

ADMINISTRATIVE DRAFT

CEQA INITIAL STUDY AND MITIGATED NEGATIVE DECLARATION

TEGNER ROAD BRIDGE (NO. 38C0302) REPLACEMENT AT TURLOCK
IRRIGATION DISTRICT LATERAL #5 CANAL BRLO-5938(196)

STANISLAUS COUNTY, CALIFORNIA



LSA

September 2015

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IRRIGATION DISTRICT LATERAL #5 CANAL BRLO-5938(196)**

STANISLAUS COUNTY, CALIFORNIA

Submitted to:

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LSA Project No. NLT1201

LSA

September 2015

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1.0 INTRODUCTION

The Stanislaus County Department of Public Works (Stanislaus County), in coordination with the California Department of Transportation District 10 (Caltrans District 10), as authorized by the Federal Highway Administration (FHWA), proposes the Tegner Road Bridge over the Turlock Irrigation District (T.I.D.) Lateral #5 Canal Replacement Project, near Turlock, Stanislaus County, California. The proposed Project includes the replacement of the T.I.D. Lateral #5 bridge (No. 38C-0302) and improvement of road approaches on Tegner and Harding Roads and T.I.D. access roads and canal. Project alternatives include the proposed Project and the No Project Alternative.

1.1 ENVIRONMENTAL REVIEW

The proposed Project constitutes a “Project” in accordance with the California Environmental Quality Act (CEQA). Prior to approving the proposed Project, Stanislaus County must provide environmental review in accordance with CEQA to assess the potential impacts of the Project, including mitigation when necessary.

Stanislaus County has prepared this Initial Study (IS) to provide agencies and the public with information about the potential impacts of the proposed Project on the regional and local environment. This document has been prepared in compliance with the CEQA of 1970 as amended, and the State CEQA Guidelines, California Administrative Code, Title 14, Division 6, Chapter 3 (CEQA Guidelines).

In anticipation of determining that all potentially significant impacts resulting from the proposed Project can be mitigated to less than significant levels, a Mitigated Negative Declaration (MND) is being considered to provide environmental clearance for the Project.

1.2 SUMMARY INFORMATION

1. Project Title:

Tegner Road Bridge (No. 38C0302) Replacement at Turlock Irrigation District Lateral #5 Canal
BRLO-5938(196)

2. Lead Agency Name and Address:

Stanislaus County Public Works
1716 Morgan Road, Modesto, California 95385

3. Contact Person and Phone Number:

Andrew Malizia, Associate Civil Engineer, 209-525-4126

4. Project Location:

The proposed Project site is located at the T.I.D. Lateral #5 Canal crossing at the intersection of Harding and Tegner Roads, in southwestern Stanislaus County. The proposed Project site is located approximately 3.0 miles southwest of Turlock. Figure 1 and Figure 2 depict the location of the proposed Project site on a regional and local scale, respectively.

5. Project Sponsor's Name and Address:

Stanislaus County Public Works
1716 Morgan Road, Modesto, California 95385

6. General Plan Designation:

Tegner Road and Harding Road are County-owned rights-of-way and, therefore, have no land use designation. APNs 044-041-038; 044-043-021; 044-014-006; and, 044-016-006 all have a land use designation of Agricultural.

7. Zoning:

Tegner Road and Harding Road are County-owned rights-of-way, and, therefore do not have zoning designations. APNs 044-041-038; 044-043-021; 044-014-006; and, 044-016-006 are all zoned as General Agricultural District A-2-40 (40-acre minimum parcel size).

8. Description of Project:

The proposed Project site is 4.8 acres in size and encompasses the maximum extent of ground disturbance including construction staging areas. The proposed Project site extends 760 feet along Tegner Road and 400 feet along Harding Road . Figure 3 shows the design of the proposed Project.

Tegner Road Bridge was constructed in 1919 and is a continuous two-span reinforced concrete slab structure on diaphragm abutments and a reinforced concrete pier, supported by spread footings. This structure is considered structurally deficient, with a sufficiency rating of 57.5 and a health index of 67.6. The soffit of the existing bridge is under the water surface elevation of the normal operating flow (100 cubic feet/second [cfs]) which has caused the erosion of the superstructure concrete exposing reinforcement steel. Additionally, the existing bridge is too narrow to accommodate farm equipment and truck traffic in both directions.

The replacement bridge would be a clear span with two Type 732 concrete barriers. The replacement bridge would be 34.83 feet wide to accommodate two 12-foot wide lanes and two 4-foot wide shoulders. The replacement bridge would be 22.75 feet long and will utilize an oversized spread footing to replace the existing bottom of lined channel and the abutment walls will act as the walls of the lined channel. The replacement bridge soffit will remain at the same elevation as the existing bridge in order to minimize the amount of construction required on both Tegner and Harding Road as well as to minimize construction time. The roadway profile of the replacement bridge would be on a slightly higher vertical alignment to accommodate the bridge deck thickness required to span the entire canal and remove the existing pier in the middle of the canal. Increased concrete cover will be provided at the soffit to mitigate future exposure of soffit reinforcement..

The construction of the Tegner Road bridge replacement structure and associated roadway approaches would be completed on essentially the same horizontal alignment as the existing bridge and roadway. The roadway approaches are being reconstructed to conform to current AASHTO

and local standards and to accommodate the minor changes in the bridge geometry. The approach work has been minimized by approximating the existing bridge soffit elevations, thereby limiting the length of improvement to conform to existing elevations. The 32-foot wide Tegner Road roadway approach work would extend approximately 300 feet north and south of the new bridge. The 22-foot wide Harding Road roadway improvements would extend for approximately 200 feet west and east of Tegner Road in order to accommodate the raised vertical alignment.

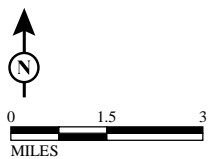


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FIGURE 1

LEGEND

★ Project Site



SOURCE: Microsoft Bing Roads (2013)

E:\nit1201\AI\MND-IS\Figure 1.ai (10/25/2013)

*Tegner Road over Turlock Irrigation District
Lateral 5 Bridge (No. 38C0302) Replacement Project
Federal Project No. BRLO-5938(196)*

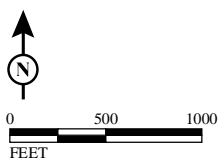
Regional Location



L S A

LEGEND

 Project Site



SOURCE: Microsoft Bing Aerial (2010)

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FIGURE 2




*Tegner Road over Turlock Irrigation District
Lateral 5 Bridge (No. 38C0302) Replacement Project
Federal Project No. BRLO-5938(196)*

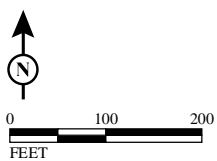
Project Location



LSA

LEGEND

-  Project Site Boundary
-  Project Design
-  Staging Area



SOURCE: Microsoft Bing Aerial (2010)

E:\NIt1201\AI\MND-IS\Figure 3.ai (10/25/2013)

FIGURE 3

*Tegner Road over Turlock Irrigation District
Lateral 5 Bridge (No. 38C0302) Replacement Project
Federal Project No. BRLO-5938(196)*

Project Design

The proposed Project would improve T.I.D. access roads and the T.I.D. canal structure. Four existing T.I.D. access roads from Tegner Road would be modified and improved; these roads are located south of the intersection of Tegner and Harding Roads, north and south of the canal. A 12-foot by 95-foot T.I.D. easement would be necessary both southwest (APN 044-041-038) and southeast (APN 044-043-021) of the bridge to accommodate the realigned T.I.D. access road.

The existing bridge pier is located in the center of the canal and the footing for this pier is underneath the canal. The pier and footing would be removed and the canal would be repaired in this location. Additionally, the invert structure would be patched. Lastly, falsework would be constructed within the T.I.D. easement during the bridge replacement and a temporary earthen berm would be installed within the canal.

Sliver right-of-way acquisitions would be necessary within APNs 044-014-006 (0.006041 acres) and 044-016-006 (0.009052 acres) to accommodate roadway fill resulting from the elevated roadway profile.

Overhead utility poles are located along both sides of Tegner Road as well as along the north side of Harding Road and may require relocation to accommodate the reconstruction of roadway approaches. No underground utilities are located within the Project area. It is not anticipated that the irrigation facilities along the western edge of Tegner Road and along the northern edge of Harding Road would be affected by the Project.

During construction of the proposed Project site, a construction staging area would be developed and utilized on the northwest corner of the Tegner Road/Harding Road intersection in an open field. Tegner Road would be closed during Project construction at the bridge location and a detour using adjacent local streets would accommodate local traffic.

9. Surrounding Land Uses:

The proposed Project is located in a rural portion of Stanislaus County approximately 3.3 miles west of State Route 99 and 3.0 miles southwest of Turlock, California. According to the Stanislaus County General Plan, the land surrounding the proposed Project site is designated as Agriculture. Uses on the surrounding land include, active agricultural fields, rural residential units, agricultural outbuildings, and county owned roadway right-of-way.

10. Other Public Agencies whose Approval is Required (e.g. permits, financing approval, or participation agreement)

- Stanislaus County CEQA Approval;
- United States Army Corps of Engineers (Corps) 404;
- Regional Water Quality Control Board (RWQCB) 401;
- Air Quality Management District (AQMD) Construction Permit; and
- Turlock Irrigation District.

11. Environmental Factors Potentially Affected:

The environmental factors checked below would be potentially affected by this Project, involving at least one impact that is a “Potentially Significant Impact” as indicated by the checklist on the following pages.

- | | | |
|--|---|---|
| <input type="checkbox"/> Aesthetics | <input checked="" type="checkbox"/> Hazards and Hazardous Materials | <input type="checkbox"/> Recreation |
| <input checked="" type="checkbox"/> Agriculture and Forest Resources | <input checked="" type="checkbox"/> Hydrology and Water Quality | <input type="checkbox"/> Transportation/Traffic |
| <input checked="" type="checkbox"/> Air Quality | <input type="checkbox"/> Land Use Planning | <input type="checkbox"/> Utilities and Service Systems |
| <input checked="" type="checkbox"/> Biological Resources | <input type="checkbox"/> Mineral Resources | <input type="checkbox"/> Mandatory Findings of Significance |
| <input checked="" type="checkbox"/> Cultural Resources | <input checked="" type="checkbox"/> Noise | |
| <input checked="" type="checkbox"/> Geology and Soils | <input type="checkbox"/> Population and Housing | |
| <input checked="" type="checkbox"/> Greenhouse Gas Emissions | <input type="checkbox"/> Public Services | |

12. Determination. (To be completed by the Lead Agency.)

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 would 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 potentially significant unless mitigated impact on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT 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, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (b) 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, nothing further is required.

Signature
Andrew Malizia, Associate Civil Engineer

Date

2.0 ENVIRONMENTAL EVALUATION

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
I. AESTHETICS				
Would the project:				
a) Have a substantial adverse effect on a scenic vista?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a State scenic highway?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Substantially degrade the existing visual character or quality of the site and its surroundings?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Environmental Setting

A *Visual Memorandum* was prepared in November 2012 and contributes to the information in this section (please see Appendix A).

The proposed Project site is located in the southwestern portion of Stanislaus County in a rural area characterized by large parcels of agricultural land with active and inactive cropland and orchards, residential units and associated agricultural outbuildings. The proposed Project site and surrounding area is topographically flat with an average elevation of 90 feet above mean sea level (amsl).

Land to the north of the proposed Project is characterized by active and inactive cornfields and almond orchards, the Tegner Road right-of-way, unpaved access roads, single-family residential units, and agricultural outbuildings (storage buildings). Land to the south of the proposed Project is also characterized by active and inactive cornfields and almond orchards, the Tegner Road right-of-way, unpaved access roads, single-family residential units, and agricultural outbuildings (storage buildings). Land to the east of the Project site is characterized by active and inactive cornfields and almond orchards, T.I.D. Lateral #5 Canal, unpaved access roads, Harding Road right-of-way, single-family residential units, and agricultural outbuildings (storage buildings). Land to the west of the Project site is also characterized by active and inactive cornfields and almond orchards, T.I.D. Lateral #5 Canal, unpaved access roads, Harding Road right-of-way, single-family residential units, and agricultural

outbuildings (storage buildings). T.I.D Lateral #5 Canal is an unvegetated, concrete lined waterway that parallels Harding Road through the proposed Project site.

The State of California has designated various State highways as having natural scenic beauty worthy of preservation. Within Stanislaus County, Interstate Highway 5 is an officially adopted State Scenic Highway. The State has no other potential scenic highways designated within the County. Stanislaus County has identified several roadways as potential scenic routes including: State Highway 132 (west of Modesto), Orange Blossom Road, La Grange Road, Del Puerto Canyon Road, and State Highway 4 in the northeastern portion of the County. All of these roads identified by the County are characterized by open, undeveloped areas, in either a natural condition or devoted to agricultural production. None of these roadways are located near the proposed Project site. There are no scenic vistas near the Project site.

Existing light and glare occurs at the proposed Project site and in the areas surrounding the site. The main sources of light and glare on the Project site and in the surrounding areas are from vehicle usage on nearby roadways, residential units, and agricultural activities.

Impact Analysis

a) Have a substantial adverse effect on a scenic vista?

No Impact. The proposed Project site is located in an area of Stanislaus County that is characterized by agricultural land uses. The area surrounding and within the proposed Project site is topographically level with an average elevation of 90 feet amsl.

Project implementation would require a construction period of four months, during which time the existing bridge would be removed, a new bridge would be constructed, and associated roadway improvements would occur. Once operational, the proposed Project site would be visually similar to the existing conditions. Development of the proposed Project would not have an adverse effect on a scenic vista; therefore, no impacts would occur.

b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a State scenic highway?

No Impact. The proposed Project site is not located within or near a designated State Scenic Highway. The nearest designated State Scenic Highway is Interstate 5, located 16 miles west of the proposed Project site. The proposed Project site is located in a rural area that is topographically flat with no prominent visual features. Implementation of the proposed Project would not substantially damage scenic resources such as trees or rock outcroppings within a designated State Scenic Highway. In addition, the Historic Property Survey Report (HPSR) prepared for the Project indicates that no historic buildings would be damaged by the Project.¹ Therefore no impacts would occur.

c) Substantially degrade the existing visual character or quality of the site and its surroundings?

¹ See the Cultural Resources section of this report for a summary of the HPSR.

Less Than Significant Impact. Active and inactive agricultural lands define the existing visual character and quality of the proposed Project site and surrounding area. Active agricultural lands currently include cornfields and almond orchards. The visual character of the Project site includes:

- single-family residential units;
- roadways (paved [Tegner Road and Harding Road] and unpaved [agricultural access roads and T.I.D. Lateral #5 Canal access]);
- T.I.D. Lateral #5 Canal;
- trees (including orchard trees on agricultural land and isolated oak and ornamental trees on residential parcels);
- utility poles along Tegner Road and Harding Road; and
- agricultural outbuildings (storage buildings).

Implementation of the proposed Project would result in temporary impacts to the visual character and quality of the land within the boundary of the proposed Project site due to construction activity. Residents adjacent to the proposed Project site and motorists driving on Tegner and Harding Roads in the vicinity of the Project site would recognize the visual change due to the use of construction equipment, removal of the existing bridge, roadway approach improvements, and development and installation of the new bridge. However, such visual changes would be minimal and temporary through the duration of the construction period and would only occur within the boundary of the proposed Project site. The overall visual characteristics of the areas surrounding the proposed Project site would remain intact during Project construction and operation. Once the proposed Project is operational adjacent residents and motorists driving on Tegner and Harding Roads in the vicinity of the Project site would notice the new bridge and roadway approach/departure areas; however, the viewer's exposure or sensitivity to the change would be minor. Motorists that do not frequently travel on Tegner and Harding Roads would most likely not notice the proposed Project improvements.

Project implementation would not substantially degrade the existing visual character or quality of the site and surrounding areas; therefore, impacts would be less than significant.

d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?

No Impact. The proposed Project would not create a new source of light or glare. The proposed Project would not have lighting elements incorporated into the design. The new bridge and improvements to the roadway approach would not generate any additional traffic (e.g., additional vehicle headlights, taillights) or light or glare. The proposed Project would not create a new source of substantial light or glare that would adversely affect day or nighttime views in the area. No impact would occur.

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
II. AGRICULTURAL 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:				
a) 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 a non-agricultural use?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) 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))?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Result in the loss of forestland or conversion of forestland to non-forest use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) 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 forestland to non-forest use?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Environmental Setting

The California Department of Conservation (CDC) Farmland Mapping and Monitoring Program (FMMP) produces maps and statistical data used for analyzing impacts on California's agricultural resources. Agricultural land is rated according to soil quality and irrigation status; the best quality land

is called Prime Farmland. The maps are updated every two years with the use of a computer mapping system, aerial imagery, public review, and field reconnaissance. The goal of the FMMP is to provide consistent and impartial data to decision makers for use in assessing present status, reviewing trends, and planning for the future of California's agricultural land resources. FMMP produces Important Farmland Maps, which are a hybrid of resource quality (soils) and land use information. Data is also released in statistical formats, principally the biennial California Farmland Conversion Report. The FMMP designates land into the following categories: Prime Farmland, Farmland of Statewide Importance; Unique Farmland; Farmland of Local Importance; Grazing Land; Urban and Built-Up Land; Other Land; and, Water. The following provides definitions of each of these designations:

- **Prime Farmland** – Farmland with the best combination of physical and chemical features able to sustain long-term agricultural production. This land has the soil quality, growing season, and moisture supply needed to produce sustained high yields. Land must have been used for irrigated agricultural production at some time during the four years prior to the mapping date;
- **Farmland of Statewide Importance** – Farmland similar to Prime Farmland but with minor shortcomings, such as greater slopes or less ability to store soil moisture. Land must have been used for irrigated agricultural production at some time during the four years prior to the mapping date;
- **Unique Farmland** – Unique Farmland is land, which does not meet the criteria for Prime Farmland and Farmland of Statewide Importance that has been used for the production of specific high economic value crops at some time during the two update cycles prior to the mapping date. This land has the special combination of soil quality, location, growing season, and moisture supply needed to produce sustained high quality and/or high yields of a specific crop when treated and managed according to current farming methods. Examples of such crops may include oranges, olives, avocados, rice, grapes, and cut flowers. This designation does not include publicly owned lands for which there is an adopted policy preventing agricultural use;
- **Farmland of Local Importance** – Farmland of Local Importance is either currently producing crops, has the capability of production, or is used for the production of confined livestock. Farmland of Local Importance is land other than Prime Farmland, Farmland of Statewide Importance, or Unique Farmland. This land may be important to the local economy due to its productivity or value. It does not include publicly owned lands for which there is an adopted policy preventing agricultural use. In a few counties the local advisory committee has elected to additionally define areas of Local Potential (LP) farmland. This land includes soils, which qualify for Prime Farmland or Farmland of Statewide Importance, but generally are not cultivated or irrigated. For reporting purposes, Local Potential and Farmland of Local Importance are combined in the acreage tables, but are shown separately on the Important Farmland Map;
- **Grazing Land** – Grazing Land is defined in Government Code Section 65570(b)(3) as: "...land on which the existing vegetation, whether grown naturally or through management, is suitable for grazing or browsing of livestock". The minimum mapping unit for Grazing Land is 40 acres. Grazing Land does not include land previously designated as Prime Farmland of Statewide Importance, Unique Farmland, or Farmland of Local Importance, and heavily brushed, timbered, excessively steep or rocky lands that restrict the access and movement of livestock. The FMMP convenes a grazing land advisory committee in each county to help identify grazing lands. The committees consist of members of the local livestock ranching community, livestock ranching

organizations, and the U.C. Cooperative Extension livestock advisor. The FMMP works with the president of the local Cattlemen's Association and the U.C. Cooperative Extension livestock advisor in selecting members of these committees;

- **Urban and Built-Up Land** – Urban and Built-up Land is used for residential, industrial, commercial, construction, institutional, public administrative purposes, railroad yards, cemeteries, airports, golf courses, sanitary landfills, sewage treatment plants, water control structures, and other development purposes. Highways, railroads, and other transportation facilities are mapped as a part of Urban and Built-Up Land if they are a part of the surrounding urban area.

Units of land smaller than 10 acres would be incorporated into the surrounding map classifications. The building density for residential use must be at least 1 structure per 1.5 acres (or approximately 6 structures per 10 acres). Urban and Built-Up Land must contain man-made structures or buildings under construction, and the infrastructure required for development (e.g., paved roads, sewers, water, electricity, drainage, or flood control facilities) that are specifically designed to serve that land. Parking lots, storage and distribution facilities, and industrial uses such as large packing operations for agricultural produce would generally be mapped as Urban and Built-Up Land even though they may be associated with agriculture. Urban and Built-Up Land does not include strip mines, borrow pits, gravel pits, farmsteads, ranch headquarters, commercial feedlots, greenhouses, poultry facilities, or road systems for freeway interchanges outside of areas classified as Urban and Built-Up Land areas. Within areas classified as Urban and Built-Up Land, vacant and nonagricultural land, which is surrounded on all sides by urban development and is less than 40 acres in size is mapped as Urban and Built-Up. Vacant and nonagricultural land larger than 40 acres in size is mapped as Other Land; and,

- **Other Land** – Other Land is that which is not included in any of the other mapping categories. The following types of land are generally included under this designation:
 - Rural development which has a building density of less than 1 structure per 1.5 acres, but with at least 1 structure per 10 acres;
 - Brush, timber, wetlands, and other lands not suitable for livestock grazing;
 - Government lands not available for agricultural use;
 - Road systems for freeway interchanges outside of Urban and Built-Up Land areas;
 - Vacant and nonagricultural land larger than 40 acres in size and surrounded on all sides by urban development;
 - Confined livestock, poultry, or aquacultural facilities, unless accounted for by the county's Farmland of Local Importance definition;
 - Strip mines, borrow pits, gravel pits, and ranch headquarters, or water bodies smaller than 40 acres; and,
 - A variety of other rural land uses.

Review of the CDC FMMP indicates that the land surrounding the proposed Project site is designated as Prime Farmland and Unique Farmland. The proposed Project site is 4.8 acres in size and according to the CDC FMMP there are 4.02 acres of land designated as Prime Farmland and 0.78 acres of land designated as Unique Farmland within the Project boundary. Temporary impacts of 0.12 acres and permanent impacts of 0.07 acres of Unique Farmland would occur with Project implementation. Temporary impacts of 0.65 acres and permanent impacts of 1.30 acres of Prime Farmland would occur with Project implementation.

The California Department of Conservation (DOC) Land Evaluation and Site Assessment Model (LESA) is used to determine if the loss of Important Farmland (Prime Farmland, Unique Farmland, or Farmland of Statewide Importance) due to Project implementation would cause a significant impact to the County and the State Important Farmland inventory. The LESA Model is composed of six different factors. Two Land Evaluation factors are based upon measures of soil resource quality. Four Site Assessment factors provide measures of a given project's size, water resource availability, surrounding agricultural lands, and surrounding protected resource lands. For a given project, each of these factors is separately rated on a 100-point scale. The factors are then weighted relative to one another and combined, resulting in a single numeric score for a given project, with a maximum attainable score of 100 points. It is the project score that becomes the basis for making a determination of a project's potential significance on the loss of Important Farmland, based upon a range of the following established thresholds:

- **0 to 39 points:** Not considered significant;
- **40 to 59 points:** Considered significant only if LE and SA subscores are each greater than or equal to 20 points;
- **60 to 79 points:** Considered significant unless either LE or SA subscore is less than 20 points; and
- **80 to 100 points:** Considered significant.

Analysis using the LESA Model was conducted for the loss of Prime Farmland due to Project implementation. The final LESA Model score is presented below. Appendix B provides the LESA Model worksheets that were completed for the proposed Project.

Portions of the proposed Project site would be located on parcels that are zoned for agricultural use. The parcels that are located within the boundary of the proposed Project site include the following: APNs 044-014-006; 044-041-037; 044-041-038; and, 044-043-021. Table A: Agricultural Information of Parcels within the Project Boundary shows the amount of land (in acres) of the parcels located in the Project boundary, the parcels' zoning designations and General Plan land use designations, and if the parcels are currently under a Williamson Act Contract.

APNs 044-014-006; 044-016-006; 044-041-037; 044-041-038; and, 044-043-021 are all zoned as A-2-40 under the Stanislaus County Zoning Ordinance. The A-2-40 designation is the General Agricultural District 40 Acre, which is intended to support and enhance agriculture as the predominant land use in the unincorporated areas of the County. This designation is also intended to protect open-space lands pursuant to Government Code Section 65910. Project implementation would include right-of-way acquisition by the County for Tegner and Harding Roads improvements and ROW acquisition by T.I.D. for maintenance access to Lateral #5 Canal. The ROW acquisition by the County would include 0.42 acre of APN 044-014-006 and 0.39 acre of APN 044-016-006 for roadway ROW. The portions of the parcels that would be acquired as ROW take would result in the removal of the A-2-40 zoning designation from these portions of land. The ROW acquisition by T.I.D. would include 0.29 acre of APN 044-041-038 and 0.25 acre of APN 044-043-021 for T.I.D. access roads. The portions of the parcels that are acquired as ROW take would result in the removal of the A-2-40 zoning designation from these portions of land.

Table A: Agricultural Information of Parcels within the Project Boundary

APNs	Total Acres of Parcel	Acres of Parcel within Project Boundary	Parcel Zoning Designation	General Plan Land Use Designation	Williamson Act Contract Number
044-014-006	26.96	0.42	A-2-40	Agriculture	2008-080004
044-016-006	73.97	0.39	A-2-40	Agriculture	1977-2858
044-041-037	1.84	0.05	A-2-40	Agriculture	NA
044-041-038	35.12	0.29	A-2-40	Agriculture	2000-4423
044-043-021	37.48	0.25	A-2-40	Agriculture	NA

Source: LSA Associates, Inc. October 2013.

The California Land Conservation Act of 1965, commonly referred to as the Williamson Act, permits a landowner of an agricultural economic unit to sign a contract with Stanislaus County guaranteeing that the land would continue to remain in farming for a period of at least 10 years. In return for this guarantee, the Stanislaus County Assessor annually values land and growing improvements using a restricted income approach rather than the market value. Generally, this means that the property taxes on parcels under Williamson Act Contracts in Stanislaus County are greatly reduced. Table A, above, shows that two parcels with land located within the Project boundary are currently under Williamson Act Contracts. Parcels 044-014-006, 044-016-006, and 044-041-038 are under contract through Williamson Act Contract Numbers 2008-080004, 1977-2858 and 2000-4423, respectively.

The proposed Project site is not located in a forested area and the land within, adjacent, and near the proposed Project site is not zoned for forestland or timberland harvesting activities.

Impact Analysis

- a) *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 a non-agricultural use?*

Less Than Significant In 2010, as part of the FMMP, the California Department of Conservation inventoried agricultural lands within Stanislaus County. According to the collected data, there are 253,435 acres of Prime Farmland and 87,527 acres of Unique Farmland within Stanislaus County.¹ Lands within and surrounding the proposed Project site are designated as Prime Farmland and Unique Farmland according to the FMMP 2010 Important Farmland Map update. Under CEQA Guidelines, Stanislaus County has some discretion in determining whether the conversion of agricultural land would have a significant adverse effect on the environment. A project would normally have a significant effect on the environment if it would convert prime agricultural land to non-agricultural use or impair the productivity of prime agricultural land. Several attempts have been made in years past to allow or require local governments to establish a threshold or agricultural land loss for the purpose of

¹ California Department of Conservation, Farmland Mapping and Monitoring Program, Table A-41 Stanislaus County 2008-2010 Land Use Conversion Spreadsheet, accessed October 21, 2013.

determining a significant effect on the environment and thereby necessitating preparation of an Environmental Impact Report (EIR). However, instead of using an arbitrary threshold such as 100 acres to trigger an EIR, Stanislaus County prefers to evaluate each project on a case-by-case basis. When Stanislaus County determines that under the specific circumstances of the proposed Project the conversion of agricultural land could have a significant effect, the County would require preparation of an EIR.¹

Development of the proposed Project would result in temporary impacts to 0.12 acres of Unique Farmland and 0.65 acres of Prime Farmland. This land would be used for construction equipment staging areas and movement of construction vehicles and equipment around the Project site. As part of the access agreement between the County and the property owners, all temporary impact areas designated as Prime Farmland will be returned to “before construction commencement” conditions once all construction activities on the Project site are completed. This would include the replacement of any soil that was removed or excavated. Through this condition of approval, the temporary impacts to Prime and Unique Farmland due to Project implementation would be reduced.

Project implementation would require permanent conversion of 0.07 acre of Unique Farmland and 1.30 acres of Prime Farmland to an urbanized use. The LESA Model was used to determine if the loss of Prime and Unique Farmland due to Project implementation would result in a significant impact to the Prime and Unique Farmland inventory of Stanislaus County. Table B: LESA Model Results shows the results of the LESA Model analysis for the proposed Project.

¹ Stanislaus County General Plan, Chapter 7 Agricultural Element, pg. 7-21.

Table B: LESA Model Results

LE Factors	Factor Scores	Factor Weight	Weighted Factor Scores
Land Capability Classification	45.6	0.25	11.4
Storie Index	49.6	0.25	12.4
LE Subtotal		0.50	23.8
SA Factors			
Project Size	0	0.15	0
Water Resource Availability	0	0.15	0
Surrounding Agricultural Land	90	0.15	13.5
Protected Resource Land	90	0.05	4.5
SA Subtotal		0.50	18.0
Final LESA Score			41.8

Source: California Department of Conservation, Farmland Mapping and Monitoring Program, California Agricultural Land Evaluation and Site Assessment Model Instruction Manual, completed October 17, 2013. (Worksheets are attached as Appendix A).

The proposed Project would score 23.8 points and 18.0 points on the Land Evaluation (LE) and Site Assessment (SA) evaluation portion of the LESA Model, respectively. Based on these subscores, the proposed Project would have a final LESA Model score of 41.8 points. As discussed above, a final LESA score between 40 to 59 points is considered significant only if LE and SA subscores are each greater than or equal to 20 points. As shown above in Table B, the SA evaluation portion of the LESA Model scored a total of 18.0 points. Per the threshold standards of the LESA Model, Project implementation would result in a less than significant impact to the loss of Prime and Unique Farmland.

Based on the nominal amount of Prime and Unique Farmland being lost, the results of the final LESA score, and condition of approval for temporary impacts to Unique and Prime Farmland, impacts to Important Farmland would be *less than significant*.

b) *Conflict with existing zoning for agricultural use, or a Williamson Act contract?*

Less Than Significant. The proposed Project site is located in an area of Stanislaus County that is zoned for agricultural use. Specific portions of the proposed Project site would include parcels that are zoned as A-2-40 per the Stanislaus County Zoning Ordinance. The A-2-40 designation is the General Agricultural District 40 Acre, which is intended to support and enhance agriculture as the predominant land use in the unincorporated areas of the County. This designation is also intended to protect open-space lands pursuant to Government Code Section 65910. Project implementation would require County roadway ROW acquisition and T.I.D. ROW acquisition on land that is currently zoned as A-2-40. Approximately 0.42 acre of APN 044-014-006 and 0.39 acre of APN 044-016-006 would be acquired for County roadway ROW. These portions of APNs 044-014-006 and 044-016-006 would be

designated as County ROW and would no longer be zoned as A-2-40. Approximately 0.29 acre of APN 044-041-038 and 0.25 acre of APN 044-043-021 would be acquired for T.I.D. ROW. These portions of APNs 044-041-038 and 044-043-021 would be designated as T.I.D. access/maintenance road ROW and would no longer be designated or zoned as A-2-40. Per the Stanislaus County Zoning Ordinance, the County Board of Supervisors would hold a public hearing regarding the zoning change of the land associated with the proposed Project and the partial acquisition of the parcels needed for County roadway ROW and T.I.D. ROW. The Board of Supervisors would then adopt or deny the amendment to the zoning changes associated with the proposed Project. The remaining land under each of the aforementioned parcels would remain zoned as A-2-40 and agricultural activities on these parcels would continue to operate as under existing conditions.

Land parcels that are located within the proposed Project site are currently under Williamson Act contracts. As shown above in Table A, APNs 044-014-006, 044-016-006, and 044-041-038 are all under Williamson Act Contracts. The Williamson Act requires that public agencies cannot locate public improvements in agricultural preserves unless findings as listed in Government Code Section 51292 are fulfilled for the following: (1) The location of the proposed Project is not based on a consideration of the lower cost of acquiring land in an agricultural preserve; and, (2) There is no other land within or outside of the preserve which is not under a Williamson Act Contract on which it is reasonably feasible to locate the proposed Project. The preceding analysis is provided for the cancellation of Williamson Act contracts on portions of APNs 044-014-006, 044-016-044 and 044-041-038:

The location of the proposed Project is not based on a consideration of the lower cost of acquiring land in an agricultural preserve.

The proposed acquisition of 0.42 acre of APN 044-014-006, 0.39 acre of APN 044-016-044, and 0.29 acre of APN 044-041-038 is due to the adjacency of these lands to long-established roads in Stanislaus County (Tegner Road and Harding Road) and the long-established Tegner Road Bridge.

Right-of-way on these three parcels would be acquired by the County for roadway improvements to Tegner Road and Harding Road to accommodate the demolition of the existing Tegner Road Bridge crossing over T.I.D. Lateral #5 Canal and installation of a new bridge. Improvements to right-of-way access are also necessary to maintain the T.I.D. Lateral #5 Canal within and adjacent to the proposed Project site. Regardless of the status of these parcels, relative to the presence or absence of a Williamson Act Contract (Agricultural Preserve), acquisition of portions of these parcels would be required to accommodate Project implementation.

There is no other land within or outside of the preserve, which is not under a Williamson Act Contract on which it is reasonably feasible to locate the proposed Project.

The acquisition of corner easements would be necessary both southwest (on parcel APN 044-041-038- Williamson Act Contract) and southeast (on parcel APN 044-043-021- Non-Williamson Act Contract) of the bridge to accommodate the realigned T.I.D. access road. Sliver right-of-way acquisitions would be necessary within APNs 044-014-006 and 044-016-006 (both Williamson Act Contracted lands) to accommodate roadway fill that would result from Project implementation.

Implementing the proposed Project in a different location is not reasonably feasible. The only land parcel surrounding the proposed Project site that is not currently under a Williamson Act Contract is APN 044-043-021. Shifting the entire Project to the southeast to reduce the amount of land acquisition on APNs 044-014-006 and 044-041-038 (which are under Williamson Act Contracts) would be infeasible as an entire realignment of Tegner and Harding Roads and shifting of the bridge location to the east would be required. Furthermore, a shift of the proposed Project to the southeast would require more land acquisition of APN 044-016-006 (under a Williamson Act Contract) which would be counterintuitive to the intent of reducing the amount of Williamson Act Contracted land that would need to be acquired for Project implementation. The proposed Project has been designed to accomplish the necessary improvements while acquiring the least amount of Williamson Act Contracted land as possible. Note that the remainder of each of the parcels would be reissued a Williamson Act contract.

Government Code Section 51291(c) requires that a public agency interested in cancelling a Williamson Act Contract, “notify the Director of Conservation within 10 days of acquiring the property under the Williamson Act contract.” Impacts would be less than significant.

