Notre Dame Boulevard Bridge Project

Final Initial Study / Proposed Mitigated Negative Declaration

CAPITAL PROJECT NO. 50453

Lead Agency:

City of Chico, Public Works Department

411 Main Street

Chico, CA 95928

October 2022

Prepared By:

City of Chico Department of Public Works – Engineering

Consultant: Gallaway Enterprises

This Page Intentionally Left Blank

Table of Contents

I. PROJECT DESCRIPTION..... 1
II. ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED: 8
III. COMMUNITY DEVELOPMENT DIRECTOR DETERMINATION 8
IV. EVALUATION OF ENVIRONMENTAL IMPACTS 9
A. Aesthetics.....10
B. Agriculture and Forest Resources: 11
C. Air Quality 12
D. Biological Resources 16
E. Cultural Resources.....25
F. Energy 28
G. Geology/Soils.....29
H. Greenhouse Gas Emissions 31
I. Hazards and Hazardous Materials 32
J. Hydrology/ Water Quality 34
K. Land Use and Planning 37
L. Mineral Resources.....38
M. Noise 39
N. Population and Housing 42
O. Public Services 43
P. Recreation 44
Q. Transportation 45
R. Tribal Cultural Resources 47
S. Utilities and Service Systems 49
T. Wildfire 51
U. MANDATORY FINDINGS OF SIGNIFICANCE 52
V. REFERENCES 53

List of Figures

Figure 1 – Project Vicinity Map 3
Figure 2 – Location Map 6

List of Tables

Table 1. Butte County Ambient Air Quality Attainment Status 13
Table 2. Butte County Air Quality Management District Criteria Pollutant Thresholds 13
Table 3. Daily Criteria Pollutant Emissions from Project Construction (max pounds per day) 14
Table 4. Estimated Operational Criteria Pollutant Emissions (pounds per day) 14
Table 5. Construction Equipment Noise Levels 40

List of Appendices

Each of the appendices listed below are available for review, along with the Draft IS/Proposed MND on the City of Chico's website at https://chico.ca.us/post/notre-dame-bridge (Public Review Documents – Notre Dame Boulevard over Little Chico Creek Bridge Project).

Appendix A: Biological Resource Assessment
Appendix B: Draft Delineation of Waters of the U.S.
Appendix C: Cultural Resources Inventory Survey
Appendix D: Hydraulic Study Report
Appendix E: Noise and Vibration Technical Report
Appendix F: Traffic/Transportation Technical Study
Appendix G: Air Quality and Greenhouse Gas Analysis
Appendix H: Project Plans

List of Acronyms

AASHTO	American Association of State Highway Transportation Officials
APE	Area of Potential Effect
AQAP	Air Quality Attainment Plan
BCAG	Butte County Association of Governments
BCAQMD or Air District	Butte County Air Quality Management District
BMPs	Best Management Practices
BSA	Biological Survey Area
CAP	Climate Action Plan
Caltrans	California Department of Transportation
Cal Water	California Water Service Company
CARB	California Air Resources Board
CBC	California Building Code
CCV	California Central Valley
CDFW	California Department of Fish and Wildlife
CEQA	California Environmental Quality Act
CFGC	California Fish and Game Commission
CFR	Code of Federal Regulations
CIDH	Cast-In-Drilled-Hole
City	City of Chico
CNDDB	California Natural Diversity Database
CRWQCB	California Regional Water Quality Control Board
CV	Central Valley
CVFPB	Central Valley Flood Protection Board
CWHR	California Wildlife Habitat Relationships
dBA	decibel
DBH	Diameter at breast height
DPS	Distinct Population Segment
DTSC	Department of Toxic Substances Control
EFH	Essential Fish Habitat
EIR	Environmental Impact Report
ESA	Endangered Species Act
ESU	Evolutionarily Significant Unit
FEMA	Federal Emergency Management Agency
ft	Feet
GHG	Greenhouse gas
Leq	Level equivalent
LID	Low Impact Development
LRA	Local Responsibility Area
LSA	Limited Soils Assessment
MBTA	Migratory Bird Treaty Act
MND	Mitigated Negative Declaration
MMRP	Mitigation Monitoring and Reporting Program
NAHC	Native American Heritage Commission
NEIC	Northeast Information Center
NMFS	National Marine Fisheries Service
NOAA	National Oceanic and Atmospheric Administration
NPDES	National Pollution Discharge Elimination Permit
NRCS	Natural Resources Conservation Service
NRHP	National Register of Historic Places
NOx	Nitrogen Oxides
$PM_{2.5}$	Fine Particulate Matter
PM_{10}	Respirable Particulate Matter

ROG	Reactive Organic Gases
SNC	Sensitive Natural Community
SPP	Spill Prevention Plan
sq ft	Square feet
SRA	State Responsibility Area
SSC	Species of Special Concern
SVAB	Sacramento Valley Air Basin
SWPPP	Stormwater Pollution Prevention Plan
USACE	United States Army Corps of Engineers
USFWS	United States Fish and Wildlife Service
VELB	Valley elderberry longhorn beetle
VMT	Vehicle-miles-traveled

Draft Initial Study / Proposed Mitigated Negative Declaration

City of Chico
Environmental Coordination and Review

I. PROJECT DESCRIPTION

A. Project Title: Notre Dame Boulevard Bridge Project (Capital Project No. 50453)

B. Project Sponsor/Lead Agency:
City of Chico – Public Works Engineering
PO Box 3420
Chico, CA 95927

C. Property Owners:
City of Chico
PO Box 3420
Chico, CA 95927

MPH CO, LLC
1811 CONCORD AVE STE 200
CHICO, CA
95928

D. City Contact: Tracy R. Bettencourt – MPA, AICP
Regulatory and Grants Manager
City of Chico – Public Works Engineering
tracy.bettencourt@chicoca.gov
(530) 879-6903

E. Project Location: The Project is located on Notre Dame Blvd at Little Chico Creek in the City of Chico, California, latitude 39.735169, longitude -121.795512. (**Figure 1 – Project Location Map**).

F. Assessor's Parcel Number (APN): The Project will be located within the existing public right-of-way and narrow portions of APNs 002-180-141, 002-180-111, 002-180-097.

G. Parcel Size: The Project is approximately 2.99 acres in size.

H. General Plan Designation: Primary Open Space (POS), Special Mixed Use (SMU)

I. Zoning: Traditional Mixed Use (TND) and Primary Open Space (OS1)

J. Environmental Setting:
The Project is located between two disjunct sections of Notre Dame Blvd, in the eastern limits of the City of Chico, Butte County, California, latitude 39.734879, longitude -121.795435, within the United States Geological Survey (USGS) "Chico" quadrangle, Section 30, Township 22N, Range 2E. The Project is located in the northern Sacramento Valley at the base of the Sierra Nevada foothills. The Project and adjacent lands consist of an intermittent drainage, disturbed annual grassland, urban development, including a medium density residential development, and a barren, paved bike path. Little Chico Creek, an intermittent drainage, flows east to west through the Project boundary. The area is heavily influenced by human development and occurs within the greater Meriam Park Development project, which is in various stages of completion.

K. Project Description:

BRIDGE CONSTRUCTION

The Project will construct a new bridge to connect the existing sections of Notre Dame Boulevard over Little Chico Creek. The new structure will accommodate two 12-foot travel lanes separated by a 6-foot-wide center median, eight-foot bike lanes, a five-foot sidewalk on the west side and an eight-foot multi-use path on the east side. The new bridge is anticipated to be a multi-span structure, approximately 100 feet long and 56 feet wide. The structure type is expected to be a three-span, cast-in-place, reinforced concrete bridge with 30-degree skew, a 2.0% Cambered 20" thick concrete deck, and will include rock slope protection at the banks under and adjacent to the bridge. In addition to the bridge, the existing bike path on the south side of the creek will be re-routed to a new bridge undercrossing and connect to the multi-use path crossing the bridge.

Construction of the bridge will involve excavation for and construction of concrete abutments and piers, founded on either spread footings or deep foundation. Other temporary work within Little Chico Creek includes falsework erection and removal, and installation of scour countermeasures at the support locations. Little Chico Creek is a seasonal creek and construction is anticipated to proceed without the need for a temporary water diversion system. Construction of the roadway approaches will involve the removal and realignment of a portion of the existing bike path on the south bank. The approach roadway will tie into the existing curb, gutter, and sidewalk on the north and south portions of Notre Dame Boulevard. Approach roadway work will include both median and parkway landscape per city standards as well as street lighting and public utility extensions crossing the creek.

VEGETATION REMOVAL

Tree removal and removal of other vegetation along the creek will be necessary for the Project. A total of six (6) trees, including two (2) sycamores, three (3) valley oaks, and one (1) mulberry are proposed to be removed.

Elderberry shrubs (*Sambucus cerulea*) are the sole host plant for the federally listed valley elderberry longhorn beetle (VELB, *Desmocerus californicus dimorphus*). Due to the proximity of a single shrub to the project site, impacts to a federally listed species are anticipated. Consultation with the USFWS regarding potential impacts to VELB will be required.

Little Chico Creek can also provide a habitat for federally listed salmonids, but only when flows allow passage of fish. Since construction is not expected to occur during sustaining flows, there will be no impacts to fish.

SCHEDULE

Construction is anticipated to begin in spring 2024 and will have a duration of approximately 8 months.

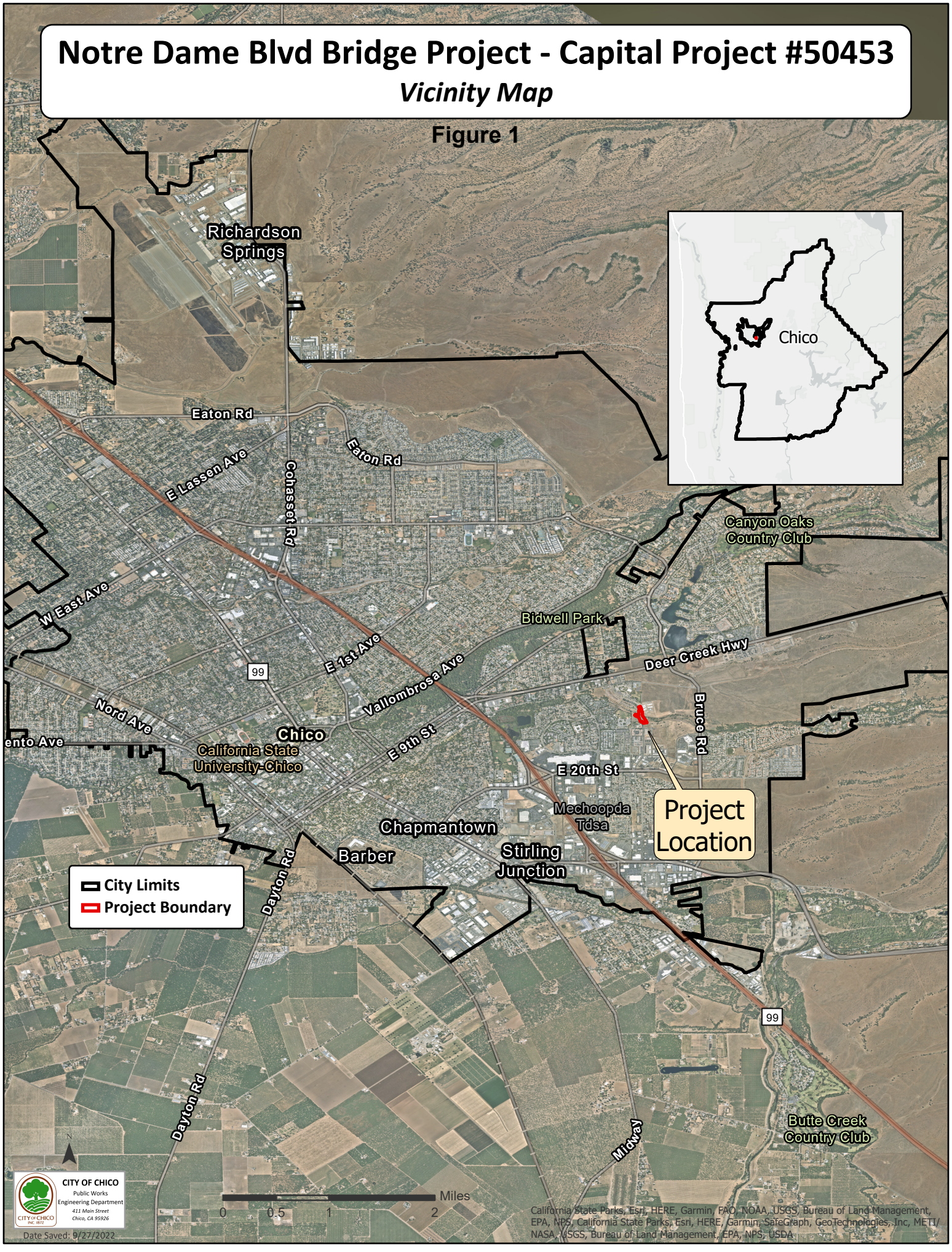
RIGHT OF WAY AND UTILITY RELOCATION

There are no utilities currently crossing Little Chico Creek that will be impacted by the construction of the project. The Project will include the installation of dual arm streetlights on the center concrete median. The streetlight conduit runs will be installed under the sidewalk with service boxes at each streetlight location. Existing powerlines are located approximately 250 feet upstream of the proposed bridge. Temporary construction easements will be needed from seven (7) parcels adjacent to the bridge to facilitate driveway/walkway conforms, utility relocations, and allow construction access (APNs 002-180-110, 002-180-141, 002-180-145, 002-180-111, 002-180-097, 002-180-220, 002-180-167).

Notre Dame Blvd Bridge Project - Capital Project #50453

Vicinity Map

Figure 1



This Page Intentionally Left Blank

L. Public Agency Approvals:

1. California Regional Water Quality Control Board – NPDES and §401 Water Quality Certification
2. California Department of Fish and Wildlife – Streambed Alternation Agreement §1602
3. Central Valley Flood Protection Board Encroachment Permit
4. U.S. Army Corps of Engineers – Clean Water Act §404 Permit
5. U.S. Fish and Wildlife §7 Endangered Species Act Consultation
6. National Oceanic and Atmospheric Administration (NOAA) National Marine Fisheries Service (NMFS) §7 Endangered Species Act Consultation

M. Native American Tribal Consultation: Have California Native American tribes traditionally and culturally affiliated with the Project area requested consultation pursuant to Public Resources Code section 21080.3.1? If so, has consultation begun?

☐ **Yes** ☒ **No**

N. Prepared By:

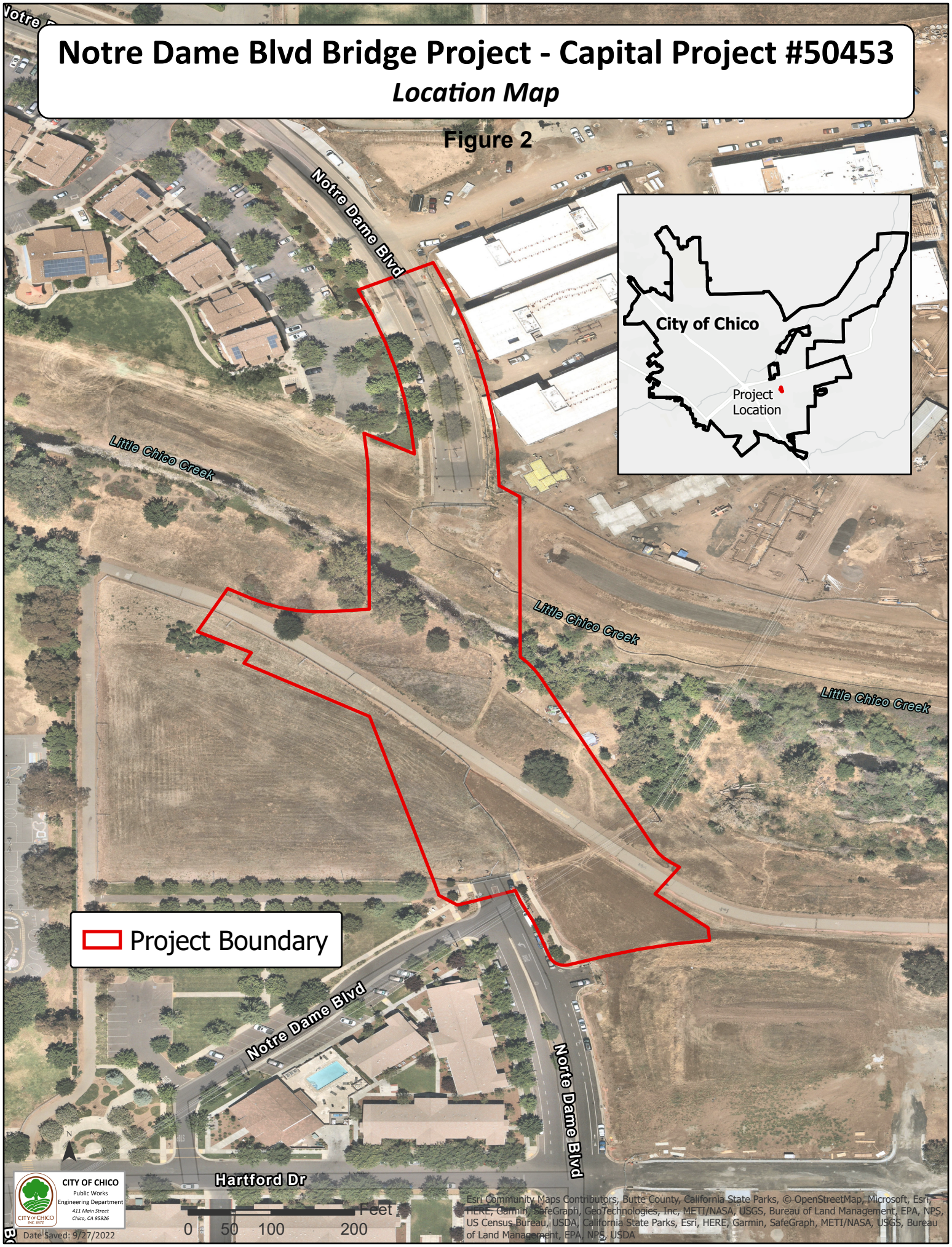
Tracy R. Bettencourt – MPA, AICP
Regulatory and Grants Manager
City of Chico Public Works - Engineering
PO Box 3420, Chico, CA 95927
Phone: (530) 879-6903
email: tracy.bettencourt@chicoca.gov

Kevin Sevier & Anthony McLaughlin
Gallaway Enterprises
117 Meyers Street, Ste. 120
Chico, CA 95928

Notre Dame Blvd Bridge Project - Capital Project #50453

Location Map

Figure 2



This Page Intentionally Left Blank

II. ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED:

The environmental factors checked below could be potentially affected by this Project, but, due to the inclusion of specific mitigation measures, will result in impacts that are a "Less Than Significant with Mitigation Incorporated," as indicated by the environmental checklist on the following pages.

☐ Aesthetics	☐ Greenhouse Gas Emissions	☐ Public Services
☐ Agriculture and Forestry Resources	☐ Hazards/Hazardous Materials	☐ Recreation
☒ Air Quality	☒ Hydrology/Water Quality	☐ Transportation
☒ Biological Resources	☐ Land Use and Planning	☒ Tribal Cultural Resources
☒ Cultural Resources	☐ Mineral Resources	☐ Utilities and Service Systems
☐ Energy	☒ Noise	☐ Wildfire
☒ Geology/Soils	☐ Population/Housing	☐ Mandatory Findings of Significance

III. COMMUNITY DEVELOPMENT DIRECTOR DETERMINATION

On the basis of this initial evaluation:

☐ I find that the proposed Project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.

☒ I find that although the proposed Project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the Project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.

☐ I find that the proposed Project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.

☐ I find that the proposed Project MAY have a potentially significant impact or have a potentially significant impact unless mitigated, but at least one effect has been adequately analyzed in an earlier document pursuant to applicable legal standards, and has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT (EIR) is required, but it must analyze only the effects that remain to be addressed.

☐ I find that although the proposed Project could have a significant effect on the environment, there WILL NOT be a significant effect in this case because all potentially significant effects have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards and have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION including revisions or mitigation measures that are imposed upon the proposed Project. No further study is required.

Tracy R Bettencourt
Signature

10/18/2022
Date

Tracy R. Bettencourt – MPA, AICP, Regulatory and Grants Manager
Printed Name (for Brendan Vieg, Community Development Director)

IV. EVALUATION OF ENVIRONMENTAL IMPACTS

- Responses to the following questions and related discussion indicate if the proposed project will have or potentially have a significant adverse impact on the environment.

- A brief explanation is required for all answers except "No Impact" answers that are adequately supported by referenced information sources. A "No Impact' answer is adequately supported if the referenced information sources show that the impact simply does not apply to projects like the one involved (e.g., the project falls outside a fault rupture zone). A "No Impact" answer should be explained where it is based on project-specific factors or general standards.

- All answers must take account of the whole action involved, including off-site as well as on-site, cumulative as well as project-level, indirect as well as direct, and construction as well as operational impacts.

- Once it has been determined that a particular physical impact may occur, then the checklist answers must indicate whether the impact is potentially significant, less than significant with mitigation, or less than significant. "Potentially Significant Impact" is appropriate if there is substantial evidence that an effect may be significant. If there is at least one "Potentially Significant Impact" entry when the determination is made an EIR is required.

- Negative Declaration: "Less than Significant with Mitigation Incorporated" applies when the incorporation of mitigation measures has reduced an effect from "Potentially Significant Impact" to a "Less than Significant Impact." The initial study will describe the mitigation measures, and briefly explain how they reduce the effect to a less than significant level (mitigation measures from Section 4, "Earlier Analysis," may be cross-referenced).

- Earlier analyses may be used where, pursuant to tiering, a program EIR, or other CEQA process, an effect has been adequately analyzed in an earlier EIR or negative declaration [Section 15063(c)(3)(D)].

- Initial studies may incorporate references to information sources for potential impacts (e.g. the general plan or zoning ordinances, etc.). Reference to a previously prepared or outside document should, where appropriate, include a reference to the page or pages where the statement is substantiated. A source list attached, and other sources used or individuals contacted are cited in the discussion.

- The explanation of each issue should identify:
  a. The significance criteria or threshold, if any, used to evaluate each question; and
  b. The mitigation measure identified, if any, to reduce the impact to less than significant.

A. Aesthetics Except as provide in Public Resources Code Section 21099, would the project or its related activities:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
1. Have a substantial adverse effect on a scenic vista?				X
2. Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?				X
3. In non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage point). If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?				X
4. Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?				X

DISCUSSION:
The Project is located in southeast Chico on the valley floor. The surrounding area is partially developed and/or planned for residential use and open space areas. The proposed Project will change the current visual character of the site by developing a new bridge in a location where currently one doesn't exist. The proposed bridge structure will be similar in size, height and appearance as the existing bridges upstream (Bruce Road) and downstream (Forest Avenue). The proposed bridge will provide connectivity between two disjunct segments of Notre Dame Boulevard, thereby formalizing the existing roadway into a contiguous facility. There are no defined scenic vistas or state scenic highways in the region.

A.1-A.4. No Impact. The proposed development will not have a substantial adverse effect on a scenic vista. Notre Dame is not designated as a state scenic highway nor are there any identified scenic resources including trees, rock outcroppings, and historic buildings, in the Project area. There are no significant scenic vistas on which the proposed Project could have an impact. The improvements for this Project include the installation of street lighting, but will be built to the City's lighting standards and will not adversely impact day or nighttime views. The construction of the new bridge will change the visual character of the immediate area of the Project site, but in a manner that is consistent with planned transportation improvements identified in the City's Capital Improvement Program. No substantial long-term visual impact is anticipated, since no significant changes in the appearance of the local urbanized area are anticipated. The Project will have **Less than Significant Impact** relative to these resources.

MITIGATION: None required.

B. Agriculture and Forest Resources: In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Dept. of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state's inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment project; and forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board. Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
1. Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?				X
2. Conflict with existing zoning for agricultural use, or a Williamson Act contract?				X
3. Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code Section 4526, or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?				X
4. Result in the loss of forest land or conversion of forest land to non-forest use?				X
5. Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?				X

DISCUSSION:

B.1–B.5. No Impact. The Project will not convert Prime or Unique Farmland or Farmland of Statewide Importance to a non-agricultural use. The California Department of Conservation, Division of Land Resource Protection, Farmland Mapping and Monitoring Program's 'Butte County Important Farmland 2016' map identifies the Project site as "Urban and Built-up Land" and "Grazing Land." Grazing land is land on which the existing vegetation, whether grown naturally or through management, is suited to the grazing of livestock. Urban and built-up land is land occupied by structures with a building density of at least 1 unit to 1.5 acres, or approximately 6 structures to a 10-acre parcel. The Project will not conflict with existing zoning for agricultural use or forest land and is not under a Williamson Act Contract. The Project will not result in the loss of forest land, conversion of forest land, or involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland or forest land. The Project will result in **No Impact** to agriculture and forest resources.

MITIGATION: None required.

C. Air Quality Where available, the significance criteria established by the applicable air quality management district or air pollution control district may be relied upon to make the following determinations. Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
1. Conflict with or obstruct implementation of the applicable air quality plans (e.g., Northern Sacramento Valley Planning Area 2012 Triennial Air Quality Attainment Plan, Chico Urban Area CO Attainment Plan, and Butte County AQMD Indirect Source Review Guidelines)?			X	
2. Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard?		X		
3. Expose sensitive receptors to substantial pollutant concentrations?			X	
4. Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?			X	

DISCUSSION:

Butte County is located within the Sacramento Valley Air Basin (SVAB), comprising the northern half of California's 400-mile long Great Central Valley. The SVAB encompasses approximately 14,994 square miles with a largely flat valley floor (excepting the Sutter Buttes) about 200 miles long and up to 150 miles wide, bordered on its east, north, and west by the Sierra Nevada, Cascade and Coast mountain ranges, respectively.

The SVAB, containing 11 counties and some two million people, is divided into two air quality planning areas based on the amount of pollutant transport from one area to the other and the level of emissions within each. Butte County is within the Northern Sacramento Valley Air Basin (NSVAB), which is composed of Butte, Colusa, Glenn, Shasta, Sutter, Tehama, and Yuba Counties.

Emissions from the urbanized portion of the basin (Sacramento, Yolo, Solano, and Placer Counties) dominate the emission inventory for the Sacramento Valley Air Basin, and on-road motor vehicles are the primary source of emissions in the Sacramento metropolitan area. While pollutant concentrations have generally declined over the years, additional emission reductions will be needed to attain the State and national ambient air quality standards in the SVAB. Seasonal weather patterns have a significant effect upon regional and local air quality. The Sacramento Valley and Butte County have a Mediterranean climate, characterized by hot, dry summers and cool, wet winters. Winter weather is governed by cyclonic storms from the North Pacific, while summer weather is typically subject to a high-pressure cell that deflects storms from the region.

In Butte County, winters are generally mild with daytime average temperatures in the low 50s°F and nighttime temperatures in the upper 30s°F. Temperatures range from an average January low of approximately 36°F to an average July high of approximately 96°F, although periodic lower and higher temperatures are common. Rainfall between October and May averages about 26 inches but varies considerably year to year. Heavy snowfall often occurs in the northeastern mountainous portion of the County. Periodic rainstorms contrast with occasional stagnant weather and thick ground or "tule" fog in the moister, flatter parts of the valley. Winter winds generally come from the south, although north winds also occur. Diminished air quality within Butte County largely results from local air pollution sources, transport of pollutants into the area from the south, the NSVAB topography, prevailing wind patterns, and certain inversion conditions that differ with the season. During the summer, sinking air forms a "lid" over the region, confining pollution within a shallow layer near the ground that leads to photochemical smog and visibility problems. During winter nights, air near the ground cools while the

air above remains relatively warm, resulting in little air movement and localized pollution "hot spots" near emission sources. Carbon monoxide, nitrogen oxides, particulate matters and lead particulate concentrations tend to elevate during winter inversion conditions when little air movement may persist for weeks.

As a result, high levels of particulate matter (primarily fine particulates or PM2.5) and ground-level ozone are the pollutants of most concern to the NSVAB Districts. Ground-level ozone, the principal component of smog, forms when reactive organic gases (ROG) and nitrogen oxides (NOx) - together known as ozone precursor pollutants - react in strong sunlight. Ozone levels tend to be highest in Butte County during late spring through early fall, when sunlight is strong and constant, and emissions of the precursor pollutants are highest.