- c) *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))?*

No Impact. Land within the proposed Project area is not zoned for forestland, timberland, or timberland zoned Timberland Production pursuant to Government Code section 51104(g). Furthermore zoning for forestland and timberland does not exist within the Project vicinity. Project implementation, therefore, would not conflict with existing zoning for forestland, or cause rezoning of forestland or timberland. No impacts would occur.

- d) *Result in the loss of forestland or conversion of forestland to non-forest use?*

No Impact. See response II(c) above. The proposed Project site is not in an area designated as forestland. Project implementation, therefore, would not convert forestland to non-forestland uses. No impacts would occur.

- e) *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 forestland to non-forest use?*

Less Than Significant Impact. The proposed Project would include replacement of an existing bridge with a newly designed bridge and associated roadway improvements at the T.I.D. Lateral #5 Canal crossing at Tegner Road and Harding Road. Agricultural uses surround the proposed Project site; implementation of the proposed Project would not influence or promote conversion of these agriculturally active parcels to be converted to non-agricultural uses. Portions of these parcels are located within the boundary of the proposed Project site. Portions of these parcels may be temporarily disturbed during Project construction, and agricultural production may not be able to occur during the construction period (4 months).

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III. AIR QUALITY

Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations. Would the project:

- | | | | | |
|--|--------------------------|-------------------------------------|-------------------------------------|--------------------------|
| a) Conflict with or obstruct implementation of the applicable air quality plan? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| c) 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 (including releasing emissions, which exceed quantitative thresholds for ozone precursors)? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| d) Expose sensitive receptors to substantial pollutant concentrations? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| e) Create objectionable odors affecting a substantial number of people? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |

Environmental Setting

Air quality is primarily a function of both local climate, local sources of air pollution and regional pollution transport. The amount of a given pollutant in the atmosphere is determined by the amount of the pollutant released and the atmosphere's ability to transport and dilute the pollutant. The major determinants of transport and dilution are wind, atmospheric stability, terrain, and for photochemical pollutants, sunshine.

A region's topographic features have a direct correlation with air pollution flow and therefore are used to determine the boundary of air basins. The proposed Project is located in the San Joaquin Valley Air Basin (SJVAB), which is comprised of approximately 25,000 square miles and covers all of seven counties including Fresno, Kings, Madera, Merced, San Joaquin, Stanislaus and Tulare, and the western portion of an eighth, Kern. The SJVAB is defined by the Sierra Nevada mountains in the east (8,000 to 14,000 feet in elevation), the Coast Ranges in the west (averaging 3,000 feet in elevation), and the Tehachapi mountains in the south (6,000 to 8,000 feet in elevation). The valley is topographically flat with a slight downward gradient to the northwest. The valley opens to the sea at the Carquinez Straits where the San Joaquin-Sacramento Delta empties into San Francisco Bay. An aerial view of the SJVAB would simulate a "bowl" opening only to the north. These topographic features restrict air movement through and out of the basin.

Air quality monitoring stations are located throughout the nation and maintained by the local air districts and state air quality regulating agencies. Data collected at permanent monitoring stations are used by the EPA to identify regions as “attainment” or “nonattainment” depending on whether the regions meet the requirements stated in the applicable National Air Quality Standards (NAAQS). Nonattainment areas are imposed with additional restrictions as required by the EPA. In addition, different classifications of attainment, such as marginal, moderate, serious, severe, and extreme, are used to classify each air basin in the state on a pollutant by pollutant basis. The classifications are used as a foundation to create air quality management strategies to improve air quality and comply with the NAAQS. The SJVAB’s attainment status for each of the criteria pollutants for Stanislaus County is listed in Table C: SJVAB Air Quality Attainment Status for Stanislaus County (2012).

Table C: SJVAB Air Quality Attainment Status for Stanislaus County (2012)

Pollutant	State	Federal
Ozone (1-hour)	Severe/Nonattainment	No Federal Regulation
Ozone (8-hour)	Nonattainment	Nonattainment
PM ₁₀	Nonattainment	Attainment
PM _{2.5}	Nonattainment	Nonattainment
Carbon Monoxide	Attainment	Unclassified/Attainment
Nitrogen Dioxide	Attainment	Unclassified/Attainment
Lead	Attainment	Unclassified/Attainment
Sulfur Dioxide	Attainment	Unclassified
Sulfates	Attainment	No Federal Regulation
Hydrogen Sulfide	Unclassified	No Federal Regulation

Source: California Air Resources Board, 2012. Area Designations. <http://www.arb.ca.gov/desig/desig.htm>. Accessed August 30, 2013.

As shown above in Table C, Stanislaus County is in Severe/Nonattainment for Ozone 1-hour; nonattainment for Ozone 8-hour, PM₁₀, and PM_{2.5}; in attainment for Carbon Monoxide, Nitrogen Dioxide, Lead, Sulfur Dioxide, and Sulfates; and, unclassified for Hydrogen Sulfide under State Air Quality Standards. Stanislaus County is in nonattainment for Ozone 8-hour and PM_{2.5}; attainment for PM₁₀; unclassified/attainment for Carbon Monoxide, Nitrogen Dioxide and Lead; and, unclassified for Sulfur Dioxide under Federal Air Quality Standards.

Major findings regarding air quality in the SJVAB include the following:

- The air quality in the San Joaquin Valley is among the poorest in the state. On average, the Valley exceeds the federal health-based standards for ground-level ozone on 35 to 40 days per year and exceeds the state ozone standard on more than 100 days per year;
- While there has been an overall decline in air pollution violations, the SJVAB continues to experience violations of NAAQS and State Ambient Air Quality Standards because some criteria pollutants remain in nonattainment with the standards; and,

- Levels of airborne particles exceed the federal standard fewer than five times annually; however, the California standard is exceeded an average of 90 to 100 days per year.

The Project is located within the jurisdiction of the San Joaquin Valley Air Pollution Control District (SJVAPCD). The SJVAPCD monitors air quality at several locations within the San Joaquin Valley. The closest multi-pollutant monitoring site that has data available for most pollutants in the area is located in Turlock approximately 3 miles northeast of the Project site. The pollutants monitored at this station include: CO, O₃, PM₁₀, PM_{2.5} and NO₂.

The air quality construction thresholds of significance in the SJVAPCD are: 100 tons/year for CO, 10 tons/year for NO_x and ROG, 27 tons/year for SO_x, and 15 tons/year for PM₁₀ and PM_{2.5}.

A discussion of Greenhouse Gas (GHG) emissions is presented below in Section VII of this document.

Impact Analysis

a) Conflict with or obstruct implementation of the applicable air quality plan?

Less Than Significant Impact. An air quality plan describes air pollution control strategies to be implemented by a city, county, or region classified as a nonattainment area. The main purpose of air quality plans is to bring the area into compliance with the requirements of Federal and State air quality standards. The air quality plans use the assumptions and projections of local planning agencies to determine control strategies for regional compliance status. Since the plans are based on local General Plans (e.g., Stanislaus County General Plan), projects that are deemed consistent with applicable General Plans are usually found to be consistent with the air quality plans.

The SJVAPCD is responsible for formulating and implementing Attainment Demonstration Plans (ADP) for the Air Basin. The latest plans address several State and federal planning requirements and incorporate significant new scientific data, primarily in the form of updated emissions inventories, ambient measurements, new meteorological episodes, and new air quality modeling tools. These ADPs are consistent with and build upon the approaches taken in previous documents for the attainment of the federal ozone air quality standard:

- The next plan for EPA's 8-hour ozone standard is to address EPA's 2008 8-hour ozone standard of 75 parts per billion (ppb). EPA designated the San Joaquin Valley as an extreme nonattainment area for this standard. This 8-hour ozone plan is expected to be due to EPA in 2015;
- In September 2013, the SJVAPCD adopted a plan for EPA's revoked 1-hour ozone standard. Although EPA approved the District's 2004 plan for the 1-hour ozone standard in 2010, EPA withdrew this approval as a result of litigation. The District's 2013 Plan for the Revoked 1-Hour Ozone Standard was approved by the District Governing Board at a public hearing on September 19, 2013. The modeling confirms that the Valley would attain the revoked standard by 2017;
- On April 26, 1996, the Board approved the "Carbon Monoxide Redesignation Request and Maintenance Plan for Ten Federal Planning Areas" as part of the State Implementation Plan (SIP) for Carbon Monoxide. U.S. EPA approved this revision on June 1, 1998 and redesignated the ten areas to attainment. On October 22, 1998, ARB revised the SIP to incorporate the effects of the recent Board action to remove the wintertime oxygen requirement for gasoline in certain areas. On

July 22, 2004, ARB approved an update to the SIP that shows how the ten areas would maintain the standard through 2018, revises emission estimates, and establishes new on-road motor vehicle emission budgets for transportation conformity purposes;

- The ARB approved the District's 2012 PM_{2.5} Plan at a public hearing on January 24, 2013. The plan, approved by the District Governing Board on December 20, 2012, would bring the Valley into attainment for EPA's 2006 PM_{2.5} standard by the 2019 deadline, with most areas seeing attainment well before then; and,
- The District adopted the 2007 PM₁₀ Maintenance Plan in September 2007 to assure the San Joaquin Valley's continued attainment of EPA's PM₁₀ standard. EPA designated the Valley as an attainment/maintenance area for PM₁₀.

As the proposed Project is a bridge replacement, it would not result in the generation of additional vehicle trips along Tegner Road or Harding Road and is not expected to increase regional Vehicle Miles Traveled (VMT). Construction and development of the proposed Project would include demolition of the existing bridge, channel work in T.I.D Lateral #5 Canal, roadway approach work where Tegner Road meets the new bridge on the south and north sides, and roadway improvements along Tegner Road and Harding Road to provide continued access to T.I.D. easements. As such, the proposed Project would not conflict with or obstruct implementation of any SJVAPCD air quality plans. Impacts would be less than significant.

b) *Violate any air quality standard or contribute substantially to an existing or projected air quality violation?*

Less Than Significant with Mitigation Incorporated. The short-term (construction) and long-term air quality impacts associated with implementation of the proposed Project are discussed below.

Short-Term (Construction) Emissions: Short-term air pollutant emissions associated with the proposed Project would occur during demolition and construction activities. Bridge demolition, grading, and vehicle/equipment use would contribute to short-term air pollution emissions.

Demolition and construction activities at the Project site would generate exhaust emissions from engines, on-site heavy duty construction vehicles, equipment hauling materials to and from the site, and motor vehicles transporting construction crews. Exhaust emissions during construction would vary daily as construction activity levels change. The use of construction equipment would result in localized exhaust emissions that could affect the residential units directly adjacent to the southeast and southwest boundary of the Project site and to the residential unit west of the Project site. However, due to the limited extent of development proposed, the projected short-term emissions of criteria pollutants as a result of Project construction are expected to be below thresholds set forth by the SJVAPCD referenced above.

Construction activities at the Project site would include the use of construction vehicles and equipment that would increase air pollutants associated with burning fossil fuel and dust on a short-term basis (a four-month period). During the four-month construction period the existing bridge would be demolished and removed, construction of the new bridge would occur, bridge roadway approach work would occur, and improvement work on T.I.D. access roads to conform to the new bridge profile

would occur. Blowing dust from on-site construction activities is a major cause of increased PM₁₀ and PM_{2.5} concentrations. The construction activities discussed above would have the potential to contribute to the District's existing California nonattainment status for particulate air quality, contributing a slight increase to PM₁₀ and PM_{2.5}. To reduce impacts to adjacent residential units during Project construction, **Mitigation Measure AIR-1**, presented below would be implemented.

The proposed Project site is not located in an area where ultramafic rocks occur and therefore naturally occurring asbestos (NOA) would not present an air quality concern during Project construction.

Long-Term (Operational) Emissions. Operational air emission impacts are associated with any change in permanent use of the Project site by on-site stationary and off-site mobile sources that substantially increase in vehicle trip emissions. No stationary sources are associated with the proposed Project. New vehicle trips would not be generated nor would the Project result in a significant increase vehicle miles traveled (VMT). Therefore, operational activities associated with the proposed Project would not contribute substantially to an existing or projected air quality violation. Operational impacts would be less than significant.

Mitigation Measure AIR-1 would be implemented during Project development to reduce construction dust emissions and air pollutant emissions.

Mitigation Measure AIR-1: The Project contractor, on behalf of the Project applicant, shall prepare a Dust Control Plan for demolition and construction activities at the Project site pursuant to the requirements and regulations of the SJVAPCD, including Regulation VIII. The Project contractor shall be responsible for ensuring that all adequate dust control measures are implemented in a timely manner during all phases of construction and maintenance activities at the Project site. The Dust Control Plan shall include, at a minimum, the following measures:

- All visible dry disturbed soil road surfaces shall be watered to minimize fugitive dust emissions;
- All unpaved surfaces, unless otherwise treated with suitable chemicals or oils, shall have a posted speed limit of 10 miles per hour;
- Earth or other material that has been deposited by trucking or earth moving equipment, erosion by water, or other means onto paved streets shall be promptly removed;
- Asphalt, oil, water or suitable chemicals shall be applied on stockpiled materials and other surfaces that can give rise to airborne dusts;
- All earthmoving activities shall cease when sustained winds exceed 15 miles per hour;
- The contractor's foreman shall take reasonable precautions to prevent the entry of unauthorized vehicles during non-work hours; and,
- The contractor's foreman shall keep a daily log of activities to control fugitive dust.

Implementation of **Mitigation Measure AIR-1** would ensure that PM₁₀ and PM_{2.5} levels generated during Project construction are within the standards of SJVAPCD for fugitive dust and particulate matter. Impacts would be less than significant with mitigation incorporated.

- c) *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 (including releasing emissions, which exceed quantitative thresholds for ozone precursors)?*

Less Than Significant. As described above in Section III(b), the proposed Project would result in a short-term increase in air pollutant emissions due to construction activities. The proposed Project would not result in increased air pollutant emissions during operation. Increases of short-term air pollutant emissions would not result in a cumulatively considerable net increase of criteria pollutants for which the Project region is in nonattainment for Federal and state ambient air quality standards. Implementation of **Mitigation Measure AIR-1**, as described above, would further reduce construction impacts.

- d) *Expose sensitive receptors to substantial pollutant concentrations?*

Less Than Significant Impact with Mitigation Incorporated. Sensitive receptors are facilities and land uses that include members of the population that are particularly sensitive to the effects of air pollutants, such as young children, the elderly, and people with illnesses. The Project is located in a rural area of Stanislaus County; however, single-family residential units are located adjacent to the southwest and southeast boundaries of the Project site and to the west of the site. Construction activities occurring on the Project site may expose these residents to airborne particulates and fugitive dust, as well as a small quantity of pollutants associated with the use of construction equipment (e.g., diesel-fueled vehicles and equipment). Such emissions would occur on a short-term basis during the construction period. Implementation of **Mitigation Measure AIR-1** would reduce construction-related emissions to a less than significant level, thus minimizing potential exposure of these sensitive receptors to substantial pollutant concentrations. As discussed in Section III(b), the proposed Project would not result in increased pollutant emissions during operation since implementation of the proposed Project would not increase traffic along Tegner Road. Therefore, the nearby sensitive receptors would not be exposed to substantial pollutant emissions during Project operation. Impacts would be less than significant with incorporation of **Mitigation Measure AIR-1**.

- e) *Create objectionable odors affecting a substantial number of people?*

Less Than Significant Impact. Some objectionable odors may be generated from the operation of diesel-powered construction equipment and/or vehicles during the Project construction period. However, these odors would be short-term in duration, would disperse quickly and would not result in long-term impacts to the nearby sensitive receptors. Long-term operation of the proposed Project would not generate any new vehicle trips; therefore, increases in permanent odors would not result from Project operation. Impacts would be less than significant.

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IV. BIOLOGICAL RESOURCES

Would the project:

- | | | | | |
|--|--------------------------|-------------------------------------|-------------------------------------|-------------------------------------|
| a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| b) 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 Game or U.S. Fish and Wildlife Service? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| d) 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? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan or other approved local, regional, or State habitat conservation plan? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

Environmental Setting

The *Tegner Road Bridge Replacement Project Natural Environment Study Minimal Impacts (NESMI)* document prepared in August 2013 contributes to the information in this section. The *NESMI* is attached as Appendix C of this document.

A Biological Study Area (BSA) was developed for the proposed Project to determine if special status animal and plant species, natural communities, or other biota would be impacted during construction and operation activities. The BSA totals approximately 3.13 acres and consists of the Project design

footprint, access areas, and staging areas. The BSA also includes lands beyond the footprint to the edge of the road right-of-way that could potentially be affected by Project construction and/or were determined necessary to inventory in order to determine impacts on biota. The BSA lies in the Central Valley, which is characterized by large, flat areas of agricultural lands. The majority of the land in the area is privately owned and is similar to lands directly adjacent to the BSA in use and vegetative characteristics. The BSA also contains the T.I.D. Canal, Tegner and Harding Roads, the surrounding unpaved shoulders (which support sparse ruderal vegetation), and areas of agricultural land beyond the roadway shoulders. Land directly adjacent to the proposed Project includes agricultural fields consisting of orchards and row crops. The topography of the BSA is flat, with an elevation of 94 feet above mean sea level. Tegner Road runs north to south through the BSA and consists of a two-lane asphalt roadway. The T.I.D. Canal runs east to west through the BSA paralleling Harding Road.

There are no natural communities within the BSA. Land uses consist of agricultural row crops and orchards, ruderal vegetation, the T.I.D. Canal, and the paved roadways. There are no wetlands or riparian areas in the project vicinity.

Orchards and row crops are agricultural lands and are not considered natural communities. Approximately 0.89 acre of agricultural lands occurs in the BSA. These lands are comprised of approximately 0.37 acre of almond orchards and 0.52 acre of corn row crops. These agricultural communities extend the length of the BSA adjacent to the roadway shoulders.

Ruderal vegetation occurs along the unpaved road shoulders and edges of the agricultural fields. Ruderal plant species are those that colonize and quickly establish in poor soils and disturbed or waste areas. They generally have fast-growing roots, low nutritional needs, and produce massive amounts of seed. Within the BSA, this community consists of bare dirt with pockets of sparsely vegetated weedy non-native plant species including: Russian thistle (*Salsola tragus*); black mustard (*Brassica nigra*); American bird's-foot trefoil (*Lotus unifoliolatus*); annual yellow sweetclover (*Melilotus indicus*); and Bermuda grass (*Cynodon dactylon*). Nutsedge (*Cyperus eragrostis*) and sedge (*Carex* sp.) were also observed near the edges of the agricultural fields. Ruderal areas comprise approximately 1.32 acres in the BSA.

Approximately 0.19 acre of open water habitat is present within the BSA during the irrigation season; open water habitat consists of the un-vegetated, concrete T.I.D. Canal. Developed land within the BSA consists of the paved portions of Tegner and Harding Roads. Developed areas comprise approximately 0.73 acre in the BSA.

A list of sensitive wildlife and plant species potentially occurring within the BSA was compiled to evaluate potential impacts resulting from Project construction. Sources used to compile the list include the California Natural Diversity Data Base (CNDDB 2013), the California Native Plant Society (CNPS) Online Edition (2013) and the United States Fish and Wildlife Service (USFWS) online list (2013). The species on the special status species lists were reviewed to determine if they could potentially occur within the BSA. The determination of whether a species could potentially occur within the BSA was based on the availability of suitable habitat within the species' known range. Species requiring specific habitat not present in the vicinity of the project (e.g., vernal pools) were eliminated as potentially occurring and are not discussed further.

The developed areas and ruderal vegetation in the BSA, as well as the surrounding agricultural lands, typically do not provide high quality habitat for wildlife species. However, a variety of species are known to occur in urbanized and agricultural settings. In addition, several valley oak trees are located directly southwest of the BSA, which may provide nesting habitat for several bird species. Common wildlife species that may occur in the BSA include, but are not limited to: coyote (*Canis latrans*); raccoon (*Procyon lotor*); striped skunk (*Mephitis mephitis*); California ground squirrel (*Otospermophilus beecheyi*); opossum (*Didelphis virginiana*); red shouldered hawk (*Buteo lineatus*); red-tailed hawk (*Buteo jamaicensis*); Swainson's hawk (*Buteo swainsoni*); rock dove (*Columba livia*); American crow (*Corvus brachyrhynchos*); Brewer's blackbird (*Euphagus cyanocephalus*); northern mockingbird (*Mimus polyglottos*); European starling (*Sturnus vulgaris*); American robin (*Turdus migratorius*); mourning dove (*Zenaida macroura*); common kingsnake (*Lampropeltis getula*); western terrestrial garter snake (*Thamnophis elegans*); and western fence lizard (*Sceloporus occidentalis*).

The specific habitats required by each species included in the special status species lists and the specific habitats and habitat conditions present in the BSA were reviewed. Special status species that were observed, or determined to potentially occur in the BSA based on availability of suitable habitat or other factors include Swainson's hawk and migratory birds, and are discussed below. No habitats of concern are located within or in the vicinity of the BSA.

Jurisdictional waters include wetlands and other waters that fall under the jurisdiction of the ACOE pursuant to Section 404 of the Clean Water Act (CWA), the RWQCB pursuant to Section 401 of the CWA or the Porter-Cologne Water Quality Control Act (PCWQCA), or the California Department of Fish and Wildlife (CDFW) pursuant to Section 1600-1616 of the State Fish and Game Code.

Potential jurisdictional waters within the BSA are limited to the T.I.D. Lateral #5 Canal. This feature, consisting of approximately 0.19 acre of non-wetland waters, is concrete lined, unvegetated, and has vertical banks. No CDFW jurisdictional waters are present within the BSA.

Impact Analysis

- a) *Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?*

Less Than Significant with Mitigation Incorporated. As described above, no state or federally listed or proposed plant species occur in the BSA; therefore, none would be affected by implementation of the proposed Project. The proposed Project has the potential to affect habitat and nesting activity of Swainson's hawk.

Swainson's hawk is a State threatened species but has no federal status. This species are long distance migrants, wintering primarily in South America, and returning north to breed. Swainson's hawks are large, broad-winged raptors that occur in open country throughout the western half of the United States. In California, Swainson's hawks occur in the northeastern portion of the State, in the Great Basin Province, and in the Central Valley. Nests are built in the tops of large trees, primarily those associated with riparian habitats. They are known to forage up to 10 miles from their nests. Six documented occurrences of the Swainson's hawk are in the search area. The closest observation of the

species occurred in 2007, approximately 4 miles north of the Project site. Most of the documented occurrences in the area included observations of nesting behavior, indicating a history of Swainson's hawks nesting nearby.

No suitable nesting habitat for Swainson's hawk occurs within the BSA. However, several valley oaks to the southeast of the BSA may provide nesting habitat for this species. Several large nests were observed in the oak trees during a February 2013 site visit; however, no Swainson's hawks or active nests were observed during this site visit. Agricultural row crops within, and adjacent to the BSA, provide foraging habitat for Swainson's hawks. Since suitable nesting and foraging habitat is present adjacent to the BSA this species could nest and forage within or in the vicinity of the Project site.

Project implementation would result in permanent impacts to 0.06 acre of agricultural land and 0.62 acre of ruderal vegetation. Temporary impacts, totaling 0.36 acre of agricultural land and 0.38 acre of ruderal vegetation, would occur as a result of construction staging, access and dewatering activities. Both of these land use types have limited value for wildlife.

Project construction activities (specifically construction of the new bridge approaches) would eliminate approximately 0.68 acre of ruderal vegetation and agricultural land that provide potential foraging habitat for Swainson's hawks.

CDFW generally recommends mitigation for loss of suitable foraging habitat for Swainson's hawk if the subject habitat is within 10 miles of an active nest (CDFW, 2000). A nest is considered active if it has been used in the last 5 years. Per the CNDDB record search, there are no active Swainson's hawk nests within 10 miles of the proposed Project site; therefore, mitigation would not be required for the loss of suitable foraging habitat for this species. However, Project implementation could potentially disrupt nesting for Swainson's hawk if the species is nesting in or near the BSA when construction begins. To reduce such an impact during Project construction, the following mitigation measure would be implemented:

Mitigation Measure BIO-1: The following measures shall be implemented by the Project applicant during construction activities:

- If work is conducted during the nesting migratory birds and Swainson's hawk season (February 1 to September 15), a qualified biologist shall survey all suitable nesting habitat in the BSA and within a 0.25-mile radius for presence of nesting raptors, including Swainson's hawk, and within 100 feet for presence of nesting birds. The survey radius may be decreased due to the presence of development or other land use that could preclude nesting. This survey shall occur no more than 10 days prior to the start of construction. If no nesting activity is observed, work may proceed as planned;
- If an active nest is discovered, a qualified biologist shall evaluate the potential for the proposed Project to disturb nesting activities. The evaluation criteria shall include, but are not limited to, the location/orientation of the nest in the nest tree, the distance of the nest from the Project site, and line of sight between the nest and the Project site. CDFW shall be contacted to review the evaluation and determine if the Project can proceed without adversely affecting nesting activities; and,

- If work is allowed to proceed, a qualified biologist shall be on site weekly (at a minimum) during construction activities to monitor nesting activities. The biologist shall have the authority to stop work if it is determined the Project is adversely affecting nesting activities.

The proposed Project would not affect any other special status species, including State or federally listed species. Consequently, consultation under Section 7 of the Federal Endangered Species Act would not be required, nor would an incidental take permit pursuant to Section 2081 of the State Fish and Game Code.

With implementation of **Mitigation Measure BIO-1** during construction, potential impacts to Swainson's hawks would be less than significant.

- b) *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 Game or U.S. Fish and Wildlife Service?*

Less Than Significant with Mitigation Incorporated. As discussed above, the proposed Project site is not located in an area that has riparian habitats or other sensitive natural communities. The lands surrounding and within the proposed Project site consist of agricultural row crops and orchards, ruderal vegetation, the T.I.D. Lateral #5 Canal, and the paved roadways. Project implementation would result in permanent impacts to 0.06 acre of agricultural land and 0.62 acre of ruderal vegetation. Temporary impacts, totaling 0.36 acre of agricultural land and 0.38 acre of ruderal vegetation would occur as a result of construction staging, access, and dewatering activities. Although the proposed Project would not have any impacts on riparian habitat or other sensitive natural communities; best management practices (BMPs) would be implemented as part of the construction plan to ensure that invasive species do not take hold and spread to neighboring habitat that could be identified as sensitive. The following BMPs would be implemented during Project construction:

- Following completion of construction activities, all fill slopes, temporary impact and/or otherwise disturbed areas shall be restored to preconstruction contours (if necessary) and revegetated with the native seed mix specified below, in Table D: Native Seed Mix. Invasive exotic plants would be controlled to the maximum extent practicable.

Table D: Native Seed Mix

Scientific Name	Common Name	Rate (Lbs./Acre)
<i>Bromus carinatus</i>	California brome grass	5.0
<i>Elymus glaucus</i>	Blue wild rye	5.0
<i>Elymus X triticum</i>	Regreen	10.0
<i>Eschscholzia californica</i>	California poppy	2.0
<i>Hordeum brachyantherum</i>	Meadow barley	5.0
<i>Lupinus bicolor</i>	Bicolored lupine	4.0

Source: LSA Associates, Inc. Tegner Road Bridge Replacement Project Natural Environment Study Minimal Impacts, September 2013.

- In accordance with Executive Order 13113 (Invasive Species), to avoid distribution of invasives during Project construction, contract specifications would include, at a minimum the following measures:
 - All earthmoving equipment to be used during Project construction shall be thoroughly cleaned before arriving on the Project site;
 - All seeding equipment (i.e., hydroseed trucks) shall be thoroughly rinsed at least three times prior to beginning seeding work; and,
 - To avoid spreading nonnative invasive species already existing on-site to off-site areas, all equipment shall be thoroughly cleaned before leaving the Project site.

Implementation of these BMPs would ensure that invasive species would not spread to off-site riparian or natural community habitat near the Project site.

The T.I.D. Lateral #5 Canal runs through the proposed Project site from west to east, paralleling Harding Road. Potential jurisdictional waters within the Project site are limited to the T.I.D. Lateral #5 Canal consisting of approximately 0.19 acre of non-wetland waters in a concrete lined, unvegetated, vertically banked waterway. Project implementation would result in minor temporary impacts to non-wetland waters of the U.S. totaling 0.06 acre during the construction period when dewatering activities would occur. To reduce this minor temporary impact during Project construction, the following mitigation measure would be implemented:

Mitigation Measure BIO-2: The following measures shall be implemented by the Project applicant prior to commencement of and during construction activities:

- Measures consistent with the current Caltrans' Construction Site Best Management Practices (BMP) Manual (including Storm Water Pollution Prevention Plan [SWPPP] and Water Pollution Control Plan [WPCP] Manuals) shall be implemented to minimize effects to jurisdictional waters resulting from erosion, siltation, etc. during Project construction; and,
- Prior to issuance of a grading permit or other authorization to proceed with Project construction, the Project applicant shall obtain any regulatory permits that are required from the ACOE and RWQCB. The waters of the U.S. in the Project site that would be affected by Project implementation are regulated by the ACOE under Section 404 of the Clean Water Act (CWA). It is expected the proposed discharge into waters of the U.S. during Project construction would be authorized by the ACOE using Nationwide Permit (NWP) 14-Linear Transportation Projects. In accordance with the conditions of NWP 14, a Preconstruction Notification shall be submitted to the ACOE for verification that the proposed discharges comply with the conditions of the subject NWP. Discharges into waters of the U.S. under Section 404 of the CWA also require a Water Quality Certification from the RWQCB, pursuant to Section 401 of the CWA. Authorization from RWQCB pursuant to Section 401 of the CWA shall also be required. The RWQCB shall issue a Water Quality Certification, prior to commencement of construction activities, to authorize discharges into waters of the State.

With implementation of **Mitigation Measure BIO-2** during construction, potential impacts to non-wetland waters of the U.S. would be less than significant.

- c) *Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?*

No Impact.

Potential jurisdictional waters within the BSA are limited to the T.I.D. Canal. This feature, consisting of approximately 0.19 acre of non-wetland waters, is concrete-lined, unvegetated, and has vertical banks. There are no wetlands in the Project area; thus, there will be no impact to wetlands.

- d) *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?*

Less Than Significant with Mitigation Incorporated. Wildlife movement corridors are linear habitats that function to connect two or more areas of significant wildlife habitat. These corridors may function on a local level between small habitat patches (e.g., streams in urban settings) or may provide critical connections between regionally significant habitats (e.g., deer movement corridors). Wildlife corridors typically include vegetation and topography that facilitate the movements of wild animals from one area of suitable habitat to another in order to fulfill foraging, breeding, and territorial needs. These corridors often provide cover and protection from predators that may be lacking in surrounding habitats. Wildlife corridors generally include riparian zones and similar linear expanses of contiguous habitat. The proposed Project site is not located in or near a wildlife movement corridor.

Migratory birds are protected under the Migratory Bird Treaty Act (MBTA) and the California State Fish and Game Code. Disturbance of migratory birds during their nesting season (February 1 to August 31) could result in “take” which is prohibited under the MBTA and Section 3513 of the California Fish and Game Code. Fish and Game code Section 3503 also prohibits take or destruction of bird nests or eggs. Migratory birds can nest in a variety of habitats depending on the species, including tree canopies, dense shrubs, and even on the ground. Within the Project site, all areas that are not paved, developed or otherwise exposed to constant disturbance could be utilized for nesting by various migratory bird species common to the region. Birds that nest on the ground in these habitats could be affected by Project construction. Implementation of **Mitigation Measure BIO-1**, discussed above, would ensure that migratory birds are not impacted by Project construction activities; therefore, impacts would be less than significant with mitigation incorporated.

- e) *Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?*

Less Than Significant Impact. Stanislaus County does not have a specific ordinance for tree preservation; however, the Open Space and Conservation Element of the Stanislaus County General Plan calls for all discretionary projects with potential impacts to develop an oak woodland management plan. Additionally the Open Space and Conservation element calls for the protection of trees with historic significance including heritage trees; however, an ordinance regarding Heritage Tree Protection has not been adopted by Stanislaus County.

The proposed Project would not include the removal of or impact to oak trees or Heritage Trees in the area. The Project would be designed and developed to be in compliance with local policies or ordinances protecting biological resources as set forth by Stanislaus County. Impacts would be less than significant.

- f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan or other approved local, regional, or State habitat conservation plan?*

No Impact. The proposed Project site is not located in or near an adopted Habitat Conservation Plan, Natural Community Conservation Plan or other approved local, regional, or State habitat conservation plan. Therefore, the proposed Project would not conflict with such conservation plans. No impact would occur.

Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
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V. CULTURAL RESOURCES

Would the project:

- | | | | | |
|--|--------------------------|-------------------------------------|--------------------------|--------------------------|
| a) Cause a substantial adverse change in the significance of a historical resource as defined in 15064.5? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to 15064.5? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| d) Disturb any human remains, including those interred outside of formal cemeteries? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

Environmental Setting

The *Historic Property Survey Report (HPSR)* and *Archaeological Survey Report (ASR)* for the Tegner Road Bridge over Turlock Irrigation District Lateral # 5 Canal Replacement Project document prepared in August 2013 contributes to the information in this section.

An Area of Potential Effects (APE) was established for the proposed Project to determine the extent of sensitive cultural resources that could be disturbed during Project construction activities. The APE is 4.77 acres in size and encompasses the maximum extent of ground disturbance including construction staging areas. The APE is located along both sides of Tegner and Harding Roads, approximately 0.9 mile south of the intersection of Linwood Avenue and Tegner Road. The APE extends 1,100 feet along Tegner Road and 900 feet along Harding Road and ranges from 60 to 200 feet wide.

Tegner Road Bridge was constructed in 1919 over the T.I.D. Lateral #5 Canal, which was originally a dirt-lined canal, constructed in the early 1900s. T.I.D. was organized in 1887 and delivered water to customers beginning in 1900 from a main canal several miles upstream from Lateral #5 Canal. In 1928, concrete lining was installed within the canal along both sides of Tegner Road. The concrete lining was resurfaced with Gunite in 1983 and 1990. The resurfacing in 1983 included an increase in the height of the lining to accommodate the reconfigured Drop 12 (flow control structure downstream of the bridge). The Drop 12 was reconstructed to its current configuration in 1983. The original construction of the Drop 12 would have likely coincided with the construction of the canal in the early 1900s. Maintenance improvements since the construction of the canal have altered the segment within the APE to appear less than 30 years old. Consequently, the Caltrans District 10 Architectural Historian has exempted this property per Property Type 3: Buildings, structures, objects, districts, and sites so altered as to appear less than 30 years old based on the Section 106 Programmatic Agreement, per the Caltrans Environmental Handbook.

Cultural Resources. Research was conducted regarding historical properties and Native American cultural sites in the APE of the proposed Project. A records search was conducted for the APE and ¼-mile radius on February 2, 2013, at the Central California Information Center (CCIC) of the California Historical Resources Information System, California State University, Stanislaus, Turlock, California. The CCIC records search identified no recorded archaeological cultural resources in, or within a ¼-mile of the APE. On February 19, 2013 letters describing the Project site with maps depicting the APE were sent to the McHenry Museum & Historical Society requesting information or concerns regarding historical resources within the APE. As of the publication of this IS/MND, no response to the inquiry has been received from the McHenry Museum & Historical Society.