The SVAB is subject to federal, state, and local regulations. The Butte County Air Quality Management District (BCAQMD) is responsible for attainment of the National and California Air Quality Standards in Butte County. The BCAQMD released the CEQA Air Quality Handbook: Guidelines for Assessing Air Quality Impacts for projects subject to CEQA Review (CEQA Handbook), which was approved October 23, 2014. The District web site (www.bcaqmd.org) provides the County's current attainment status, air quality trends, and rules and regulations that may be applicable to projects under consideration by lead agencies. Table 1 provides Butte County's attainment status as of September 2018:

Table 1. Butte County Ambient Air Quality Attainment Status

Pollutant	State	Federal
1-hour Ozone	**Nonattainment**	**-**
8-hour Ozone	**Nonattainment**	**Nonattainment**
Carbon Monoxide	Attainment	Attainment
Nitrogen Dioxide	Attainment	Attainment
Sulfur Dioxide	Attainment	Attainment
24-hour PM10*	**Nonattainment**	Attainment
24-hour PM2.5*	No Standard	Attainment
Annual PM10*	Attainment	No Standard
Annual PM2.5*	**Nonattainment**	Attainment

* PM10 – Respirable particulate matter less than 10 microns in size Source: BCAQMD 2018

* PM 2.5 – Fine particulate matter less than 2.5 microns in size

Table 2. Butte County Air Quality Management District Criteria Pollutant Thresholds

Source	ROG	NOX	PM10
Construction (pounds per day)	137	137	80
Construction (tons per year)	4.5	4.5	--
Operation (pounds per day)	25	25	80

Source: BCAQMD 2014.
-- = no threshold

An Air Quality and Greenhouse Gas Analysis for the Notre Dame Boulevard Bridge Project was conducted by ICF, completed April 14, 2022 (**Appendix G**). The study analyzed the potential impacts of criteria pollutant, toxic air containment, and greenhouse gas emissions during construction and operation of the Project (Shown Table 3 and Table 4). Operation emissions are a result of motor vehicle use post construction. The analysis shows temporary emissions during construction would exceed BCAQMD Nitrogen Oxides (NOx) construction-period thresholds under unmitigated conditions. Construction emissions were estimated using the Sacramento Metropolitan Air Quality Management District's Roadway Construction Emission Model (RCEM v.9). Operational emissions from motor vehicles within the Project area were evaluated using the California Department of Transportation CT-EMFAC model.

Table 3. Daily Criteria Pollutant Emissions from Project Construction (max pounds per day)

Construction Activity	ROG	NOX	PM10
Bridge Construction (unmitigated)	14	208	68
Bridge Construction (mitigated)	9	84	63
Significance Threshold	137	137	80
Exceeds Thresholds after mitigation?	No	No	No

Source: (ICF, 2022)

Table 4. Estimated Operational Criteria Pollutant Emissions (pounds per day)

Operation Scenario	ROG	NOX	PM10
Existing Conditions (2019)			
No Project	0.20	1.89	0.12
Proposed Project	0.30	2.80	0.18
Net	<1	<1	<1
Significance Threshold	25	25	80
Exceeds Thresholds?	No	No	No

Source: (ICF, 2022)

If a project is below (meets) the applicable screening criteria, it may be assumed to have a less than significant impact upon the environment under CEQA. None of the Butte County Air Quality Management District Criteria Pollutant Thresholds are expected to be exceeded.

The proposed Project is exempt from conformity requirements per the Air Quality Emissions Analysis and Conformity Determination of the 2020 Regional Transportation Plan and 2019 Federal Transportation Improvement Program prepared by Butte County Association of Governments.

C.1. Less Than Significant Impact. The Project will not conflict with or obstruct implementation of the applicable air quality plans. The applicable air quality plan for the Project area is the 2015 AQAP, prepared by the BCAQMD. The AQAP control measure commitments are based, in part, on the regional population, housing, and employment projections (and related transportation-source emissions) prepared by the region's cities and counties and adopted by BCAG (BCAQMD 2015). As such, projects that propose development consistent with the population, employment, and VMT growth (and resultant emissions projections) anticipated in the relevant land use plans that were used in the formulation of the AQAP are therefore considered to be consistent with the AQAP.

The proposed Project was included in the regional emissions analysis conducted by BCAG for the conforming 2020 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS) (BCAG 2020). As such, the proposed Project is considered consistent with the region's AQAP. Furthermore, many of BCAQMD's rules are intended to meet the attainment goals of the AQAP. The Project would be consistent with applicable rules that would limit ROG and PM emissions (e.g., Rules 205, 230, 231) during construction. This impact is considered **less than significant**.

C.2. Less Than Significant Impact with Mitigation. The Project will not result in a cumulatively considerable net increase of any criteria pollutant for which the Project region is non-attainment. The EPA has classified Butte County as nonattainment for the federal 8-hour O_3 standard and a partial maintenance area for the federal $PM_{2.5}$ standard. The California Air Resources Board (CARB) has classified the area as nonattainment for the state 8-hour O_3, 24-hour PM_{10}, and annual $PM_{2.5}$ standards. The BCAQMD has promulgated separate construction- and operation-period significance thresholds to help the Basin attain federal and state air quality standards and protect public health.

The proposed Project's operational emissions would not exceed any of the BCAQMD thresholds for either the existing conditions or opening year. Given the small quantity of additional VMT that the project would result in, the net emissions in the existing conditions and opening year would be substantially below the BCAQMD thresholds and therefore would not be expected to contribute a significant level of air pollution such that regional air quality within the NSVAB would be degraded.

Construction of the proposed Project would result in the short-term generation of criteria pollutant emissions. Pollutant emissions would vary daily, depending on the level of activity, specific operations, and prevailing weather. Project emissions would exceed the BCAQMD NOx construction-period threshold. To mitigate this impact, the project would be required to implement mitigation measure C.1. Implementation of mitigation measure C.1 will bring construction related emissions below BCAQMD thresholds, therefore this impact is considered **less than significant with mitigation.**

C.3-C.4. Less Than Significant Impact. Construction of the proposed Project would result in the short-term generation of criteria pollutant emissions. Pollutant emissions would vary daily, depending on the level of activity, specific operations, and prevailing weather. The Project will not expose sensitive receptors to substantial pollutant concentrations. Due to the small scope of the Project, the pollutant concentrations and other emissions will not be substantial and will not adversely affect a substantial number of people. This impact is considered **less than significant**.

MITIGATION:

MITIGATION C.1. (Air Quality):
The following measures, when implemented, will avoid and minimize impacts/emissions of criteria pollutants:

- The Project proponent shall ensure that all on-road vehicles used during construction have 2010 model year engines or newer.

- The Project proponent shall ensure that all off-road diesel-powered equipment used during construction is equipped with engines that meet the California Air Resources board Tier 4 final emission standards

MITIGATION MONITORING C.1: The supervising contractor shall be responsible for ensuring that the vehicles utilized during construction meet, or exceed, the criteria described in Mitigation Measure C.1.

D. Biological Resources Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
1. Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species as listed and mapped in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?		X		
2. Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?		X		
3. Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?		X		
4. Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?				X
5. Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?		X		
6. Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?				X

DISCUSSION:

A Biological Resource Assessment (BRA) was prepared for the Project in March 2021 by Gallaway Enterprises (**Appendix A**). The purpose of the BRA is to document the current endangered, threatened, sensitive, and rare species and their critical habitats that occur in the biological study area (BSA) of the Project. The BSA extends to the limits of the Project boundary. Primary references consulted include species lists and information gathered using the United States Fish and Wildlife Service (USFWS) Information for Planning and Consultation (IPaC) tool, NOAA-NMFS species list, California Department of Fish and Wildlife (CDFW) California Natural Diversity Database (CNDDB), the California Native Plant Society (CNPS) inventory of rare and endangered plants, and literature review. A Draft Delineation of Jurisdictional Waters of the United States was also prepared for the Project in April 2021 by Gallaway Enterprises (**Appendix B**). The surveys involved an examination of botanical resources, soils, hydrological features, and determination of wetland characteristics based on the United States Army Corps of Engineers (USACE) Wetlands Delineation Manual (Environmental Laboratory 1987) and other current regulations, manuals, and interpretations of jurisdiction currently in effect.

The Project site contains the habitat types of valley foothill-riparian, annual grassland, riverine, lacustrine, barren, and urban. Valley foothill riparian habitat within the Project site is associated with the riverine habitat of Little Chico Creek, which traverses the Project site. Lacustrine habitats are

intermittently inundated depressions or ponded areas comprised of vernal pools and seasonal wetlands. Lacustrine habitats are primarily in the northeastern section of the Project site. Annual grasslands occur throughout the Project site and are a supporting habitat to the vernal swale. Barren habitats are comprised of the existing roadway and sidewalks. Urban habitat is present in the form of the surrounding residential development. Little Chico Creek is designated as critical habitat for CCV steelhead.

The Project proposes to construct a bridge over Little Chico Creek on the Norte Dame Boulevard alignment. The following discussions will address potential environmental impacts.

D.1. Less Than Significant with Mitigation Incorporated. The special-status species with potential to occur within the Project area are Central Valley (CV) spring-run Chinook salmon (*Oncorhynchus tshawytscha*), California Central Valley (CCV) steelhead (*Oncorhynchus mykiss*), Swainson's hawk (*Buteo swainsoni*), valley elderberry longhorn beetle (VELB, *Desmocerus californicus dimorphus),* Western spadefoot *(Spea hammondii),* western pond turtle (*Emys marmorata*), pallid bat (*Antrozous pallidus)*, vernal pool tadpole shrimp (*Lepidurus packardi*), vernal pool fairy shrimp (*Branchinecta lynchi*), and various bird and raptor species protected under the Migratory Bird Treaty Act (MBTA). The potential for occurrence for the aforementioned species is considered to be moderate to high due to suitable habitat and favorable conditions, with the exception of CV spring-run Chinook salmon, whose habitat within the BSA is considered marginal and therefore the potential for occurrence is low. Elderberry shrubs (*Sambucus cerulea*) occur within the Project site and the presence of VELB is assumed.

Central Valley Spring-run Chinook Salmon

Chinook salmon are an anadromous species which originate in freshwater environments, such as major rivers and tributaries, before migrating to oceanic environments to grow and mature, then returning to their natal freshwater environments to spawn and eventually die. Chinook salmon are the largest of the salmon species. They range in appearance throughout their developmental stages and aquatic environments.

The Central Valley spring-run Chinook salmon Evolutionarily Significant Unit (ESU) is listed as threatened under the Endangered Species Act (ESA). Spring-run Chinook salmon are differentiated from the other ESUs or other "runs" of Chinook salmon due to their distinct life history strategy in which natural populations migrate from the Pacific Ocean to their natal spawning habitat in Central Valley tributaries starting in the spring; as early as February for some populations. Unlike other runs of Chinook salmon, spring-run migrate upstream early in the year and then disperse throughout the upper reaches of a river and hold there over the summer months before spawning, instead of spawning quickly upon arrival. Juveniles will then emigrate during late fall and winter with increased flows to make their way to the Pacific Ocean. Key habitat for CV spring-run Chinook salmon includes moderately deep pools utilized for holding habitat over summer, small cobble or gravel substrate for spawning, and slow, off-channel water with debris or vegetation that juveniles utilize for rearing habitat and refuge. Shade and wood cover have been indicated as important for juvenile Chinook salmon holding habitat (Zajanc et al. 2012). Chinook salmon adults utilize deep pools for holding that usually have a large bubble curtain at the head, underwater rocky ledges, and shade cover throughout the day, or hold in smaller "pocket" water behind large rocks in fast water (Moyle 1995).

According to the NMFS, the Little Chico Creek watershed is not typically used as a migration corridor or spawning habitat for adult CV spring-run Chinook salmon. There have been observations of CV spring-run Chinook salmon within the upper canyon reaches of Little Chico Creek during a few high flow years (Brown and Mott 2002), but due to the habitat deterioration and flow changes that have occurred within the urban zone of Little Chico Creek, where the BSA is situated, the BSA only supports habitat for migrant or spill-over CV spring-run Chinook salmon from the upstream reaches of Little Chico Creek and only during high flows events. Chinook salmon juveniles are not expected to hold or rear within the BSA due to lack of preferred habitat components. Chinook salmon adults are not expected to hold in the BSA due to lack of cover such as bubble curtains, underwater rocky ledges, shade cover, or pocket water behind large rocks in fast water. As such, there is low potential for CV spring-run Chinook salmon to occur within the Project site when water is present. The proposed Project will require work within the channel of Little Chico Creek, but the in-channel work will be conducted when the creek is dry. As such, no fish species will be present at the time of construction and the Project will have no impacts to CV spring-run Chinook salmon.

California Central Valley Steelhead Distinct Population Segment

The CCV steelhead Distinct Population Segment (DPS) is listed as threatened by NMFS. Steelhead are small-bodied in general compared to their coastal counterparts and rarely exceed 60 centimeters in fork length, which may be an adaptation to the distance inland these fish migrate to reach their spawning areas in some cases (Moyle 2002). Steelhead will spend 1 to 3 years growing in a marine environment before migrating into the upper reaches of the Sacramento and San Joaquin River systems to spawn. Steelhead generally move quickly through the main stem of the Sacramento River to their respective spawning grounds, where they then seek out suitable spawning habitat. The steelhead population is entirely a "winter-run" fish that enter the river system in November through April as fully reproductively mature adults to spawn before emigrating back to marine habitat (Moyle et al. 2008). Adult steelhead require cold, clear, relatively fast-moving water that is usually provided by snowmelt-driven stream systems at the time they are spawning. Depths required for spawning are typically 10 to 150 cm (Moyle 2002 cited in NMFS 2014b), and optimum depth for spawning is 14 inches (35.56 cm) (Bovee 1978 cited in McEwan 2001). Juvenile steelhead may spend from just months up to 7 years rearing in freshwater, with most emigrating to the ocean after 1 to 2 years (NMFS 2016). For the first year or two of life, juvenile steelhead are found in cool, fast-flowing permanent streams and rivers where riffles predominate over pools and there is ample cover from riparian vegetation or undercut banks (Moyle 2002 cited in NMFS 2014b).

Little Chico Creek has been designated as critical habitat for steelhead; however, the portion of Little Chico Creek that occurs within the BSA is positioned within the urban zone of the creek which contains only intermittent flows. The upstream canyon zone of the creek supports perennial flows and steelhead have been documented infrequently in this portion of Little Chico Creek (Brown and Mott 2002). Due to the lack of perennial flows within the portion of Little Chico Creek within the BSA, the BSA only supports habitat for steelhead migrants and strays from the upstream portion of the creek and only during high flow events. Steelhead juveniles and adults are not expected to hold or rear within the BSA due to lack of preferred habitat components. The proposed Project will require work within the channel of Little Chico Creek, but the in-channel work will be conducted when the creek is dry. As such, no fish species will be present at the time of construction and the Project will have no direct impacts to CCV steelhead. Further, any temporarily disturbed vegetation within the creek and along the creek banks will be re-planted and restored once the construction activities are complete. The Project proposes to place approximately 330 cubic yards of rock slope protection (RSP) within the floodplain of Little Chico Creek to protect the banks and abutments, which will result in permanent impacts to approximately 0.02 acres and temporary impacts to 0.09 acres of CCV steelhead critical habitat. With the implementation of Mitigation Measure D.1, potential impacts are considered **less than significant with mitigation incorporated.**

Valley Elderberry Longhorn Beetle

The VELB is listed as threatened under the federal ESA. The VELB is a small (0.5 - 0.8 inch long) beetle that is endemic to the Central Valley of California (USFWS 2017). The beetle is found only in association with its host plant, elderberry. Adults feed on the foliage and flowers of elderberry shrubs and are present from March through early June. During this period, the beetles mate and females lay eggs on living elderberry plants. The first instar larvae bore to the center of elderberry stems where they feed on the pith of the plant for 1 to 2 years as they develop. Prior to forming their pupae, the elderberry wood boring larvae chew through the bark and then plug the holes with wood shavings. In the pupal chamber, the larvae metamorphose into their pupae and then into adults where upon they emerge between mid-March through June (Barr 1991). The only identifiable exterior evidence of elderberry use by VELB is the exit hole created by the larvae (USFWS 2017). Current threats to VELB consist primarily of riparian habitat destruction causing extirpation, fragmentation, and isolation of beetle populations (Barr 1991).

Results from field surveys indicate that one (1) elderberry shrub is located within or adjacent to the Project site with stems with a diameter at ground level of 1 inch or greater. The shrub appears to contain exit holes consistent with those created by VELB. The shrub is located in the creek channel next to a large sycamore tree. There will either be work in close proximity to the shrub or the shrub may need to be removed for the placement of the bridge structure, resulting in a potential impact to VELB. The next closest documented occurrence of VELB is within Big Chico Creek (CNDDB occurrence #107) approximately 1.5 miles north of the BSA. There are no known occurrences of VELB in the Little Chico Creek watershed. With the implementation of Mitigation Measure D.2, potential impacts are considered **less than significant with mitigation incorporated.**

Western Pond Turtle

The western pond turtle is a Species of Special Concern (SSC) in California. Western pond turtles are drab, darkish colored turtles with a yellowish to cream colored head. They range from the Washington Puget Sound to the California Sacramento Valley. Suitable aquatic habitats include slow moving to stagnant water, such as back waters and ponded areas of rivers and creeks, semi-permanent to permanent ponds and irrigation ditches. Preferred habitats include features such as hydrophytic vegetation, for foraging and cover, and basking areas to regulate body temperature. In early spring through early summer, female turtles begin to move over land in search for nesting sites. Eggs are laid on the banks of slow-moving streams. The female digs a hole approximately 4 inches deep and lays up to eleven eggs. Afterwards the eggs are covered with sediment and are left to incubate under the warm soils. Eggs are typically laid between March and August (Zeiner et al. 1990). Current threats facing the western pond turtle include loss of suitable aquatic habitats due to rapid changes in water regimes and removal of hydrophytic vegetation.

The portion of Little Chico Creek that occurs in the BSA contains suitable habitat for western pond turtles. The drainage within the BSA generally lacks emergent rocks and logs on which western pond turtles bask for thermoregulation; however, there is fresh emergent vegetation for foraging and cover and open banks for basking. Western pond turtles are frequently found within irrigation canals and drainages throughout their range in the Central Valley, but are not expected to be present when Little Chico Creek is dry.

Direct and indirect impacts to western pond turtles will be avoided by conducting a survey immediately prior to in-stream work, relocating turtles as needed, and creating non-disturbance buffers if turtle nests are discovered. With the implementation of Mitigation Measures D.3 and D.6 these impacts are considered **less than significant with mitigation incorporated.**

Pallid Bat

The pallid bat is designated as a CDFW SSC. Pallid bats roost alone, in small groups (2 to 20 bats), or gregariously (hundreds of individuals). Day and night roosts include crevices in rocky outcrops and cliffs, caves, mines, trees (e.g., basal hollows of coast redwoods and giant sequoias, bole cavities of oaks, exfoliating Ponderosa pine and valley oak bark, deciduous trees in riparian areas, and fruit trees in orchards), and various human structures such as bridges (especially wooden and concrete girder designs), barns, porches, bat boxes, and human-occupied as well as vacant buildings. Roosts generally have unobstructed entrances/exits, and are high above the ground, warm, and inaccessible to terrestrial predators. However, this species has also been found roosting on or near the ground under burlap sacks, stone piles, rags, and baseboards. Lewis 1996 found that pallid bats have low roost fidelity and both pregnant and lactating pallid bats changed roosts an average of once every 1.4 days throughout the summer. Overwintering roosts have relatively cool, stable temperatures and are located in protected structures beneath the forest canopy or on the ground, out of direct sunlight. In other parts of the species' range, males and females have been found hibernating alone or in small groups, wedged deeply into narrow fissures in mines, caves, and buildings. At low latitudes, outdoor winter activity has been reported at temperatures between –5 and 10 °C.

Mature trees within the Project boundary that have suitable habitat elements (e.g., cavities, peeling bark) may provide suitable day-roosting habitat. Removal of mature trees within the BSA would have a potentially significant impact on pallid bats in the Project area. Mitigation Measures D.4 and D.6 would reduce the potential impact to a **less than significant with mitigation incorporated** level.

Vernal Pool Fairy Shrimp

Vernal pool fairy shrimp are listed under the ESA as threatened. This species is widespread, but not abundant. Known populations occur in northern California and the geographic range of this species encompasses most of the Central Valley from Shasta County to Tulare County. Vernal pool fairy shrimp typically hatch when the first rains of the year fill vernal pools and they mature in about 41 days under typical winter conditions. The vernal pool fairy shrimp occupies a variety of different vernal pool habitats, from small, clear, sandstone rock pools to large, turbid, alkaline, grassland valley floor pools. Occupied habitats range in size from rock outcrop pools as small as one square meter to large vernal pools up to 12 acres. Smaller vernal pools are the most commonly occupied and are found more frequently in grass or mud bottomed swales, or basalt flow depression pools in unplowed grasslands.

There was suitable habitat for vernal pool fairy shrimp within the mapped vernal swale in the BSA. Since the time of developing the Draft Wetland Delineation for the proposed project, the vernal pool on the northeast corner of the project site has been filled by a separate project. No protocol-level surveys for

branchiopods were conducted within the BSA for the proposed project; however, multiple known CNDDB occurrences of vernal pool fairy shrimp were identified within 5 miles of the BSA (occurrence #121, #689) and the vernal swale feature within the BSA provided suitable habitat. Since the only suitable habitat in the project site for vernal pool fairy shrimp has been filled by a separate project, there will be no impacts to the species.

Vernal Pool Tadpole Shrimp
Vernal pool tadpole shrimp are federally endangered species. They are a small crustacean in the Triopsidae family. The vernal pool tadpole shrimp is known from 18 populations in the Central Valley, ranging from east of Redding in Shasta County, south to the San Luis National Wildlife Refuge in Merced County, and from a single vernal pool complex on the San Francisco Bay National Wildlife Refuge in the City of Fremont, Alameda County (USFWS 1996). They inhabit vernal pools containing clear to highly turbid water, ranging in size from 54 square feet in the former Mather Air Force Base area of Sacramento County, to the 89-acre Olcott Lake at Jepson Prairie. Their diet consists of organic debris and living organisms, such as fairy shrimp and other invertebrates (USFWS 1996).

There was suitable habitat for vernal pool tadpole shrimp within the mapped vernal swale in the BSA. Since the time of developing the Draft Wetland Delineation for the proposed Project, the vernal pool on the northeast corner of the Project site has been filled by a separate project. No protocol-level surveys for branchiopods were conducted within the BSA for the proposed Project; however, multiple known CNDDB occurrences of vernal pool tadpole shrimp were identified within 5 miles of the BSA (occurrence #121, #689) and the vernal swale feature within the BSA provided suitable habitat. Since the only suitable habitat in the Project site for vernal pool fairy shrimp has been filled by a separate project, there will be no impacts to the species.

Migratory Birds and Raptors
Migratory birds and raptors are protected under the Migratory Bird Treaty Act (MBTA) (16 USC 703) and the CFGC (§3503). The MBTA (16 USC §703) prohibits the killing of migratory birds or the destruction of their occupied nests and eggs except in accordance with regulations prescribed by the USFWS. The bird species covered by the MBTA includes nearly all of those that breed in North America, excluding introduced (i.e., exotic) species (50 Code of Federal Regulations §10.13). Activities that involve the removal of vegetation including trees, shrubs, grasses, and forbs or ground disturbance has the potential to affect bird species protected by the MBTA.

The CFGC (§3503.5) states that it is "unlawful to take, possess, or destroy any birds in the order Falconiformes (hawks, eagles, and falcons) or Strigiformes (owls) or to take, possess, or destroy the nest or eggs of any such bird except as otherwise provided by this code or any regulation adopted pursuant thereto." Take includes the disturbance of an active nest resulting in the abandonment or loss of young. The CFGC (§3503) also states that "it is unlawful to take, possess, or needlessly destroy the nest or eggs of any bird, except as otherwise provided by this code or any regulation made pursuant thereto." There is suitable nesting habitat for a variety of ground, shrub, and tree nesting avian species within the BSA. With the implementation of Mitigation Measure D.5, potential impacts are considered **less than significant with mitigation incorporated.**

D.2. Less Than Significant with Mitigation Incorporated. No Sensitive Natural Communities (SNC) identified by the CDFW have been mapped within the BSA.

Critical habitat designation is a tool used by the USFWS and NMFS that supports the continued conservation of imperiled species by guiding cooperation within the federal government and only affects federal agency actions. Little Chico Creek has been designated by NMFS as critical habitat for CCV steelhead.

The Magnuson-Stevens Fishery Conservation and Management Act (MSA), as amended by the Sustainable Fisheries Act of 1996, established procedures designed to identify, conserve, and enhance Essential Fish Habitat (EFH) for those species regulated under a federal fisheries management plan. The MSA requires Federal agencies to consult with the NMFS on all actions, or proposed actions, authorized, funded, or undertaken by the agency, that may adversely affect EFH. EFH is defined in the MSA as those waters and substrate necessary to fish for spawning, breeding, feeding, or growth to maturity. Adverse effect means any impact which reduces quality and/or quantity of EFH, and may include direct (e.g., contamination or physical disruption), indirect (e.g., loss of prey or reduction in species fecundity), site-

specific or habitat-wide impacts, including individual, cumulative, or synergistic consequences of actions. Little Chico Creek has been designated by NMFS as EFH for Chinook salmon.

The proposed Project would result in 0.02 acres of direct impacts and 0.09 acres of temporary impacts to EFH (Little Chico Creek). Additionally, the proposed Project would result in approximately 0.17 acres of direct impacts to riparian habitat (associated with Little Chico Creek). Riparian habitat is associated with the removal of vegetation and trees within Little Chico Creek. Impacts to these habitats would be considered a potentially significant impact. With the implementation of Mitigation Measures D.1, D.2 and D.6 the potential impacts are considered **less than significant with mitigation incorporated.**

D.3. Less Than Significant with Mitigation Incorporated. A Draft Delineation of Waters of the United States (**Appendix B**) was prepared for the Project site in April of 2021 by Gallaway Enterprises. The BSA contains 0.22 acres of Waters of the U.S. (WOTUS). The Project will result in approximately 0.09 acres of temporary impacts and 0.02 acres of permanent impacts to other waters due to the permanent placement of RSP and piers/bents below the ordinary high water mark of Little Chico Creek. This is considered a potentially significant impact. With the implementation of Mitigation Measure D.6, the potential impacts are considered **less than significant with mitigation incorporated.**

D.4. No Impact. The proposed Project consists of the construction of a new bridge. The proposed bridge structure will be similar in size, height and appearance as the existing bridges upstream (Bruce Road) and downstream (Forest Avenue). The Project will not interfere substantially with the movement of any native fish or wildlife species, nor cause fragmentation of an existing wildlife habitat, therefore there will be **no impact.**

D.5. Less Than Significant with Mitigation Incorporated. Impacts to vegetation include the removal of six (6) trees with a DBH of 4 inches or greater: two (2) multi trunk sycamore (DBH 32", 5", 8", 6", 8", 5", 3" and DBH 18", 23"), three (3) multi trunk valley oak (DBH 4", 7"and 10", 5"), and one (1) multi trunk mulberry (DBH 10", 7", 16") . As a result, associated riparian tree canopy impacts are an estimated 0.17 acres. With the implementation of Mitigation Measure D.7, potential impacts are considered **less than significant with mitigation incorporated.**

D.6. No Impact. There are no adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plans applicable to the proposed Project, therefore there will be **no impact.**

MITIGATION:

MITIGATION D.1. (CV Spring-run Chinook Salmon, CCV Steelhead, CCV Steelhead Critical Habitat, and Chinook Salmon EFH):
The following measures, when implemented, will avoid and minimize impacts to anadromous fishes, their critical habitat, and EFH:

- Construction activities within Little Chico Creek shall be limited to a work window of June 1 to October 15, or during a period when there is no flow within the BSA.
- Disturbance to the channel and banks of Little Chico Creek and/or removal of vegetation will be kept to the minimum necessary to complete Project activities.
- Portions of the bank of Little Chico Creek disturbed by construction activities will be restored to a pre-construction condition.
- An erosion control plan that incorporates erosion control BMPs shall be created and implemented prior to the wet season (November 1 – April 15) in order to avoid sediment from entering into WOTUS.
- All fueling and/or equipment maintenance shall occur 50 feet from all water bodies and riparian areas. Any chemical spill within the active channel of the Little Chico Creek will be reported to NMFS, CDFW, and other appropriate resource agencies within 48 hours.
- A spill prevention plan (SPP) and storm water pollution prevention plan (SWPPP) shall be developed and implemented by the contractor. Spill prevention measures will include stockpiling absorbent booms, staging hazardous materials at least 50 feet away from WOTUS, and maintaining and checking construction equipment to prevent fuel and lubrication leaks. SWPPP measures will utilize applicable BMPs such as use of silt fences, straw bales, and other methods necessary to minimize storm water discharge associated with construction activities.

- The contractor should have absorbent booms available within 50 feet of the live channel during all in channel work to be further prepared for quick containment of any spills within or adjacent to Little Chico Creek.

Additionally, prior to any vegetation- or ground-disturbing activities associated with the construction of the bridge over Little Chico Creek, the applicant shall compensate for impacts to CCV steelhead critical habitat and Chinook salmon EFH as determined through consultation with NMFS. The applicant shall purchase salmonid habitat preservation and creation credits at an approved mitigation bank as defined by the NMFS Biological Opinion.

MITIGATION MONITORING D.1.: Public Works staff shall document the final purchase of required mitigation credits, or other method of compensatory mitigation documenting relief thereof, prior to commencement of construction activities. Public Works staff and contractor shall ensure avoidance and minimization measures are implemented through ongoing site inspections and monitoring.

MITIGATION D.2. (Valley Elderberry Longhorn Beetle):
Prior to any ground-disturbing activities, the applicant shall determine if the elderberry shrub will need to be removed or if design and construction activities can avoid direct impacts. If the final design requires removal of the elderberry shrub, the applicant shall compensate for direct impacts to approximately 0.05 acres of riparian habitat that may support VELB. The final amounts of impacts and mitigation will be determined through the federal Endangered Species Act section 7 consultation process. The applicant shall purchase credits at an approved mitigation bank as defined by the USFWS Biological Opinion.