Consultation with *Native American Heritage Commission* occurred on January 3, 2013, and the results indicated that a records search of the Sacred Lands File "...cultural resource sites were not identified within one-half mile of the project site..." Names of Native Americans who might have information or concerns about culturally sensitive sites within the APE were also requested and on February 5, 2013, letters were sent to 13 representatives of local Native American tribes. Of the 13 representatives contacted, two representatives (the Cultural Resources Director from the Tuolumne Band of Me-Wuk and Chairperson from the California Valley Miwok Tribe) responded, requesting, that they would like to be contacted if inadvertent discoveries are made during Project construction. The 11 other local Native American Tribe representatives that were contacted have not responded to date to the records search request for Native American cultural sites within or near the APE.

Archaeological Sensitivity. The ASR consisted of archival and background research, a field survey on March 1, 2013, consultation with potentially interested parties, and an archaeological sensitivity assessment. The CCIC records search and background research identified no recorded archaeological cultural resources in, or within ¼-mile of the APE. Additionally, no archaeological cultural resources were identified during field surveys conducted within the boundary of the APE. The archaeological sensitivity assessment identified moderate sensitivity for encountering prehistoric archaeological deposits and no sensitivity for encountering historic-period archaeological deposits within the APE.

Paleontological Resources. Geologic maps of the project area and relevant geological and paleontological literature were consulted to determine which geologic units are present within the project area and whether fossils have been recovered from those or similar geologic units elsewhere in the region. A search for known fossil localities was conducted through the online collections database of the University of California Museum of Paleontology (UCMP) at the University of California, Berkeley, in order to determine the status and extent of previously recorded paleontological resources within and surrounding the project area.

Paleontological Sensitivity. The paleontological analysis consisted of a fossil locality search through the UCMP and a review of relevant geological and paleontological literature. This analysis documented that the project area is underlain by the Late Pleistocene Modesto Formation, which has produced scientifically significant paleontological resources in Stanislaus County and elsewhere in the San Joaquin Valley. As such, these deposits are considered to have high paleontological sensitivity. However, this analysis noted that the project is located in a previously disturbed area and will have minimal ground disturbance, with the exception of the installation of steel pipe driven piles, a method that is not conducive to the recovery of fossils. Therefore, the analysis concluded that project is

unlikely to impact scientifically important paleontological resources and no paleontological mitigation measures are required for this project using current project plans.

Impact Analysis

- a) *Cause a substantial adverse change in the significance of a historical resource as defined in § 15064.5?*

Less Than Significant with Mitigation Incorporated. As described above, research was conducted to determine if historical or Native American sensitive sites were located within the APE or surrounding the Project site. No historical resources were identified within or adjacent to the Project area.

The bridge is determined by Caltrans to be a Category 5 bridge. Category 5 bridges are not eligible for the National Register of Historic Places.

The possibility exists that previously unknown buried archaeological deposits could be discovered during grading and excavation work associated with Project construction. Prehistoric materials can include flaked-stone tools (e.g., projectile points, knives, choppers) or obsidian, chert, basalt or quartzite tool making debris; bone tools; culturally darkened soil (e.g., midden soil often containing heat-affected rock, ash and charcoal, shellfish remains, faunal bones, and cultural materials); and stone milling equipment (e.g., mortars, pestles, handstones). Prehistoric archaeological sites often contain human remains. Historical materials can include wood, stone, concrete, or adobe footings, walls and other structural remains; debris-filled wells or privies; and deposits of wood, glass, ceramics, metal and other refuse. Implementation of **Mitigation Measure CULT-1**, presented below, would reduce impacts to undiscovered resources to a less than significant level if found during Project construction activities.

Mitigation Measure CULT-1: If deposits of prehistoric or historical archaeological materials are discovered during non-monitored Project construction activities, all work within 25 feet of the discovery shall be redirected and a qualified archaeologist contacted, if one is not present, to assess the situation, consult with agencies as appropriate, and make recommendations for the treatment of the discovery. Personnel at Stanislaus County shall be notified. Project personnel shall not collect or move any archaeological materials.

Any adverse impacts to the finds shall be avoided by Project construction activities. If avoidance is not feasible, the archaeological deposits shall be evaluated to determine if they qualify as a historical resource or unique archaeological resource, or as historic property. If the deposits do not so qualify, avoidance is not necessary. If the deposits do so qualify, adverse impacts on the deposits shall be avoided, or such impacts shall be mitigated. Mitigation may consist of, but is not limited to, recovery and analysis of the archaeological deposit; recording the resource; preparing a report of findings; and accessioning recovered archaeological materials at an appropriate curation facility. Educational public outreach may also be appropriate. Upon completion of the assessment, the archaeologist shall prepare a report documenting the methods and results, and provide recommendations for the treatment of the archaeological deposits discovered. The report shall be submitted to Stanislaus County.

Implementation of **Mitigation Measure CULT-1**, discussed above, would ensure that undiscovered historical resources as defined in § 15064.5 would be avoided or, alternatively, identified, catalogued or preserved if found during Project construction activities; therefore, impacts would be less than significant with mitigation incorporated.

- b) *Cause a substantial adverse change in the significance of an archaeological resource pursuant to § 15064.5?*

Less Than Significant with Mitigation Incorporated. No archaeological resources, as defined by § 15064.5, have been identified in the proposed Project area. Archaeological resources are not anticipated to be discovered during Project construction activities. If, however, such resources are discovered, **Mitigation Measure CULT-1**, described above, would be implemented. **Mitigation Measure CULT-1** would ensure that undiscovered archaeological resources pursuant to § 15064.5 would be avoided or, alternatively, identified, catalogued, or preserved if found during construction activities; therefore, impacts would be less than significant with mitigation incorporated.

- c) *Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?*

Less Than Significant with Mitigation Incorporated. No paleontological resources or unique geologic features are known to exist within the APE or near the Project site. As noted, the Project area is underlain by the Late Pleistocene Modesto Formation, which is considered to have high paleontological sensitivity. However, the Project is located in a previously disturbed area and will have minimal ground disturbance, with the exception of the installation of steel pipe driven piles, a method that is not conducive to the recovery of fossils. Therefore, the analysis concluded that project is unlikely to impact scientifically important paleontological resources and no paleontological mitigation measures are required for this project using current project plans. However, should undiscovered paleontological resources be found during Project construction, **Mitigation Measure CULT-2** shall be implemented to reduce potential impacts to paleontological resources.

Mitigation Measure CULT-2: If undiscovered paleontological resources are encountered during Project subsurface construction and no monitor is present, all ground-disturbing activities within 50 feet shall be redirected to other areas until a qualified paleontologist can be retained to evaluate the find and make recommendations for identifying, cataloguing, or preserving the resource. If found to be significant and Project activities cannot avoid the paleontological resources, a paleontological evaluation and monitoring plan, as described above, shall be developed and implemented. Adverse impacts to paleontological resources shall be mitigated, which may include monitoring, data recovery and analysis, a final report, and the accession of all fossil material to a paleontological repository. Upon completion of Project ground-disturbing activities, a report documenting methods, findings, and recommendations shall be prepared and submitted to the paleontological repository.

Implementation of **Mitigation Measure CULT-2**, discussed above, would ensure that undiscovered paleontological resources and unique geologic features would be avoided or, alternatively, identified, catalogued or preserved if found during Project construction activities and would not be directly or indirectly destroyed without proper mitigation; therefore, impacts would be less than significant with mitigation incorporated.

d) Disturb any human remains, including those interred outside of formal cemeteries?

Less Than Significant with Mitigation Incorporated. No human remains are known to exist within the APE or near the proposed Project site. Section 7050.5 of the California Health and Safety Code states that in the event of discovery or recognition of any human remains in any location other than a dedicated cemetery, there shall be no further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent remains until the Stanislaus County Coroner has determined whether or not the remains are subject to the coroner's authority. There is no indication that human remains are present within the proposed Project site. Implementation of **Mitigation Measure CULT-3** would ensure that potential impacts to human remains, should they be discovered during Project construction activities, are identified, collected and reinterred.

Mitigation Measure CULT-3: In the event that human remains are encountered, work within 50 feet of the discovery shall be redirected to another area on the Project site and the Stanislaus County Coroner shall be immediately notified. At the same time, a qualified archaeologist shall be retained to assess the situation and consult with agencies as appropriate. Construction personnel working at the Project site shall not collect or move any human remains and associated materials. If the human remains are of Native American origin, the Coroner shall notify the Native American Heritage Commission within 24 hours of this identification. The Native American Heritage Commission shall identify a Most Likely Descendant (MLD) that would be retained to inspect the find and provide recommendations for the proper treatment of the remains and associated grave goods. Upon completion of such an assessment, the archaeologist that has been retained shall prepare a report documenting the methods and results, and provide recommendations for the treatment of the human remains and any associated cultural materials, as appropriate and in coordination with the recommendations of the MLD. The finalized report shall be submitted to Stanislaus County.

There is no indication that human remains are present within the proposed Project site. Implementation of **Mitigation Measure CULT-3** would ensure that potential impacts to human remains, should they be encountered, would be reduced to a less than significant level.

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VI. GEOLOGY AND SOILS

Would the project:

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|--|--------------------------|-------------------------------------|-------------------------------------|-------------------------------------|
| a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving: | | | | |
| i) 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. | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| ii) Strong seismic ground shaking? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| iii) Seismic-related ground failure, including liquefaction? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| iv) Landslides? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| b) Result in substantial soil erosion or the loss of topsoil? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| c) 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? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

Environmental Setting

Parikh Consultants, Inc. prepared a geotechnical engineer report for the potential Project in August 2013 to evaluate the general soil and groundwater conditions at the project site, to evaluate their engineering properties, and to provide foundation design recommendations for the proposed project. The Stanislaus County General Plan¹ and the U.S. Geological Survey² also contributed to information

¹ Stanislaus County General Plan, General Plan Support Documentation, Chapter 5 Safety, 1994.

² U.S. Geological Survey Website, <http://www.usgs.gov/>. Accessed September 9, 2013.

discussed in this section. The central portion of Stanislaus County is located in the Great Valley of California's Central Valley. The valley is an asymmetrical trough with a shallow dipping east limb and steeply dipping west limb. The trough has been filled with sediment and attains a thickness exceeding 30,000 feet in depth in some areas. Geologic formations within the Central Valley consist of sediment deposited in marine, alluvial, and terrestrial environments. The general geologic features pertaining to the Project site are similar to that of the Great Valley of California's Central Valley. The subsoils at the Project site are situated on the following geological unit:

- **Quaternary alluvium and marine deposits (Pliocene to Holocene) (Q):** This geologic unit contains alluvium, lake, playa, and terrace deposits that are unconsolidated and semi-consolidate, mostly nonmarine, but includes marine deposits near the coast.

Soil types located within the Project site include the following:

- **Delhi loamy sand, silty substratum, 0 to 3 percent slopes (DgA):** This soil is slightly less droughty than the associated soil, Delhi sand, and a little less severely affected by wind erosion when cultivated. Most of the soil is cultivated and is used for orchard crops, grapes, melons, alfalfa, and sweet potatoes, and range. This soil has very rapid permeability and has high wind erosion susceptibility.
- **Dinuba sandy loam, 0 to 1 percent slopes (DrA):** This soil is imperfectly drained and moderately coarse textured. It is developed from alluvium derived from granitic rock and are on young alluvial fans and have very gently sloping to nearly level, smooth topography. These soils are largely cultivated and are used mainly for irrigated pasture, grain, and vine crops. This soil has moderate permeability and slight erosion susceptibility.
- **Madera sandy loam, 0 to 2 percent slopes (MdA):** The Madera sandy loam is from 1 foot to 6 feet of a light-brown to dark-brown sandy loam, which is sticky when wet and is very hard and compact when dry. Areas of this soil are used for grain farming and grazing, and considerable areas are valueless for other purposes on account of the topography and hardpan. In the more level areas of the soil the hardpan is always deeper, and with a supply of irrigation water these soils are well adapted for vines, figs, olives, berries, and alfalfa, and fairly well adapted to the production of various stone fruits and almonds. This soil has very slow permeability and slight erosion susceptibility.

Geologic hazards exist within Stanislaus County that could impact residents, buildings and infrastructure (e.g, roadways, bridges, etc.). Several faults are known to exist within the County; however, no faults are currently known to exist within the valley portion of the County. In the extreme eastern part of the County, the Bear Mountain and Melones Faults are found, but are believed to have been inactive for the past 150 million years. Within the Diablo Range, the most recent surface movements were along the Tesla-Ortogonalita fault approximately 5 million years ago, although earthquake activity without surface fracturing or faulting is still common. Since 1930, one earthquake with a magnitude of greater than 4.0 on the Richter Scale was recorded in Stanislaus County. No active faults traverse the proposed Project site nor are any near the site. The closest active fault is the San Joaquin Fault, approximately 14.2 miles to the west of the proposed Project site.

The State of California Division of Mines and Geology has published maps of areas that are in or to be included in Alquist-Priolo Special Studies Zones. These maps identify the Ortigalita Fault in the Diablo Range in the southwestern corner of the County as an Alquist-Priolo Special Studies Zone. This fault begins in the northwestern portion of Merced County and extends northwest, seven miles into Stanislaus County. The proposed Project site is not located on or near a fault designated as an Alquist-Priolo Special Study Zone and is located approximately 26 miles northeast of the Alquist-Priolo designated Ortigalita Fault.

The California Geologic Survey Probabilistic Seismic Hazard Assessment (PHSA) calculates earthquake shaking hazards through historic seismic activity and fault slip rates. Shaking from faults is expressed as the Peak Ground Acceleration (PGA) measured as a percentage (or fraction) of acceleration due to gravity (%g) from ground motion that has a 10 percent probability of being exceeded in 50 years. The proposed Project site is located in an area with a PGA of 40 to 50 percent (0.40 g to 0.50 g).¹

Seismic ground shaking can result in soil compaction and settlement. If the sediments that compact during an earthquake become saturated they are subject to liquefaction. If liquefaction occurs, soil loses its supporting structure, resulting in a condition where structures could settle into the ground. According to the California Geological Survey, the proposed Project site is located in an unmapped area for liquefaction.² The geotechnical report evaluated the liquefaction potential of the site and found that soils found at the site are potentially liquefiable. Post-liquefaction settlement was calculated to be about 1 to 2 inches.

Slope instability (landslides and rockslides) can result in the movement of material down a slope or gradient. Areas at risk from landslides within Stanislaus County are in the Diablo Range in the southwest portion of the County. The proposed Project site is located on topographically flat land and would not be susceptible to landslides or rockslides caused during a seismic event.

Impact Analysis

- a) *Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:*
 - i) *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.*

Less Than Significant Impact. The proposed Project site is not located within or near an Alquist-Priolo Earthquake Fault Zone. The closest Alquist-Priolo Fault is the Ortigalita Fault located 26 miles southwest of the proposed Project site. The proposed Project would not include development on or near an Alquist-Priolo designated fault, which would expose people or structures to potential

¹ California Emergency Management Agency Hazard Mitigation Website, <http://myplan.calema.ca.gov/>. Accessed September 9, 2013.

² California Emergency Management Agency Hazard Mitigation Website, <http://myplan.calema.ca.gov/>. Accessed September 9, 2013.

substantial adverse effects, including the risk of loss, injury, or death. Impacts would be less than significant. There are no other known active or potentially active faults in the project vicinity. According to the geotechnical report, the potential for fault rupture at the site appears to be low.

ii) Strong seismic ground shaking?

Less Than Significant Impact. Ground shaking is a general term referring to all aspects of motion of the earth's surface resulting from an earthquake and is normally the major cause of damage in seismic events. The extent of ground-shaking is controlled by the magnitude and intensity of the earthquake, depth of the epicenter, distance from the epicenter, and local geological conditions.

As discussed above, the proposed Project site is not located on, adjacent to, or near an active fault. The closest active fault is the San Joaquin Fault, approximately 14.2 miles to the west of the proposed Project site. This fault is capable of producing a maximum magnitude seismic event of 6.6 on the Richter Scale. Although this fault is fairly close, the proposed Project site is located in a relatively low seismically active portion of northern California. Based on the available geological and seismic data, the proposed Project site is located in an area that has the potential to experience Peak Ground Acceleration (PGA) of 40 to 50 percent (0.40g to 0.50g – indicating moderate ground shaking) during such a seismic event. Although the site could be exposed to moderate ground shaking, the Project would be designed and constructed consistent with Stanislaus County and Caltrans seismic design standards. Implementation of the proposed Project would not expose people or structures to potential adverse effects, including the risk of loss, injury or death involving strong seismic ground shaking. Impacts would be less than significant.

iii) Seismic-related ground failure, including liquefaction?

Less Than Significant Impact. Soil liquefaction is a phenomenon primarily associated with the saturated soil layers located close to the ground surface. These soils lose strength during ground shaking in seismic events. Due to the loss of strength, the soil acquires “mobility” sufficient to permit both horizontal and vertical movements. Soils that are most susceptible to liquefaction are clean, loose, uniformly graded, saturated, fine-grained sands that lie relatively close to the ground surface. However, loose sands that contain a significant amount of fines (minute silt and clay fraction) may also liquefy.

According to the California Geological Survey the proposed Project site is located in an unmapped area for liquefaction potential. These areas have not been evaluated for seismically induced liquefaction hazards by the California Geological Survey; however, the on-site soils have characteristics that are typically not susceptible to seismically related liquefaction. The proposed Project would include design features that would reduce the risk of loss or damage to the new bridge structure due to seismically related liquefaction or ground failure events. With implementation of such design features impacts would be less than significant.

The geotechnical report evaluated the liquefaction potential and determined that soils found at the site are potentially liquefiable. Post-liquefaction settlement was calculated to be about 1 to 2 inches. This settlement could cause a downdrag force on the foundation, which was accounted for in Project design.

iv) Landslides?

No Impact. The proposed Project site is located in a topographically flat area of Stanislaus County. There are no hills or mountains that would be susceptible to landslides within, adjacent to, or near the Project site. The California Geological Survey and Stanislaus County General Plan indicate that areas susceptible to landslides are located in the southwestern portion of the County in the Diablo Range. Project implementation would not expose construction workers seismically induced landslides. No impact would occur.

b) Result in substantial soil erosion or the loss of topsoil?

Less Than Significant with Mitigation Incorporated. The proposed Project site is located on the following soils: Delhi loamy sand, silty substratum, 0 to 3 percent slopes (DgA); Dinuba sandy loam, 0 to 1 percent slope (DrA); and, Madera sandy loam, 0 to 2 percent slopes (MdA). Soils are typically susceptible to water and wind erosion over a period of time and the erodibility of the soil as a whole is measured by the NRCS using the Erosion Factor Kw. This factor is rated from 0.02 (low erosion susceptibility) to 0.69 (very high erosion susceptibility) for soils within Stanislaus County. Soils DgA and MdA have an Erosion Factor Kw of 0.2; and, Soil DrA has an Erosion Factor Kw of 0.3. These three soils have a medium susceptibility to loss through sheet and rill erosion. Ground disturbing activities during existing bridge demolition and the construction phase of the Project would have the potential to result in temporary soil erosion due to water application and exposing these soils to wind. Implementation of **Mitigation Measures HYDRO-1** through **HYDRO-4** in Section IX of this document, requiring the preparation and implementation of a Stormwater Pollution Prevention Plan would contain Best Management Practices (BMPs) to reduce the potential impacts associated with soil erosion during Project construction. Therefore, impacts would be less than significant with mitigation incorporated.

c) 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?

Less Than Significant Impact. As discussed above, the proposed Project site is located in an area that is topographically flat. There are no hillsides, cliffs, canyons, or unstable land mass areas within or near the proposed Project site.

The area where the proposed Project site is located is designated as an unmapped area for liquefaction per the California Geological Survey. The geotechnical report evaluated the liquefaction potential and determined that soils found at the site are potentially liquefiable. Post-liquefaction settlement was calculated to be about 1 to 2 inches. This settlement could cause a downdrag force on the foundation, which was accounted for in Project design.

Subsidence is the gradual, local settling or sinking of the earth's surface with little or no horizontal movement. Most of the non-seismically induced subsidence in the area occurs in the Delta area of San Joaquin County where subsidence has generally been attributed to the overdrafting of groundwater basins and from peat oxidation of the Delta islands. Seismically induced subsidence is most likely to occur in areas where water tables are deep, the soils are of loose to medium density, and the soil profile includes strata of loose, clean, uniformly graded sand. According to Stanislaus County subsidence has

not been and is not expected to be a problem within the County. The proposed Project is not located in an area where subsidence is known to occur.

Ground collapse (sinkholes) occurs when subsidence of soil, sediment, or rock underlying strata are dissolved by groundwater. A sinkhole may form when upper soil levels collapse into subterranean voids created by the dissolving of limestone or dolostone beneath the soil layer. Once dissolving occurs the upper level soils become weak and cannot support their own weight or the weight of structures. Ground collapse occurs in areas underlain by limestone and is most prevalent in states such as Florida and Pennsylvania. The proposed Project site is not located in an area underlain by limestone or dolostone. The project is located on Quaternary alluvium and marine deposits (Pliocene to Holocene), which are typically not susceptible to ground collapse (sinkholes). Therefore the proposed Project is not expected to be susceptible to ground collapse.

The proposed Project would not be located on a geologic unit or soil that is unstable, or that would become unstable and potentially result in on- and offsite landslides, lateral spreading, subsidence, liquefaction or collapse. Therefore impacts would be less than significant.

d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?

Less Than Significant Impact. Expansion and contraction of volume occur when expansive soils experience alternating cycles of wetting (swelling) and drying (shrinking) and are generally associated with clayey soils. During these cycles, the volume of the soil changes substantially. Expansive soils are common throughout California and can cause damage to foundations and slabs unless properly treated during the construction process. The three soils present on the proposed Project site all have a low shrink-swell capacity.¹ The proposed Project would not be located on soils with substantial susceptibility to expansion, which would create risks to life or property. Impacts would be less than significant.

e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water

No Impact. The proposed Project does not involve the generation of any wastewater or include the use of septic tanks or alternative waste water disposal systems in soils. The proposed Project consists of the removal of an existing bridge, development of a new bridge, and improvements to roadway approaches along Tegner and Harding Roads. No impacts would occur.

¹ United States Department of Agriculture Natural Resources Conservation Services, Web Soil Survey, <http://websoilsurvey.nrcs.usda.gov/app/HomePage.htm>. Accessed September 5, 2013.

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VII. GREENHOUSE GAS EMISSIONS

Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations. Would the project:

- | | | | | |
|--|--------------------------|--------------------------|-------------------------------------|-------------------------------------|
| a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| b) Conflict with any applicable plan, policy or regulation of an agency adopted for the purpose of reducing the emissions of greenhouse gases? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

Environmental Setting

Unlike emissions of criteria and toxic air pollutants, which have local or regional impacts, emissions of greenhouse gases (GHGs) that contribute to global climate change have a broader global impact. Global climate change is a process whereby GHGs accumulating in the atmosphere contribute to an increase in the temperature of the earth's atmosphere contribute to an increase in the temperature of the earth's atmosphere. The principle GHGs contributing to global climate change are carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), and fluorinated compounds. These gases allow visible and ultraviolet light from the sun to pass through the atmosphere, but they prevent heat from escaping back out into space. Among the potential implications of global climate change are, rising sea levels, and adverse impacts to water supply, water quality, agriculture, forestry and habitats. In addition, global warming may increase electricity demand for cooling, decrease the availability of hydroelectric power, and affect regional air quality and public health. Like most criteria and toxic air pollutants, much of the GHG production is generated by motor vehicle usage. GHG emissions can be reduced to some degree by improved coordination of land use and transportation planning on the city, county and subregional level, and other measures to reduce automobile use. Energy conservation measures can contribute to reduction in GHG emissions as well.

The primary existing source of human-caused GHGs in the Project area are emissions from vehicles traveling along Tegner and Harding Roads and other surrounding rural roadways.

Impact Analysis

- a) *Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?*

Less Than Significant GHG emissions associated with Project implementation would occur over the short term due to construction activities, primarily consisting of emissions from construction equipment exhaust.

Short-Term GHG Emissions. Demolition and construction at the proposed Project site would produce combustion emissions from various sources. During site preparation, demolition of the existing bridge, construction of the new bridge, and roadway improvements, GHGs would be emitted through the operation of construction equipment and from worker and builder supply vendor vehicles, each of which typically use fossil-based fuels to operate. The combustion of fossil-based fuels creates GHGs such as CO₂, CH₄ and N₂O. Furthermore, CH₄ is emitted during the fueling of heavy equipment. Exhaust emissions from on-site demolition and construction activities would vary daily as construction activity levels change. No thresholds have been adopted that are applicable to this project. It is Caltrans determination that in the absence of further regulatory or scientific information related to GHG emissions and CEQA significance, it is too speculative to make a significance determination regarding the project's direct and indirect impact with respect to climate change. Caltrans does remain firmly committed to implementing measures to help reduce the potential effects of the project. These measures are outlined in the body of the environmental document. Since any emissions would be minimal and short-term, the Project would not significantly contribute to greenhouse gas emissions. Impacts would be less than significant.

Long-Term GHG Emissions. The proposed Project would include the demolition of the existing Tegner Bridge over T.I.D. Lateral #5 Canal, the development of a new bridge, and roadway approach improvements. Once completed, the new bridge on Tegner Road would not generate any new vehicle trips that would contribute to an increase in GHG emissions. Therefore, the proposed Project would not contribute to a long-term increase in GHG emissions.

b) *Conflict with any applicable plan, policy or regulation of an agency adopted for the purpose of reducing the emissions of greenhouse gases?*

No Impact. California has a proactive approach to dealing with GHG emissions and climate change. Relevant legislation includes the following policies:

- Assembly Bill 1493 (AB 1493), Pavley, Vehicular Emissions: Greenhouse Gases, 2002: This bill requires the California Air Resources Board (ARB) to develop and implement regulations to reduce automobile and light truck GHG emissions. These stricter emissions standards were designed to apply to automobiles and light trucks beginning with the 2009-model year.
- Executive Order (EO) S-3-05 (June 1, 2005): The goal of this EO is to reduce California's GHG emissions to 1) year 2000 levels by 2010, 2) year 1990 levels by 2020, and 3) 80 percent below the year 1990 levels by 2050. In 2006, this goal was further reinforced with the passage of Assembly Bill 32.
- AB 32, the Global Warming Solutions Act of 2006, Nunez and Pavley, The Global Warming Solutions Act of 2006: AB 32 sets the same overall GHG emissions reduction goals as outlined in EO S-3-05, while further mandating that ARB create a scoping plan and implement rules to achieve "real, quantifiable, cost-effective reductions of greenhouse gases."
- Executive Order S-20-06 (signed on October 18, 2006 by former Governor Arnold Schwarzenegger): This order establishes the responsibilities and roles of the Secretary of the California Environmental Protection Agency (Cal/EPA) and state agencies with regard to climate change.

- Executive Order S-0 1-07 (signed on January 18, 2007 by former Governor Arnold Schwarzenegger): This order set forth the low carbon fuel standard for California. Under this EO, the carbon intensity of California's transportation fuels is to be reduced by at least 10 percent by 2020.
- Senate Bill 97 (SB 97) Chapter 185, 2007, Greenhouse Gas Emissions: This bill required the Governor's Office of Planning and Research (OPR) to develop recommended amendments to the California Environmental Quality Act (CEQA) Guidelines for addressing GHG emissions. The amendments became effective on March 18, 2010.
- Senate Bill 375 (SB 375), Chapter 728, 2008, Sustainable Communities and Climate Protection: This bill requires the California Air Resources Board (ARB) to set regional emissions reduction targets from passenger vehicles. The Metropolitan Planning Organization (MPO) for each region must then develop a "Sustainable Communities Strategy" (SCS) that integrates transportation, land-use, and housing policies to plan for the achievement of the emissions target for their region.
- Senate Bill 391 (SB 391) Chapter 585, 2009 California Transportation Plan: This bill requires the State's long-range transportation plan to meet California's climate change goals under AB 32.
- Caltrans Director's Policy 30 (DP-30) Climate Change (approved June 22, 2012): This policy is intended to establish a Department policy that will ensure coordinated efforts to incorporate climate change into Departmental decisions and activities. This policy contributes to Caltrans' stewardship goal to preserve and enhance California's resources and assets.

The regulatory plans and policies discussed above are intended to reduce federal, state, and local GHG emissions by targeting the largest emitters of GHGs: the transportation and energy sectors. The proposed Project includes the replacement of an existing bridge to allow for development of a bridge, which meets current design standards, and to improve overall safety in the Project area. The proposed Project would not generate any new vehicle trips during operation and would not conflict with these transportation reduction measures. In addition, the proposed Project does not propose any development that would increase energy demand. The proposed Project would not conflict with the State goal of reducing GHG emissions and would not conflict with the AB 32 Scoping Plan or any other plan or policy. The Project would be subject to all applicable permit and planning requirements in place or adopted by Stanislaus County. Therefore, the proposed Project would not conflict with any applicable plan, policy or regulation of an agency adopted for the purpose of reducing the emissions of greenhouse gases. No impacts would occur pertaining to this threshold.

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
VIII. HAZARDS AND HAZARDOUS MATERIALS				
Would the project:				
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) 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?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) 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 for people residing or working in the project area?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) For a project located within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
h) Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Environmental Setting

Hazardous materials include all flammable, reactive, corrosive, or toxic substances, which, because of these properties, pose potential harm to the public or environment. Hazardous materials such as agricultural chemicals, natural gas and petroleum, explosives, radioactive materials and various commercial chemical substances are used, stored, or produced in Stanislaus County.

Since Stanislaus County is predominantly agricultural, one of the primary uses of hazardous materials is in farming. Chemicals are applied to crops every day throughout the County and although precautions are taken when chemicals are applied to crops, accidental releases can happen. Over-spraying by crop dusters is not uncommon and unforeseen weather conditions can also cause problems with chemical applications. An incident occurred in 1986 near the town of Ceres where chemicals were over-applied to a property under agricultural production prompting emergency evacuations of a nearby plant.

The proposed Project site and nearby land uses are not located in an area that is included on a list of hazardous material sites compiled pursuant to Government Code Section 65962.5. A search of the California Water Resources Control Board (SWRCB) GeoTracker website (SWRCB 2013) indicates that there were two Leaking Underground Tank (LUST) Cleanup Sites in the vicinity of the proposed Project. Both of these LUST Cleanup Sites have been remediated, and the cases have been closed on both facilities.¹

Considering that the existing bridge on Tegner Road crossing over T.I.D. Lateral #5 Canal was installed in 1919, the Project site may contain hazardous materials associated with the existing structure (e.g., asbestos containing materials, lead-based paint) and the existing Tegner and Harding Roads (i.e., traffic striping, aerially deposited lead).

According to the California Geologic Survey the southeastern portion of Stanislaus County contains ultramafic rocks that could contain Naturally Occurring Asbestos (NOA). The proposed Project site is located in a geological area that is composed of Quaternary alluvium and marine deposits with low potential. Therefore, the likelihood of the proposed Project being in an area where undiscovered NOA could be found is low.

An Initial Site Assessment (ISA) was performed between May 15th and July 14, 2013 to identify and evaluate potential hazardous waste sites and update the evaluation of environmental factors that may have affected the soil and groundwater quality in the project vicinity due to past and present environmental and commercial activities. This report was prepared by PARIKH Consultants, Inc. Results from this report informed the following analysis.

¹ State Water Resources Control Board, GeoTracker, <http://geotracker.waterboards.ca.gov/map/?CMD=runreport&myaddress=Turlock%2C+CA>. Accessed September 24, 2013.

Impact Analysis

- a) *Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?*

Less Than Significant with Mitigation Incorporated. Actions associated with development of the proposed Project include removal of the existing bridge along Tegner Road; roadway approach work along Tegner Road; creation of better access for maintenance crews to reach T.I.D. Lateral #5 Canal paralleling Harding Road; and development of a new bridge where Tegner Road crosses over T.I.D. Lateral #5 Canal. During construction, hazardous materials may be present on-site from construction vehicles and demolition debris. Upon completion (operation) of the proposed Project the routine transport, use or disposal of hazardous materials associated with Project construction would not occur.

Construction of the proposed Project would involve the use of heavy equipment for grading, hauling, and handling materials. The equipment expected to be used during construction includes: mobile cranes; excavators; graders; loaders; backhoes; and, bulldozers. This construction equipment may require the use of fuels and other common liquids that have hazardous properties (e.g., fuels, oils, fluids that are flammable). These liquids would be used in accordance with all applicable laws and regulations, and as described in the Spill Prevention Countermeasure Plan, and, if used properly, would not pose a hazard to people, animals, plants or sensitive areas on or near the Project site. All refueling of construction equipment would occur within designated staging areas located in a field on the northwest corner of the Harding Road and Tegner Road intersection. The use of such hazardous materials would be temporary during construction activities, and the proposed Project would not include a permanent use or generate a source of hazardous materials during operational activities. The following mitigation measure shall be implemented to reduce impacts associated with the use of hazardous materials during Project construction:

Mitigation Measure HAZ-1: Prior to the commencement of construction activities, the construction contractor shall prepare a Spill Prevention Countermeasure Plan (SPCP) and submit the plan to Stanislaus County Department of Environmental Resources. The SPCP shall include information on the nature of all hazardous materials that would be used on-site during the construction period and information regarding proper handling of hazardous materials and clean-up procedures in the event of an accidental release. The SPCP shall be available on the Project site through the duration of the construction period. The phone number of the agency overseeing hazardous materials and toxic clean-up shall be provided in the SPCP.

Implementation of **Mitigation Measure HAZ-1**, as presented above, would reduce this impact to a less than significant level.

- b) *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?*

Less Than Significant with Mitigation Incorporated. After Project construction, the newly installed bridge on Tegner Road crossing over T.I.D. Lateral #5 Canal would operate as under existing conditions; therefore, operation of the proposed Project would not create a significant hazard to the public or the surrounding environment. However, demolition and construction activities occurring at

the Project site could expose construction workers to potentially hazardous materials since the existing bridge was initially installed in 1919. Hazardous materials to which construction workers could potentially be exposed include: traffic striping, asbestos containing materials (ACM), lead-based paint (LBP), and aerially deposited lead (ADL).

Traffic Striping. Traffic striping within the Project area would include both yellow and white striping to identify the boundaries of the lanes and shoulders along the newly installed bridge and improved roadway areas. Both types of striping are known to contain lead, but older striping is known to contain higher levels of heavy materials such as lead and chromium. The levels of this material could exceed the hazardous waste thresholds established by the California Code of Regulations (CCRs). When heated, the yellow striping may generate toxic fumes that construction workers could inhale. The following mitigation measure regarding traffic striping removal and installation shall be implemented during Project construction:

Mitigation Measure HAZ-2: Yellow thermoplastic and/or paint striping shall be removed as an independent action and the waste generated during striping shall be sampled, if necessary, handled, and disposed of as a hazardous waste. Process and requirements for removal or grinding of traffic striping shall be conducted in compliance with current Caltrans Standard Special Provisions (SSPs).

Asbestos Containing Materials/Lead-Based Paint. The existing bridge on Tegner Road crossing over T.I.D. Lateral #5 Canal was built and installed in 1919. Due to the age of the existing bridge there is a potential for presence of asbestos containing materials (ACM) and lead-based paint (LBP). Demolition of the existing bridge could potentially release airborne particles of these hazardous materials that may affect construction workers on-site or adjacent (nearby) residents.

The U.S. Environmental Protection Agency and the Department of Toxic Substances Control (DTSC) require that LBP with lead concentrations equal to or greater 1 mg/cm² or 0.5 percent of lead by weight as standardized by the U.S. Department of Housing and Urban Development (HUD) be removed prior to demolition if the paint is loose or peeling. If the paint is securely adhering to substrate, the entire material may be disposed of as demolition debris, which is a non-hazardous waste. Loose and peeling paint must be disposed of as a State and/or federal hazardous waste, if concentration of lead exceeds applicable hazardous waste thresholds. Hazardous materials must be managed, labeled, transported, and disposed of in accordance with local requirements by trained workers. State and federal construction worker health and safety regulations require air monitoring and other protective measures to occur during demolition activities where LBP is present.

Removal of asbestos or suspect asbestos containing materials, including removal as part of bridge demolition, is regulated by the U.S. Environmental Protection Agency, federal and State Occupational Safety and Health Administration (OSHA) and the Department of Toxic Substance Control. All friable (crushed by hand) ACM, or non-friable ACM subject to damage, must be abated prior to disturbance in accordance with applicable requirements. Friable ACM must be disposed of as asbestos waste at an approved facility. Non-friable ACM may be disposed of as a non-hazardous waste at landfills that accept such wastes. Workers conducting asbestos abatement must be trained in accordance with State and federal OSHA requirements.

The following mitigation measure regarding ACM and LBP shall be implemented during Project construction:

Mitigation Measure HAZ-3: During construction, the Project contractor shall comply with all applicable state and federal waste requirements, including the OSHA Standard 192.6 and Title 17 California Code of Regulations, Division 1, Chapter 8 for lead and asbestos abatement, including the handling and disposal of LBP, ACM and universal wastes.

Representatives from Stanislaus County shall verify that the surveys and abatement or removal, as necessary, has been completed prior to any demolition and construction activities on the Project site.

Mitigation Measure HAZ-4: Prior to any demolition, grading or construction activities on the Project site, a Health and Safety Plan shall be prepared in accordance with State and federal laws and regulations. The Health and Safety Plan shall identify provisions to protect construction workers and the nearby residents from health risks generated by any residual contaminants in site soils, groundwater, and/or the existing bridge during Project demolition and construction. This plan shall summarize previous environmental investigations and health risk assessments conducted for the Project site (if any are applicable) and identify any known residual contamination that remains in soil or groundwater that would be disturbed or handled during demolition and construction.

The Health and Safety Plan shall also: 1) provide procedures to be undertaken in the event that previously unreported construction hazards or previously undetected subsurface hazards, including soil or groundwater contamination, are discovered during construction; 2) incorporate construction safety measures for excavation and other construction activities; 3) establish procedures for safe storage, stockpile, use, and disposal of contaminated soils and groundwater and other hazardous materials from the Project site; 4) provide emergency response procedures; 5) designate personnel responsible for implementation of the Health and Safety Plan during the construction phase of the Project. If regulatory oversight is required for site remediation, the Health and Safety Plan shall be subject to review and approval by regulatory oversight agencies. The Stanislaus County Department of Environmental Resources shall verify that the Health and Safety Plan has been completed and is implemented prior to any grading or demolition activities on the Project site.

Aerially Deposited Lead (ADL) and Other Potential Soil/Groundwater Contamination. Soil located adjacent to roadways may contain elevated concentrations of ADL in exposed surface soils, which could pose a health hazard to construction workers. Potential ADL impacts are anticipated to be limited to the areas of exposed soil at both ends of the bridge where roadway alignment work would be conducted, where improvements to T.I.D access right-of-way would occur and at the construction staging area for the Project site. As described above, the proposed Project site is not near any hazardous materials sites as identified by the Water Resources Control Board. Although potential soil/groundwater contamination at the Project site is unlikely, **Mitigation Measure HAZ-4**, as presented above, and **Mitigation Measure HAZ-5**, as follows, shall be implemented.

Mitigation Measure HAZ-5: Prior to commencement of Project construction, a soil investigation shall be performed by a licensed professional to evaluate if ADL or other potentially hazardous constituents are present in shallow soils that would be disturbed.

Chemical analyses for soils shall be performed by an analytical laboratory certified by the California Department of Public Health Environmental Laboratory Accreditation Program. A licensed professional shall review the results of the soil investigation and provide recommendations on additional investigation activities, if any, and soil management recommendations that shall be implemented during Project construction, if applicable (see **Mitigation Measure HAZ-6**). The analytical results of the soil investigation shall be compared to hazardous waste criteria and health and safety thresholds for construction workers. The soil investigation shall be conducted with oversight from a local or state regulatory agency (e.g., Stanislaus County Department of Environmental Resources or Caltrans).

Mitigation Measure HAZ-6: If warranted, based on the results of the pre-construction soil characterization (**Mitigation Measure HAZ-5**), the Stanislaus County Department of Environmental Resources shall implement a Risk Management Plan (RMP) that would identify special soil management and disposal procedures and/or construction worker health and safety procedures to be implemented during Project demolition and construction activities to reduce exposure to hazardous materials. The RMP shall include all necessary procedures to ensure that excavated soils are stored, tested, managed, and disposed of in a manner that is protective of human health and in accordance with applicable laws and regulations. The County shall ensure that the RMP includes available data from any pre-Project construction soil sampling activities (**Mitigation Measure HAZ-5**). The County shall provide the RMP to the construction contractor and ensure that the contractor follows the RMP. The RMP shall consider and include the following requirements:

- Excavation, transportation, and placement operations shall result in no visible dust;
- A construction “Exclusion Zone” shall be identified where hazardous materials may be stored. A temporary security fence shall be installed to surround and secure the exclusion zone;
- Air quality shall be monitored during excavation of soils contaminated with hazardous constituents;
- Storage of hazardous materials shall comply with the requirements in Title 22, CCR, Sections 6626.250 to 66265.260;
- If temporary stockpiling of hazardous materials is necessary, the construction contractor shall:
 - Cover the stockpile with plastic sheeting or tarps
 - Install a berm around the stockpile to prevent runoff from leaving the area
 - Locate the stockpile away from the Lateral #5 Canal
- Hazardous materials shall be excavated, transported, and disposed in accordance with the rules and regulations of the following agencies:
 - United States Environmental Protection Agency
 - Caltrans
 - California Department of Toxic Substances Control (DTSC)
 - California Environmental Protection Agency (Cal/EPA)
 - California Division of Occupational Safety and Health (DOSH)

- o Local regulatory agencies

Implementation of **Mitigation Measures HAZ-2** through **HAZ-6** would ensure that a significant hazard to the public or environment would not occur from reasonably foreseeable upset and accident conditions involving the release of hazardous materials from the proposed Project. Impacts would be less than significant with mitigation incorporated.

- c) *Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?*

No Impact. The nearest school to the proposed Project site is Cunningham Elementary School located at 324 West Linwood Avenue in Turlock. This school is located approximately 2 miles from the proposed Project site. Therefore, Project activities during construction and operation would not result in hazardous emission releases nor require the handling of hazardous materials or substances within one-quarter mile of a school. No impacts would occur.

- d) *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?*

No Impact. As described above, the proposed Project site is not on or near a site, which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5. Therefore, implementation of the proposed Project would not create a significant hazard to the public or the environment. No impacts would occur.

- e) *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 for people residing or working in the project area?*

No Impact. The nearest public or public use airport to the proposed Project site is Modesto Municipal located at 617 Airport Way in Modesto. This airport is approximately 11.5 miles northwest of the proposed Project site. According to the Stanislaus County Airport Land Use Commission Plan¹ the Project site is not located within an airport land use plan. Implementation of the proposed Project would not result in a safety hazard for construction crews in association with public use airports. No impacts would occur.

- f) *For a project located within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?*

No Impact. Aerial views of the proposed Project site and surrounding areas were reviewed using Google Earth. Turlock Airpark, a private airstrip, is located 2.3 miles northeast of the proposed Project site. Due to the distance between the airstrip and the Project site, implementation of the proposed Project would not result in a safety hazard for construction crews in association with use of Turlock Airpark. No impacts would occur.

¹ Stanislaus County Airport Land Use Commission Plan, Adopted August 3, 1978, As Amended May 20, 2004.

- g) *Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?*

Less Than Significant Impact. The proposed Project site is located in a rural area of Stanislaus County along Tegner Road and is within the jurisdiction of the Stanislaus County Multi-Jurisdictional Hazard Mitigation Plan. This Plan is a countywide plan that identifies risks posed by disasters, and identifies ways to minimize damage from such disasters. Project implementation would not interfere with the goals and minimization measures identified in the Stanislaus County Multi-Jurisdictional Hazard Mitigation Plan to reduce risks posed by disasters.

Tegner Road traverses in a north/southbound direction and connects to roadways that would offer residents multiple routes to use during an emergency evacuation. Residents living near the proposed Project site would be able to access State Route 99 using Tegner Road and adjacent roadways to evacuate the area in the event of an emergency. During construction activities Tegner Road and Harding Road within the Project boundary may be temporarily closed to through traffic. A detour plan would be developed to ensure that residents and through traffic would be able to navigate around the proposed Project site during construction closures of Tegner and Harding Roads. The required detour would be a relatively short distance and temporary during the construction period. Nearby residents would still be able to access the required detour and exit the area in the event of an emergency. Once completed, the new bridge would allow similar traffic flows as the existing bridge and would not hinder emergency escape routes. Impacts would be less than significant.

- h) *Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?*

Less Than Significant Impact. According to the California Department of Forestry and Fire Protection (CALFIRE) the proposed Project site is located in a Local Responsibility Area (LRA) for wildland fire protection services. The proposed Project site is located in an “LRA Unzoned” Fire Hazard Zone according to CALFIRE. The proposed Project would not include the development of structures or endanger the lives of residents or construction workers if a wildland fire were to occur. Impacts would be less than significant.

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
IX. HYDROLOGY AND WATER QUALITY				
Would the project:				
a) Violate any water quality standards or waste discharge requirements?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner, which would result in substantial erosion or siltation on- or off-site?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner, which would result in flooding on- or off-site?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
f) Otherwise substantially degrade water quality?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
g) Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
h) Place within a 100-year flood hazard area structures which would impede or redirect flood flows?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
i) Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding of as a result of the failure of a levee or dam?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
j) Inundation by seiche, tsunami, or mudflow?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Environmental Setting

The *Draft Water Quality Report* for the proposed Project contributed to the information and analysis in this section (please see **Appendix D**).

Agricultural and urban water supplies for Stanislaus County originate from both ground water and surface water. Extensive energy efficient gravity flow irrigation systems have been developed in Stanislaus County to provide continued supply of agricultural and urban waters to customers. The main sources of irrigation water in the County include: the Stanislaus River, Tuolumne River, and San Joaquin River. These rivers contain water of excellent quality at their sources in the Sierra Nevada, but as they flow through the County, their quality is impaired by each successive use. Both agricultural and domestic use-and-return contributes to this degradation. As flows decrease seasonably, concentrations of pollutants increase, particularly in the San Joaquin River, which drains return water and domestic and industrial wastes through the entire San Joaquin Valley. Quality of the Stanislaus River is somewhat deteriorated at its confluence with the San Joaquin River. The Tuolumne River's condition has deteriorated more than the Stanislaus River due to agricultural return wastes and gas well wastes before it reaches the San Joaquin River.

Groundwater is the major source of domestic and industrial water in Stanislaus County, and is used as a supplemental water supply for irrigation. The quality of groundwater is determined by the geologic formations through which it filters. Groundwater recharge occurs by water conducting through the gravels of major streams and rivers, seepage from reservoirs, irrigations and rainfall on well drained alluvial soils in the valley portion of the County. Rainfall is not a dependable recharge source since the average annual County rainfall is only 12 inches and of this amount, only about half can be considered an effective recharge source. The groundwater situation west of the San Joaquin River is substantially different from the rest of the County to the east of the river. Three major problems exist, including: a rising, perched water table; saline build-up in the soil; and an increasing imbalance in the groundwater body. These conditions exist through combinations of canal seepage, excessive irrigation and poor quality irrigation waters. The decreasing groundwater quality is having adverse effects on domestic water supplies, as well as agricultural lands throughout the County.

Water Characteristics in Project Vicinity

Surface Water: The proposed Project site is located in the San Joaquin River Basin. The San Joaquin River, which flows 2.2 miles east of the Project site, drains into the southern part of the San Joaquin Valley, and flows south into the Sacramento-San Joaquin River Delta. This portion of the San Joaquin River is currently on the Clean Water Act (CWA) Section 303 (d) list of Water Quality Limited Segments, and therefore, does not currently meet state water quality standards. High levels of diazinon, pesticides, and mercury contribute to the San Joaquin River exceeding current CWA standards.

The T.I.D Lateral #5 Canal, bisecting the Project site, is a part of the Turlock Irrigation District system. The T.I.D. serves over 4,900 irrigation customers covering approximately 150,000 acres of farmland in the County. T.I.D. owns and maintains more than 250 miles of canals and laterals. Approximately 90 percent of the T.I.D. canals and laterals are concrete-lined to reduce seepage and erosion. The T.I.D. Lateral #5 Canal was constructed in the early 1900s and was originally dirt-lined.

In 1928, concrete lining was installed within the canal along both sides of Tegner Road. The concrete was resurfaced with Gunitite in 1983 and 1990.

Wetlands. Wetlands are highly productive natural habitats used for foraging and nesting by many types of wildlife. These areas are given a high priority for protection by the California Department of Fish and Wildlife and the U.S. Fish and Wildlife Service. Surface water resources throughout Stanislaus County include a variety of wetlands. Wetlands are typically found at the margins of ponds, lakes, and streams, in low-lying areas that collect precipitation and may be seasonal or perennial. Wetlands are also found in areas where groundwater precipitates to the ground surface. Many constructed ponds (stockponds) are located throughout the County that may be classified as wetlands. Wetlands are not located within or near the proposed Project site.

Groundwater. The proposed Project site is located within the boundary of the Turlock Groundwater Subbasin in the San Joaquin Valley Groundwater Basin.

The Turlock Groundwater Subbasin is within the San Joaquin River Hydrologic Region (HR) and covers approximately 347,000 acres in Stanislaus and Merced Counties. The subbasin is bounded to the north by the Tuolumne River, to the south by the Merced River, and to the west by the San Joaquin River. The primary sources of groundwater recharge in the subbasin are from deep percolation of applied irrigation water, from canals, and from water storage facilities. Lesser groundwater recharge occurs from percolation from small streams, direct percolation of precipitation, and underflow downstream channels from the east. Natural recharge is estimated at 33,000 acre-feet annually while recharge of applied water is estimated at 313,000 acre-feet annually. Annual groundwater extraction is estimated at 65,000 acre-feet for urban use and 387,000 acre-feet for agricultural use.

According to the Foundation Report prepared by Parikh Consultants, Inc. for the Project, groundwater was encountered at approximately 15 feet below grade during drilling. Based on the groundwater data from the monitoring stations, published by California Department of Water Resources, the groundwater level in the proximity of the project site could be within about 10 feet below grade. However, groundwater may vary with the passage of time due to seasonal groundwater fluctuation, water level in the channel, surface and subsurface flows, ground surface run-off, and other factors that may not be present at the time of investigation. Groundwater levels were considered during Project design.

Water Quality Characteristics in Project Vicinity

The Turlock Irrigation District is the only water resource in the immediate Project area. A representative from the Turlock Irrigation District was contacted on April 12, 2013 to advise about the quality of the water in T.I.D. Lateral #5 Canal bisecting the Project site. According to T.I.D., water sampling does not occur on the Lateral #5 Canal and the closest water quality sampling site is a little over two miles downstream from the Project site. This sampling area contains water from other pumps and canals, blended with water in Lateral #5 Canal and is not representative of the water quality within the Lateral #5 Canal at the Project site.¹

¹ Personal communication between Chris Graham, Environmental Planner, LSA Associates, and Todd Troglin, Supervising Engineering Technician, T.I.D. Water and Power, on April 12, 2013.

Although Stanislaus County and the Turlock Groundwater Subbasin tend to have high concentrations of pesticides and Total Dissolved Solids (TDS),¹ according to the State Water Resources Control Board Groundwater Ambient Monitoring and Assessment website, the nearest groundwater quality monitoring occurred at a cluster of wells located south of Idaho Road (the latest testing occurred on May 13, 2009), approximately 0.5 mile southwest of the Project site. The wells in this location did not exceed the threshold levels for pesticides or TDS.²

Floodplain

The Federal Emergency Management Agency (FEMA) has designated the Project area (shown on Map No. 06099C0800E) as follows:

- **Other Area Zone X.** Other Area Zone X includes areas that have been determined to be outside of the 0.2 percent annual chance floodplain.

Impact Analysis

a) *Violate any water quality standards or waste discharge requirements?*

Less Than Significant With Mitigation Incorporated. During construction, the proposed Project has the potential to cause temporary water quality impacts due to grading activities and removal of existing vegetation, which can cause increased erosion. Stormwater runoff from the proposed Project may transport pollutants to T.I.D. Lateral #5 Canal, if Best Management Practices (BMPs) are not properly implemented. Generally, as the Disturbed Soils Area (DSA) increases, the potential for temporary water quality impacts also increases.

Long-term water quality impacts are usually due to changes in stormwater drainage. The proposed Project would result in the installation of a new bridge that is wider and longer than the existing bridge, thus, causing a permanent increase of impervious surfaces. As such, the proposed Project has the potential to impact long-term water quality due to a permanent increase in runoff and pollutant loading from the road surface.

The following mitigation measures would be implemented during construction and operational activities of the proposed Project.

Mitigation Measure HYDRO-1: Construction site temporary BMPs and any subsequent permit as they relate to construction activities for the Project shall be prepared and implemented in compliance with the provisions of the County MS4. This documentation shall

¹ Jones and Stokes, Central Valley Regional Water Quality Control Board, Irrigated Lands Program, Draft Existing Conditions Report, Chapter 4 Groundwater Quality, pg. 4-315 to 4-318, February 2006. It should be noted that the locations of the wells were not disclosed in this document.

² California State Water Resources Control Board, Groundwater Ambient Monitoring and Assessment website, <http://geotracker.waterboards.ca.gov/gama/>. Accessed October 21, 2013.

include submission of a Notice of Construction (NOC) to the Regional Water Quality Control Board (RWQCB) at least 30 days before the commencement of construction and submission of a Notice of Construction Completion (NCC) to the RWQCB upon completion of construction and stabilization of the Project site. These temporary BMPs shall be installed prior to any construction operations and shall be in place for the duration of the contract. The removal of these BMPs along with site cleanup shall be the final construction operation procedures.

Mitigation Measure HYDRO-2: Design Pollution Prevention (DPP) and Treatment Control BMPs for the Project shall be incorporated and followed in accordance with the procedures outlined in the Caltrans Stormwater Quality Handbook's Project Planning and Design Guide. This process shall include coordination with RWQCB with respect to feasibility, maintenance, and monitoring of Treatment Control BMPs as set forth in Caltrans' Statewide Stormwater Management Plan (SWMP).

Mitigation Measure HYDRO-3: All refueling and staging of construction equipment shall occur a minimum of 60 feet from the T.I.D. Lateral #5 Canal so an accidental spill does not drain into the Canal. Regular monitoring shall occur to ensure contamination of the water in the Canal does not occur. Prior to the commencement of construction activities, the Project applicant shall provide Caltrans (on behalf of the FHWA) with a plan for prompt and effective response to any accidental spills. All workers shall be educated on the importance of preventing fuel and oil spills and the appropriate measures to take should an accidental spill occur.

Mitigation Measure HYDRO-4: To control sedimentation during the construction and operational periods of the proposed Project, BMPs outlined in any authorizations or permits issued under the authority of the CWA shall be implemented. If such BMPs are ineffective, the Project applicant shall attempt to remedy the situation immediately, in consultation with the regulatory and resource agencies.

With implementation of **Mitigation Measures HYDRO-1** through **HYDRO-4** impacts to water quality during Project construction and operation would be less than significant.

- b) *Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?*

No Impact. During construction activity, minimal amounts of water may be required for dust control activities. Water required during construction activities would be transported to the proposed Project site by water trucks and stored in these trucks or tanks at the construction staging area. Groundwater usage for the project would be short-term and minor; supplies would not be substantially depleted nor would interference of groundwater recharge occur due to water usage during Project construction. Once operational, the proposed Project would not require the use of water. No groundwater impact would occur.

- c) *Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site?*

Less Than Significant With Mitigation Incorporated. Construction activities occurring on the proposed Project site has the potential to temporarily alter the existing on- and off-site drainage pattern. The soffit of the existing bridge is under the water surface elevation of the normal operating flow of the T.I.D. Lateral #5 Canal (100 cubic feet per second) which has caused erosion of the superstructure concrete, exposing reinforcement steel. The bridge replacement soffit will remain at the same elevation as the existing bridge in order to minimize the amount of construction required on both Tegner and Harding Road as well as to minimize construction time. The improvements to the roadway profile for the replacement bridge would be on a slightly higher vertical alignment to accommodate the bridge deck thickness required to span the entire canal and remove the existing pier in the middle of the canal. Increased concrete cover will be provided at the soffit to mitigate future exposure of soffit reinforcement. The T.I.D. Lateral #5 Canal within the Project boundary is concrete lined and erosion or siltation build-up during construction is not expected to occur. Implementation of **Mitigation Measure HYDRO-1, HYDRO-2 and HYDRO-3** would incorporate BMPs during Project implementation to reduce erosion resulting from construction and siltation on- or off-site. Once construction is completed, the proposed Project would minimally increase impervious surfaces due to the improvements along Tegner and Harding Roads. This increase in impervious surfaces would be nominal and would not result in the alteration of the existing drainage pattern of the proposed Project site or surrounding area. Impacts under this criterion would be less than significant with implementation of the above identified mitigation measures.

- d) *Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?*

Less Than Significant Impact. During construction of the proposed Project, BMPs would be used to reduce the amount of surface runoff within the proposed Project site and surrounding areas. The proposed Project includes the removal of the existing bridge and its associated support structure that currently impedes the flow of water in T.I.D. Lateral #5 Canal. The replacement bridge would be set on the same horizontal alignment as the existing bridge, but on a slightly higher vertical profile so that the bridge can span the width of the canal without an intermediate support. The increase in vertical profile would be no more than approximately 10 inches higher than that of the existing roadway. Once construction is completed, the proposed Project would minimally increase impervious surfaces due to the improvements along Tegner and Harding Roads. This increase in impervious surfaces would be nominal and would not result in an increase rate or amount of surface runoff that would result in flooding on- or off-site. Impacts would be less than significant.

- e) *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?*

Less Than Significant Impact. The proposed Project would incorporate BMPs to reduce the amount of runoff during construction activities. Once operational, the proposed Project would slightly increase the area of impervious surfaces; however, this increase would be nominal and similar to the existing runoff rate. The existing stormwater drainage system in the Project area provides adequate service to the existing land uses in the area. Project implementation would result in a nominal increase in runoff; however, the existing stormwater drainage system in the area would be able to accommodate such an increase. Impacts would be less than significant.

f) Otherwise substantially degrade water quality?

Less Than Significant With Mitigation Incorporated. Please refer to the discussion under Section IX (a). During development of the proposed Project, construction BMPs would be implemented to reduce runoff amounts that could substantially degrade groundwater and drinking water in the area. With implementation of **Mitigation Measures HYDRO-1** through **HYDRO-4**, impacts would be less than significant.

g) Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?

No Impact. The proposed Project includes the removal of an existing bridge on Tegner Road over the T.I.D. Lateral #5 Canal, roadway improvements along Tegner and Harding Roads, and installation of a new bridge over the Canal. The proposed Project does not include the development of residential units. According to FEMA, the proposed Project site is located in an Other Area Zone X which is not an area of a 100-year flood hazard. No impact would occur.

h) Place within a 100-year flood hazard area structures which would impede or redirect flood flows?

No Impact. According to FEMA, the proposed Project site is located in Other Area Zone X which is not an area of a 100-year flood hazard. The proposed Project includes removal of the existing bridge over T.I.D. Lateral # 5 Canal on Tegner Road and installation of a new bridge. The replacement bridge would be set on the same horizontal alignment as the existing bridge, but on a slightly higher vertical profile so that the bridge can span the width of the canal without an intermediate support. The increase in vertical profile would be no more than approximately 10 inches higher than that of the existing roadway. No impact would occur.

i) Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding of as a result of the failure of a levee or dam?

No Impact. The closest lakes to the proposed Project site are Turlock Lake and Modesto Reservoir (both approximately 18 miles northeast of the site). According to the Stanislaus County General Plan Support Documentation¹ the proposed Project site is not located in dam failure inundation areas. Therefore, Project implementation would not expose construction workers or structures to significant injury or loss of life as a result of the failure of a levee or dam. No impact would occur.

j) Inundation by seiche, tsunami, or mudflow?

No Impact. A seiche is a large wave that occurs on a body of water (typically a lake or reservoir) due to a seismic event or large landslide event that can cause flooding. The proposed Project site is not near a reservoir or lake and therefore would not be prone to damage from a seiche. A tsunami is a large wave that occurs in the ocean, typically caused by a seismic event, which can inundate coastal areas with flood waters. The proposed Project site is not located near the coast, and, therefore, would not be subject to flooding caused by a tsunami. A mudflow typically occurs in hilly or mountainous terrain when large amounts of rain have fallen and the soil is inundated with water. The proposed Project site

¹ Stanislaus County General Plan Support Documentation, Chapter 5 Safety, pgs. 5-9 through 5-11.

is located in the San Joaquin Valley in an area that is topographically flat and void of hills and mountains. The proposed Project would not be subject to the effects of a mudflow. No impacts would occur.

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
X. LAND USE AND PLANNING				
Would the project :				
a) Physically divide an established community?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Conflict with any applicable habitat conservation plan or natural community conservation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Environmental Setting

The proposed Project site is located in a rural portion of Stanislaus County. Section 65302(a) of the California Government Code requires that Stanislaus County adopt a “land use element which designates the proposed general distribution and general location and extent of the uses of the land for housing, business, industry, open space, including agriculture, natural resources, recreation, and enjoyment of scenic beauty, education, public buildings and grounds, solid and liquid waste disposal facilities, and other categories of public and private uses of land.”

The proposed Project site is located in an area of Stanislaus County that is characterized by agricultural and rural residential uses. The site is located in an area designated as Agriculture by the Stanislaus County General Plan Land Use Element.¹ A majority of Stanislaus County is productive and potentially productive agricultural land. These lands are of economic importance not only to the County, but to the state and nation as well, as evidenced by the fact that Stanislaus County ranks very high nationally in production of agricultural commodities. The Agriculture designation recognizes the value and importance of agriculture precluding incompatible urban development within agricultural area. The agricultural designation is intended for areas of land which are presently or potentially desirable for agricultural use. These areas typically possess characteristics with respect to location, topography, parcel size, soil classification, water availability and adjacent usage which provide a favorable agricultural environment. This designation establishes agriculture as the primary use, but allows dwelling units, limited agriculturally related commercial services, agriculturally related light industrial uses, and other uses provided they do not conflict with the primary agricultural use. The Agriculture designation is also consistent with areas the overall General Plan has identified as suitable for open space or recreational use and for ranchettes.

¹ Stanislaus County General Plan, Chapter 1 Land Use, Adopted June 1987.

The nearest established community is the City of Turlock, approximately 3 miles to the northeast of the proposed Project site. Rural residential units associated with agricultural land uses surround the proposed Project site; however, this area is not considered, by Stanislaus County as an established community.

The proposed Project site is not located within or near the jurisdiction of a habitat conservation plan (HCP) or a natural community conservation plan (NCCP).

Impact Analysis

a) Physically divide an established community?

No Impact. The proposed Project site is located in a rural portion of Stanislaus County. The area of the proposed Project is characterized by agricultural uses with rural residential units. The nearest established community is the City of Turlock, located approximately 3 miles northeast of the proposed Project site.

Actions associated with the proposed Project include removing the existing bridge along Tegner Road; working on roadway approaches along Tegner Road; creating better access for maintenance crews to reach T.I.D. Lateral #5 Canal paralleling Harding Road; and constructing a new bridge where Tegner Road crosses over T.I.D. Lateral #5 Canal. Demolition and replacement of the bridge along Tegner Road would not physically divide an established community as the proposed Project site is not located in an established community. No impacts would occur as a result of Project implementation regarding this threshold.

b) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?

Less Than Significant. The proposed Project includes parcels of land that are designated as Agriculture under the Stanislaus County General Plan Land Use Element and are zoned as A-2-40 under the Stanislaus County Zoning Code. Corner easements would be required on parcels 044-041-038 and 044-043-021 to accommodate the access improvements to the maintenance roads serving the T.I.D Lateral #5 Canal within the Project boundary. Additionally, sliver right-of-way acquisitions would also be necessary within parcels 044-014-006 and 044-016-006 to accommodate roadway fill during roadway improvements along Tegner and Harding Roads. The corner easement and sliver acquisitions associated with the proposed Project would be in compliance with the Stanislaus County land use plans, policies and regulations and with the zoning code. The portions of the parcels that would be acquired would be redesignated as County right-of-way and the remaining land within each of the parcels would retain the same land use and zoning designations per Stanislaus County regulations. Impacts would be less than significant.

c) Conflict with any applicable habitat conservation plan or natural community conservation plan?

No Impact. The proposed Project site is not located within the jurisdiction of a habitat conservation plan or natural community conservation plan. Therefore, Project implementation would not conflict with such plans. No impacts would occur.

Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
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XI. MINERAL RESOURCES

Would the project:

- | | | | | |
|---|--------------------------|--------------------------|--------------------------|-------------------------------------|
| a) 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? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| b) 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? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

Environmental Setting

Minerals are any naturally occurring chemical element or compound, or groups of elements and compounds, formed from inorganic processes and organic substances including, but not limited to, coal, peat and oil bearing rock, but excluding geothermal resources, natural gas and petroleum. Rock, sand, gravel and earth are also considered minerals by the California Department of Conservation when extracted by surface mining operations.

Stanislaus County is not prolific in extractive resources. Some magnesite has been produced commercially, and attempts have been made to market a variety of manganese minerals found in the western portion of the County. Sand and gravel deposits presently constitute the only significant extractive resource from a commercial viewpoint. Numerous exploratory oil and gas wells have been drilled within the County. Although none of the wells are producing commercially, the underlying geological structure of the County indicates oil or gas may be present which could lead to the likelihood of more exploration. Minerals found in Stanislaus County include: bementite, braunite, chromite, cinnabar, garnet, gypsum, hausmannite, hydromagnesite, inesite, magnesite, psilomelane, pyrobrsite, and rhodochrosite. Small deposits of gold, clay, and lead are also known to exist; however, present economic conditions make commercial extraction of these minerals difficult or impossible. According to the Stanislaus County General Plan the proposed Project site is not located in a mineral resource zone (MRZ).¹

Impact Analysis

- a) *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?*

No Impact. According to the Stanislaus County General Plan the proposed Project site is not located within an MRZ nor is one located near the site. Therefore, the proposed Project would not result in loss of availability of a known mineral resource that would be of value. No impact would occur.

¹ Stanislaus County General Plan, General Plan Support Documentation, Chapter 3 Conservation, pg. 3-16.

b) 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?

No Impact. As discussed above, the proposed Project is not located in an area of locally important mineral resource recovery sites. Implementation of the proposed Project would not result in the loss of such locally important mineral resources. No impacts would occur.

XII. NOISE

Would the project result in:

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Exposure of persons to or generation of excessive ground borne vibration or ground borne noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e) 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 expose people residing or working in the project area to excessive noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Environmental Setting

The *Construction Noise Technical Memorandum* dated November 12, 2012 contributes to the information and analysis in this section (attached as **Appendix E**).

Noise Discussion

Noise is usually defined as unwanted sound. Noise consists of any sound that may produce physiological damage and/or interfere with communication, work, rest, recreation or sleep. Several noise measurement scales exist that are used to describe noise in a particular location. A *decibel* (dB) is a unit of measurement that indicates the relative intensity of a sound. The 0 measurement on the dB scale is based on the lowest sound level that the healthy, unimpaired human ear can detect. Noise level changes of 3.0 dB or less are only perceptible in laboratory environments. Audible increases in noise levels generally refer to a change of 3.0 dB or more, as this level has been found to be barely

perceptible to the human ear in outdoor environments. Sound levels in dB are calculated on a logarithmic basis. An increase of 10.0 dB represents a 10-fold increase in acoustic energy while a 20.0 dB increase is 100 times more intense, and a 30.0 dB increase is 1,000 times more intense. Each 10.0 dB increase in sound level is perceived as approximately a doubling of loudness to the human ear. Sound intensity is normally measured through the *A-weighted sound level* (dB(A)). This scale gives greater weight to the frequencies of sound to which the human ear is most sensitive.

The primary existing noise source in the Project vicinity is vehicle traffic along Tegner and Harding Roads including cars, trucks, farm equipment, and motorcycles. Truck traffic increases in importance during harvest season. Noise from surrounding agricultural uses contributes to the existing ambient noise levels in the Project vicinity. Additionally some noise is generated by the rural residential units located adjacent to the southwestern and southeastern Project boundary and the residential unit located west of the Project site. The level of vehicular noise generally varies with the volume of traffic, the number of trucks or motorcycles, the speed of traffic, and the distance a sensitive receptor is located from the roadway centerline.

Construction often generates community noise complaints, even when it takes place over a limited time frame. Noise impacts from construction may vary greatly depending on the proximity, duration and complexity of the project. The noise levels generated by construction equipment would vary depending on the type of equipment, the specific model, the operation being performed, and the condition of the equipment. The equivalent sound level (L_{eq}) of the construction activity also depends on the fraction of time that the equipment is operated over the time period of construction. The dominant source of noise from most construction equipment is the engine, usually a diesel, often without sufficient muffling. In a few cases, such as impact pile-driving or pavement-breaking, noise generated by the process dominates. Construction equipment can operate in two modes, stationary and mobile. Stationary equipment operates in one location for one or more days at a time, with either a fixed power operation (pumps, generators, compressors) or a variable noise operation (pile drivers, pavement breakers). Mobile equipment moves around the construction site with power applied in cyclic fashion (bulldozers, loaders), or to and from the site (trucks). Variation in power imposes additional complexity in characterizing the noise source level from a piece of construction equipment. This variation is handled by describing the noise at a reference distance from the equipment operating at full power and adjusting it based on the duty cycle of the activity to determine the L_{eq} of the operation. Typical noise levels from representative pieces of construction equipment are listed in Table E: Typical Construction Equipment Noise Levels.

Two types of short-term noise increase would occur during Project construction. The first type would be from construction crew commutes and the transport of construction equipment and materials to the Project site, which would incrementally raise existing ambient noise levels. The second type of short-term increase is related to noise generated during bridge removal and construction.

Stanislaus County regulates construction noise levels that would impact sensitive receptors through the Stanislaus County Code Chapter 10.46 Noise Control, Section 10.46.060 Specific Noise Source Standards. The standard states, “ No person shall operate any construction equipment so as to cause at or beyond the property line of any property upon which a dwelling unit is located an average sound level greater than seventy-five decibels (75.0 dB(A)) between the hours of seven p.m. and seven a.m. (7:00 PM to 7:00 AM).”