If direct impacts to elderberry bushes can be avoided, the following measures, when implemented, will avoid and minimize impacts to VELB:

- Fencing. All areas to be avoided during construction activities will be fenced and/or flagged as close to construction limits as feasible.
- Avoidance area. Activities that may damage or kill an elderberry shrub (e.g., trenching, paving, etc.) may need an avoidance area of at least 6 meters (20 feet) from the drip-line, depending on the type of activity.
- Worker education. A qualified biologist will provide training for all contractors, work crews, and any onsite personnel on the status of the VELB, its host plant and habitat, the need to avoid damaging the elderberry shrubs, and the possible penalties for noncompliance.
- Construction monitoring. A qualified biologist will monitor the work area at project-appropriate intervals to assure that all avoidance and minimization measures are implemented. The amount and duration of monitoring will depend on Project specifics and should be discussed with the USFWS.
- Timing. As much as feasible, all activities that could occur within 50 meters (165 feet) of an elderberry shrub, will be conducted outside of the flight season of the VELB (March - July).
- Trimming. Trimming may remove or destroy VELB eggs and/or larvae and may reduce the health and vigor of the elderberry shrub. In order to avoid and minimize adverse effects to VELB when trimming, trimming will occur between November and February and will avoid the removal of any branches or stems that are ≥ 1 inch in diameter.
- Mowing. Mechanical weed removal within the drip-line of the shrub will be limited to the season when adults are not active (August - February) and will avoid damaging the elderberry.

MITIGATION MONITORING D.2: Public Works staff shall document the final purchase of required mitigation credits, or other methods of mitigation documenting relief thereof, prior to commencement of construction activities. Public Works staff and contractor shall ensure avoidance and minimization measures are implemented through ongoing site inspections and monitoring.

MITIGATION D.3 (Biological Resources):
No later than 48 hours prior to any ground disturbance, pre-construction surveys will be conducted by a qualified biologist within the Project limits for western pond turtle and western spadefoot. If a pond turtle or western spadefoot is observed in the Project limits during construction, all work will be stopped, and the turtle or western spadefoot will:

1. be allowed to leave on its own volition, or
2. be moved by the Project biologist in the direction it was heading, at a safe distance from the grading activities, and at a safe location.

The biologist will report observations and relocations to the City.

MITIGATION MONITORING D.3: Public Works staff will require final copies of the pre-construction surveys for western pond turtle and western spadefoot, prior to issuance of any grading or other permits that will result in disturbances to the site. Should the species occur on the Project site a qualified biologist shall be retained on-site during ground-disturbance.

MITIGATION D.4. (Pallid Bat):
To minimize impacts to pallid bats, mature trees identified for removal shall be removed between September 16 and March 15, outside of the bat maternity season. Trees shall be removed at dusk to minimize impacts to roosting bats that may be utilizing the mature trees.

MITIGATION MONITORING D.4: Public Works staff will ensure that tree removal is conducted during the appropriate time of year and after dusk.

MITIGATION D.5. (Nesting Migratory Birds and Raptors):
If vegetation removal or initial ground disturbances occur during the avian breeding season (February 1 – August 31) the applicant shall hire a qualified biologist to conduct a nesting migratory bird and raptor survey to identify any active nests within 50 feet of the BSA. A qualified biologist shall:

- Conduct a pre-construction survey for nesting migratory birds and raptors within 7 days prior to the initiation of Project activities, and map all active nests located within 50 feet of proposed construction areas.
- Develop buffer zones around active nests as recommended by a qualified biologist. Construction activity shall be prohibited within the buffer zones until the young have fledged or the nest fails.
- If construction activities stop for more than 15 days, then another migratory bird and raptor survey shall be conducted within seven (7) days prior to the continuation of construction activities.

MITIGATION MONITORING D.5.: If Project activities are proposed to be conducted during the avian breeding season, Public Works staff will require final copies of the required surveys documenting relief thereof, prior to disturbances to the site. If active nests are encountered, the qualified biologist shall determine appropriate species protections buffers around active nests based on the species tolerance of disturbance, species type, nest location, and activities that will be conducted near the nest. Construction activities shall be prohibited within the buffer zones until the young have fledged or the nest fails. Active nests shall be monitored once per week, or as necessary, and a report submitted to the City of Chico Public Works Department weekly or as necessary.

MITIGATION D.6. (Aquatic and Biological Resources):
Prior to commencing construction, the City shall have available the final copies of the permits and authorizations required by the USACE, USFWS, NMFS, California Regional Water Quality Control Board, CDFW, and the Central Valley Flood Protection Board or copies of relevant correspondence documenting that no permit is required, as applicable.

Approximately 0.02 acres of permanent impacts and 0.09 acres of temporary impacts to other waters are anticipated. Impacts to jurisdictional Waters of the U.S. and the State will be compensated through the CWA §404 and §401 permitting process and mitigation requirements.

MITIGATION MONITORING D.6.: Public Works staff will require final copies of the required permits or letters documenting relief thereof, prior to the commencement of construction.

MITIGATION D.7. (Riparian Restoration):
In order to mitigate the removal of riparian vegetation one of the two following options shall be implemented:

1. At least 90 days prior to commencing project activities, the Project proponent shall provide to CDFW for review and approval a Mitigation Plan (Mitigation Plan) to mitigate for the permanent loss of riparian and streambed habitat. The Mitigation Plan shall outline how the Project proponent will mitigate for the permanent loss of riparian and streambed habitat at a 3:1 ratio of created, enhanced, or restored riparian habitat along Little Chico Creek or 6:1 ratio of habitat outside the Little Creek watershed. A combination of the three methods may be utilized if

deemed appropriate by CDFW. For the purposes of the restoration plan, created habitat includes establishment of riparian vegetation in an area that currently lacks that habitat type; enhanced habitat includes targeted actions such as debris removal or invasive species control; and restored habitat includes planting or reseeding of vegetation in previously disturbed areas. For the purposes of the restoration plan, acreage of enhancement activities shall be considered at half the amount of created or restored habitat (i.e., If the Project proponent chooses exclusively enhancement, 6:1 ratio shall be required along Little Chico Creek or 12:1 ratio outside of the Little Chico Creek watershed). The Mitigation Plan shall describe the habitat values of the mitigation proposal, the success criteria, contingency measures, and describe the improvement of ecosystem function upon implementation.

2. Off-site mitigation may occur at a CDFW-approved mitigation bank by way of purchasing credits at a 3:1 ratio of like-kind tree species. The bill of sale and payment receipt shall be submitted to CDFW no later than 30 days prior to starting any construction activities.

MITIGATION MONITORING D.7: Public Works staff will ensure that either on-site restoration or the purchase of mitigation credits is implemented and completed.

E. Cultural Resources Would the Project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
1. Cause a substantial adverse change in the significance of a historical resource pursuant to § 15064.5?		X		
2. Cause a substantial adverse change in the significance of an archaeological resource pursuant to § 15064.5?		X		
3. Disturb any human remains, including those interred outside of dedicated cemeteries?		X		

DISCUSSION:

E.1.–E.3. Less Than Significant with Mitigation Incorporated. In prehistoric times, Little Chico Creek, which flows northeast to southwest through the present Area of Potential Effect (APE), was a significant surface water source that made possible relatively intensive occupation during all prehistoric phases as well as the early historic time period. A number of ecotones and microenvironments are represented along this Creek (Klaseen and Ellison 1974), which prior to modern development created a complex mosaic of vegetation and dependent fauna. An oak/grassland community once dominated the area, with native flora at one time including gray pine (*Pinus sabiniana*), buckeye (*Aesculus californica*), valley oak (*Quercus lobata*), interior live oak (*Quercus wislizenii*), blue oak (*Quercus douglasii*), buckbrush (*Ceanothus* sp.) and manzanita (*Arctostaphylos* sp.), redbud (*Cercis occidentalis*), poison oak (*Toxicodendron diversiloba*), toyon (*Heteromeles arbutifolia*), yerba santa (*Eriodictyon* sp.), sycamore (*Platanus racemosa*), willow (*Salix* sp.), and a variety of annual grasses and forbs dominating the wetter areas along Little Chico Creek and its overflow channels.

Overall and based upon map review and the results of previous archaeological surveys in the vicinity, the Project area appeared to contain lands high in archaeological sensitivity for both prehistoric and historic-period sites and features.

Genesis Society prepared a Cultural Resources Inventory Survey (CRIS) and Historic Properties Survey Report (HPSR) in March 2021 for the proposed Project (**Appendix C**). In support of the CRIS, Genesis Society staff conducted an archival record search, consultations, and an archaeological field survey in order to identify the cultural resources occurring, or potentially occurring, in the Project area. The record search included a review of the data housed at the Northeast Information Center (NEIC) at CSU, Chico and a Sacred Lands search with the Native American Heritage Commission (NAHC). The consultation involved potentially interested local Native American groups, as identified by the NAHC. As identified in the CRIS, the record search, consultations and field survey produced the following results:

Record Search: Prior to conducting the pedestrian field survey, the official Butte County archaeological records maintained by the Northeast Information Center were examined for any existing recorded prehistoric or historic sites (I.C. File # D21-22, dated 02/15/2021). The records search area was established at 1/4-mile radius of the Project site.

According to the Information Center, the entire APE has been subjected to some degree of cultural resources investigation. As well, the entire 0.25-mile search radius has been subjected to cultural resources investigation efforts. As a result, no sites have been documented within the APE. However, three resources (P-04-000565, P-04-001072, and P-04-001456) have been documented within the 0.25-mile search radius. All three sites had been previously subjected to subsurface testing, and NHPA Section 106 evaluations, and all were previously recommended not eligible for the National Register of Historic Places (NRHP) or the California Register of Historical Resources (CRHR).

No prehistoric or historic-era sites have been recorded or otherwise identified within the Project site boundary on records maintained at the NEIC. Additionally, no prehistoric sites, traditional use areas or other cultural issues of concern have been identified by the Native American groups and individuals contacted. The Native American Heritage Commission (NAHC) has no record of Sacred Land listings within, adjacent or close to the Project area. The data file and determinations of effect for the Office of

Historic Preservation also failed to document resources in the Project. Lastly, the California Inventory and Historic and General Land Office (GLO) maps failed to identify potential historic resources within the APE.

Consultation with Interested Parties: The NAHC identified no sacred lands within the Project area (response dated 03/09/2021). The NAHC provided contact information for local Native American parties that may have an interest in the Project site for additional consultation. Letters were delivered on March 12, 2021 to all representatives on the NAHC contact list, and all those contacted were requested to supply any information they might have concerning prehistoric sites or traditional use areas within, adjacent or near the Project area. To date, no responses have been received from the contacted parties. Since no prehistoric sites were identified within the APE, no additional consultation was undertaken.

Field Survey: The field survey, conducted per CEQA and NHPA standards, identified no potentially significant cultural resources (prehistoric or historic) within the Project site. No archaeological resources were identified within or immediately adjacent to the Project site.

Disturbance to the ground surface, within the APE, ranges from moderate to substantial. The Project APE straddles Little Chico Creek and includes terminal ends of Notre Dame Boulevard. Substantial grading and land recontouring activities have been undertaken along these existing road corridor elements, and adjacent residential developments have contributed to the immediate area's high level of disturbance. Buried utilities were observed throughout the APE, and the City of Chico's recreational path was observed trending generally northwest-southeast through the APE, a short distance south of Little Chico Creek.

Examination of the variously sourced map materials for the APE provided a relatively clear history of the property over the past century. Most of the above-referenced disturbances appear to have been undertaken after 1998 and 2005. While these photographic and map sources depict structures and buildings associated with the Chico Slaughterhouse site (P-04- 001456), no evidence of structures or buildings appear within the APE on any of the examined aerials or quadrangles.

Excavation depths for roadway reconstruction and associated utilities are anticipated to be up to 7 feet. For the bridge structure, a maximum excavation depth of 7 feet will be required to install abutment supports, which are anticipated to be Cast-In-Drilled-Hole (CIDH) piles.

The overall finding for this study is that no historic properties recognized under Section 106, no historical resources recognized under CEQA and no unique archaeological resources were identified within the Project Area; therefore, no historic properties/historical resources would be affected by the proposed Project. However, there is always a possibility of unearthing an archaeological site during ground-disturbing activities.

Therefore, in accordance with the intent of 'Memorandum of Understanding Regarding Principles for the City of Chico Consultation with the Mechoopda Indian Tribe of Chico Rancheria' dated August 8, 2008, and in the event that resources are inadvertently discovered, implementation of Mitigation Measures E.1. and R.1. (see Section R. Tribal Cultural Resources) will mitigate potential impacts to a level considered **less than significant with mitigation incorporated.**

MITIGATION:

MITIGATION E.1. (Cultural Resources): If any bones, pottery fragments or other potential cultural resources are encountered during construction, all work shall cease within the area of the find equivalent to a 25-foot radius around the materials (100 feet for human remains) pending an examination of the site and materials by a professional archaeologist. If during ground disturbing activities, any bones, pottery fragments or other potential cultural resources are encountered, the developer or their supervising contractor shall cease all work within 25 feet of the materials and notify City of Chico Public Works staff at (530) 879-6900. A professional archaeologist who meets the Secretary of the Interior's Professional Qualification Standards for prehistoric and historic archaeology and who is familiar with the archaeological record of Butte County, shall be retained by the City of Chico to evaluate the significance of the find. Further, City Public Works staff shall notify the local tribe(s) on the consultation list maintained by the State of California Native American Heritage Commission to provide local tribes the opportunity to monitor evaluation of the site. Site work shall not resume until the archaeologist conducts

sufficient research, testing and analysis of the archaeological evidence to make a determination that the resource is either not cultural in origin or not potentially significant. If a potentially significant resource is encountered, the archaeologist shall prepare a mitigation plan for review and approval by the City of Chico Public Works Department, including recommendations for total data recovery, Tribal monitoring, disposition protocol, or avoidance, if applicable. All measures determined by the City of Chico to be appropriate shall be implemented pursuant to the terms of the archaeologist's report. The preceding requirement shall be incorporated into construction contracts and plans to ensure contractor knowledge and responsibility for proper implementation.

MITIGATION MONITORING E.1: Public Works staff will verify that the above wording is included in the construction specifications. Should cultural resources be encountered, the supervising contractor shall be responsible for reporting any such findings to Public Works staff, and contacting a professional archaeologist, in consultation with Public Works staff, to evaluate the find.

MITIGATION E.2. (Tribal Monitor): The City's contractor shall facilitate the presence of a Mechoopda Indian Tribal Monitor during all earth moving and ground disturbing activities. This includes, providing the contractor's contact information for the purpose of providing direct information to the Tribal Monitor regarding project scheduling and safety protocol, as well as project scope, location of construction areas, and nature of work to be performed. The determination to be present for any, some, or all construction activities shall be at the discretion of the Tribal Monitor.