Table E: Typical Construction Equipment Noise Levels

Type of Equipment	Range of Maximum Sound Levels Measured (dB(A) at 50 feet)	Suggested Maximum Sound Levels for Analysis (dB(A) at 50 feet)
Pile Drivers	81-96	93
Rock Drills	83-99	96
Jackhammers	75-85	82
Pneumatic Tools	78-88	85
Pumps	74-84	80
Scrapers	83-91	87
Haul Trucks	83-94	88
Cranes	79-86	82
Portable Generators	71-87	80
Rollers	75-82	80
Dozers	77-90	85
Tractors	77-82	80
Front-End Loaders	77-90	86
Hydraulic Backhoe	71-90	86
Hydraulic Excavators	81-90	86
Graders	79-89	86
Air Compressors	76-89	86
Trucks	81-87	86

Source: Noise Control for Buildings and Manufacturing Plants, Bolt, Beranek & Newman 1987.

Notes: dB(A) = A-weighted decibels

Operational noise associated with projects typically includes stationary noise sources (HVAC systems, speaker systems, drive-thru areas, business operations, and docking equipment) and mobile noise sources (vehicles on roadways, loading equipment, and vehicles on project sites). Typically, operational noise increases associated with bridge projects are due to an increase in vehicles using local roadways and the roadway where the bridge would be located. The proposed Project would not result in an increase in vehicle travel along adjacent roadways or increase vehicle miles driven; and, therefore, would not result in an increase in ambient noise levels during operation.

Groundborne Vibration Discussion

Groundborne vibration can be a serious concern for residential areas and sensitive land uses. Some common sources of ground-borne vibration include construction activities such as blasting, pile driving and operating heavy earth-moving equipment. Vibration is an oscillatory motion which can be described in terms of displacement, velocity, or acceleration. The response of humans, buildings, sensitive land use areas, and equipment vibration is more accurately described using velocity or acceleration. The Peak Particle Velocity (PPV) is used to describe construction related vibrations. The PPV is defined as the maximum instantaneous positive or negative peak of the vibration signal and is

measured in inches/second. Table F: Vibration Source Levels for Construction Equipment provides typical vibration levels generated by operating construction equipment as measured from 25 feet away.

Table F: Vibration Source Levels for Construction Equipment

Equipment Type ^{1,2}	PPV at 25 Feet (inches/second)	PPV at 150 Feet (inches/second)
Vibratory Roller	0.210	0.014
Large Bulldozer	0.089	0.006
Caisson Drilling	0.089	0.006
Loaded Trucks	0.076	0.005
Jackhammer	0.035	0.002
Small Bulldozer	0.003	0.0002
Crack-and-seat operations	2.400	0.163
Pile Driver (impact)-upper range	1.518	0.103
Pile Driver (impact)-typical	0.644	0.044
Pile Driver (sonic)-upper range	0.734	0.050
Pile Driver (sonic)-typical	0.170	0.012

Source: ¹ Information for the vibratory roller, large bulldozer, caisson drilling, loaded trucks, jackhammer, small bulldozer and crack-and-seat operations are sourced from: California Department of Transportation Environmental Engineering Noise, Vibration and Hazardous Waste Management Office, *Transportation- and Construction-Induced Vibration Guidance Manual*, pg. 26, Table 18: Vibration Source Amplitudes for Construction Equipment, June 2004.

² Information for the pile drivers are sourced from: Federal Transit Administration, *Transit Noise and Vibration Impact Assessment*, pg. 12-12, Table 12-2: Vibration Source Levels for Construction Equipment, May 2006.

Stanislaus County regulates vibration during construction through the Stanislaus County Code Chapter 10.46 Noise Control, Section 10.46.070 Vibration. According to the code, “Operating or permitting the operation of any device that creates vibration that is above the vibration perception threshold of any individual at or beyond the property boundary of the source if on private property, or at one hundred fifty feet from the source if on a public space or public right-of-way is prohibited. Vibration perception threshold means the minimum ground-borne or structure-borne vibration motion necessary to cause a reasonable person to be aware of the vibration by such direct means as, but not limited to, sensation by touch or visual observation of moving objects, or a measured motion velocity of 0.01 in/sec over the range of one to one hundred Hertz (0.01 inches/second RMS).” The threshold of 0.01 inches/second RMS equates to 0.04 inches/second PPV.

Impact Analysis

- a) *Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?*

Less Than Significant Impact with Mitigation Incorporated. Short-term (construction) and long-term (operational) noise impacts of the proposed Project are described below.

Short-Term (Construction) Impacts. During construction of the Project, noise from construction activities may intermittently dominate the noise environment in the immediate area of construction.

Two types of short-term noise impacts would occur during Project construction. The first type would be from construction crew commutes and the transport of construction equipment and materials to the Project site, which would incrementally increase noise levels on roadways (Tegner and Harding Roads) leading to the site. The pieces of heavy equipment required for existing bridge demolition and new bridge construction would be moved to staging areas on the Project site, and would remain in such areas for the duration of the construction period. The transport of such heavy equipment would occur twice (to the Project staging area prior to construction commencement and from the Project staging area upon construction completion) and would not add to the daily traffic volume along roadways surrounding the proposed Project site. During arrival and departure of this heavy equipment there is a potential for a high single-event noise exposure at a maximum level of 87.0 dB(A) (L_{max}) from trucks passing as measured from a distance of 50 feet. However, the projected construction traffic would be minimal when compared to existing traffic volumes on Tegner and Harding Roads, including truck traffic, and the noise levels along these roadways would not be increased permanently. Therefore, short-term construction-related worker commutes and equipment noise impacts would be less than significant.

The second type of short-term noise impact is related to noise generated during bridge removal and construction. Construction of the proposed Project would be performed in discrete steps, each of which has its own mix of equipment and, consequently, its own noise characteristics and levels. These various sequential phases would change the noise generated and, therefore, the noise levels at the Project site as construction progresses. Despite the variety in the type and size of construction equipment, similarities in the dominant noise sources and patterns of operation allow construction-related noise ranges to be categorized by work phases. Table E above lists typical construction equipment maximum noise levels (L_{max}) recommended for noise impact assessments based on a measured distance of 50 feet away from the operating construction equipment.

Construction areas associated with the proposed Project are located as close as approximately 150 feet (to the southeast end of the bridge) from the nearest sensitive receptor (residential units). It is expected that pile drivers would be used during construction and would generate the highest noise levels. As shown above in Table E, the maximum noise level generated by pile drivers is estimated to be approximately 93.0 dB (A) L_{max} at 50 feet away from the operating equipment. Other construction equipment expected to be used include haul/dump trucks which would generate an estimated noise level of 88.0 dB (A) L_{max} at 50 feet away. Assuming each piece of construction equipment operates at some distance away from the other equipment, the predicted combined noise level during this phase of construction is estimated to be 95.0 dB(A) L_{max} at a distance of 50 feet from active construction equipment use on the proposed Project site. Considering that the nearest sensitive receptor is 150 feet away from the nearest construction area on the proposed Project site and each doubling of distance away from a noise source reduces noise levels by 3.0 dB(A), this receptor may be subject to short-term noise levels that would reach an estimated 85.5 dB(A) L_{max} . To minimize the construction noise impacts for sensitive receptors, **Mitigation Measures NOI-1** through **NOI-4** would be implemented during construction activities occurring on the proposed Project site.

Mitigation Measure NOI-1: The construction contractor shall comply with all local sound control and noise level rules, regulations, and ordinances that apply to any work performed pursuant to the contract;

Mitigation Measure NOI-2: Each internal combustion engine, used for any purpose on the job or related to the job, shall be equipped with a muffler recommended by the manufacturer. No internal combustion engine shall be operated without a muffler;

Mitigation Measure NOI-3: Between the hours of 7:00 PM and 7:00 AM (night work), the noise level from the construction activities shall not exceed 86.0 dB(A) L_{max} at a distance of 50 feet. Additionally, no person shall operate any construction equipment so as to cause at or beyond the property line of any property upon which a dwelling unit is located an average sound level greater than 75 decibels between the hours of 7:00 PM and 7:00 AM. Work shall be permitted Monday through Saturday, but not permitted on Sundays, unless specifically permitted by contract. This requirement shall not relieve the Contractor from the responsibility of complying with local ordinances regulating construction noise levels. The noise level requirement shall apply to the equipment on the job or related to the job, including but not limited to trucks, transit mixers, or transient equipment that may or may not be owned by the Contractor. The use of loud sound signals shall be avoided in favor of light warnings except those required by safety laws for the protection of construction personnel; and,

Mitigation Measure NOI-4: As directed by Caltrans or Stanislaus County, the construction contractor shall implement appropriate additional noise mitigation measures, including changing the location of stationary construction equipment, turning off idling equipment, rescheduling construction activity, notifying adjacent residents in advance of construction work, and installing acoustic barriers around stationary construction noise sources.

With implementation of **Mitigation Measures NOI-1 through NOI-4** short-term noise impacts to surrounding residential uses would be reduced to a less than significant level.

Long-Term (Operational) Impacts. Tegner and Harding Roads would remain two-lane roadways and it vehicular trips along these roadways would not increase due to Project implementation. The proposed Project meets the criteria for a Type III project established in 23 CFR 772; therefore, the proposed Project requires no analysis for highway traffic noise impacts. The proposed Project would not involve an increase in traffic volumes based on the projected future traffic, construction of new through lanes or auxiliary lanes, substantial changes in the horizontal or vertical alignment of the roadway, or exposure of noise sensitive land uses to a new or existing highway noise source. No operational impacts regarding noise is expected to occur as a result of Project implementation.

b) *Exposure of persons to or generation of excessive ground borne vibration or ground borne noise levels?*

Less Than Significant Impact. During construction activities at the proposed Project site several different types of construction equipment would be used that could generate groundborne vibrations that could impact adjacent residential uses. The nearest adjacent resident is approximately 150 feet from the Project site boundary. During construction on the proposed Project site construction crews would use pile drivers and haul/dump trucks. These two types of construction equipment would generate the highest levels of groundborne vibration compared to the other construction equipment that would be used during construction activities. Pile drivers used on the construction site would generate a vibration level of 0.644 PPV as measured from 25 feet; and, haul/dump trucks used on the Project site would generate vibration levels of 0.076 as measured from 25 feet.

Considering that the nearest sensitive receptors (residential units) are 150 feet from the proposed Project site boundary vibration levels generated by pile driver usage would be 0.044 PPV (as measured from 150 feet) and haul/dump truck usage would be 0.005 PPV (as measured from 150 feet) as shown above in Table F. Groundborne vibrations generated by construction equipment on the proposed Project site would be within the Stanislaus County standard of 0.04 inches/second PPV. Therefore impacts would be less than significant.

- c) *A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?*

Less Than Significant Impact. As discussed above, the proposed Project would not increase or generate new vehicle trips along Tegner and Harding Roads. Therefore, during operation of the proposed Project noise emanating from Tegner and Harding Roads would remain the same as under existing conditions. Long-term (operational) noise impacts would be less than significant.

- d) *A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?*

Less Than Significant Impact with Mitigation Incorporated. Temporary intermittent noise from short-term construction activities associated with the development of the proposed Project would occur. These activities would expose sensitive receptors near the Project site to intermittent short-term increases in ambient noise levels. **Mitigation Measures NOI-1 through NOI-4** identified above would be implemented to reduce the short-term noise increase generated during construction activities on the Project site. With implementation of **Mitigation Measures NOI-1 through NOI-4** impacts would be less than significant.

- e) *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 expose people residing or working in the project area to excessive noise levels?*

No Impact. The proposed Project site is not located within two miles of a public airport or within the vicinity of a private airstrip. The closest airport to the proposed Project site is Turlock Airpark, 2.3 miles to the northeast. Therefore, the proposed Project would not expose people working in the area to excessive noise levels associated with public airport or private airstrip activities. No impacts would occur.

- f) *For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?*

No Impact. The proposed Project site is not located within the vicinity of a private airstrip. No impacts would occur.

Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
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XIII. POPULATION AND HOUSING

Would the project:

- | | | | | |
|---|--------------------------|--------------------------|--------------------------|-------------------------------------|
| a) Induce substantial 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)? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

Environmental Setting

The proposed Project site is located in a rural portion of Stanislaus County just south of the intersection of Harding Road and Tegner Road. The area around the proposed Project site is characterized by agricultural uses with areas of rural residential units and agricultural outbuildings.

The proposed Project site is located approximately 3 miles southwest of the City of Turlock. The City of Turlock has a current population of 68,549 residents and a current stock of 24,627 housing units.¹ The proposed Project site is located in Stanislaus County Census Tract 37 which has a current population of 4,796 residents and a current stock of 1,417 housing units.²

Activities associated with the proposed Project include the demolition of the existing bridge on Tegner Road crossing over T.I.D. Lateral #5 Canal; roadway approach work on Tegner Road; reconfiguration of maintenance access roads for the T.I.D. Lateral #5 Canal; and, development of a new bridge crossing over T.I.D. Lateral #5 Canal. Project implementation does not include the relocation of residents nor would it require the demolition of existing residential units in the area.

¹ U.S. Department of Commerce United States Census Bureau, American Fact Finder, information is of Census Year 2010, <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>. Accessed September 24, 2013.

² U.S. Department of Commerce United States Census Bureau, American Fact Finder, information is of Census Year 2010, <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>. Accessed September 24, 2013.

Impact Analysis

- a) *Induce substantial 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)?*

No Impact. As discussed above, the proposed Project includes the removal of an existing bridge and development of a new bridge on Tegner Road crossing over T.I.D Lateral #5 Canal and associated improvements. Once operational, the new bridge and improvements would not result in an increase in vehicle traffic volume along nearby roadways which could indirectly induce substantial population growth in the area around the Project site. The nearest residential units are adjacent to the southeast and southwest corners of the proposed Project site. Implementation of the proposed Project would not induce direct population growth to the rural residential/agricultural uses in the surrounding area. Therefore the Project would not directly or indirectly induce population growth. No impacts would occur.

- b) *Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?*

No Impact. Rural residential units are located adjacent to the southeast and southwest corners of the proposed Project site. Project implementation would not require the acquisition of these residential units and therefore would not result in the displacement of people residing in these residential units nor would it require construction of replacement housing elsewhere to accommodate the relocation of residents. No impacts would occur.

- c) *Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?*

No Impact. As discussed above, rural residential units are located adjacent to the southwest and southeast corners of the proposed Project site. Project implementation would not require the displacement of residents from these residential units. Therefore, replacement housing would not be needed elsewhere to accommodate displaced residents due to Project implementation. No impacts would occur.

XIV. PUBLIC SERVICES

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) 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:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Fire protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Police protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Schools?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Parks?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Other public facilities?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Environmental Setting

The proposed Project site is located in Stanislaus County and is served by the following public services:

Fire Protection Services: The proposed Project site is located in the jurisdiction of the Turlock Rural Fire Protection District (TRFPD). The TRFPD station is located at 690 W. Canal Drive in Turlock approximately 3 miles northeast of the proposed Project site. The TRFPD is currently staffed with 22 personnel, including: 1 Chief; 1 Assistant Chief; 1 Battalion Chief; 5 Captains; 7 Engineers; 4 Firefighters and 3 Firefighter Trainees.¹ The TRFPD would provide fire protection service and emergency medical service to the proposed Project site.

Law Enforcement Protection Services: The proposed Project site is under the jurisdiction of the Stanislaus County Sheriff's Department. Patrol Operations of the Stanislaus County Sheriff's Department is located at the Main Station at 250 East Hackett Road in Modesto, approximately 10 miles northwest of the proposed Project site. The Main Station is the closest station that would serve the proposed Project site. Traffic control is provided by the California Highway Patrol (CHP) on roadways surrounding the proposed Project site.

¹ Turlock Rural Fire Department Website, <http://www.turlockruralfire.com/index.html>. Accessed September 24, 2013.

Educational Services: The proposed Project site is located within the Turlock Unified School District (TUSD). The TUSD is composed of 9 Elementary Schools, 1 Middle School, 1 Junior High School, 2 High Schools, and 2 Alternative Schools which serve over 13,500 students. Currently 761 certified teachers/administrators and 675 classified employees are working in the TUSD.¹ The proposed Project would not include the development of residential units that would generate an increase in students attending TUSD.

Park Services: For a discussion on the environmental setting for parks and recreation in Stanislaus County and near the Project site, see **Section XIV Recreation** below.

Other Public Facilities: Other public facilities such as government facilities are provided by Stanislaus County. Library service in the proposed Project area is provided by Stanislaus County Library at the Turlock Branch located at 550 Minaret Avenue in Turlock, approximately 3 miles northeast of the Project site.

Impact Analysis

- a) *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: Fire protection, police protection, schools, parks, other public facilities?*

No Impact. The proposed Project includes the demolition of the existing bridge on Tegner Road crossing over T.I.D. Lateral #5 Canal, roadway approach improvements on Tegner and Harding Roads; improvements to maintenance access roads paralleling the T.I.D. Lateral #5 Canal; and new bridge development. During construction activities Tegner Road and Harding Road within the Project boundary may be temporarily closed to through traffic. A detour plan would be developed to ensure that residents and through traffic would be able to navigate around the proposed Project site during construction closures of Tegner and Harding Roads. The required detour would be a relatively short distance (approximately 1 mile) and temporary during the construction period. Nearby residents would still be able to access the required detour and exit the area in the event of an emergency. In addition, emergency and safety services would be able to use the detour. Once completed, the new bridge would allow similar traffic flows as the existing bridge and would not hinder emergency escape routes.

The proposed Project would not include the development of residential units that would generate residents or the demand for public services; and, therefore, would not degrade the quality of existing public services in the area. No parks, recreational facilities or other public facilities are located near the proposed Project; therefore, such public services would not be impacted by the development of the proposed Project. Impacts to public services would not occur.

¹ Turlock Unified School District, <http://turlockusd-ca.schoolloop.com/>. Accessed September 24, 2013.

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
XV. RECREATION				
a) 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Environmental Setting

Stanislaus County presently maintains several regional parks with a total acreage in excess of 15,500 acres. These parks provide a wide variety of recreational facilities and opportunities such as picnic areas, sports fields, campsites, equestrian facilities, swimming, waterskiing, fishing, boating and barbeque pits. Other facilities such as seasonal off-road vehicle areas in La Grange and Del Puerto Canyon, nature trails and fishing accesses are maintained by the County in response to more specific recreational needs.¹ The nearest County maintained park is Hatch Park located at 5506 Jennie Avenue in Keyes, approximately 6.5 miles north of the proposed Project site.

Impact Analysis

- a) *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?*

No Impact. The proposed Project site is located in a rural portion of Stanislaus County and is not located near any existing regional, neighborhood parks or other recreational facilities. The proposed Project would replace an existing bridge along Tegner Road crossing over T.I.D. Lateral #5 Canal as well as roadway improvements and does not include residential units that would increase the use of existing neighborhood, regional parks or recreational facilities. Therefore implementation of the proposed Project would not increase the use of such facilities so that substantial deterioration of the facility would occur or be accelerated. No impacts would occur.

¹ Stanislaus County General Plan Support Documentation, Chapter III Conservation/Open Space, pg. 3-44.

- b) 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?*

No Impact. Recreational facilities would not be developed as part of the proposed Project nor would such facilities need to be constructed or expanded as a result of Project implementation. Therefore the proposed Project would not include the development of such facilities that may have an adverse physical effect on the environment. No impacts would occur.

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XVI. TRANSPORTATION/TRAFFIC

Would the project:

- | | | | | |
|---|--------------------------|--------------------------|-------------------------------------|-------------------------------------|
| a) Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| b) Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that result in substantial safety risks? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| e) Result in inadequate emergency access? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| f) Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |

Environmental Setting

The proposed Project site is located on Tegner Road south of the Tegner Road/Harding Road intersection in a rural portion of Stanislaus County. Both Tegner and Harding Roads are classified as Local Roadways according to Stanislaus County. Local roads serve as land access facilities in the agricultural areas of the County by providing both direct access to abutting property and movement of small volumes of people and goods for medium length trips. Local roadways are two-lane facilities with a typical right-of-way (ROW) of 60 feet to safely accommodate drainage, utilities, and other physical improvements that may be located within the public ROW. Harding Road, in the Project

vicinity currently has an estimated average daily traffic (ADT) volume of 407 vehicles.¹ Tegner Road north and south of Harding Road has an estimated ADT volume of 950 and 1,457 vehicles, respectively.²

The proposed Project includes the replacement of the Tegner Road Bridge (No. 38C-0302) over T.I.D. Lateral #5 Canal and improvement of road approaches on Tegner and Harding Roads, and T.I.D. access roads and canal. Tegner Road Bridge was constructed in 1919 and is a continuous two-span reinforced concrete slab structure on diaphragm abutments and a reinforced concrete pier, supported by spread footings. This structure is considered structurally deficient, with a sufficiency rating of 57.5 and a health index of 67.6. The soffit of the existing bridge is under the water surface elevation of the normal operating flow (100 cubic feet per second) which has caused the erosion of the superstructure concrete exposing reinforcement steel. Additionally, the existing bridge is too narrow to accommodate farm equipment and truck traffic in both directions.

The replacement bridge is a clear span with two Type 732 concrete barriers. The replacement bridge would be 34.83 feet wide to accommodate two 12-foot lanes and two, four-foot shoulders. The replacement bridge would be 22.75 feet long and will utilize an oversized spread footing to replace the existing bottom of lined channel and the abutment walls will act as the walls of the lined channel. The replacement bridge soffit will remain at the same elevation as the existing bridge in order to minimize the amount of construction required on both Tegner and Harding Road as well as to minimize construction time. The roadway profile of the replacement bridge would be on a slightly higher vertical alignment in order to accommodate the bridge deck thickness required to span the entire canal and remove the existing pier in the middle of the canal. Increased concrete cover will be provided at the soffit to mitigate future exposure of soffit reinforcement.

The construction of the Tegner Road Bridge replacement structure and associated roadway approaches would be completed on essentially the same horizontal alignment as the existing bridge and roadway. The 32-foot wide Tegner Road roadway approach work would extend approximately 400 feet north and south of the new bridge. The 22-foot wide Harding Road roadway improvements would extend for approximately 200 feet west and east of Tegner Road in order to accommodate the raised vertical alignment.

Sliver right-of-way (ROW) takes would be necessary within APNs 044-014-006 and 044-016-006 to accommodate roadway fill.

Tegner Road would be closed during Project construction at the bridge location and a detour using adjacent local streets would be used to accommodate local traffic.

¹ Google Earth Pro, U.S. Daily Traffic Counts, Originally sourced from KSSFuels, MPSI TrafficMetrix-Published Counts, http://www.kssfuels.com/Solutions/Data_Intelligence/TrafficMetrix%20_Published_Counts.html. Accessed October 3, 2013.

² Google Earth Pro, U.S. Daily Traffic Counts, Originally sourced from KSSFuels, MPSI TrafficMetrix-Published Counts, http://www.kssfuels.com/Solutions/Data_Intelligence/TrafficMetrix%20_Published_Counts.html. Accessed October 3, 2013.

The Project proposes improvements to T.I.D. access roads and the canal structure itself. Four T.I.D. access roads would be modified and improved. Two dirt access roads would be improved off Harding Road, north of the canal, and two dirt access roads would be improved off Tegner Road, south of the intersection of Tegner and Harding Roads and south of the canal. Corner easements would be necessary both southwest (APN 044-041-038) and southeast (APN 044-043-021) of the bridge to accommodate the realigned T.I.D. access road. The existing bridge pier enters the canal and the footing for this pier is underneath the canal. The pier and footing would be removed and the canal would be repaired in this location. Additionally, the invert structure would be patched. Lastly, falsework would be constructed within the T.I.D. easement during the bridge replacement and a temporary earthen berm would be installed within the canal.

Stanislaus County offers excellent conditions for bicycle and pedestrian transportation. The County is generally topographically flat, has a temperate climate, and major destinations are within an easy ride of most residences. Relatively few marked bicycle facilities have been constructed in the County. In agricultural areas (such as the area where the proposed Project is located), the County provides adequate striping and paving in accordance with Caltrans and AASHTO standards to safely accommodate bicycle travel whenever a roadway is widened, and, where adequate ROW exists, whenever a roadway is resurfaced, restored, or rehabilitated on all routes except minor roads. Marked and/or signed bicycle lanes and paths are provided in accordance with the Non-Motorized Transportation Master Plan adopted by Stanislaus County Council of Governments (StanCOG), the adopted Community Plans for the urban areas of the County, and the general plans of the cities within the spheres of influence. No designated bicycle lanes are located along Tegner Road or Harding Road in the Project vicinity; however, the Non-Motorized Transportation Master Plan identifies that a Class III Bicycle Route is proposed for Harding Road between Washington Road and Golf Road.¹

Impact Analysis

- a) *Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?*

Less Than Significant Impact. A nominal increase in the volume of vehicles using Tegner and Harding Roads would occur during construction of the proposed Project. The increase in vehicle volume along these roadways would occur due to vehicle trips associated with the arrival and departure of construction equipment and construction workers to and from the Project site. Tegner Road would be closed to southbound traffic at the Tegner Road/Harding Road intersection and would be closed to northbound traffic just south of the existing/new bridge location. A roadway detour would be set up to direct through and local traffic around the proposed Project site during construction to ensure that performance of local roadways continues as is under existing conditions. This would result in minor shifts in existing traffic patterns during the construction period.

¹ Fehr and Peers, Stanislaus County Council of Governments (StanCOG), Non-Motorized Transportation Master Plan, Figure 3-5 Stanislaus County Existing and Proposed Bikeways, September 18, 2013.

Once completed, the proposed Project would not generate an increase in traffic volumes along Tegner and Harding Roads. These roadways would continue operating at existing performance levels once the proposed Project is operational. Impacts would be less than significant.

- b) Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?*

Less Than Significant Impact. As described above, construction activities associated with the development of the proposed Project would generate a nominal increase in vehicle volumes along Tegner and Harding Roads. The nominal increase in traffic volume would occur from the arrival and departure of construction equipment and construction workers to and from the proposed Project site. This increase would be temporary in nature for the duration of the four month construction period. Once operational, the proposed Project would not contribute to an increase in traffic volumes along Tegner and Harding Roads as the Project would only include removal and replacement of an existing bridge. The proposed Project would not result in an increase in Level of Service (LOS) standards established by Stanislaus County along Tegner and Harding Roads. Impacts would be less than significant.

- c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that result in substantial safety risks?*

No Impact. The proposed Project does not include the development of a tall structure that would interfere with Federal Aviation Administration airspace or private airplane use airspace. Project implementation, therefore, would not result in a change of air traffic patterns that would result in substantial aviation risks. No impact would occur.

- d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?*

Less Than Significant Impact. Development of the proposed Project over the T.I.D. Lateral #5 Canal would utilize enhanced and updated design features that would reduce hazards for vehicles traveling along Tegner Road. The proposed Project would include roadway improvements along Tegner and Harding Roads for bridge replacement and T.I.D. access road improvements. These improvements would meet AASHTO standards for design and roadway/bridge width. Implementation of the proposed Project would not substantially increase hazards due to design features or incompatible uses. This impact would be less than significant.

- e) Result in inadequate emergency access?*

Less Than Significant Impact. The Stanislaus County Multi-Jurisdictional Hazard Mitigation Plan identifies procedures for the coordination of planned response to large-scale disasters. The Hazard Mitigation Plan describes emergency management organization, roles, and responsibilities, and analyzes various hazard risks; however, the plan does not identify specific routes for emergency access or evacuation. Any temporary construction traffic detours would be in accordance with County standards and would not interfere with emergency access or evacuation in the areas or with the County Multi-Jurisdictional Hazard Mitigation Plan. Impacts would be less than significant.

- f) Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?*

Less Than Significant Impact. The proposed Project is located in a rural area of unincorporated Stanislaus County. StanCOG prepared and adopted the Stanislaus County Non-Motorized Transportation Master Plan (September 18, 2013), which identifies existing and proposed bicycle facilities throughout the County. No existing bicycle facilities are located on Tegner and Harding Roads in the Project vicinity. However, the Non-Motorized Transportation Master Plan identifies that a Class III Bicycle Route is proposed for Harding Road between Washington Road and Golf Road.¹ The proposed Project would be designed to accommodate the planned Class III Bicycle Route along Harding Road. No alternative transportation routes (existing or proposed) are located within the Project area. Therefore, the proposed Project would not conflict with alternative transportation policies, plans or programs. Impacts would be less than significant.

¹ Fehr and Peers, Stanislaus County Council of Governments (StanCOG), Non-Motorized Transportation Master Plan, Figure 3-5 Stanislaus County Existing and Proposed Bikeways, September 18, 2013.

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
XVII. UTILITIES AND SERVICE SYSTEMS				
Would the project:				
a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
g) Comply with federal, State, and local statutes and regulations related to solid waste?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Environmental Setting

The proposed Project site is located in a rural area of unincorporated Stanislaus County. This section describes the utility services (potable and non-potable water service, wastewater service, solid waste disposal service, and electric/natural gas service) that are located in the area of the proposed Project.

Utility poles are located along both sides of Tegner Road as well as on the north side of Harding Road in the Project site and vicinity. These utility poles may require relocation to accommodate the reconstruction of the roadway approaches as part of the proposed Project. No underground utilities are located within the vicinity of the proposed Project site. It is not anticipated that the existing irrigation facilities along the western edge of Tegner Road and along the northern edge of Harding Road would

be impacted by Project implementation. The County would coordinate with the utility service providers in advance of needed relocation activities to ensure minimal service disruption.

Potable and Non-Potable Water Service

Residential uses in the vicinity of the proposed Project receive potable water from privately owned wells. Non-potable water supply in the proposed Project vicinity is provided by the Turlock Irrigation District.¹ The T.I.D. holds 4,904 irrigation accounts and provides irrigation service to an area of 307 square miles.

Wastewater Service

The proposed Project site is located in a rural portion of Stanislaus County. Currently no wastewater service is available in the Project vicinity and all wastewater generated by nearby residents is disposed of in underground on-site septic tank/leach field systems.

Solid Waste Disposal Service

Solid waste generated by the proposed Project during construction activities would be collected and transported to an active and permitted landfill. All solid waste generated within unincorporated areas of the County are taken to Fink Road Landfill located at 4000 Fink Road in Crows Landing, approximately 13 miles to the west of the proposed Project site. Fink Road Landfill intakes several different types of waste, including: agricultural, asbestos, ash, construction/demolition debris, contaminated soils, dead animals, industrial, inert, mixed municipal, sludge (BioSolids), tires, and wood waste. The landfill is a Class II and III type and permits a maximum intake of 2,400 tons of solid waste per day. The maximum permitted capacity of the landfill is 14,640,000 cubic yards and as of January 5, 2012, the landfill has a remaining capacity of 8,240,435 cubic yards.²

Electrical and Natural Gas Service

The proposed Project site is located in the jurisdiction of T.I.D. which provides electrical service to customers. T.I.D. has several electrical power generation facilities including: solar generation facilities, hydroelectric facilities, wind facilities, natural gas powered facilities, and geothermal and coal facilities. No major transmission lines are located in the Project vicinity; however, utility poles with electrical lines are in the area. Utility poles are located along both sides of Tegner Road as well as on the north side of Harding Road and may require relocation to accommodate the reconstruction of roadway approaches associated with the proposed Project.

Natural gas service in the larger Project area is supplied by Pacific Gas and Electric Company (PG&E). The major supply line for the County parallels Interstate 5; however, there is no local gas service in the immediate project vicinity. This line transports natural gas produced elsewhere to

¹ Stanislaus County, Water Atlas Stanislaus County, September 2007.

² CalRecycle, Facility/Site Summary Details: Fink Road Landfill (50-AA-0001), <http://www.calrecycle.ca.gov/SWFacilities/Directory/50-AA-0001/Detail/>. Accessed October 4, 2013.

Stanislaus County residents. Major PG&E Natural Gas pipelines are not located in the vicinity of the proposed Project.¹

Impact Analysis

- a) *Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?*

No Impact. During development of the proposed Project, construction workers on-site would generate a nominal amount of wastewater. Any amount of wastewater generated by construction workers would be hauled and treated off-site. Once operational, the proposed Project would not generate wastewater. Project implementation would not cause wastewater treatment requirements to be exceeded. No impacts would occur.

- b) *Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?*

No Impact. The proposed Project includes demolition of an existing bridge on Tegner Road, roadway improvements to Tegner and Harding Road, and installation of a new bridge on Tegner Road over the T.I.D. Lateral #5 Canal. Nominal amounts of wastewater would be generated by construction workers during the construction period; however, once operational, the Project would not generate additional wastewater. Water would be used during construction activities for dust suppression; however, once operational, the proposed Project would not require water. Project implementation would not require or result in the construction of new water or wastewater treatment facilities. No impacts would occur.

- c) *Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?*

Less Than Significant Impact. The proposed Project would result in the addition of a nominal amount of impervious surfaces in the form of the wider and longer bridge deck. No additional storm water drainage improvements are proposed due to this nominal increase in impervious surface associated with Project implementation. Minor modifications to existing drainage would not cause significant environmental impacts. Impacts would be less than significant.

- d) *Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?*

Less Than Significant Impact. Operation of the proposed Project would not require water service; however, the proposed Project would require water for dust suppression during construction activities. Water required during construction activities would be transported to the proposed Project site by water trucks and stored in these trucks at the construction staging area. Water requirements for construction of the proposed Project would not exceed existing entitlements. Impacts would be less than significant.

¹ Stanislaus County General Plan Support Documentation, Chapter 2 Circulation, Figure II-4 Natural Gas and Oil Pipelines.

- e) *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?*

No Impact. Construction workers would generate a nominal amount of wastewater during Project development. Wastewater generated during construction would be treated at off-site facilities. Operation of the proposed Project would not result in the generation of wastewater. Project implementation would not result in an impact to wastewater treatment capacity. No impact would occur.

- f) *Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?*

Less Than Significant Impact. Solid waste generated during Project construction would be limited to construction debris, including, asphalt and concrete, generated by the construction and removal of the old bridge. Solid waste disposal would occur in accordance with federal, state and local regulations. Disposal would occur at the Fink Road Sanitary Landfill which has sufficient permitted remaining capacity for solid waste disposal. The proposed Project would be served by a landfill with sufficient permitted capacity; therefore, impacts would be less than significant.

- g) *Comply with federal, State, and local statutes and regulations related to solid waste?*

Less Than Significant Impact. The proposed Project would conform to all applicable local, state and federal solid waste regulations. Therefore, impacts would be less than significant.

Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
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XVIII. MANDATORY FINDINGS OF SIGNIFICANCE

- | | | | | |
|---|--------------------------|-------------------------------------|-------------------------------------|--------------------------|
| a) Does the project have the potential to 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? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| b) 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.) | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |

Environmental Setting

The Mandatory Findings of Significance section discusses the potential of the proposed Project to degrade the quality of the environment and any biological habitats. Impacts on a cumulative basis as well as the Project's potential to result in any environmental impacts which would cause substantial direct or indirect impacts on humans are also discussed.

Impact Analysis

- a) *Does the project have the potential to 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?*

Less Than Significant with Mitigation Incorporated. As discussed throughout this document, the Project has the potential to result in significant impacts on the environment; however, with the implementation of the proposed mitigation measures, the Project is not expected to degrade the quality of the environment. Furthermore, Project implementation is not expected to substantially impact the habitat or populations of any fish and wildlife species (see **Section IV**) or eliminate important

examples of the major period of California history or prehistory (see **Section V**). With full implementation of the proposed mitigation measures impacts would be less than significant.

- b) *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.)*

Less Than Significant Impact. The impacts of the proposed Project would be individually limited and would not be cumulatively considerable. Project implementation would include the demolition of an existing bridge on Tegner Road over T.I.D Lateral #5 Canal, roadway improvements on Tegner and Harding Roads, and improvements to T.I.D. easement access off of Harding Road for canal maintenance. All environmental impacts that could occur as a result of Project development would be reduced to a less than significant level with implementation of the mitigation measures recommended throughout this Initial Study. When viewed in conjunction with other closely related past, present or reasonably foreseeable future projects, development of this Project would not cumulatively contribute to impacts.

- c) *Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?*

Less Than Significant Impact. The purpose of the proposed Project would be to replace the existing bridge on Tegner Road crossing over the T.I.D. Lateral #5 Canal south of Harding Road with a bridge constructed to current standards and codes. The proposed Project would replace the existing bridge that was constructed and installed in 1919 with a new bridge that is 34.83 feet wide and 22.75 feet long. The new bridge would accommodate two 12-foot wide travel lanes and two four-foot wide shoulders. Once completed, the new bridge would meet current design standards. As described in this Initial Study, implementation of the proposed Project could result in temporary agricultural resources, air quality, biology, cultural resources, geology and soils, greenhouse gas, hazards and hazardous materials, hydrology and water quality, and noise impacts. Implementation of the mitigation measures recommended in this Initial Study, compliance with Stanislaus County and Caltrans regulations, and application of standard construction practices would ensure that the proposed Project would not result in environmental impacts that would cause substantial direct or indirect adverse impacts on humans. Impacts would be less than significant.

3.0 REPORT PREPARERS

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APPENDIX A

VISUAL MEMORANDUM

Memorandum

*Flex your power!
Be energy efficient!*

To: Jaycee Azevedo
Environmental Coordinator
Caltrans District 10

Date: November 28, 2012

BRLO – 5939(196)

From: Justin Howland
LSA Associates, Inc.
Marcia Vallier
Vallier Design Associates, Inc.

Subject: Visual Impact Assessment

Project: Tegner Road Bridge Replacement Project

The purpose of this Visual Impact Assessment Memorandum is to document potential visual impacts caused by the proposed project. Visual impacts are demonstrated by identifying visual resources in the project area, measuring the amount of change that would occur as a result of the project, and predicting how the affected public would respond to or perceive those changes. The Visual Impact Assessment Guide checklist was used to determine the level of detail required for a Visual Impact Assessment. After a site visit and completing the Visual Impact Assessment Guide checklist, it was determined that the proposed project will not result in substantial visual impacts and a brief Visual Impact Assessment Memorandum will be sufficient.

Project Description: The project will replace the existing Tegner Road Bridge with a new two lane concrete slab bridge that will be approximately 35 feet wide and 28 feet long. The replacement bridge will be set on the same horizontal alignment as the existing bridge, but on a slightly higher vertical profile so that the bridge can pass the maximum design flow of the Turlock Irrigation District Lateral Number 5 Canal without a pressure flow. The increase in vertical profile will be no more than approximately 2 feet higher than that of the existing roadway. In addition to the work involved in the bridge replacement, the project will include roadway work associated with rebuilding the approaches along Tegner Road and Harding Road.

The project location and vicinity and the tentative layout plans for the project are shown in the attached Figures 1 and 2, respectively.

Visual Setting: The project is located in rural agricultural land in Stanislaus County. The project area is surrounded on all sides by large agricultural parcels (both orchard and row crops) with two residences just south of the project area. The project is consistent with the land use within the project corridor and surrounding area. The proposed project and adjacent land have no federal or locally designated scenic resources. Tegner Road is not designated as a Scenic Highway or Scenic Resource nor does it fall within a Scenic Corridor.

Assessment Method: To determine the potential effects from the proposed project improvements on the visual environment, a site visit and photographic reconnaissance was conducted. The site visit and representative photographs are used to establish the scenic character and quality of the project area. Figure 3 contains photographs of the project area.

Visual Resource Change: Review of the project corridor and project plans indicate the project would not result in substantial adverse impact to the visual character of the project area. The project would replace the existing Tegner Road Bridge with an improved structure and create slightly higher vertical approaches (2 feet) to the new bridge. These improvements would not alter the existing visual resources of the area and is consistent with the visual context for the area.

This review indicates the project would not adversely affect any "Designated Scenic Resource" as defined by CEQA statutes or guidelines, or by Caltrans policy.

Prepared By:


Justin Howland, Environmental Planner
LSA Associates, Inc.

Date:

11.29.12

Reviewed By:


Marcia Vallier, Landscape Architect (RLA # CA3293)
Vallier Design Associates, Inc.

Date:

11.29.12

Attachments: Figure 1: Project Vicinity Map

Figure 2: Project Layout

Figure 3: Representative Photographs

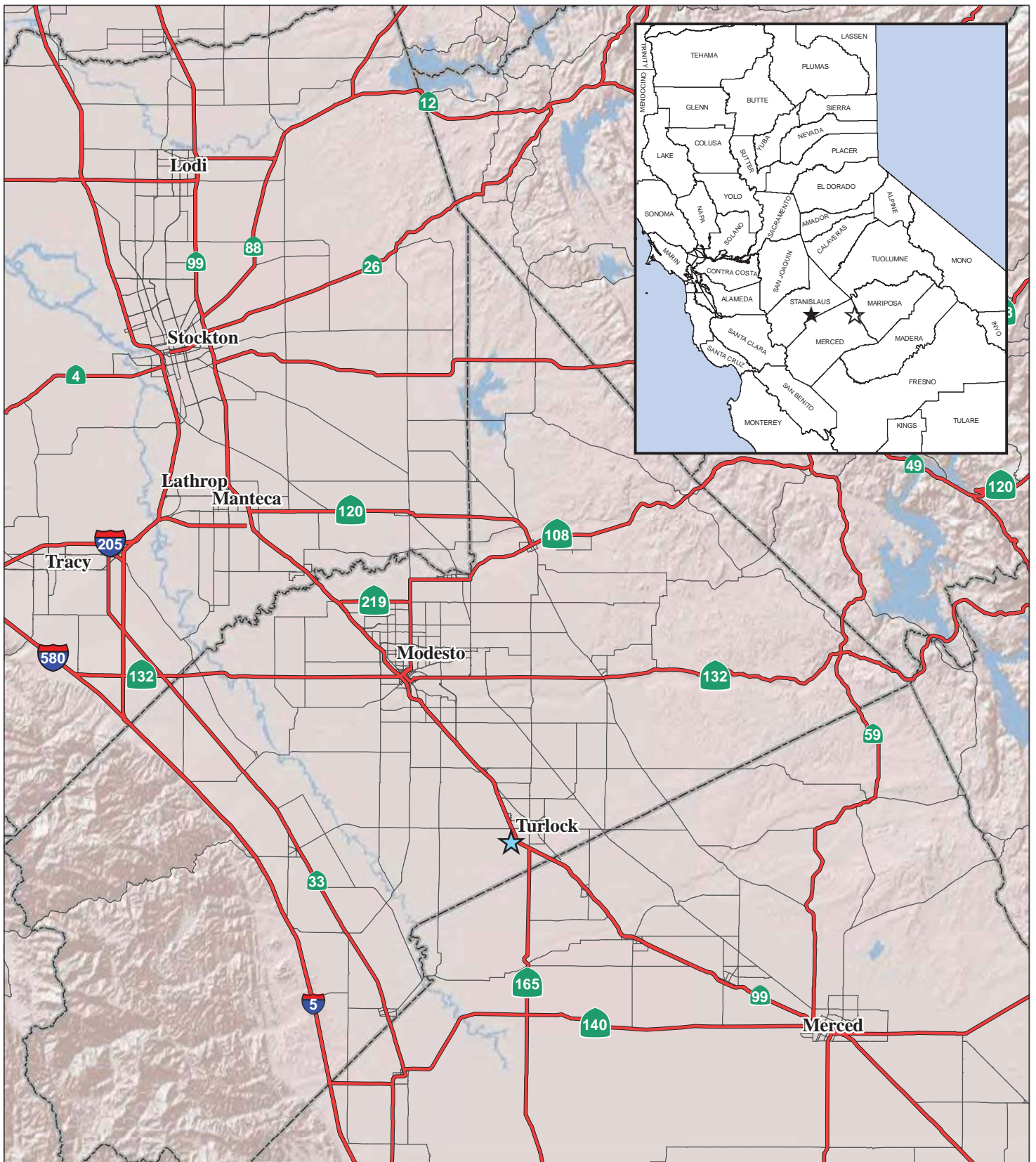
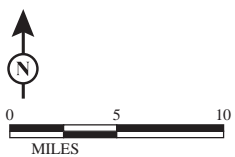


FIGURE 1

LEGEND

★ Project Location



SOURCE: ESRI Imagery (4/2008)

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Tegner Road Bridge Replacement Project
Stanislaus County, California
Project Vicinity Map

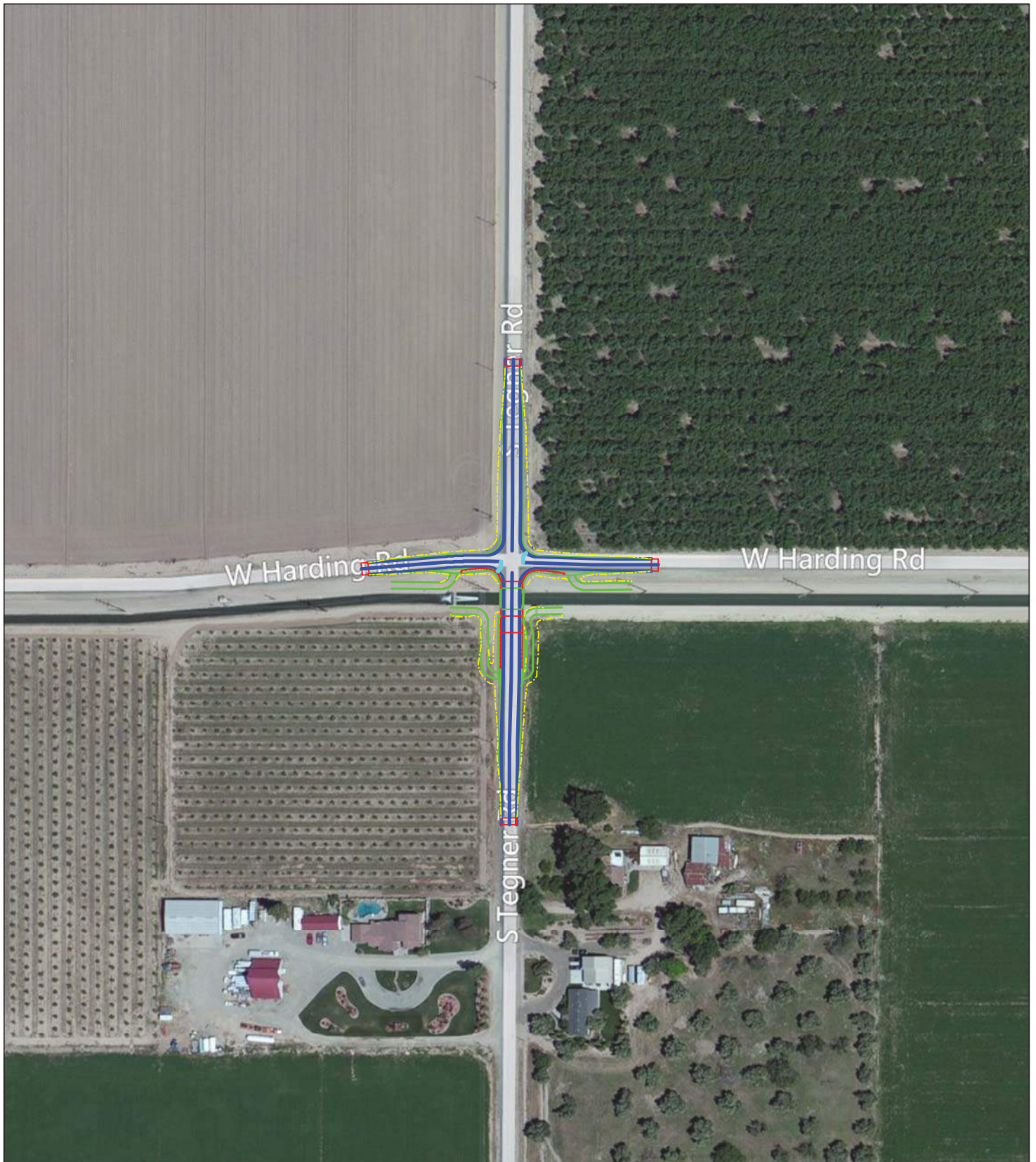
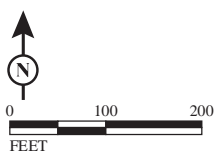


FIGURE 2



SOURCE: Microsoft Bing Aerial (2010)

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Tegner Road Bridge Replacement Project
Stanislaus County, California
 Project Layout



Tegner Road looking north towards Tegner Road Bridge



Harding Road looking east towards Tegner Road Bridge



Harding Road looking west towards Tegner Road Bridge



Looking east towards Tegner Road Bridge

FIGURE 3

Tegner Road Bridge Replacement Project
Stanislaus County, California
Representative Photographs

APPENDIX B
LAND EVALUATION AND SITE ASSESSMENT (LESA) MODEL

Appendix A. California Agricultural LESA Worksheets Tegner Road Bridge Replacement at T.I.D Lateral #5 Canal

NOTES

Calculation of the Land Evaluation (LE) Score

Part 1. Land Capability Classification (LCC) Score:

- (1) Determine the total acreage of the project.
- (2) Determine the soil types within the project area and enter them in **Column A** of the **Land Evaluation Worksheet** provided on page 2-A.
- (3) Calculate the total acres of each soil type and enter the amounts in **Column B**.
- (4) Divide the acres of each soil type (**Column B**) by the total acreage to determine the proportion of each soil type present. Enter the proportion of each soil type in **Column C**.
- (5) Determine the LCC for each soil type from the applicable Soil Survey and enter it in **Column D**.
- (6) From the LCC Scoring Table below, determine the point rating corresponding to the LCC for each soil type and enter it in **Column E**.

LCC Scoring Table

LCC Class	I	Ile	Ils,w	IIle	IIls,w	IVe	IVs,w	V	VI	VII	VIII
Points	100	90	80	70	60	50	40	30	20	10	0

- (7) Multiply the proportion of each soil type (**Column C**) by the point score (**Column E**) and enter the resulting scores in **Column F**.
- (8) Sum the LCC scores in **Column F**.
- (9) Enter the LCC score in box <1> of the **Final LESA Score Sheet** on page 10-A.

Part 2. Storie Index Score:

- (1) Determine the Storie Index rating for each soil type and enter it in **Column G**.
- (2) Multiply the proportion of each soil type (**Column C**) by the Storie Index rating (**Column G**) and enter the scores in **Column H**.
- (3) Sum the Storie Index scores in **Column H** to gain the Storie Index Score.
- (4) Enter the Storie Index Score in box <2> of the **Final LESA Score Sheet** on page 10-A.

Land Evaluation Worksheet

Land Capability Classification (LCC) and Storie Index Scores

	A	B	C	D	E	F	G	H
	Soil Map Unit	Project Acres	Proportion of Project Area	LCC	LCC Rating	LCC Score	Storie Index	Storie Index Score
NI	DgA	2.7	0.56	IVe	50	28.1	51	28.7
NI	DrA	1.3	0.27	IVs	40	10.8	60	16.3
NI	MdA	0.8	0.17	IVs	40	6.7	28	4.7
	Totals	4.8	(Must Sum to 1.0)	LCC Total Score		45.6	Storie Index Total Score	49.6

NI = Non-Irrigated

Site Assessment Worksheet 1.

Project Size Score

	I	J	K
	LCC Class I - II	LCC Class III	LCC Class IV - VIII
			2.7
			1.3
			0.8
Total Acres			4.8
Project Size Scores			0

**Highest Project
Size Score**

0

NOTES

Calculation of the Site Assessment (SA) Score

Part 1. Project Size Score:

- (1) Using **Site Assessment Worksheet 1** provided on page 2-A, enter the acreage of each soil type from **Column B** in the **Column - I, J or K** - that corresponds to the LCC for that soil. (Note: While the Project Size Score is a component of the Site Assessment calculations, the score sheet is an extension of data collected in the Land Evaluation Worksheet, and is therefore displayed beside it).
- (2) Sum **Column I** to determine the total amount of class I and II soils on the project site.
- (3) Sum **Column J** to determine the total amount of class III soils on the project site.
- (4) Sum **Column K** to determine the total amount of class IV and lower soils on the project site.
- (5) Compare the total score for each LCC group in the Project Size Scoring Table below and determine which group receives the highest score.

Project Size Scoring Table

Class I or II		Class III		Class IV or Lower	
Acreage	Points	Acreage	Points	Acreage	Points
>80	100	>160	100	>320	100
60-79	90	120-159	90	240-319	80
40-59	80	80-119	80	160-239	60
20-39	50	60-79	70	100-159	40
10-19	30	40-59	60	40-99	20
10<	0	20-39	30	40<	0
		10-19	10		
		10<	0		

- (6) Enter the **Project Size Score** (the highest score from the three LCC categories) in box <3> of the **Final LESA Score Sheet** on page 10-A.

NOTES

Part 2. Water Resource Availability Score:

(1) Determine the type(s) of irrigation present on the project site, including a determination of whether there is dryland agricultural activity as well.

(2) Divide the site into portions according to the type or types of irrigation or dryland cropping that is available in each portion. Enter this information in **Column B** of **Site Assessment Worksheet 2. - Water Resources Availability**.

(3) Determine the proportion of the total site represented for each portion identified, and enter this information in **Column C**.

(4) Using the Water Resources Availability Scoring Table, identify the option that is most applicable for each portion, based upon the feasibility of irrigation in drought and non-drought years, and whether physical or economic restrictions are likely to exist. Enter the applicable Water Resource Availability Score into **Column D**.

(5) Multiply the Water Resource Availability Score for each portion by the proportion of the project area it represents to determine the weighted score for each portion in **Column E**.

(6) Sum the scores for all portions to determine the project's total Water Resources Availability Score

(7) Enter the Water Resource Availability Score in box <4> of the **Final LESA Score Sheet** on page 10-A.

Site Assessment Worksheet 2. - Water Resources Availability

A	B	C	D	E
Project Portion	Water Source	Proportion of Project Area	Water Availability Score	Weighted Availability Score (C x D)
1	Non-Irrigated	1.0	0	0
2				
3				
4				
5				
6				
		(Must Sum to 1.0)	Total Water Resource Score	0

Water Resource Availability Scoring Table

Option	Non-Drought Years			Drought Years			WATER RESOURCE SCORE
	RESTRICTIONS			RESTRICTIONS			
	Irrigated Production Feasible?	Physical Restrictions ?	Economic Restrictions ?	Irrigated Production Feasible?	Physical Restrictions ?	Economic Restrictions ?	
1	YES	NO	NO	YES	NO	NO	100
2	YES	NO	NO	YES	NO	YES	95
3	YES	NO	YES	YES	NO	YES	90
4	YES	NO	NO	YES	YES	NO	85
5	YES	NO	NO	YES	YES	YES	80
6	YES	YES	NO	YES	YES	NO	75
7	YES	YES	YES	YES	YES	YES	65
8	YES	NO	NO	NO	-- --	-- --	50
9	YES	NO	YES	NO	-- --	-- --	45
10	YES	YES	NO	NO	-- --	-- --	35
11	YES	YES	YES	NO	-- --	-- --	30
12	Irrigated production not feasible, but rainfall adequate for dryland production in both drought and non-drought years						25
13	Irrigated production not feasible, but rainfall adequate for dryland production in non-drought years (but not in drought years)						20
14	Neither irrigated nor dryland production feasible						0

NOTES

The ZOI is 548.9 acres in size and consists of the following parcels (APNs):

044-014-013
044-014-015
044-016-001
044-016-006
044-043-021
044-043-001
044-043-002
044-043-003
044-043-030
044-043-022
044-041-007
044-041-038
044-041-005
044-041-004
044-041-037
044-041-003
044-014-006
044-014-007
044-014-008

Approximately 48.62 acres of the land in these parcels is under Agricultural Production. This equates to 87.6 percent of the ZOI. Approximately 493.68 acres of these parcels is under Williamson Act Contracts. This equates to 89.9 percent of the ZOI.

Part 3. Surrounding Agricultural Land Use Score:

- (1) Calculate the project's Zone of Influence (ZOI) as follows:
 - (a) a rectangle is drawn around the project such that the rectangle is the smallest that can completely encompass the project area.
 - (b) a second rectangle is then drawn which extends one quarter mile on all sides beyond the first rectangle.
 - (c) The ZOI includes all parcels that are contained within or are intersected by the second rectangle, less the area of the project itself.
- (2) Sum the area of all parcels to determine the total acreage of the ZOI.
- (3) Determine which parcels are in agricultural use and sum the areas of these parcels
- (4) Divide the area in agriculture found in step (3) by the total area of the ZOI found in step (2) to determine the percent of the ZOI that is in agricultural use.
- (5) Determine the Surrounding Agricultural Land Score utilizing the Surrounding Agricultural Land Scoring Table below.

Surrounding Agricultural Land Scoring Table

Percent of ZOI in Agriculture	Surrounding Agricultural Land Score
90-100	100
80-89	90
75-79	80
70-74	70
65-69	60
60-64	50
55-59	40
50-54	30
45-49	20
40-44	10
<40	0

- (5) Enter the Surrounding Agricultural Land Score in box <5> of the **Final LESA Score Sheet** on page 10-A.

Site Assessment Worksheet 3.

Surrounding Agricultural Land and Surrounding Protected Resource Land

A	B	C	D	E	F	G
Zone of Influence					Surrounding Agricultural Land Score (From Table)	Surrounding Protected Resource Land Score (From Table)
Total Acres	Acres in Agriculture	Acres of Protected Resource Land	Percent in Agriculture (A/B)	Percent Protected Resource Land (A/C)		
548.9	480.62	493.68	87.6	90.0	90	90

NOTES

See attached ZOI spreadsheet.

Part 4. Protected Resource Lands Score:

The Protected Resource Lands scoring relies upon the same Zone of Influence information gathered in Part 3, and figures are entered in Site Assessment Worksheet 3, which combines the surrounding agricultural and protected lands calculations.

- (1) Use the total area of the ZOI calculated in Part 3. for the Surrounding Agricultural Land Use score.
- (2) Sum the area of those parcels within the ZOI that are protected resource lands, as defined in the California Agricultural LESA Guidelines.
- (3) Divide the area that is determined to be protected in Step (2) by the total acreage of the ZOI to determine the percentage of the surrounding area that is under resource protection.
- (4) Determine the Surrounding Protected Resource Land Score utilizing the Surrounding Protected Resource Land Scoring Table below.

Surrounding Protected Resource Land Scoring Table

Percent of ZOI Protected	Protected Resource Land Score
90-100	100
80-89	90
75-79	80
70-74	70
65-69	60
60-64	50
55-59	40
50-54	30
45-49	20
40-44	10
<40	0

- (5) Enter the Protected Resource Land score in box <6> of the **Final LESA Score Sheet** on page 10-A.

NOTES

Final LESA Score Sheet

Calculation of the Final LESA Score:

- (1) Multiply each factor score by the factor weight to determine the weighted score and enter in Weighted Factor Scores column.
- (2) Sum the weighted factor scores for the LE factors to determine the total LE score for the project.
- (3) Sum the weighted factor scores for the SA factors to determine the total SA score for the project.
- (4) Sum the total LE and SA scores to determine the Final LESA Score for the project.

	Factor Scores	Factor Weight	Weighted Factor Scores
<u>LE Factors</u>			
Land Capability Classification	<1> 45.6	0.25	11.4
Storie Index	<2> 49.6	0.25	12.4
LE Subtotal		0.50	23.8
<u>SA Factors</u>			
Project Size	<3> 0	0.15	0
Water Resource Availability	<4> 0	0.15	0
Surrounding Agricultural Land	<5> 90	0.15	13.5
Protected Resource Land	<6> 90	0.05	4.5
SA Subtotal		0.50	18.0
Final LESA Score			41.8

For further information on the scoring thresholds under the California Agricultural LESA Model, consult Section 4 of the Instruction Manual.

Section IV. California Agricultural LESA Scoring Thresholds - Making Determinations of Significance Under CEQA

A single LESA score is generated for a given project after all of the individual Land Evaluation and Site Assessment factors have been scored and weighted as detailed in Sections 2 and 3. Just as with the scoring of individual factors that comprise the California Agricultural LESA Model, final project scoring is based on a scale of 100 points, with a given project being capable of deriving a maximum of 50 points from the Land Evaluation factors and 50 points from the Site Assessment factors.

The California Agricultural LESA Model is designed to make determinations of the potential significance of a project's conversion of agricultural lands during the Initial Study phase of the CEQA review process. Scoring thresholds are based upon both the total LESA score as well as the component LE and SA subscores. In this manner the scoring thresholds are dependent upon the attainment of a minimum score for the LE and SA subscores so that a single threshold is not the result of heavily skewed subscores (i.e., a site with a very high LE score, but a very low SA score, or vice versa). Table 9 presents the California Agricultural LESA scoring thresholds.

Table 9. California LESA Model Scoring Thresholds

Total LESA Score	Scoring Decision
0 to 39 Points	Not Considered Significant
40 to 59 Points	Considered Significant <u>only</u> if LE <u>and</u> SA subscores are each <u>greater</u> than or equal to 20 points
60 to 79 Points	Considered Significant <u>unless</u> either LE <u>or</u> SA subscore is <u>less</u> than 20 points
80 to 100 Points	Considered Significant

ZOI Information			
Parcel	Total Acres	Acres Under Ag	Williamson Act?
044-014-013	21.43	19.29	Y
044-014-005	24.43	21.99	y
044-016-001	79.09	71.18	Y
044-016-006	74.30	66.87	Y
044-043-021	37.48	33.73	N
044-043-001	14.60	13.14	Y
044-043-002	19.33	17.40	Y
044-043-003	14.49	13.04	Y
044-043-030	37.41	33.67	Y
044-043-022	1.02	0.92	N
044-041-007	78.23	70.41	Y
044-041-038	35.12	31.61	Y
044-041-005	4.75	4.28	Y
044-041-004	4.75	4.28	Y
044-041-037	1.84	1.66	N
044-041-003	9.39	8.45	Y
044-014-006	26.96	24.26	Y
044-014-007	10.61	9.55	Y
044-014-008	38.79	34.91	Y
Total	534.02	480.62	493.68
Percent of ZOI	97.3	87.6	89.9
Total ZOI	548.9		

APPENDIX C
NATURAL ENVIRONMENT STUDY MINIMAL IMPACTS (NESMI)

Natural Environment Study

(Minimal Impacts)

**Tegner Road over Turlock Irrigation District Lateral 5
Bridge (No 38C0302) Replacement
Stanislaus County, California
Federal Project No. BRLO-5938(196)**

February 2014

**STATE OF CALIFORNIA
Department of Transportation**

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District 10/MPS and Local Assistance Branch



For individuals with sensory disabilities, this document is available in Braille, large print, on audiocassette, or computer disk. To obtain a copy in one of these alternate formats, please call or write to Caltrans, Attn: Julie Myrah, Environmental MPS Branch, P.O. Box 2048, Stockton, CA 95205, (209) 948-7427 Voice, or use the California Relay Service TTY number, 800-735-2922.

1. Summary

The Stanislaus County Department of Public Works (County) proposes to replace the existing Tegner Road Bridge (No. 38C0302) over Turlock Irrigation District (T.I.D.) Lateral #5 Canal (T.I.D. Canal). The project is located in the southern Stanislaus County, California.

The project proposes to replace the existing Tegner Road Bridge with a longer and wider structure and improve road approaches on Tegner and Harding Roads.

The Biological Study Area (BSA) includes the proposed project and lands beyond the footprint to the edge of the road right-of-way that could potentially be affected by project construction. Project staging will be located in an agricultural field in the northwest corner of the intersection.

The T.I.D. Canal is a concrete lined channel that flows from east to west. Due to its concrete lining and lack of vegetation, the canal does not provide suitable habitat for special status species.

A few mature trees associated with an adjacent residence to the southeast may provide nesting habitat for Swainson's hawk (*Buteo swainsonii*) and other migratory birds. Agricultural row crops surrounding the BSA provide potential foraging habitat for Swainson's hawks and other raptor species.

The BSA does not support suitable habitat for any other special status species and, consequently, the project will not affect any other special status wildlife or plant species.

Additionally, the project will not result in "take" of any federally listed species. Consultation pursuant to Section 7 of the Endangered Species Act will not be required because a "No Effect" determination has been made.

The proposed project includes avoidance and minimization measures for species status species and habitats to reduce the potential for adverse effects.

The project will result in minor temporary impacts to the T.I.D. Canal. Consequently, the project will require a Section 404 U.S. Army Corp of Engineers (ACOE) Nationwide Permit and a Section 401 Water Quality Certification from the Regional Water Quality Control Board (RWQCB). Per coordination with Sarah Paulson at the California Department of Fish and Wildlife (CDFW) on July 12, 2012, the T.I.D Canal is not subject to Section 1600 of the

California Fish and Game Code; therefore, a Lake and Streambed Alteration Agreement will not be required.

Project construction is scheduled to begin in November 2015 and end in March 2016, lasting one work season.

2. Introduction

The County in conjunction with the Federal Highways Administration (FHWA) and the California Department of Transportation (Caltrans) proposes to replace the existing Tegner Road Bridge (No. 38C0302) over the T.I.D. Canal.

The Environmental review, consultation, and any other action required in accordance with applicable federal laws for this project is being or has been, carried out by the California Department of Transportation (Caltrans) under its assumption of responsibility pursuant to National Environmental Policy Act Assignment MOU (23 USC 326). The County will serve as the lead agency under the California Environmental Quality Act.

2.1 Project Location

The proposed project is located at the T.I.D. Canal crossing at the intersection of Harding and Tegner Roads, located in southwestern Stanislaus County, California (Figures 1, 2 and 3).

2.2 Project Description

The purpose of this project is to replace the existing Tegner Road Bridge with a longer and wider structure, improve hydraulic performance of the canal crossing, and to improve the roadway approaches on Tegner and Harding Roads. The current structure, constructed in 1919, is a 20 ft long two-span reinforced concrete slab structure on diaphragm abutments and a reinforced concrete pier, supported by spread footings. This structure is considered to be structurally deficient with a sufficiency rating of 57.7 and health index of 67.6. During normal operating flows of the T.I.D. Canal, the soffit of the existing bridge is underwater, resulting in erosion of the superstructure concrete and exposing the reinforcement steel. Additionally, the current 22 ft wide bridge is too narrow to accommodate local farm equipment and truck traffic in both directions.

The proposed replacement bridge will be a single-span two-lane concrete slab bridge with two Type 732 concrete barriers. The bridge will be 35 ft wide, 31 ft long and consist of two 12-ft lanes and two 4-ft shoulders. The bridge roadway approaches will also be realigned to conform to the new vertical alignment of the bridge. The roadway approach work will extend 300 ft north and south of the bridge along Tegner Road. Similarly, Harding Road will require improvements near the Tegner Road intersection to conform to the new Tegner Road alignment. This work will extend 200 ft in each direction from the intersection.



FIGURE 1



LEGEND

★ Project Location



SOURCE: Microsoft Bing Roads (2013)

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*Tegner Road over Turlock Irrigation District
Lateral 5 Bridge (No. 38C0302) Replacement Project
Federal Project No. BRLO-5938(196)*

Project Location Map

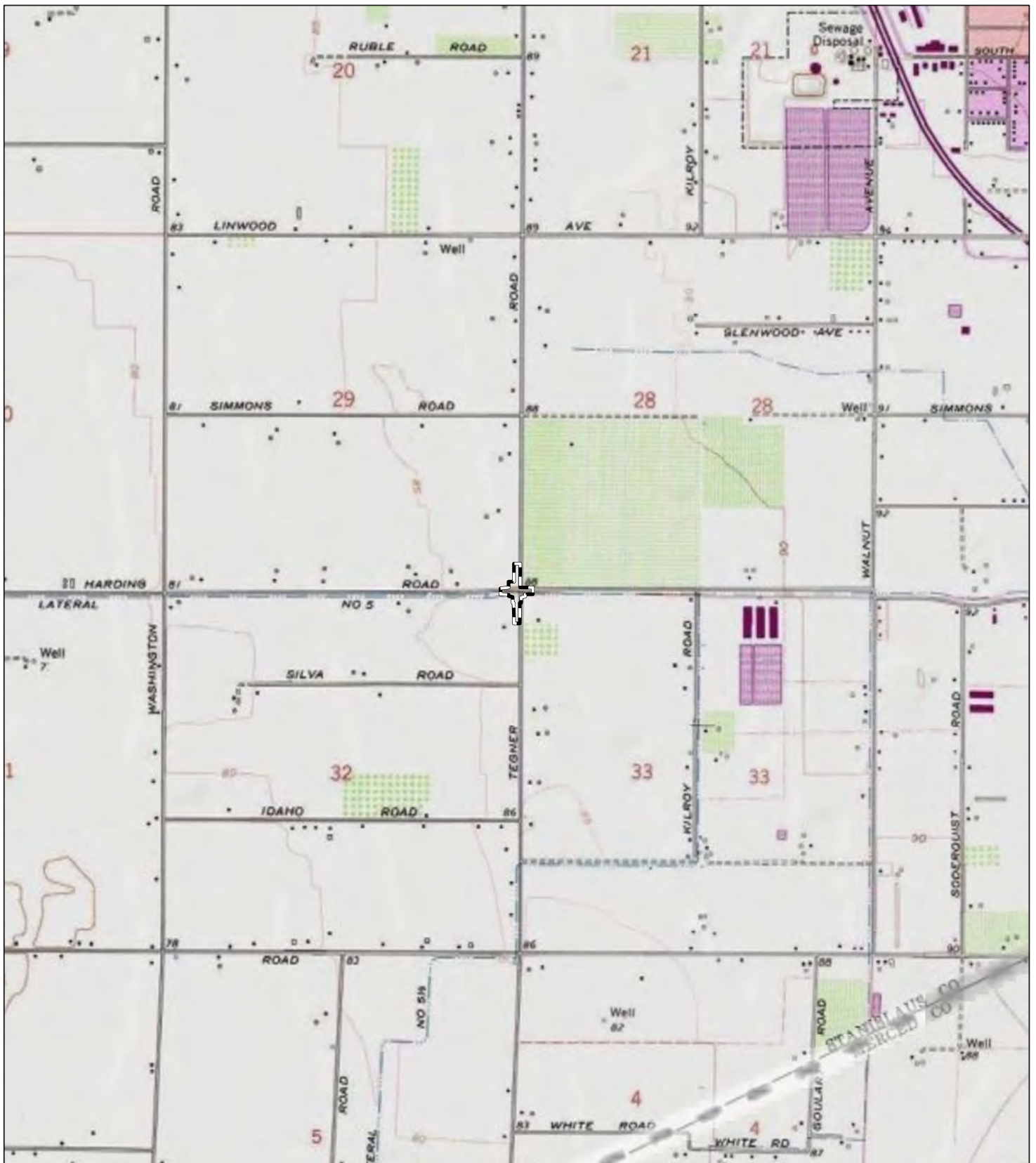


FIGURE 2



LEGEND



Biological Study Area



0 1000 2000
FEET

SOURCE: USGS 7.5-Minute Quadrangle (Hatch and Turlock)

F:\Nlt1201\GIS\Nesmi_fig2-prj_vic_topo.mxd (7/31/2013)


*Tegner Road over Turlock Irrigation District
Lateral 5 Bridge (No. 38C0302) Replacement Project
Federal Project No. BRLO-5938(196)
Project Vicinity on Topographic Base*

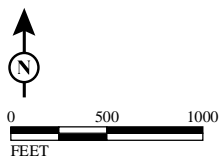


FIGURE 3



LEGEND

 Biological Study Area



SOURCE: Microsoft Bing Aerial (2010)

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*Tegner Road over Turlock Irrigation District
Lateral 5 Bridge (No. 38C0302) Replacement Project
Federal Project No. BRLO-5938(196)
Project Vicinity on Aerial Base*

The project also proposes to improve four existing T.I.D. access roads at the corners of the bridge to conform to the new bridge profile.