MITIGATION MONITORING E.2.: Public Works staff will require and verify that the contractor provides the above information to the Mechoopda Tribal Monitor upon construction contract execution.

F. Energy Would the Project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
1. Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?				X
2. Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?				X

DISCUSSION:

F.1.–F.2. No Impact. All construction equipment would be regulated per the California Air Resources Board (CARB) In-Use Off-Road Diesel Vehicle Regulation. CARB standards for construction equipment includes measures to reduce emissions from vehicles by subjecting fleet owners to retrofit or accelerated replacement/repower requirements and imposing idling limitations on owners, operators, renters, or lessees of off-road diesel vehicles, thereby having a secondary benefit of reducing energy consumption during construction activities.

Project construction would also be required to comply with all applicable BCAQMD rules and regulations. The Project would be required to comply with all applicable standards and regulations regarding energy conservation and fuel efficiency, which would ensure that the future activities would be energy efficient to the maximum extent practicable. The Project would not be considered to result in a wasteful, inefficient, or unnecessary use of energy. The proposed Project would not conflict with a state or local plan for renewable energy or energy efficiency. There will be **no impact** with regard to energy resources.

MITIGATION: None required.

G. Geology/Soils Would the Project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
1. Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:			X	
a. Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.			X	
b. Strong seismic ground shaking?			X	
c. Seismic-related ground failure, including liquefaction?			X	
d. Landslides?			X	
2. Result in substantial soil erosion or the loss of topsoil?			X	
3. Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the Project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?			X	
4. Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?			X	
5. Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater, or is otherwise not consistent with the Chico Nitrate Action Plan or policies for sewer service control?				X
6. Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?		X		

G.1. Less Than Significant Impact. The City of Chico is located in one of the least active seismic regions in California. Currently, there are no designated Alquist-Priolo Special Studies Zones within the Chico Planning Area, nor are there any known or inferred active faults. Thus, the potential for ground rupture within the Chico area is considered very low. The Project would result in No Impact as there are no known earthquake faults within the Chico Planning Area.

As there are no known faults in the Project area, the rupture of a known fault would, at most, result in a seismic ground-shaking event on the Project site. The bridge will be built to current American

Association of State Highway Transportation Officials (AASHTO), Caltrans Seismic Design Criteria (SDC) and current releases to the Caltrans Bridge Memo to Designers (MTD) criteria.

Under existing regulations, all future structures will incorporate AASHTO, SDC, and MTD standards into the design and construction that are designed to minimize potential impacts associated with strong ground-shaking during an earthquake. Therefore, the Project would result in a **less than significant impact**.

The Project site is not located in an area of sloping topography that would result in a landslide risk. Potential soil instability in and around the channel of Little Chico Creek would not result in potentially significant impacts through the incorporation of appropriate development standards and adherence to all necessary permits and certifications. Therefore, the Project would result in a **less than significant impact**.

G.2.-G.4. Less Than Significant Impact. Development of the site will be subject to the City's Design Criteria and Improvement Standards (CMC §18R). The proposed Project would be required to incorporate site-specific and City-wide measures, as identified in the grading standards defined in the CBC, which describe appropriate measures used to reduce potential impacts resulting from unstable soils and soil shrink-swell. All projects disturbing greater than one acre must comply with and obtain coverage under the applicable National Pollution Discharge Elimination Permit (NPDES) from the California Regional Water Quality Control Board (CRWQCB) per §402 of the Clean Water Act. The proponent will be required to prepare and implement Storm Water Pollution Prevention Plan (SWPPP) pursuant to Regional Water Quality Control Board (RWQCB) requirements. The SWPPP would require site specific, detailed measures to be incorporated into grading plans to control erosion and sedimentation. Furthermore, the City and the Butte County Air Quality Management District require implementation of all applicable fugitive dust control measures, which further reduces the potential for construction-generated erosions

Therefore, prior to grading, the City would ensure that the proposed Project has incorporated appropriate, site-specific construction and design standards per CMC §18R Design Criteria and Improvement Standards. As a result, potential future impacts relating to geology and soils are considered to be **less than significant.**

G.5. No Impact. No septic tanks, sewer, or alternative wastewater disposal systems are proposed for the subject property. The Project will result in **no impact** relative to policies governing sewer service control.

G.6. Less Than Significant with Mitigation Incorporated. The Project is not anticipated to cause a substantial adverse change in the significance, directly or indirectly destroy a unique paleontological resource or site, geological feature, or unique geological feature. Due to the developed character of the site, the potential to encounter surface-level paleontological resources is considered low. However, there is the potential for accidental discovery of paleontological resources. In the event that resources are inadvertently discovered, implementation of Mitigation E.1. would reduce impacts to a less-than-significant level. See Impact E.1. Tribal Cultural Resources for mitigation measure specifics. Therefore, impacts would be considered **less than significant with mitigation incorporated.**

MITIGATION: Mitigation E.1. (Cultural Resources)

H. Greenhouse Gas Emissions Would the Project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
1. Generate greenhouse gas (GHG) emissions, either directly or indirectly, that may have a significant impact on the environment?			X	
2. Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?			X	

DISCUSSION:

H.1-H.2. Less Than Significant Impact. In 2012, the Chico City Council adopted a Climate Action Plan (CAP) which sets forth objectives and actions that will be undertaken to meet the City's greenhouse gas (GHG) emission reduction targets. In 2021 the Chico City Council adopted a Climate Action Plan Update which sets emission reduction targets of 40 percent below 1990 levels by the year 2030. This target is consistent with the State Global Warming Solutions Act of 2006 (AB 32, Health & Safety Code, Section 38501[a]).

Development and implementation of the CAP are directed by a number of goals, policies and actions in the City's General Plan (SUS-6, SUS-6.1, SUS-6.2, SUS-6.2.1, SUS-6.2.2, SUS-6.2.3, S-1.2 and OS-4.3). Growth and development assumptions used for the CAP are consistent with the level of development anticipated in the General Plan EIR. The actions in the CAP, in most cases, mirror adopted General Plan policies calling for energy efficiency, water conservation, waste minimization and diversion, reduction of vehicle miles traveled, and preservation of open space and sensitive habitat.

BCAG's 2020 RTP/SCS demonstrated that a 6 percent reduction will be achieved by 2020 and a 7 percent reduction will be achieved by 2035 (BCAG 2020). GHG emissions associated with the RTP/SCS, including those projects identified in the RTP/SCS, would therefore be less than significant.

As discussed in Section C. (Air Quality), the proposed Project is listed in the 2020 RTP/SCS. The design concept and scope of the proposed Project is consistent with the Project description in both documents. Since the proposed Project is identified and consistent with BCAG's 2020 RTP/SCS, which was found to have a less-than-significant GHG impact, project-level GHG emissions would be consistent with SB 375.

Chico's CAP, in conjunction with the General Plan, meets the State criteria for tiering and streamlining the analysis of GHG emissions in subsequent CEQA project evaluation. Therefore, to the extent that a development project is consistent with CAP requirements, potential impacts with regard to GHG emissions for that project are considered to be **less than significant**.

MITIGATION: None required.

I. Hazards and Hazardous Materials Would the Project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
1. Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?			X	
2. Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?			X	
3. Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?			X	
4. Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?				X
5. For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area?				X
6. Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?				X
7. Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?				X

DISCUSSION:

A review of the Department of Toxic Substances Control's EnviroStor mapping database did not identify any known sites or facilities being tracked for cleanup, permitting, enforcement or investigation efforts within or adjacent to the Project site. The EIR prepared for the Meriam Park Development, which includes the land on which the proposed Project is being developed, identified no hazardous material incidents or releases with potential to significantly impact the site of the proposed Project.

I.1. Less Than Significant Impact. The Project will not create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials. Hazardous materials will be used during construction activities (e.g., equipment maintenance, fuel, solvents, roadway resurfacing and re-striping materials). However, all hazardous material use would be required to comply with all applicable local, state, and federal standards associated with the handling and storage of hazardous materials. Use of hazardous materials in accordance with applicable standards ensures that any exposure of the public to hazard materials would result in a **less than significant impact**.

I.2. Less Than Significant Impact. Construction activities associated with the Project would include refueling and minor onsite maintenance of construction equipment, which could lead to minor fuel and oil spills. The release of hazardous materials into the environment is regulated through existing federal, state, and county laws. These regulations require emergency response from local agencies to contain hazardous materials. The Butte County Interagency Hazardous Materials Team responds to hazardous materials emergencies in the Project area. The use and handling of hazardous materials during construction activities would occur in accordance with applicable federal, state, and local laws including California Occupational Health and Safety Administration (CalOSHA) requirements, therefore there will be a **less than significant impact.**

I.3. Less Than Significant Impact. The nearest schools, Marsh Junior High School and Little Chico Creek Elementary, are located 800 feet and 500 feet respectively away from the Project site respectively. As described in I.2. the use and handling of hazardous materials during construction activities would occur in accordance with applicable federal, state, and local laws including California Occupational Health and Safety Administration (CalOSHA) requirements. There are existing roadways in the vicinity of the Project and the existing schools that would have a similar risk of potential hazardous materials emissions and handling. Since the proposed Project involves the construction of a bridge, the activities are not expected to emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste that would affect the school population either during construction or operation therefore there will be a **less than significant impact.**

I.4. No Impact. The Project site is not included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 (Cortese List); therefore, there will be **no impact**.

I.5. No Impact. The Project site is not located within 2 miles of a public airport, private airport or public use airport and will not result in a safety hazard or excessive noise; therefore, there will be **no impact**.

I.6. No Impact. Development of the proposed Project would neither hinder the implementation, nor physically interfere with, emergency response or evacuation plans. Street designs and improvements will be adequate for ingress and egress of emergency response vehicles. The proposed Project is considered to have **no impact.**

I.7. No Impact. The Project site is not located in an area of high sensitivity to wildland fire risks per the California Fire Hazard Severity Zone Viewer. No buildings or dwelling units are proposed as part of the proposed Project, therefore there is **no impact**.

MITIGATION: None required.

J. Hydrology/ Water Quality Would the Project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
1. Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?		X		
2. Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the Project may impede sustainable groundwater management of the basin?				X
3. Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:			X	
a. result in substantial erosion or siltation on- or off-site;			X	
b. substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite;			X	
c. create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or			X	
d. impede or redirect flood flows?			X	
4. In flood hazard, tsunami, or seiche zones, risk release of pollutants due to Project inundation?			X	
5. Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?			X	

DISCUSSION:

The Project site is situated in the floodplain of Little Chico Creek and within the Butte Creek watershed. Little Chico Creek, in the area of the Project site, is listed as a regulated stream per the CCR Title 23 §112.

The Project site is located on Flood Insurance Rate Map (FIRM) 06007C0506E. The Project area is located in a Zone AE (Flood Depths of 1 to 3 feet/1% Annual Chance Flood Hazard).

A Hydraulic Study Report was developed by NorthStar Inc. for the proposed Project (**Appendix D**). The Hydraulic Study Report is based on HEC-RAS hydraulic modeling and analysis which estimated the water surface elevation (WSE) for the existing and proposed site conditions (without and with proposed bridge).

Results indicate that after construction of the new bridge, the WSE elevation will be slightly increased upstream due to the installation of the proposed structure and the accompanying slight decrease in channel width. The existing WSE is 249.79', and the WSE after installation is 250.16; an increase of 0.37' is expected.

Additionally, the proposed bridge structure is estimated to meet the freeboard requirement of three (3) feet above the design floodplain at an estimated 200-year discharge. This satisfies the CVFPB and City of Chico freeboard requirements for bridge structures.

J.1. Less Than Significant Impact With Mitigation. The new bridge over Little Chico Creek will include excavation for and construction of concrete abutments and piers, founded on either spread footings or deep foundation. Other temporary work within Little Chico Creek includes falsework erection and removal, and installation of scour countermeasures (RSP) at the support locations below the ordinary high-water mark of the creek. Under existing State regulations, the Project proponent is required to obtain a water quality certification or waiver from the Central Valley RWQCB. Through the RWQCB permitting process (refer to Mitigation D.6), the Project will be required to avoid, minimize, and/or compensate for potential discharges into regulated waterways based on a detailed review of the bridge construction techniques.

Existing State permitting requirements by the RWQCB will ensure that the Project will not result in the violation of any water quality standards or waste discharge requirements. Due to the scope and nature of the proposed Project it is not expected that the Project would degrade ground water quality. With these standard permitting and water quality requirements in place, potential impacts to water quality from the Project are considered to be **less than significant with mitigation**.

J.2. No Impact. There would be no new sources of groundwater extraction. The Project will not interfere substantially with groundwater recharge nor impede sustainable groundwater management of the basin.

J.3 (a)–(d) Less Than Significant Impact. The Project would not alter the existing drainage patterns at the site, result in substantial erosion or siltation on- or off-site, nor create excessive runoff because prior to construction the Project would have to demonstrate compliance with City/State post-construction storm water management requirements including the General Construction Permit requirements of the NPDES, as well as, the preparation of a SWPPP that incorporates water quality control BMPs.

With the application of the existing regulations outlined above, the Project will not substantially degrade water quality drainage systems or provide substantial additional sources of polluted runoff. Under existing City/State requirements for the Project to implement BMPs and incorporate LID design standards, storm water impacts from anticipated future construction and operation of the Project would be **less than significant**.

J.4. Less Than Significant Impact. According to the Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map No. 06007C0506E, the Project site is located in Zone AE, a Special Flood Hazard Area subject to inundation by the 1% annual chance flood. Project activities will occur during the dry season when Little Chico Creek is not flowing, and it is extremely unlikely that flooding will occur. The Project site is not located in an area that is prone to seiche or tsunami. Risks associated with inundation and the release of pollutants by seiche or tsunami, would not occur beyond existing conditions. This is considered a **less than significant impact.**

J.5. Less than Significant Impact. The Project is not expected to substantially degrade water quality with the implementation of the SWPPP and BMPs. The Project will not conflict or obstruct implementation of a water quality control plan or sustainable groundwater management plan. The impact to water quality will be **less than significant.**

MITIGATION:

MITIGATION D.6 (Biological Resources)

MITIGATION J.1. (Hydrology): Prior to grading and ground-disturbance, the applicant shall consult with the Central Valley Flood Protection Board to confirm the need to obtain an Encroachment Permit

for the proposed Project. Public Works staff shall ensure the acquisition of the permit and compliance with any design and measures to minimize environmental impacts as a result of the Project.

MITIGATION MONITORING J.1: Public Works staff will require final copies of the required permits or letters documenting relief thereof, prior to issuance of any grading or other permits that will result in disturbances to the site. Copies of all permits will be delivered to applicant's contractor prior to commencing work and will be required to be on-site at all times.