Removal of the existing bridge and installation of temporary falsework for construction of the new bridge will require temporary dewatering of a section of the T.I.D. Canal. Approximately 130 ft (50 ft) upstream and downstream of the new bridge) will be dewatered. Dewatering will consist of installation of a temporary earthen berm along this length.

Utility poles along Tegner Road and the north side of Harding Road will require relocation due to the reconstruction of roadway approaches.

Project staging will be located in an agricultural field in the northwest corner of the intersection. The proposed staging area is approximately 75 ft by 75 ft.

Tegner Road will be closed during construction and a local detour using adjacent streets will be used to accommodate local traffic. Access for private residences during the road closure will be provided at all times during construction.

Project construction is scheduled to begin in November 2015 and end in March 2016, lasting one work season.

Typical equipment used on the project will include trucks, scrapers, excavators, graders, loaders, backhoes, and bulldozers.

Design plans are included in Appendix A.

3. Study Methods

Prior to conducting any field studies, the limits of the BSA were established, as shown in Figure 4. The BSA totals approximately 3.13 acres and consists of the project footprint, access, and staging areas. The BSA also includes lands beyond the footprint to the edge of the road right-of-way that could potentially be affected by project construction and/or were determined necessary to inventory in order to perform an adequate analysis of project impacts.

A list of sensitive wildlife and plant species potentially occurring within the BSA was compiled to evaluate potential impacts resulting from project construction. Sources used to compile the list include the California Natural Diversity Data Base (CNDDB 2013), the California Native Plant Society (CNPS) Online Edition (2013), and the United States Fish and Wildlife Service (USFWS) online list (2013). The extent of the record search has been designed to obtain a sufficient representative sampling of special status species that could occur in the area. Due to the location, and limited size and scope of the project, four U.S. Geological Survey 7.5-minute quadrangles were referenced to compile the species lists: Denair, Turlock, Ceres, and Hatch. The individual lists are included in Appendix B.

The species on the special status species lists were reviewed to determine if they could potentially occur within the BSA. The determination of whether a species could potentially occur within the BSA was based on the availability of suitable habitat within the species' known range. Species requiring specific habitat not present in the vicinity of the project (e.g., vernal pools) were eliminated as potentially occurring and are not discussed further. Those species that could potentially occur in the BSA from a habitat suitability standpoint are discussed in Section 4.

LSA biologist Dayna Hambrick surveyed the BSA on February 12, 2013. Vegetation communities in the BSA were mapped and assessed for the potential to support special status species.

Vegetation in the BSA was characterized in accordance with *A Manual of California Vegetation, Second Edition* (Sawyer, Keeler-Wolf, and Evans 2008), as appropriate. The names of the plant species are consistent with *The Jepson Manual: Vascular Plants of California, Second Edition* (Baldwin, B. G., et. al., editors 2012).

Potential waters of the U.S. were delineated in accordance with the 1987 ACOE Wetland Delineation Manual (1987 Manual), the September 2008 Regional Supplement – Arid West Region, and the ACOE Regulatory Guidance Letter 08-02 regarding Preliminary Jurisdictional Delineations (June 2008).



0 100 200
FEET

LEGEND




-  Biological Study Area - (3.13 ac)
-  Project Design
-  Staging Area

FIGURE 4

*Tegner Road over Turlock Irrigation District
Lateral 5 Bridge (No. 38C0302) Replacement Project
Federal Project No. BRLO-5938(196)
Biological Study Area and Project Design*

SOURCE: Microsoft Bing Aerial (2010)

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LSA biologist Dayna Hambrick conducted a preliminary jurisdictional delineation on February 12, 2013. The field investigation was conducted in accordance with the ACOE Routine Approach for small areas (i.e. equal to or less than 5 acres), as described in 1987 Manual. However, data on vegetation and soils were not available, as the only aquatic feature in the BSA is a concrete-lined irrigation canal with vertical banks (T.I.D. Canal). Therefore, formal observation points were not collected. The ordinary high water mark was determined to be the concrete-lined vertical banks.

LSA coordinated with Sarah Paulson at CDFW July 12, 2012, regarding the T.I.D. canal. It was determined that this feature is not subject to Section 1600 of the California Fish and Game Code and therefore, will not require a Lake and Streambed Alteration Agreement. See Appendix D for agency correspondence.

No problems or limitations were encountered during the research, fieldwork, or document preparation that influenced the results presented herein.

4. Environmental Setting

The BSA is located on Tegner Road at the Harding Road intersection, near Turlock, Stanislaus County, California. The project is located in the Hatch quadrangle, Township 5 South, Range 10 East, and in Sections 28, 29, 32, and 33.

Lands directly adjacent to the BSA are predominantly comprised of rural residential and agricultural lands. Undeveloped lands in the vicinity are typically agricultural (row crops/orchards/vineyards) or pastureland.

4.1 Description of the Existing Biological and Physical Conditions

The BSA lies in the Central Valley, which is characterized by large, flat areas of agricultural farmland. The majority of the land in the area is privately owned and appears to be similar to lands directly adjacent to the BSA in use and vegetative characteristics. The BSA is small, totaling 3.13 acres and contains the T.I.D. Canal, Tegner and Harding Roads, the surrounding unpaved shoulders (which support sparse ruderal vegetation), and areas of agricultural land beyond the roadway shoulders. Directly adjacent land include a range of agricultural fields consisting of orchards and row crops. The topography of the BSA is flat, with an elevation of 94 ft above mean sea level.

Tegner Road runs north to south through the BSA and consists of a two-lane asphalt roadway. The existing Tegner Road Bridge is a continuous two-span reinforced concrete slab structure on diaphragm abutments and a reinforced concrete pier. The T.I.D. Canal runs east to west, through the BSA, paralleling Harding Road.

Representative photos are provided in Appendix C.

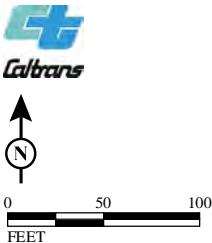
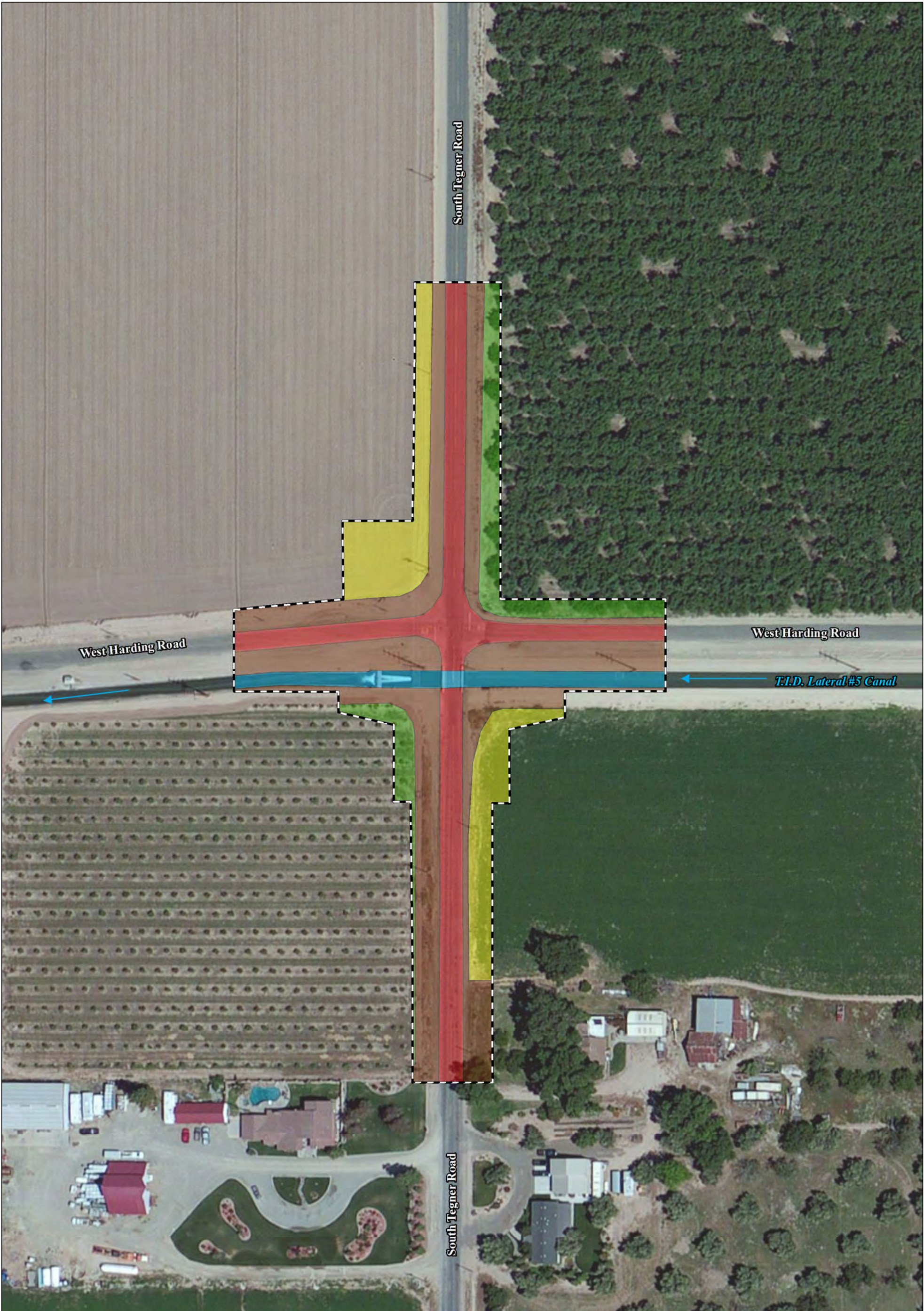
4.2 Natural Communities/Land Uses

There are no natural communities within the BSA. Land uses consist of agricultural row crops and orchards, ruderal vegetation, the T.I.D. Canal, and the paved roadways.

Vegetation communities and land uses are shown in Figure 5.

4.2.1 Orchard and Row Crops

Orchards and row crops are agricultural lands and are not considered natural communities. Approximately 0.89 acre of agricultural lands occurs in the BSA comprised of approximately 0.37 acre of almond orchards and 0.52 acre of cornrow crops. These agricultural communities extend the length of the BSA adjacent to the roadway shoulders.



LEGEND	
	Biological Study Area - (3.13 ac)
Natural Communities / Land Uses - (3.13 ac)	
	Orchards - (0.37 ac)
	Row Crops - (0.52 ac)
	Canal/Open Water - (0.19 ac)
	Ruderal - (1.32 ac)
	Developed - (0.73 ac)

FIGURE 5

*Tegner Road over Turlock Irrigation District
Lateral 5 Bridge (No. 38C0302) Replacement Project
Federal Project No. BRLO-5938(196)*
Natural Communities / Land Uses

4.2.2 Ruderal

Ruderal vegetation occurs along the unpaved road shoulders and edges of agricultural fields. Ruderal plant species are those that colonize and quickly establish in poor soils and disturbed or waste areas. They generally have fast-growing roots, low nutritional needs, and produce massive amounts of seed. Within the BSA, this community consists of bare dirt with pockets of sparsely vegetated weedy non-native, plant species including Russian thistle (*Salsola tragus*), black mustard (*Brassica nigra*), American bird's-foot trefoil (*Lotus unifoliolatus*), annual yellow sweetclover (*Melilotus indicus*), and Bermuda grass (*Cynodon dactylon*). Nutsedge (*Cyperus eragrostis*) and sedge (*Carex* sp.) were also observed near the edges of the agricultural fields. Ruderal areas comprise approximately 1.32 acres in the BSA.

4.2.3 Canal/Open Water

Open water habitat consists of the unvegetated, concrete T.I.D. Canal that flows west to east through the BSA parallel to Harding Road. Open water habitat comprise approximately 0.19 acre in the BSA.

4.2.4 Developed

Developed land within the BSA consists of the paved portions of Tegner and Harding Roads. Developed areas comprise approximately 0.73 acre in the BSA.

4.3 Wildlife

The developed areas and ruderal vegetation in the BSA, as well as the surrounding agricultural lands, typically do not provide high quality habitat for wildlife species. However, a variety of species are known to occur in urbanized and agricultural settings. In addition, several valley oak trees are located directly southeast of the BSA, which may provide nesting habitat for several bird species. Common wildlife species that may occur in the BSA include, but are not limited to, coyote (*Canis latrans*), raccoon (*Procyon lotor*), striped skunk (*Mephitis mephitis*), California ground squirrel (*Otospermophilus beecheyi*), opossum (*Didelphis virginiana*), red shouldered hawk (*Buteo lineatus*), red-tailed hawk (*Buteo jamaicensis*), Swainson's hawk, rock dove (*Columba livia*), American crow (*Corvus brachyrhynchos*), Brewer's blackbird (*Euphagus cyanocephalus*), northern mockingbird (*Mimus polyglottos*), European starling (*Sturnus vulgaris*), American robin (*Turdus migratorius*), mourning dove (*Zenaida macroura*), common kingsnake (*Lampropeltis getula*), western terrestrial garter snake (*Thamnophis elegans*), and western fence lizard (*Sceloporus occidentalis*).

4.4 Regional Species and Habitats of Concern

LSA reviewed the specific habitats required by each species included in the special status species lists in Appendix B, and the specific habitats and habitat conditions present in the BSA. LSA's previous experience with these species was also taken into consideration. Based on this evaluation, LSA determined the likelihood of each species included in the special status species lists to occur in the BSA. Special status species that were observed, or determined to potentially occur in the BSA based on availability of suitable habitat or other factors include Swainson's hawk and migratory birds, and are discussed below. Species determined unlikely to occur in the BSA based on these same factors are not discussed in this report. For example, no suitable nesting or roosting habitat for swallows or bats are present in the BSA. While these species may forage in the vicinity, the project will not affect these species and, therefore, are not discussed in the document.

No habitats of concern are located within or in the vicinity of the BSA.

4.4.1 Swainson's Hawk

The Swainson's hawk is a State threatened species; it has no federal status. Swainson's hawks are long distance migrants, wintering primarily in South America, and returning north to breed. Swainson's hawks are large, broad-winged hawks that occur in open country throughout the western half of the United States. In California, Swainson's hawks occur in the northeastern portion of the State, in the Great Basin Province, and in the Central Valley. They return to the Central Valley in mid-March and begin migrating south in August. Nests are built in the tops of large trees, primarily those associated with riparian habitats. They are known to forage up to 10 miles from their nest sites.

There are six documented occurrences of the Swainson's hawk in the search area. The closest occurrence, dated 2007, located approximately 4 miles north of the BSA. Most of the documented occurrences in the area included observations of nesting behavior, indicating a history of Swainson's hawks nesting nearby.

No suitable nesting habitat for Swainson's hawk occurs within the BSA. However, several valley oaks to the southeast of the BSA may provide nesting habitat for this species. Several large nests were observed in the oak trees during the February 2013 site visit. Although large nests were observed adjacent to the BSA, no Swainson's hawks or active nests were observed during the site visit. However, since suitable nesting and foraging habitat is present adjacent to the BSA this species could nest and forage within, or in the vicinity of, the BSA.

4.4.2 Nesting Migratory Birds

While not typically considered special status species, migratory birds are protected under the Migratory Bird Treaty Act (MBTA) and the California Fish and Game Code. Disturbance of migratory birds during their nesting season (February 1 to August 31) could result in “take” which is prohibited under the MBTA and Section 3513 of the California Fish and Game Code. California Fish and Game Code (Section 3503) also prohibits take or destruction of bird nests or eggs.

Migratory birds can nest in a variety of habitats depending on the species including tree canopies, dense shrubs, and even on the ground.

Within the BSA, all areas that are not paved, developed or otherwise exposed to constant disturbance, could be utilized for nesting by various migratory bird species common to the region.

4.4.3 Jurisdictional Waters

Jurisdictional waters include wetlands and other waters that fall under the jurisdiction of the ACOE pursuant to Section 404 of the Clean Water Act (CWA), the RWQCB pursuant to Section 401 of the CWA or the Porter-Cologne Water Quality Act (PCWQCA), or the CDFW pursuant to Section 1600-1616 of the State Fish and Game Code.

Potential jurisdictional waters within the BSA are limited to the T.I.D. Canal. This feature, consisting of approximately 0.19 acre of non-wetland waters, is concrete-lined, unvegetated, and has vertical banks. As noted in Section 3, no CDFW jurisdictional waters are present.

5. Project Impacts

The project will result in minor permanent impacts to 0.06 acre of agricultural land and 0.62 acre of ruderal vegetation. Temporary impacts, totaling 0.36 acre of agricultural land and 0.38 acre of ruderal vegetation, will occur as a result of construction staging and access and dewatering. Neither of these land uses provide suitable habitat for special status species, and both have only limited value for wildlife.

The project will eliminate approximately 0.68 acre of ruderal vegetation and agricultural land that provide potential foraging habitat for Swainson's hawks, a State threatened species, during construction of the new bridge approaches.

CDFW generally recommends mitigation for loss of suitable foraging habitat for Swainson's hawk if the subject habitat is within 10 miles of an active nest (CDFW, 2000). A nest is considered active if it has been used in the last 5 years. Per the CNDDDB record search, there are no active Swainson's hawk nests within 10 miles of the BSA. Although there is a documented Swainson's hawk nest within 4 miles of the BSA, the last documented occurrence at the nest was over 5 years ago. Consequently, the nest is not considered to be active per CDFW guidelines. Therefore, mitigation is not proposed for the loss of suitable foraging habitat for this species.

There will be no loss of nesting or foraging habitat for Swainson's hawk associated with the project; however, the project could potentially disrupt nesting for Swainson's hawk if the species is nesting in or near the BSA when construction begins. No impacts to Swainson's hawks are expected with the implementation of avoidance and minimization efforts described in Section 6.

Birds that nest on the ground in these habitats could be affected by the project. No impacts to nesting migratory birds are expected with the implementation of avoidance and minimization efforts described in Section 6.

The project will not affect any other special status species, including State or federally listed species. Consequently, consultation under Section 7 of the Federal Endangered Species Act will not be required, nor will an Incidental Take Permit pursuant to Section 2081 of the California Fish and Game Code.

The project will result in minor temporary impacts to non-wetland waters of the U.S., totaling 0.06 acre during dewatering activities. All avoidance and minimization measures listed in Section 6 will be followed to minimize project impacts to jurisdictional waters.

6. Avoidance and Minimization Measures

1. Measures consistent with the current Caltrans' Construction Site Best Management Practices (BMP) Manual (including the Storm Water Pollution Prevention Plan [SWPPP] and Water Pollution Control Plan [WPCP] Manuals) shall be implemented to minimize effects to jurisdictional waters resulting from erosion, siltation, etc. during construction.
2. Following completion of construction activities, all fill slopes, temporary impact and/or otherwise disturbed areas shall be restored to preconstruction contours (if necessary) and revegetated with the native seed mix specified in Table 1. Invasive exotic plants will be controlled to the maximum extent practicable.

Table 1: Native Seed Mix

Scientific Name	Common Name	Rate (Lbs./Acre)
<i>Bromus carinatus</i>	California brome grass	5.0
<i>Elymus glaucus</i>	Blue wild rye	5.0
<i>Elymus X triticum</i>	Regreen	10.0
<i>Eschscholzia californica</i>	California poppy	2.0
<i>Hordeum brachyantherum</i>	Meadow barley	5.0
<i>Lupinus bicolor</i>	Bicolored lupine	4.0

3. Prior to issuance of a grading permit or other authorization to proceed with project construction, the project proponent shall obtain any regulatory permits that are required from the ACOE and RWQCB.
4. The following measures are recommended to minimize adverse effects to nesting birds per the MBTA and Sections 3513 and 3503 of the California Fish and Game Code:
 - a. If work is conducted during the nesting season (February 1 to August 31), a qualified biologist shall survey all suitable nesting habitat in the BSA and within a 0.25 mile radius for presence of nesting raptors, including Swainson's hawk, and within 100 feet for presence of other nesting birds. The survey radius may be decreased due to the presence of development or other land use that could preclude nesting. This survey shall occur no more than 10 days prior to the start of construction. If no nesting activity is observed, work may proceed as planned.

- b. If an active nest is discovered, a qualified biologist shall evaluate the potential for the proposed project to disturb nesting activities. The evaluation criteria shall include, but are not limited to, the location/orientation of the nest in the nest tree, the distance of the nest from the BSA, and line of sight between the nest and the BSA. CDFW shall be contacted to review the evaluation and determine if the project can proceed without adversely affecting nesting activities.
 - c. If work is allowed to proceed, a qualified biologist shall be on-site weekly (at a minimum) during construction activities that occur during the nesting season to monitor nesting activities until the biologist determines, in consultation with CDFW, that monitoring is no longer required. The biologist shall have the authority to stop work if it is determined the project is adversely affecting nesting activities. This measure only applies to construction activities.
- 5. In accordance with Executive Order 13113 (Invasive Species), to avoid the distribution of invasives during project construction, contract specifications should include, at a minimum, the following measures:
 - a. All earthmoving equipment to be used during project construction should be thoroughly cleaned before arriving on the project site.
 - b. All seeding equipment (i.e. hydroseed trucks) shall be thoroughly rinsed at least three times prior to beginning seeding work.
 - c. To avoid spreading any nonnative invasive species already existing on-site to off-site areas, all equipment should be thoroughly cleaned before leaving the site.

7. Permits Required

The waters of the U.S. in the BSA that will be affected by the project are regulated by the ACOE under Section 404 of the Clean Water Act (CWA). It is expected the proposed discharge into waters of the U.S. during project construction can be authorized by the ACOE using Nationwide Permit (NWP) 14 – Linear Transportation Projects. In accordance with the conditions of NWP 14, a Preconstruction Notification must be submitted to the ACOE for verification that the proposed discharges comply with the conditions of the subject NWP's.

Discharges into waters of the U.S. under Section 404 of the CWA also require a Water Quality Certification from the RWQCB, pursuant to Section 401 of the CWA. Authorization from RWQCB pursuant to Section 401 of the CWA will also likely be required. It is expected the RWQCB will issue a Water Quality Certification to authorize discharges into waters of the State.

Per coordination with Sarah Paulson at CDFW, work in the T.I.D. Canal will not require a Lake and Streambed Alteration Agreement (See Appendix D).

8. References

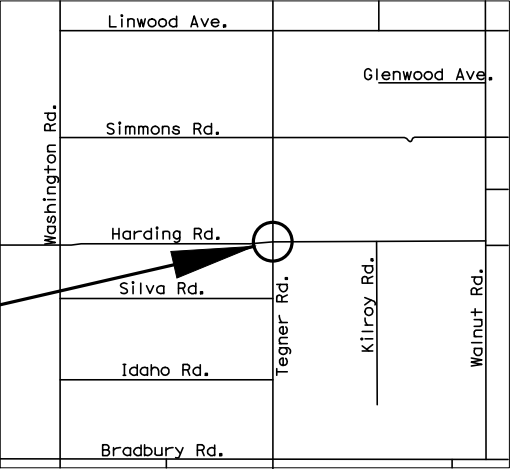
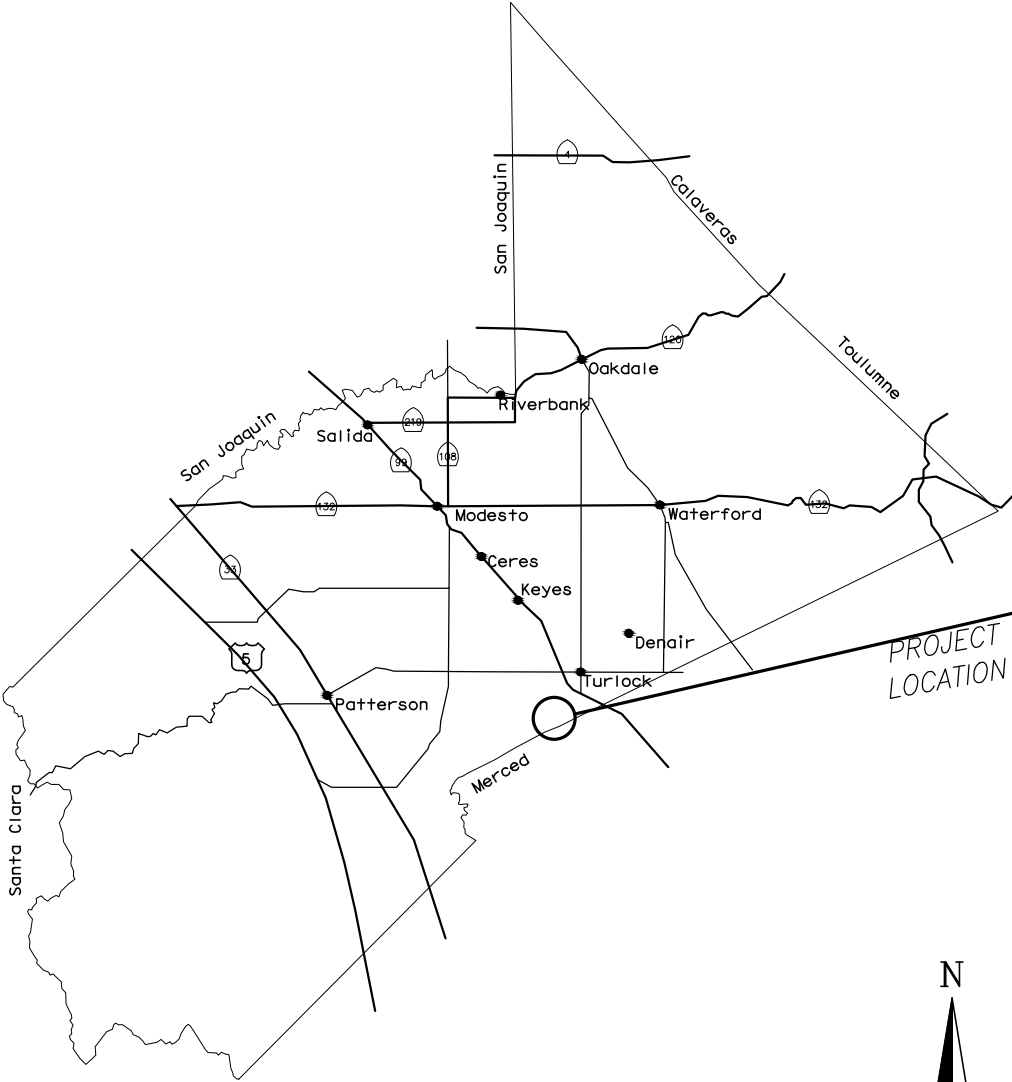
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Appendix A Design Plans

INDEX OF SHEETS

1. COVER/TITLE/INDEX SHEET	T-1
2. TYPICAL SECTIONS	X-1
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5. LAYOUT PLAN - HARDING	C-3
6. GENERAL PLAN	S-1

STANISLAUS COUNTY
PLANS FOR THE CONSTRUCTION OF
TEGNER ROAD BRIDGE REPLACEMENT
BRIDGE REPLACEMENT AND IMPROVEMENT PROJECT
30% PLANS SEPTEMBER 2012



STANISLAUS COUNTY
NO SCALE



STATE OF CALIFORNIA

COUNTY OF STANISLAUS

PUBLIC WORKS ADMINISTRATOR DATE

ASSISTANT DIRECTOR OF PULIC WORKS DATE

MICHAEL A. PUGH, PE, SE DATE
RPE 53967
NOLTE ASSOCIATES, INC.

PREPARED UNDER THE DIRECTION OF:

NO.	DESCRIPTIONS	DATE	APPROVED

STANISLAUS COUNTY
DEPARTMENT OF PUBLIC WORKS
ENGINEERING AND OPERATIONS DIVISION
1716 MORGAN ROAD - MODESTO, CA 95358



TEGNER ROAD BRIDGE REPLACEMENT

TITLE SHEET

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CK BY
SCALE AS SHOWN

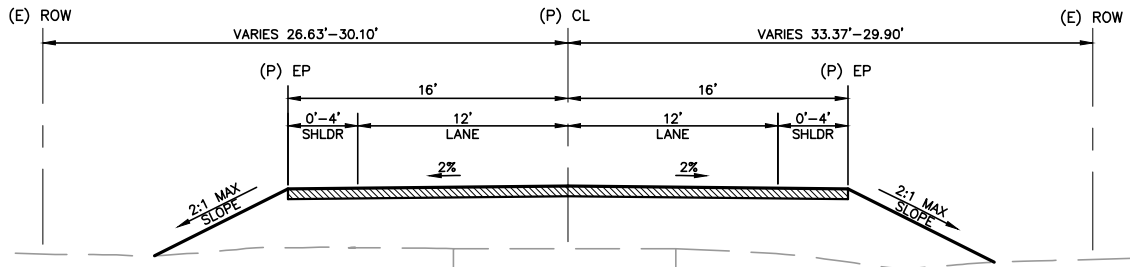
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T-1
OF 6 SHEETS

35% SUBMITTAL
NOT FOR CONSTRUCTION
JUNE 2012

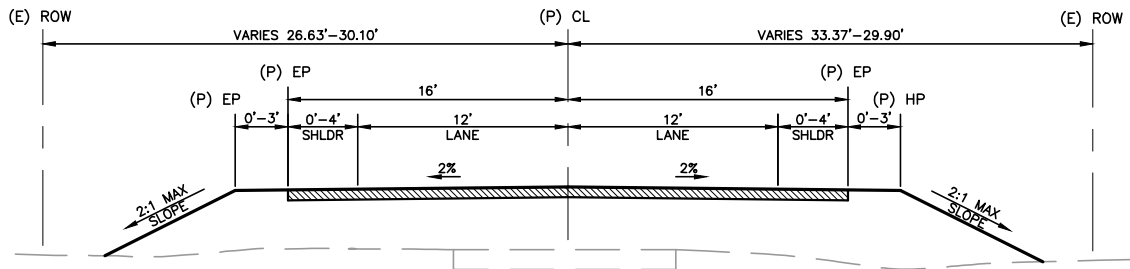


2405 NATOMAS PARK DRIVE, FOURTH FLOOR SACRAMENTO, CA 95833
916.641.9100 TEL. 916.641.9222 FAX WWW.NV5.COM

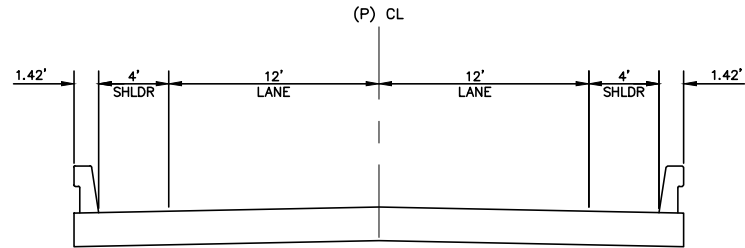




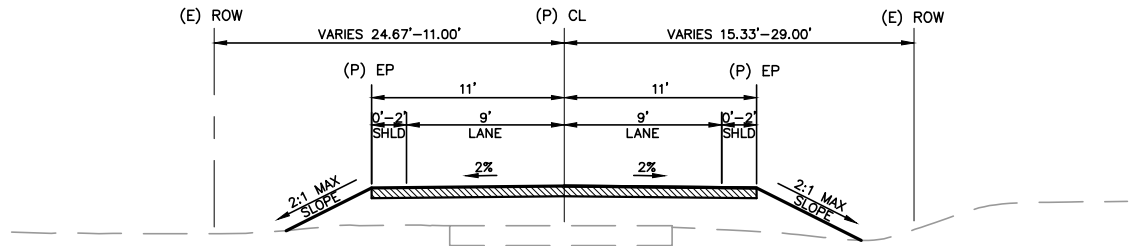
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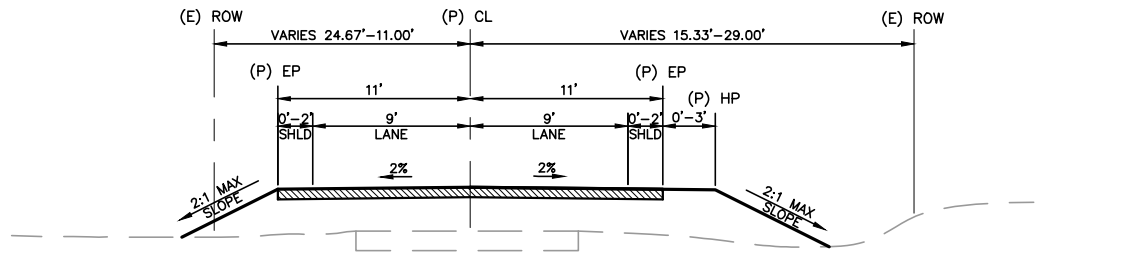
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SOUTH TEGNER ROAD
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SCALE: NTS



WEST HARDING ROAD
STA 3+10.00 - STA 4+11.17
STA 6+56.57 - STA 9+70.00
SCALE: NTS



WEST HARDING ROAD
STA 4+11.17 - STA 6+56.57
SCALE: NTS

DESIGN CRITERIA/PARAMETERS:

- 1) AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, 5TH EDITION WITH THE 2010 INTERIMS AND THE CALTRANS AMENDMENTS V4
- 2) AASHTO POLICY ON GEOMETRIC DESIGN OF HIGHWAYS AND STREETS
- 3) DESIGN SPEED: TEGNER - 45 MPH
HARDING - 30 MPH
- 4) FUTURE AVERAGE DAILY TRAFFIC (ADT) ___
- 5) LANE WIDTH - 2@ 12'-0"
- 6) SHOULDER WIDTH - 2@ 4'-0"