K. Land Use and Planning Would the Project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
1. Physically divide an established community?				X
2. Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?				X

DISCUSSION:

K.1. No Impact. The Project will not physically divide an established community. The proposed Project will promote community connectivity by providing a connection to two areas of Notre Dame Boulevard that are currently discontinuous. Therefore, the Project is anticipated to have **no impact**.

K.2. No Impact. The Project implements General Plan goals and policies which strive to enhance community connectivity and improve public safety and access. The Project is also identified in the Butte County Regional Transportation Plan. There will be no conflicts with land use plans, policies or regulations adopted for the purpose of avoiding or mitigating an environmental effect. This is considered **no impact.**

MITIGATION: None required.

L. Mineral Resources Would the Project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
1. Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?				X
2. Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?				X

DISCUSSION:

L.1-L.2. No Impact. There are no active mines and no known areas with mineral resource deposits within the Chico Planning Area, although historically several areas along Butte Creek were mined for gold, sand, and gravel. The majority of the closest mining operations are located to the southeast, outside of the Chico Planning Area (City of Chico 2011b). The Project would not result in the loss of availability of a known mineral resource or mineral resource recovery site. Mineral resources are not associated with the Project or located on the Project site. Therefore, the Project would have **no impact** on mineral resources.

MITIGATION: None required.

M. Noise Would the Project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
1. Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?		X		
2. Generation of excessive groundborne vibration or groundborne noise levels?		X		
3. For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?				X

DISCUSSION:

A Noise and Vibration Technical Report was conducted by ICF in April 2022 (**Appendix E**). The report evaluated the impacts of noise and vibration from construction and operation of the Project according to City of Chico standards. Additionally, a field investigation was conducted to identify existing land uses sensitive to traffic and construction noise impacts. Land uses in the Project area were categorized by land use type and the extent of frequent human use. For this Project, the potentially affected noise-sensitive uses with defined outdoor activity areas consist of single- and multi-family residences, parks, Little Chico Creek Elementary, and Marsh Junior High School.

The Project is surrounded by developed and built-up urban land. The ambient noise in the Project area is generated primarily by vehicles traveling on Notre Dame Boulevard.

The magnitude of sound, whether wanted or unwanted, is usually described by sound pressure (a dynamic variation in atmospheric pressure). The human auditory system is sensitive to fluctuations in air pressure above and below the barometric static pressure. These fluctuations are defined as sound when the human ear is able to detect pressure changes within the audible frequency range.

To better accommodate and assess the varying noise levels typically associated with traffic patterns, a time-averaged, single-number descriptor known as the "Level equivalent" (Leq) is frequently employed. The Leq, expressed in decibels (dB), represents the average energy content of sounds over a specified time. The A weighting filter (dBA) is commonly used to create a scale more compatible with human perceptions of sound. It includes both steady background sounds, transient, and short-term sounds. It represents the level of a steady sound which, when averaged over the sampling period, is equivalent in energy to the time-varying (fluctuating) sound level over the same period.

The table below (Table 5) shows typical equipment noise levels for various construction equipment and activities, including measured sound levels at a distance of 50 and 100 feet from the source. Noise sources associated with Project construction would include excavation, construction truck traffic, and other noises typically associated with a construction site.

Table 5. Construction Equipment Noise Levels

Equipment	Typical Noise Level (dBA) 50 Feet from Source	Typical Noise Level (dBA) 100 Feet from Source
Impact Pile Driver	101	95
Vibratory Pile Driver	96	90
Auger Drill Rig (for drilled piles)	85	79
Crane	83	77
Heavy Truck	84	78
Excavator	85	79
Bulldozer	85	79
Pump	81	75
Generator	81	75
Air compressor	80	74
Cement Mixer	80	74
Grader	85	79
Compactor	82	76
Scraper	89	83
Backhoe	85	79
Loader	84	78

Source: (ICF, 2022)

The Project site is not within any airport land use plans. The Chico Airport is located approximately 5.3 miles north of the Project site and the private Ranchaero Airport is located 4.2 miles to the west.

M.1-M.2. Less Than Significant Impact With Mitigation. During the construction phases of the Project, noise from construction activities will intermittently dominate the noise environment in the immediate area. Construction noise is regulated by state and county regulations, which include California Building Code (CBC) standards for construction-generated noise attenuation and Caltrans Standard Specifications Section 14-8.02, "Noise Control". Noise levels generated during construction must comply with applicable local, state, and federal regulations. Adherence to existing noise attenuation standards would ensure construction-generated noise impacts that are less than significant.

The proposed Project will construct a new two-lane bridge across Little Chico Creek connecting the existing sections of Notre Dame Boulevard. Temporary or periodic noise levels may be increased in the area during Project construction. Construction activities would be required to adhere to all applicable noise standards, such as proper equipment maintenance and limiting the hours of noise-generating activities to normal working hours.

Project construction would generate noise that could affect sensitive receptors within the Project vicinity. The FHWA defines a noise sensitive receptor as a property where frequent outside human use occurs and where a lowered noise level would be beneficial.

The City of Chico's Noise Ordinance contained in Chapter 9.38 of the City's Municipal Code states, "…no person shall produce, suffer or allow to be produced on public property by human voice, machine, animal, or device, or any combination of same, a noise level that exceeds sixty (60) dBA at a distance of 25 feet or more from the source." Per Section 9.38.060, construction-related source noise is exempt from the provisions set forth in the noise ordinance except (i) the construction-related noise must not exceed 86 dBA at any point outside of the property plane of the Project; and (ii) construction noise generating activities are restricted to the hours of 7:00 a.m. to 9:00 p.m., Monday through Saturday and 10:00 a.m. to 6:00 p.m. on Sunday and holidays.

Noise levels during Project operation were modeled at a level of 65 dBA CNEL and are equal to the City's maximum allowable noise standard for residential areas. As such, operational traffic noise levels from the Project under both near-term and future year conditions would be considered compatible with residential use. Therefore, operation of the project would not expose persons to noise levels that exceed standards established in the City of Chico 2030 General Plan.

Construction equipment used during the bridge construction would produce maximum noise levels of up to 95 dBA at the nearest receptors located to the southwest and northeast of the new bridge abutment locations, each at a distance of about 100 feet away. During bridge construction, the two loudest pieces of equipment that may operate at one time would be a bulldozer and an excavator, with a combined noise level of 82 dBA at 100 feet. Based on this information, individual pieces of construction noise may potentially exceed the city limit of 83 dBA at 25 feet. Noise levels during construction are also expected to exceed the city limit of 86 dBA along the property plane of apartment units with frontage along Notre Dame Boulevard on an intermittent basis. However, construction noise at the bridge would be short term, and would vary as construction equipment used to build the bridge would progress over time from one end of the bridge location to the other end. Heavy equipment noise from construction of the bridge would be a temporary effect, ceasing once work is complete. Mitigation Measure M.1. is provided to implement minimization and avoidance measures with respect to potential construction related noise impacts. With the implementation of Mitigation Measure M.1. potential impacts are considered **less than significant impact with mitigation incorporated**.

M.3. No Impact. The Project site is located 4.2 miles east of Ranchaero Airport, a private airport. The Project site is not located within 4 miles of a public airport or public use airport and people within the project site would not be exposed to excessive noise levels generated by airports or airstrips, beyond what they already experience. The proposed Project would result in **no impact.**

MITIGATION:

MITIGATION M.1. (Noise): To avoid substantial construction-period noise impacts to nearby sensitive receptors, the best practices listed below will be included during Project construction.

1. Use of heavy equipment shall be limited to hours allowed by the City: 7:00 a.m. to 9:00 p.m. Monday to Saturday, and 10:00 a.m. to 6:00 p.m. on Sunday.
2. Stationary equipment (e.g., generators, compressors, cement mixers, idling trucks) shall be located as far as possible from noise-sensitive land uses.
3. Construction equipment powered by gasoline or diesel engines shall be required to have sound control devices that are at least as effective as those originally provided by the manufacturer; all equipment shall be operated and maintained to minimize noise generation.
4. Excessive noise shall be prevented by shutting down idle vehicles or equipment.
5. Noise-reducing enclosures shall be used around noise-generating equipment.
6. Adjacent residents shall be notified in advance of construction work.

MITIGATION MONITORING M.1: The Resident Engineer shall be responsible for ensuring that construction-related noise-generating activities at, or adjacent to, the construction site shall comply with the Chico Municipal Code and all guidelines set forth in Mitigation M.1. Public Works staff shall ensure a Noise Disturbance Coordinator is responsible for responding to noise complaints and implementing reasonable measures.

N. Population and Housing Would the Project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
1. Induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?				X
2. Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?				X

DISCUSSION:

N.1-N.2. No Impact. The Project will construct a new bridge to connect the existing sections of Notre Dame Boulevard to provide a transportation corridor over Little Chico Creek. It is not expected to directly or indirectly trigger new home construction that has not already been identified in the City's General Plan. The Project implements General Plan goals and policies which strive to enhance community connectivity and improve public safety and access. The Project is also identified in the Butte County Regional Transportation Plan. The Project will not displace any people or housing. There will be no conflicts with land use plans, policies or regulations adopted for the purpose of avoiding or mitigating an environmental effect. The Project impacts to population/housing are therefore considered to have **no impact.**

MITIGATION: None required.

O. Public Services Would the Project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Fire protection?				X
Police protection?				X
Schools?				X
Parks?				X
Other public facilities?				X

DISCUSSION:

O.1-O.5. No Impact. The proposed Project would not construct dwelling units, buildings, businesses, or other similar facilities that would result in an increased human population in the Project area. There would be no long-term demands on fire or police protection services generated by the proposed Project. Similarly, there would be no increased demands on school services or parks.

The proposed project would not cause any permanent closures to the roadway, nor block access to private property, rather the Project would provide for improved connectivity and response times for fire and police responses in the area.

No changes in fire protection or police protection services are proposed as part of this Project. The proposed Project would not add to the area's population or increase demands on police or fire services. Therefore, relative to the provision of police and fire service, the proposed Project would generate a **no impact**.

MITIGATION: None required.

P. Recreation	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
1. Would the Project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?				X
2. Does the Project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?				X

DISCUSSION:

P.1-P.2. No Impact. The Project does not propose dwelling units, businesses, or other structures that might increase the area's human population. The Project site does not include existing recreational facilities. Similarly, the proposed Project would not construct recreational facilities.

The proposed Project would not generate additional demands on parks and recreational facilities. The proposed Project does not include the development of recreational facilities or other structures that would necessitate the development or modification of any recreational facilities. Relative to recreation, the proposed Project would result in **no impact.**

MITIGATION: None required.

Q. Transportation Would the Project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
1. Conflict with a program plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?			X	
2. Would the Project conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)?			X	
3. Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?			X	
4. Result in inadequate emergency access?			X	

DISCUSSION:

This Project is identified in the BCAG 2020 Regional Transportation Plan. The Project will construct a new two-lane bridge to connect the existing sections of Notre Dame Boulevard to provide a transportation corridor over Little Chico Creek.

The City of Chico *2030 General Plan* Circulation Element establishes the following level of service standards for roadways and intersections:

Policy CIRC-1.4 (Level of Service Standards) – Maintain LOS D or better for roadways and intersections at the peak PM period, except as specified below:

- LOS E is acceptable for City streets and intersections under the following circumstances:
  - Downtown streets within the boundaries identified in Figure DT-1 of the Downtown Element.
  - Arterials served by scheduled transit.
  - Arterials not served by scheduled transit, if bicycle and pedestrian facilities are provided within or adjacent to the roadway.
- Utilize Caltrans LOS standards for Caltrans' facilities.
- There are no LOS standards for private roads.

A traffic/transportation technical study was conducted by Headway Transportation, completed January 21, 2022 (**Appendix F**). The study analyzed the existing, near-term, and future conditions of Level of Service (LOS) and Vehicle Miles Traveled (VMT) for three (3) intersections and three (3) roadway segments. The study intersections and roadway segments are listed below:

Study Intersections -

- SR 32 / El monte Avenue
- Humboldt Road / Notre Dame Boulevard
- 20th Street / Notre Dame Boulevard

Study Roadway Segments –

- El monte Avenue between SR 32 and Humboldt Road
- Notre Dame Boulevard between Humboldt Road and Hartford Drive
- Notre Dame Boulevard between Hartford Drive and 20th Street

Following is a list of the key findings from the traffic/transportation technical study:

- The proposed project will construct a new two-lane bridge over Little Chico Creek. The proposed bridge will include bicycle and pedestrian facilities.
- The SR 32 / El Monte Avenue currently operates at poor level of service during the AM peak hour. Near-term regional intersection improvements are anticipated at the SR 32 / El Monte Avenue intersection which will improve operating conditions to an acceptable level.
- It is anticipated that all the study intersections will operate within level of service policy with construction of the bridge under Near-Term (Build) and Cumulative (Build) conditions.
- The Technical Advisory on Evaluating Transportation Impacts in CEQA, December 2018, published by the Governor's Office of Planning and Research (OPR) states the "addition of roadway capacity

on local or collector streets provided the project also substantially improves conditions for pedestrians, cyclists, and, if applicable, transit" is a "Project that would not likely lead to a substantial or measurable increase in vehicle travel, and therefore generally should not require an induced travel analysis" (pages 20 and 21).

- The bridge connection is calculated as creating an induced demand of 50 VMT per day. This amount is negligible in the regional scale (0.001%). The minor amount of induced travel would be offset with the inclusion of bicycle and pedestrian facilities.
- The estimated daily ADT I VMT for the Notre Dame Boulevard segment between Humboldt Road and Hartford Drive is:
    - Existing Conditions (no-build)- 3,310 ADT I 1,357 VMT per day
    - Existing Conditions (build)- 4,018 ADT I 2,009 VMT per day
    - Near-Term Conditions (no-build)- 4,090 ADT I 1,677 VMT per day
    - Near-Term Conditions (build)- 4,965 ADT I 2,483 VMT per day
    - Future Year Conditions (no-build)- 4,130 ADT I 1,693 VMT per day
    - Future Year Conditions (build)- 6,130 ADT I 3,065 VMT per day
- It is presumed that vehicular traffic will travel generally near the posted speed limit (assumed to be 35 mph) and will contain approximately 2% heavy vehicles with the completion of the bridge connection.

Q.1-Q.4. Less Than Significant Impact The proposed Project is not considered a generator of additional traffic as it would not construct facilities; residential, commercial or otherwise, however the Project is expected to result in inducing demand of 50 VMT per day, impacts to the area's levels of service, or affect trip distributions within the Project area. The Project includes width for pedestrian and bicycle passage. Roadway safety conditions are expected to improve upon Project completion.

As described in Section O of this document (Public Services), the Project will be required to adhere to pertinent construction site standards, including those of the City Code, Caltrans, and the CBC. The proposed improvements, which would bring the existing facilities in the Project site up to current design standards, would provide safer passage for emergency vehicles following the completion of the Project.

Relative to these traffic and transportation factors, the proposed Project would generate **less than significant** impacts.

MITIGATION: None required.

R. Tribal Cultural Resources	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
1. Would the Project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:				
a. Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k), or		X		
b. A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resource Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.		X		

DISCUSSION:

The Project is not anticipated to cause a substantial adverse change in the significance of a tribal cultural resource. The Project site is classified as an area of High Sensitivity on the Archaeological Sensitivity Areas Map in the Chico General Plan. The Project site is located within the traditional boundaries of the Konkow, or Valley Maidu tribe. Historically, the Konkow inhabited a large geographic area that encompassed the Sacramento River and east to the Sierra/Cascade canyons and foothills east of Chico.

R.1.a – R.1.b. Less Than Significant with Mitigation Incorporated. A Tribal Cultural Resource is a site feature, place, cultural landscape, sacred place or object, which is of cultural value to a Tribe. According to Butte County constraints mapping, the Project site is not located in an area considered to have a high archeological sensitivity. Often, cultural resources are found in foothill areas, areas with high bluffs, rock outcroppings, areas overlooking deer migratory corridors, or near bodies of water. The Project site is located in the Sacramento Valley and has been extensively disturbed by residential and transportation infrastructure development.

No prehistoric or historic-era sites have been recorded or otherwise identified within the Project site boundary on records maintained at the NEIC. Additionally, no prehistoric sites, traditional use areas or other cultural issues of concern have been identified by the Native American groups and individuals contacted. The Native American Heritage Commission (NAHC) has no record of Sacred Land listings within, adjacent or close to the Project area. The data file and determinations of effect for the Office of Historic Preservation also failed to document resources in the Project. Lastly, the California Inventory and Historic and General Land Office (GLO) maps failed to identify potential historic resources within the APE.

Consultation with Interested Parties: The NAHC identified no sacred lands within the Project area (response date July 6, 2020). The NAHC provided contact information for local Native American parties that may have an interest in the Project site for additional consultation. Follow-up telephone calls were made to all of the parties and in all cases voicemails were reached, detailed messages concerning the Project description and findings was provided, along with contact information for both Caltrans and Genesis Society. The representative of the Enterprise Rancheria responded indicating that the Project is

not located within the Tribe's aboriginal territory and there is no comment. No other responses were received. Although no other responses were received, consultation will continue for the life of the Project.

Excavation depths for roadway reconstruction and associated utilities are anticipated to be up to 6-feet. For the bridge structure, a maximum excavation depth of 7-feet will be required to install abutment supports, which are anticipated to be Cast-In-Drilled-Hole (CIDH) piles. Geo-archaeological research indicated the presence of Late Holocene soils along Little Chico Creek. With the presence of Holocene soils and the possibility of a mound site near the creek, this area is identified as sensitive for buried archaeological material. Despite this, given the type of proposed Project activities for the bridge at Little Chico Creek (construction of Cast-In-Drilled-Hole piles), the potential to encounter intact cultural resources is considered low. In the event that resources are inadvertently discovered, implementation of Mitigation R.1 would reduce impacts to a level considered **less than significant with mitigation incorporated.**

MITIGATION:

MITIGATION R.1. (Tribal Cultural Resources): If during ground disturbing activities, any potentially paleontological, prehistoric, protohistoric, and/or historic cultural resources or tribal cultural resources are encountered, the supervising contractor shall cease all work within 25 feet of the find (100 feet for human remains) and notify the City. A professional archaeologist meeting the Secretary of the Interior's Professional Qualification Standards for prehistoric and historic archaeology and being familiar with the archaeological record of Butte County, shall be retained to evaluate the significance of the find. City staff shall notify all local tribes on the consultation list maintained by the State of California Native American Heritage Commission, to provide local tribes the opportunity to monitor evaluation of the site. If human remains are uncovered, the Project team shall notify the Butte County Coroner pursuant to Section 7050.5 of California's Health and Safety Code. Site work shall not resume until the archaeologist conducts sufficient research, testing and analysis of the archaeological evidence to make a determination that the resource is either not cultural in origin or not potentially significant. If a potentially significant resource is encountered, the archaeologist shall prepare a mitigation plan for review and approval by the City, including recommendations for total data recovery, Tribal monitoring, disposition protocol, or avoidance, if applicable. All measures determined by the City to be appropriate shall be implemented pursuant to the terms of the archaeologist's report. The preceding requirement shall be incorporated into construction contracts and documents to ensure contractor knowledge and responsibility for the proper implementation.

MITIGATION MONITORING R.1.: Public Works staff will verify that the above wording is included in the construction specifications. Should paleontological, prehistoric, protohistoric, and/or historic cultural resources or tribal cultural resources be encountered, the supervising contractor shall be responsible for reporting any such findings to Public Works staff, and contacting a professional archaeologist or paleontologist in consultation with Public Works staff, to evaluate the find.

S. Utilities and Service Systems Would the Project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
1. Require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?			X	
2. Have sufficient water supplies available to serve the Project and reasonably foreseeable future development during normal, dry and multiple dry years?				X
3. Result in a determination by the wastewater treatment provider which serves or may serve the Project that it has adequate capacity to serve the Project's projected demand in addition to the provider's existing commitments?				X
4. Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?			X	
5. Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?			X	

DISCUSSION:

S.1. Less Than Significant Impact. There are no utilities currently crossing Little Chico Creek, however low overhead power and telephone facilities exist within the Project work area. The Project will include the installation of dual-arm streetlights on the center concrete median of the right of way. Streetlight conduit runs will be installed beneath the sidewalk with service boxes at each streetlight location. Existing powerlines are located approximately 250 feet upstream of the proposed bridge. A 12-inch waterline trenchless crossing is being installed by others approximately 65 feet downstream of the bridge and is anticipated to be completed by December 2022.

The Project would not alter wastewater requirements or result in an increase in the generation of wastewater aside from groundwater generated during any potential dewatering operations that may occur as a result of trenching and excavation. Similarly, the Project would not result in an increased demand for water and no expanded water treatment facilities are required.

The proposed utility updating would take place primarily within the existing roadway corridor and would not cause a significant environmental effect. Therefore, the Project would not require or result in the construction of other facilities or expansion of existing facilities outside of those included and analyzed in this document. This is considered a **less than significant impact with mitigation** incorporated.

S.2-S.3. No Impact. The proposed Project would not include any uses that would require increased wastewater treatment or solid waste disposal. The proposed Project would not generate impacts relative to landfill capacity, wastewater treatment, or solid waste generation. Therefore, there would be **no impact.**

S.4-S.5. Less Than Significant Impact. The Project will not generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals. During construction, a limited amount of construction waste would be generated. Waste would only be sent to permitted landfill facilities with adequate capacity to accept

construction waste. The Project would not create a long-term source of solid waste needing disposal. Disposal and recycling of materials generated by the construction of the new road and bridge will be handled and disposed of in accordance with Federal, State, and local requirements. This impact would be **less than significant**.

MITIGATION: None required.

T. Wildfire If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the Project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
1. Substantially impair an adopted emergency response plan or emergency evacuation plan?				X
2. Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?				X
3. Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?				X
4. Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?				X

DISCUSSION:

T.1-T.4. No Impact. The Project is not located in or near state responsibility areas or lands classified as very high fire hazard severity zones; therefore, it will not substantially impair an adopted emergency response plan or emergency evacuation plan, exacerbate wildfire risks, require the installation or maintenance of associated infrastructure, or expose people or structures to significant risks. The Notre Dame Boulevard over Little Chico Creek Bridge Project site is identified as an area outside of Cal Fire's 'Very High Fire Hazard Severity Zone' (i.e., it is a non-VHFHSZ) as identified by Cal Fire (see the following: https://egis.fire.ca.gov/FHSZ). The Project site is located in a Local Responsibility Area (LRA) pursuant to the Fire Hazard Severity Zone and is served by the City of Chico Fire Department as shown in the SRA map last modified by Cal Fire on 07/09/2020. The proposed Project would have **no impact** on wildfire.

MITIGATION: None required.

U. MANDATORY FINDINGS OF SIGNIFICANCE

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
1. Does the Project have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?			X	
2. Does the Project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?			X	
3. Does the Project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?			X	

DISCUSSION:

U.1-U.3. Less Than Significant Impact. The Project does not have the potential to significantly degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory. Based on the preceding environmental analysis, the application of existing regulations and incorporation of identified mitigation measures will ensure that all potentially significant environmental impacts associated with the Project, including those related to air quality, biological resources, cultural resources, geology/soils, hydrology/water quality, noise and tribal cultural resources would be minimized or avoided, and the Project will not result in direct or indirect adverse effects on human beings or the environment, nor result in significant cumulative impacts. Therefore, with the incorporation of the mitigation measures identified in previous sections, the Project will result in a **less than significant impact**.

MITIGATION: None required.

V. REFERENCES

Barr, C.B. 1991. The Distribution, Habitat, and Status of the Valley Elderberry Longhorn Beetle *Desmocerus californicus dimorphus* Fisher (Insecta: Coleoptera: Cerambycidae). U.S. Fish and Wildlife Service; Sacramento, California. 134 pp.

Brown, D.L., J. Mott. 2002. Little Chico Creek Watershed Existing Conditions Report Vegetation, Fish & Wildlife, Water Quality, Land Use. California State University, Chico.

Butte County Air Quality Management District (BCAQMD). 2014. CEQA Air Quality Handbook. https://bcaqmd.org/wp-content/uploads/CEQA-Handbook-Appendices-2014.pdf.

California Department of Conservation, Division of Land Resource Protection. 2017. Farmland Mapping and Monitoring Program. Butte County Important Farmland.

California Department of Fish and Wildlife (CDFW). 2022. California Natural Diversity Database (CNDDB), Rarefind version 5. United States Geological Survey (USGS) "Chico," "Ord Ferry," "Nord," and "Richardson Springs" 7.5 minute quadrangles.

California Department of Forestry and Fire Protection. 2020. Fire Hazard Severity Zones Viewer. https://egis.fire.ca.gov/FHSZ/ [accessed 03 March 2022]

California Native Plant Society, Rare Plant Program. 2020. Inventory of Rare and Endangered Plants of California (online edition, v8-03 0.39). Website http://www.rareplants.cnps.org [accessed 03 March 2022].

California Water Service. 2016. California Water Service Company, 2015 Urban Water Management Plan, Chico-Hamilton District, Final Draft. California.

City of Chico. 2008. Memorandum of Understanding Regarding Principles for the City of Chico Consultation with the Mechoopda Indian Tribe of Chico Rancheria, August 8, 2008.

City of Chico. 2011a. City of Chico 2030 General Plan, adopted April 12, 2011.

City of Chico. 2011b. City of Chico 2030 General Plan Update Environmental Impact Report. State Clearinghouse No. 2008122038. Certified April 12, 2011.

City of Chico. 2020. Chico Municipal Code. https://codelibrary.amlegal.com/codes/chico/latest/chico_ca/0-0-0-1

Crawford & Associates, Inc. 2021. Draft Foundation Report for the Little Chico Creek Bridge on Notre Dame Blvd.

Department of Toxic Substances Control (DTSC). 2021. EnviroStor. Hazardous Waste and Substances Sites List. http://www.envirostor.dtsc.ca.gov

Federal Emergency Management Agency (FEMA). 2021. Flood Insurance Rate Maps. Map ID 06007C0506E http://msc.fema.gov/portal/home. 2022.

Gallaway Enterprises. 2020. Draft Delineation of Waters of the United States: Notre Dame Boulevard Bridge over Little Chico Creek Project.

Genesis Society. 2021. Cultural Resources Inventory Survey for the Meriam Park-Notre Dame Bridge Project.

Headway Transportation, LLC. 2022. Traffic/Transportation Technical Study: Notre Dame Bridge Connection.

ICF. 2022. Air Quality and Greenhouse Gas Analysis, Notre Dame Boulevard Bridge Project, City of Chico. California.

ICF. 2022. Noise and Vibration Technical Report, Notre Dame Boulevard Bridge Project, City of Chico. California.

Klaseen, T.A. and D.K. Ellison. 197.4 Soil Survey of the Butte County Area, California. United States Department of Agriculture, Soil Conservation Service. U.S. Government Printing Office, Washington, D.C.

McEwan, D.R. 2001. Central Valley steelhead. California Department of Fish and Game. Fish Bulletin 179:1–43. Sacramento, CA.

Moyle, P. B., R. M. Yoshiyama, J. E. Williams, and E. D. Wikramanayake. 1995. Fish Species of Special Concern in California, Second Edition. Report # Final Report for Contract No. 2128IF. Prepared for CDFG, Inland Fisheries Division, Rancho Cordova.

Moyle, P.B. 2002. Inland fishes of California. University of California Press, Berkeley, CA. 502 pp.

Moyle, P.B., Israel, J.A., & Purdy, S.E. 2008. Salmon, steelhead, and trout in California. Status of an Emblematic Fauna. A report commissioned by California Trout.

National Marine Fisheries Service. 2014. Recovery Plan for the Evolutionarily Significant Units of Sacramento River Winter-run Chinook Salmon and Central Valley Spring-run Chinook Salmon and the Distinct Population Segment of California Central Valley Steelhead. California Central Valley Area Office. July 2014.

National Marine Fisheries Service. 2016. Central Valley Recovery Domain, 5-Year Review: Summary and Evaluation, California Central Valley Steelhead Distinct Population Segment. West Coast Region.

Natural Resources Conservation Service (NRCS). 2006. Soil Survey of Butte County, California.

Northstar Engineering, MP Northfork, LLC. 2021. Hydraulic Study Report for the Notre Dame Boulevard over Little Chico Creek.

Sacramento Valley Air Quality Engineering and Enforcement Professionals (SVAQEEP). 2015. Northern Sacramento Valley Planning Area 2015 Triennial Air Quality Attainment Plan. https://www.fraqmd.org/files/cc5597e19/2015+Triennial+AQAP.pdf

United States Fish and Wildlife (USFWS). 2010. Biological Opinion on the Meriam Park Development. United States Fish and Wildlife Service; Sacramento, CA.

United States Fish and Wildlife Service (USFWS). 2017. Framework for Assessing Impacts to the Valley Elderberry Longhorn Beetle (*Desmocerus californicus dimorphus*). U.S. Fish and Wildlife Service; Sacramento, California. 28 pp.

Zeiner, D.C., W.F. Laudenslayer, Jr., K.E. Mayer, and M. White, eds. 1990. California's Wildlife. Vol. I-III. California Depart. of Fish and Game, Sacramento, California.

Appendix A:
Biological Resource Assessment

Appendix B:
Draft Delineation of Waters of the U.S.

Appendix C:
Cultural Resources Inventory Survey

Appendix D:
Hydraulic Study Report

Appendix E:
Noise and Vibration Technical Report

Appendix F:
Traffic/Transportation Technical Study

Appendix G:
Air Quality and Greenhouse Gas Analysis

Appendix H:
Project Plans