35% SUBMITTAL
NOT FOR CONSTRUCTION
JUNE 2012



2405 NATOMAS PARK DRIVE, FOURTH FLOOR
918.041.9100 TEL. 918.041.9222 FAX
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SACRAMENTO, CA 95833
WWW.NV5.COM



STANISLAUS COUNTY
DEPARTMENT OF PUBLIC WORKS
ENGINEERING AND OPERATIONS DIVISION
1716 MORGAN ROAD - MODESTO, CA 95358



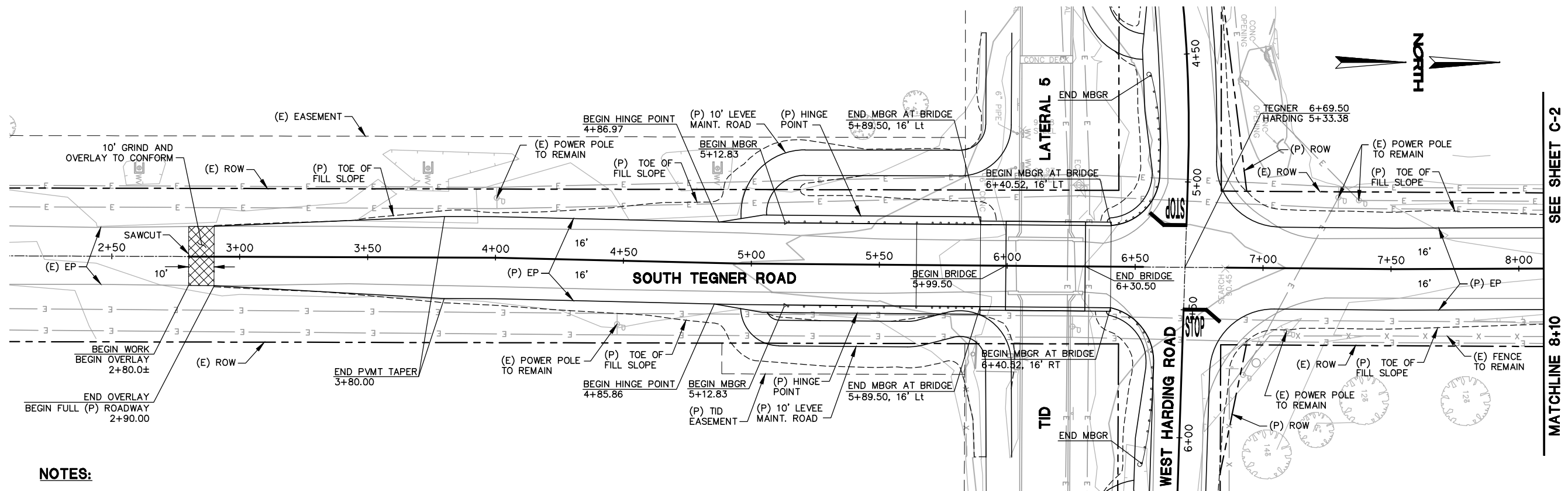
TEGNER ROAD BRIDGE REPLACEMENT

TYPICAL SECTIONS

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DATE 7/19/12
DR BY SMS
CK BY
SCALE AS SHOWN

SHEET
NUMBER
X-1

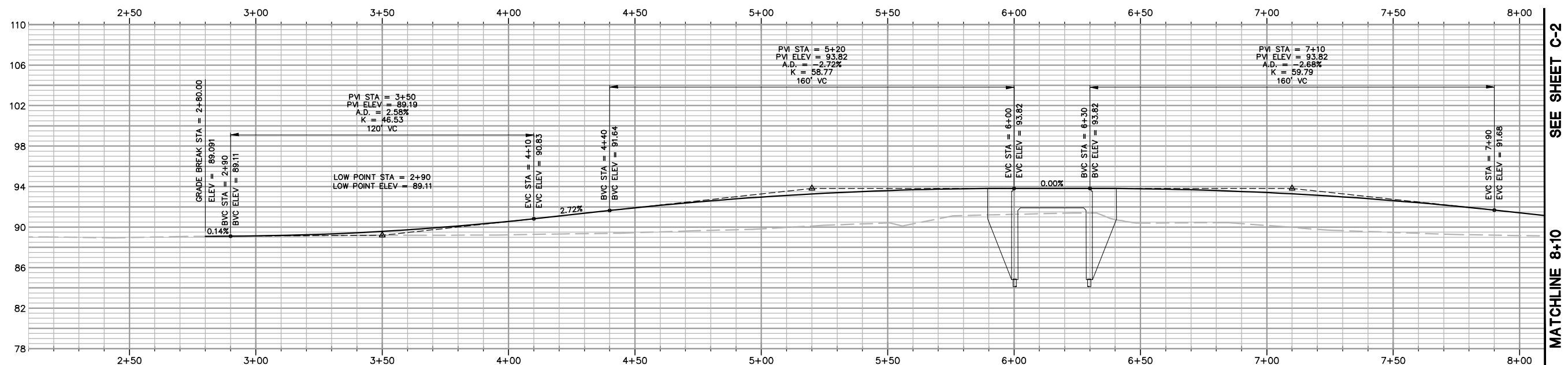
OF 6 SHEETS



NOTES:

1. FOR WEST HARDING
IMPROVEMENTS SEE SHEET C-3

PLAN
1" = 20'



PROFILE

H: 1" = 20'
V: 1" = 5'

35% SUBMITTAL
NOT FOR CONSTRUCTION
JUNE 2012



NV5
BEYOND ENGINEERING

2495 NATOMAS PARK DRIVE, FOURTH FLOOR SACRAMENTO, CA 95833
916.8418100 TEL. 916.8418222 FAX WWW.NV5.COM



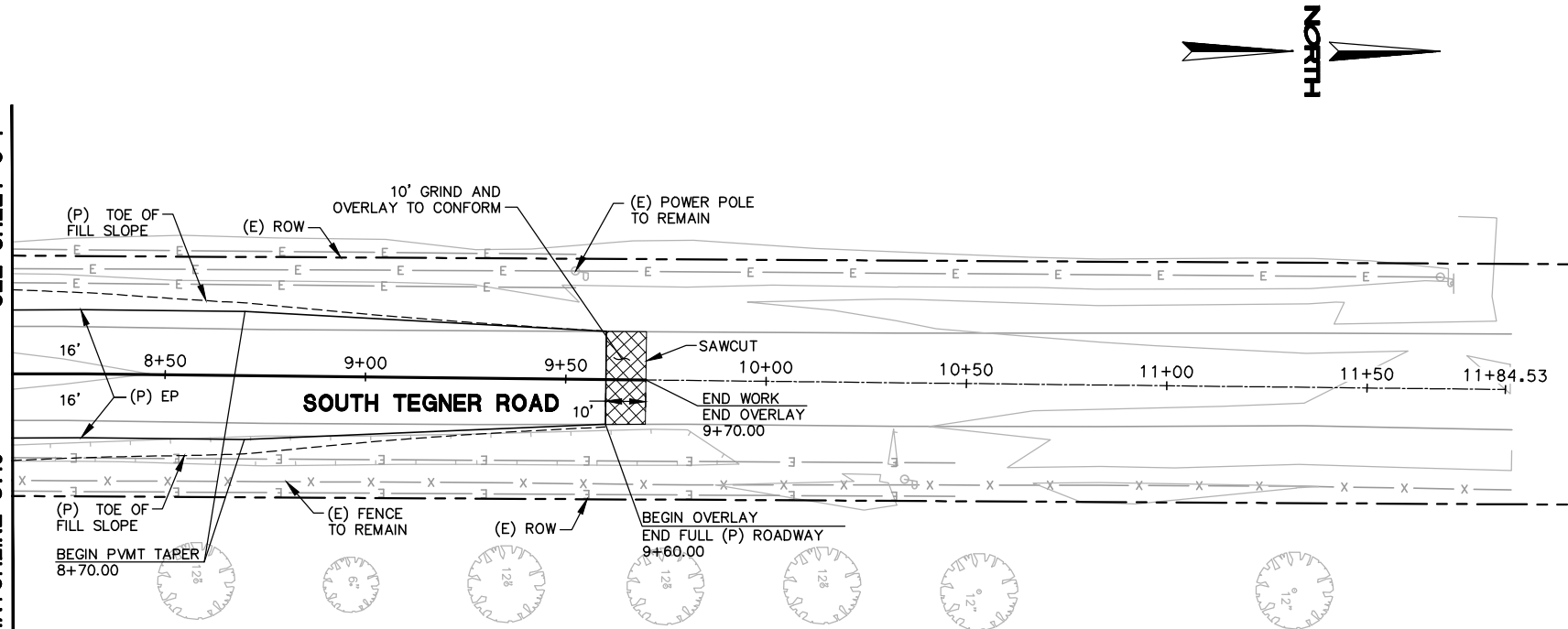
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C-1

OF 6 SHEETS

SEE SHEET C-1

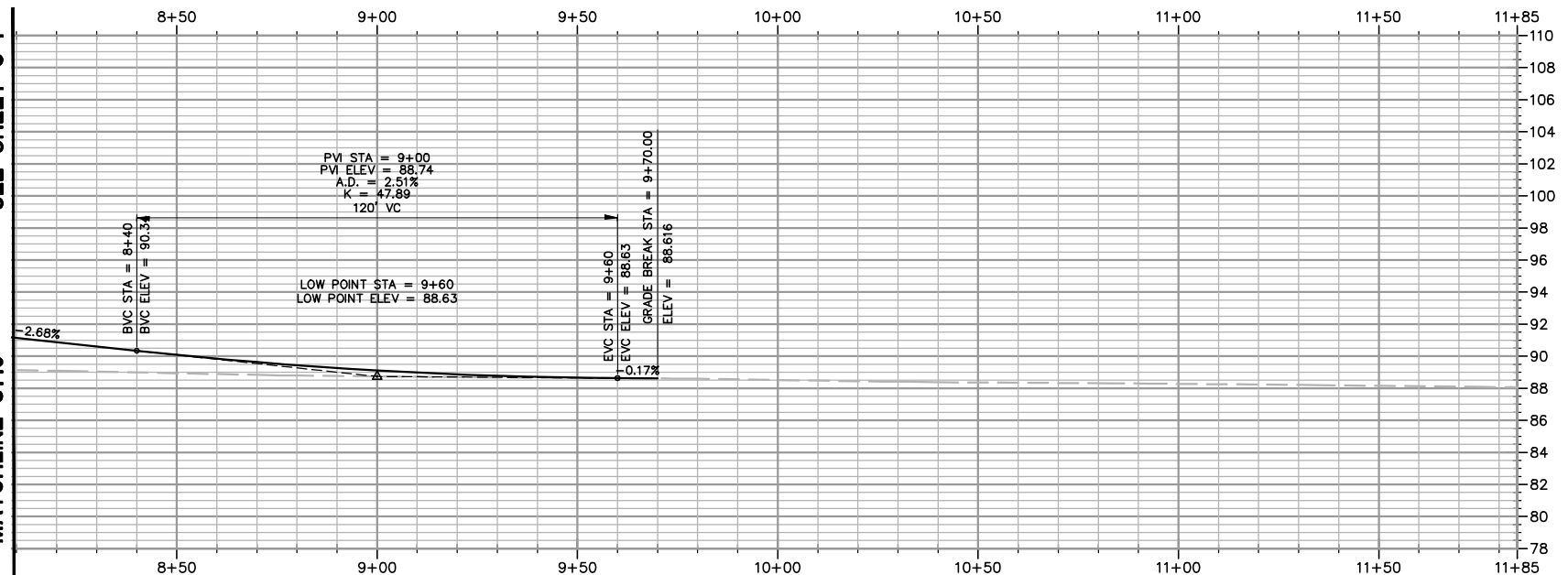
MATCHLINE 8+10



PLAN
1" = 20'

SEE SHEET C-1

MATCHLINE 8+10



PROFILE
H: 1" = 20'
V: 1" = 5'

35% SUBMITTAL
NOT FOR CONSTRUCTION
JUNE 2012



2405 NATOMAS PARK DRIVE, FOURTH FLOOR
918.041.9100 TEL. 918.041.9222 FAX
SACRAMENTO, CA 95833
WWW.NV5.COM



STANISLAUS COUNTY
DEPARTMENT OF PUBLIC WORKS
ENGINEERING AND OPERATIONS DIVISION
1716 MORGAN ROAD - MODESTO, CA 95358

TEGNER ROAD BRIDGE REPLACEMENT

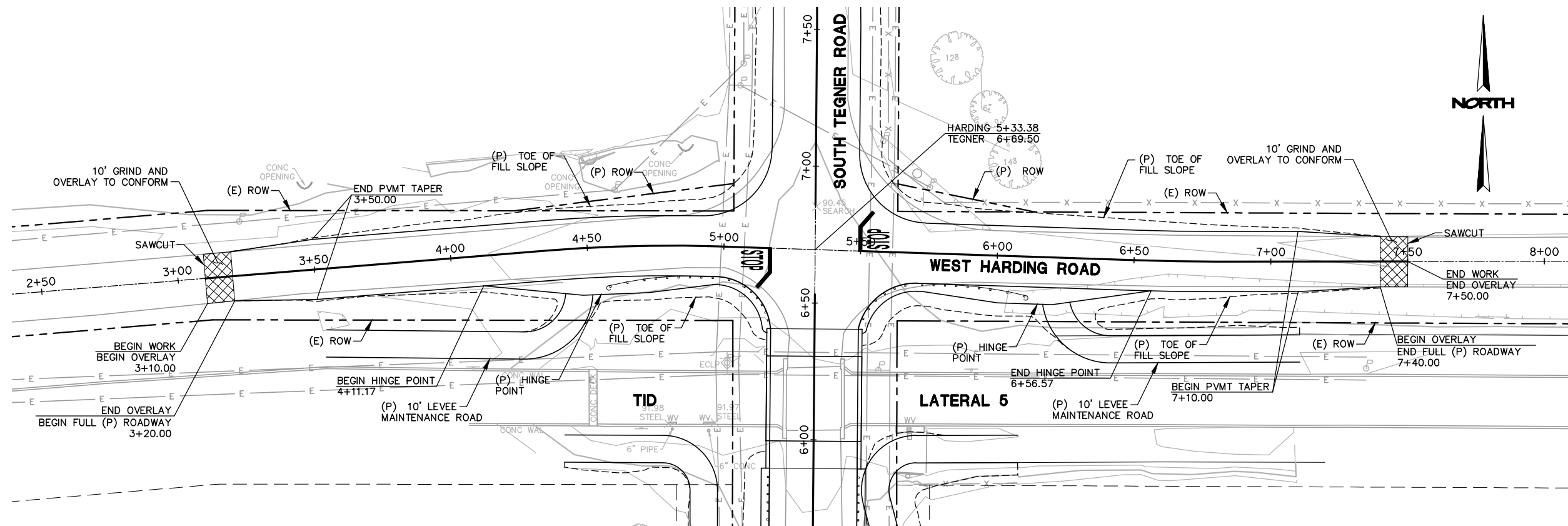
PLAN AND PROFILE
SOUTH TEGNER ROAD 8+00 TO 9+70

JOB No. SAB047700
DATE 7/19/12
DR BY SMS
CK BY
SCALE AS SHOWN

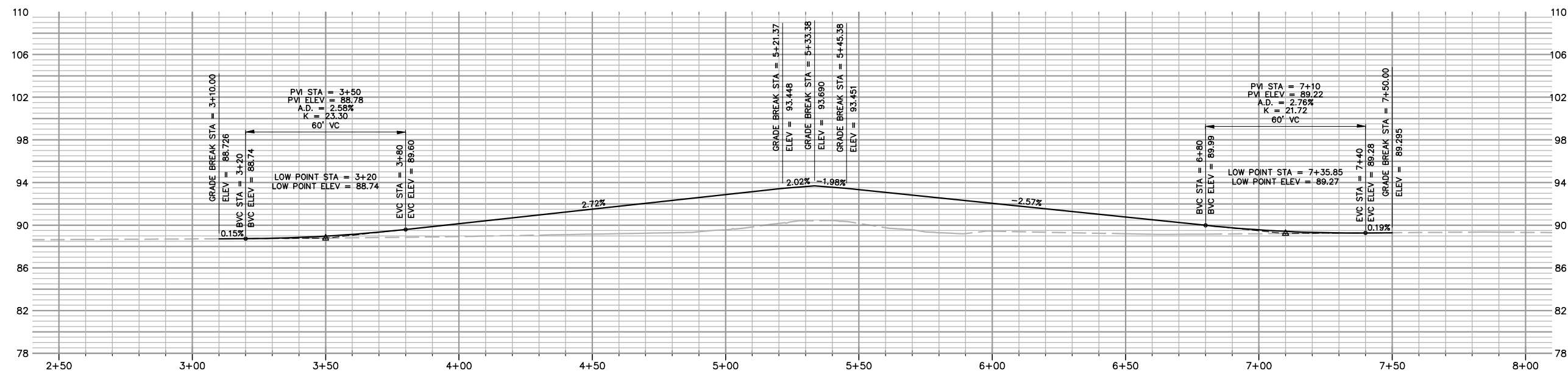
SHEET
NUMBER

C-2

OF 6 SHEETS



PLAN
1" = 20'



PROFILE
H: 1" = 20'
V: 1" = 5'

35% SUBMITTAL
NOT FOR CONSTRUCTION
JUNE 2012



2405 NATOMAS PARK DRIVE, FOURTH FLOOR
918.041.9100 TEL. 918.041.9222 FAX
SACRAMENTO, CA 95833
WWW.NV5.COM



REVISIONS		DATE	APPROVED
NO.	DESCRIPTIONS		

STANISLAUS COUNTY
DEPARTMENT OF PUBLIC WORKS
ENGINEERING AND OPERATIONS DIVISION
1716 MORGAN ROAD - MODESTO, CA 95358



TEGNER ROAD BRIDGE REPLACEMENT
PLAN AND PROFILE
WEST HARDING ROAD 3+20 TO 7+50

JOB NO. SAB047700
DATE 7/19/12
DR BY LLK
CK BY
SCALE AS SHOWN

SHEET
NUMBER
C-3
OF 6 SHEETS

Appendix B CNDDDB, CNPS and USFWS Lists



Selected Elements by Scientific Name

California Department of Fish and Wildlife

California Natural Diversity Database



Query Criteria: Quad is (Denair (3712057) or Turlock (3712047) or Ceres (3712058) or Hatch (3712048))

Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
<i>Agelaius tricolor</i> tricolored blackbird	ABPBXB0020	None	None	G2G3	S2	SSC
<i>Anniella pulchra pulchra</i> silvery legless lizard	ARACC01012	None	None	G3G4T3T4Q	S3	SSC
<i>Atriplex cordulata</i> var. <i>cordulata</i> heartscale	PDCHE040B0	None	None	G3T2	S2	1B.2
<i>Atriplex subtilis</i> subtle orache	PDCHE042T0	None	None	G1	S1	1B.2
<i>Branta hutchinsii leucopareia</i> cackling (=Aleutian Canada) goose	ABNJB05035	Delisted	None	G5T3	S2	
<i>Buteo swainsoni</i> Swainson's hawk	ABNKC19070	None	Threatened	G5	S2	
<i>Desmocerus californicus dimorphus</i> valley elderberry longhorn beetle	IICOL48011	Threatened	None	G3T2	S2	
<i>Dipodomys heermanni dixonii</i> Merced kangaroo rat	AMAFD03062	None	None	G3G4T2T3	S2S3	
<i>Emys marmorata</i> western pond turtle	ARAAD02030	None	None	G3G4	S3	SSC
<i>Lasiurus cinereus</i> hoary bat	AMACC05030	None	None	G5	S4?	
<i>Lytta moesta</i> moestan blister beetle	IICOL4C020	None	None	G2	S2	
<i>Monardella leucocephala</i> Merced monardella	PDLAM180C0	None	None	GH	SH	1A
<i>Mylopharodon conocephalus</i> hardhead	AFCJB25010	None	None	G3	S3	SSC
<i>Orcuttia inaequalis</i> San Joaquin Valley Orcutt grass	PMPOA4G060	Threatened	Endangered	G1	S1	1B.1

Record Count: 14



Plant List

1 matches found. *Click on scientific name for details*

Search Criteria

Found in Quad 37120E7

Scientific Name	Common Name	Family	Lifeform	Rare Plant Rank	State Rank	Global Rank
Orcuttia inaequalis	San Joaquin Valley Orcutt grass	Poaceae	annual herb	1B.1	S1	G1

Suggested Citation

California Native Plant Society (CNPS). 2014. Inventory of Rare and Endangered Plants (online edition, v8-02). California Native Plant Society. Sacramento, CA. Accessed on Thursday, February 13, 2014.

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Plant List

2 matches found. *Click on scientific name for details*

Search Criteria

Found in Quad 37120D7

Scientific Name	Common Name	Family	Lifeform	Rare Plant Rank	State Rank	Global Rank
Eryngium racemosum	Delta button-celery	Apiaceae	annual / perennial herb	1B.1	S1	G1Q
Monardella leucocephala	Merced monardella	Lamiaceae	annual herb	1A	SH	GH

Suggested Citation

California Native Plant Society (CNPS). 2014. Inventory of Rare and Endangered Plants (online edition, v8-02). California Native Plant Society. Sacramento, CA. Accessed on Thursday, February 13, 2014.

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Plant List

2 matches found. *Click on scientific name for details*

Search Criteria

Found in Quad 37120E8

Scientific Name	Common Name	Family	Lifeform	Rare Plant Rank	State Rank	Global Rank
Atriplex cordulata var. cordulata	heartscale	Chenopodiaceae	annual herb	1B.2	S2	G3T2
Atriplex subtilis	subtle orache	Chenopodiaceae	annual herb	1B.2	S1	G1

Suggested Citation

California Native Plant Society (CNPS). 2014. Inventory of Rare and Endangered Plants (online edition, v8-02). California Native Plant Society. Sacramento, CA. Accessed on Thursday, February 13, 2014.

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Plant List

1 matches found. *Click on scientific name for details*

Search Criteria

Found in Quad 37120D8

Scientific Name	Common Name	Family	Lifeform	Rare Plant Rank	State Rank	Global Rank
<u>Atriplex minuscula</u>	lesser saltscale	Chenopodiaceae	annual herb	1B.1	S2	G2

Suggested Citation

California Native Plant Society (CNPS). 2014. Inventory of Rare and Endangered Plants (online edition, v8-02). California Native Plant Society. Sacramento, CA. Accessed on Thursday, February 13, 2014.

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U.S. Fish & Wildlife Service
Sacramento Fish & Wildlife Office
Federal Endangered and Threatened Species that Occur in
or may be Affected by Projects in the Counties and/or
U.S.G.S. 7 1/2 Minute Quads you requested

Document Number: 140213102801

Database Last Updated: September 18, 2011

Quad Lists

Listed Species

Invertebrates

- Branchinecta lynchi*
vernal pool fairy shrimp (T)
- Desmocerus californicus dimorphus*
valley elderberry longhorn beetle (T)
- Lepidurus packardii*
vernal pool tadpole shrimp (E)

Fish

- Acipenser medirostris*
green sturgeon (T) (NMFS)
- Hypomesus transpacificus*
delta smelt (T)
- Oncorhynchus mykiss*
Central Valley steelhead (T) (NMFS)
Critical habitat, Central Valley steelhead (X) (NMFS)
- Oncorhynchus tshawytscha*
Central Valley spring-run chinook salmon (T) (NMFS)
winter-run chinook salmon, Sacramento River (E) (NMFS)

Amphibians

- Ambystoma californiense*
California tiger salamander, central population (T)
- Rana draytonii*
California red-legged frog (T)

Reptiles

- Gambelia (=Crotaphytus) sila*
blunt-nosed leopard lizard (E)
- Thamnophis gigas*
giant garter snake (T)

Mammals

- Dipodomys nitratoides exilis*
Fresno kangaroo rat (E)

Plants

- Orcuttia inaequalis*

San Joaquin Valley Orcutt grass (T)

Quads Containing Listed, Proposed or Candidate Species:

TURLOCK (423A)

HATCH (423B)

CERES (442C)

DENAIR (442D)

County Lists

No county species lists requested.

Key:

(E) *Endangered* - Listed as being in danger of extinction.

(T) *Threatened* - Listed as likely to become endangered within the foreseeable future.

(P) *Proposed* - Officially proposed in the Federal Register for listing as endangered or threatened.

(NMFS) Species under the Jurisdiction of the [National Oceanic & Atmospheric Administration Fisheries Service](#). Consult with them directly about these species.

Critical Habitat - Area essential to the conservation of a species.

(PX) *Proposed Critical Habitat* - The species is already listed. Critical habitat is being proposed for it.

(C) *Candidate* - Candidate to become a proposed species.

(V) Vacated by a court order. Not currently in effect. Being reviewed by the Service.

(X) *Critical Habitat* designated for this species

Important Information About Your Species List

How We Make Species Lists

We store information about endangered and threatened species lists by U.S. Geological Survey 7½ minute quads. The United States is divided into these quads, which are about the size of San Francisco.

The animals on your species list are ones that occur within, **or may be affected by** projects within, the quads covered by the list.

- Fish and other aquatic species appear on your list if they are in the same watershed as your quad or if water use in your quad might affect them.
- Amphibians will be on the list for a quad or county if pesticides applied in that area may be carried to their habitat by air currents.
- Birds are shown regardless of whether they are resident or migratory. Relevant birds on the county list should be considered regardless of whether they appear on a quad list.

Plants

Any plants on your list are ones that have actually been observed in the area covered by the list. Plants may exist in an area without ever having been detected there. You can find out what's in the surrounding quads through the California Native Plant Society's online [Inventory of Rare and Endangered Plants](#).

Surveying

Some of the species on your list may not be affected by your project. A trained biologist and/or botanist, familiar with the habitat requirements of the species on your list, should

determine whether they or habitats suitable for them may be affected by your project. We recommend that your surveys include any proposed and candidate species on your list. See our [Protocol](#) and [Recovery Permits](#) pages.

For plant surveys, we recommend using the [Guidelines for Conducting and Reporting Botanical Inventories](#). The results of your surveys should be published in any environmental documents prepared for your project.

Your Responsibilities Under the Endangered Species Act

All animals identified as listed above are fully protected under the Endangered Species Act of 1973, as amended. Section 9 of the Act and its implementing regulations prohibit the take of a federally listed wildlife species. Take is defined by the Act as "to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect" any such animal.

Take may include significant habitat modification or degradation where it actually kills or injures wildlife by significantly impairing essential behavioral patterns, including breeding, feeding, or shelter (50 CFR §17.3).

Take incidental to an otherwise lawful activity may be authorized by one of two procedures:

- If a Federal agency is involved with the permitting, funding, or carrying out of a project that may result in take, then that agency must engage in a formal [consultation](#) with the Service.

During formal consultation, the Federal agency, the applicant and the Service work together to avoid or minimize the impact on listed species and their habitat. Such consultation would result in a biological opinion by the Service addressing the anticipated effect of the project on listed and proposed species. The opinion may authorize a limited level of incidental take.

- If no Federal agency is involved with the project, and federally listed species may be taken as part of the project, then you, the applicant, should apply for an incidental take permit. The Service may issue such a permit if you submit a satisfactory conservation plan for the species that would be affected by your project.

Should your survey determine that federally listed or proposed species occur in the area and are likely to be affected by the project, we recommend that you work with this office and the California Department of Fish and Game to develop a plan that minimizes the project's direct and indirect impacts to listed species and compensates for project-related loss of habitat. You should include the plan in any environmental documents you file.

Critical Habitat

When a species is listed as endangered or threatened, areas of habitat considered essential to its conservation may be designated as critical habitat. These areas may require special management considerations or protection. They provide needed space for growth and normal behavior; food, water, air, light, other nutritional or physiological requirements; cover or shelter; and sites for breeding, reproduction, rearing of offspring, germination or seed dispersal.

Although critical habitat may be designated on private or State lands, activities on these lands are not restricted unless there is Federal involvement in the activities or direct harm to listed wildlife.

If any species has proposed or designated critical habitat within a quad, there will be a separate line for this on the species list. Boundary descriptions of the critical habitat may be found in the Federal Register. The information is also reprinted in the Code of Federal Regulations (50 CFR 17.95). See our [Map Room](#) page.

Candidate Species

We recommend that you address impacts to candidate species. We put plants and animals on our candidate list when we have enough scientific information to eventually propose them for listing as threatened or endangered. By considering these species early in your planning process you may be able to avoid the problems that could develop if one of these candidates was listed before the end of your project.

Species of Concern

The Sacramento Fish & Wildlife Office no longer maintains a list of species of concern. However, various other agencies and organizations maintain lists of at-risk species. These lists provide essential information for land management planning and conservation efforts. [More info](#)

Wetlands

If your project will impact wetlands, riparian habitat, or other jurisdictional waters as defined by section 404 of the Clean Water Act and/or section 10 of the Rivers and Harbors Act, you will need to obtain a permit from the U.S. Army Corps of Engineers. Impacts to wetland habitats require site specific mitigation and monitoring. For questions regarding wetlands, please contact Mark Littlefield of this office at (916) 414-6520.

Updates

Our database is constantly updated as species are proposed, listed and delisted. If you address proposed and candidate species in your planning, this should not be a problem. However, we recommend that you get an updated list every 90 days. That would be May 14, 2014.

Appendix C Representative Photos



Looking east towards Tegner Road Bridge.



From the bridge, looking south down Tegner Road.



The T.I.D Lateral #5, looking east from the bridge.



Looking at the Tegner Road bridge from the south.



APPENDIX C

*Tegner Road Bridge (No. 38C0302) Replacement
at T.I.D. Lateral #5 Canal
Federal Aid No. BRLO 5938(196)*
Representative Photos

Appendix D CDFW Coordination

Kelly Jackson

From: Mike Trueblood
Sent: Thursday, July 12, 2012 10:26 AM
To: Kelly Jackson
Subject: FW: Turlock Irrigation Canal at Tenger and Harding in Turlock, CA

Below is verification from DFG that the Turlock Irrigation Canal is not subject to Section 1600 of the Fish and Game Code. Therefore, a Streambed Alteration Agreement is not required for this project.

Mike Trueblood
Biologist
LSA Associates, Inc.
4200 Rocklin Road, Suite 11B
Rocklin, CA 95677
(916) 630-4600
mike.trueblood@lsa-assoc.com

From: Sarah Paulson [mailto:SPAULSON@dfg.ca.gov]
Sent: Thursday, July 12, 2012 10:11 AM
To: Mike Trueblood
Subject: Turlock Irrigation Canal at Tenger and Harding in Turlock, CA

Hello Mike,

I spoke with you over the phone this morning regarding a bridge replacement over the Turlock Irrigation Canal (Lateral No. 5) at the intersection of Tenger and Harding in Turlock, CA.

I have determined that the Turlock Irrigation Canal, at this location, is not subject to section 1600 of Fish and Game Code, and thus, the aforementioned project will not require a Lake and Streambed Alteration Agreement.

Please keep in mind that there may be sensitive natural resources in the area that may be subject to other Federal, State, or Local laws and regulations.

Please feel free to contact me if you have any additional questions or concerns.

Thank you

Sarah Paulson
Environmental Scientist
California Department of Fish and Game
Central Region
1234 East Shaw Avenue
Fresno CA, 93710
559-243-4014 ext. 293

7/13/2012

APPENDIX D
DRAFT WATER QUALITY REPORT

Tegner Road Bridge Replacement Project



Water Quality Report

Tegner Road Bridge (Br. No. 38C-0302)

Stanislaus County, California

Federal Project No. BRLO-5938 (196)

July 2014



For individuals with sensory disabilities, this document is available in Braille, large print, on audiocassette, or computer disk. To obtain a copy in one of these alternate formats, please call or write to Caltrans, Attn: Environmental Management, P.O. Box 2048, Stockton, CA 95201, 209.948.7543 Voice, or use the California Relay Service TTY number, 800.735.2922.

Water Quality Report

Tegner Road Bridge Replacement Project
Stanislaus County, California

Federal Project No. BRLO-5938 (196)

July 2014

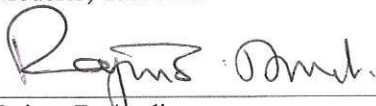
Stanislaus County Public Works Department
U.S. DEPARTMENT OF TRANSPORTATION
Federal Highway Administration, and
STATE OF CALIFORNIA
Department of Transportation

Prepared By:  Date: 5/20/14

Edward Heming, AICP, Senior Environmental Planner
(916) 630-4600
LSA Associates, Inc.

Approved By:  Date: 7/9/14

Stanislaus County
Department of Public Works
1716 Morgan Road
Modesto, CA 95385

Approved By:  Date: 7/24/14

Rajeev Dwivedi
(559) 445-6218 Caltrans Central Region

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Chapter 1. Introduction

Stanislaus County (County), with Federal Highway Administration funding, and in conjunction with the California Department of Transportation (Caltrans), proposes to replace the Tegner Road Bridge (38C-0302) over the Turlock Irrigation Canal Lateral #5 in southwestern Stanislaus County.

1.1 Project Location and Description

1.1.1. Project Location

The Project is located in Stanislaus County, California, on Tegner Road at the intersection of W. Harding Road. **Figure 1: Regional Location** shows the location of the proposed Project on a regional scale. The surrounding land consists of primarily agricultural land with scattered residences.

1.1.2. Project Description

The purpose of this project is to replace the existing Tegner Road Bridge with a longer and wider structure, improve hydraulic performance of the canal crossing, and to improve the roadway approaches on Tegner and Harding Roads. The current structure, constructed in 1919, is a 20 feet long two-span reinforced concrete slab structure on diaphragm abutments and a reinforced concrete pier, supported by spread footings. This structure is considered to be structurally deficient with a sufficiency rating of 57.7 and health index of 67.6. During normal operating flows of the T.I.D. Canal, the soffit of the existing bridge is underwater, resulting in erosion of the superstructure concrete and exposing the reinforcement steel. Additionally, the current 22-foot-wide bridge is too narrow to accommodate local farm equipment and truck traffic in both directions.

The proposed replacement bridge will be a single-span two-lane concrete slab bridge with two Type 732 concrete barriers. The bridge will be 35 feet wide, 31 feet long and consist of two 12-foot lanes and two 4-foot shoulders. The bridge roadway approaches will also be realigned to conform to the new vertical alignment of the bridge. The roadway approach work will extend 300 feet north and south of the bridge along Tegner Road. Similarly, Harding Road will require improvements near the Tegner Road intersection to conform to the new Tegner Road alignment. This work will extend 200 feet in each direction from the intersection. **Figure 2: Project**

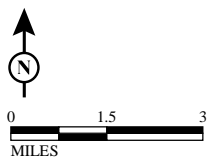


FIGURE 1



LEGEND

★ Project Site



SOURCE: Microsoft Bing Roads (2013)

E:\nit1201\AI\MND-IS\Figure 1.ai (8/22/2013)

*Tegner Road over Turlock Irrigation District
Lateral 5 Bridge (No. 38C0302) Replacement Project
Federal Project No. BRLO-5938(196)*

Regional Location



FIGURE 2



LEGEND

 Project Site



0 100 200
FEET

SOURCE: Microsoft Bing Aerial (2010)

E:\Nlt1201\AI\WQA\Figure 2.ai (8/27/2013)

*Tegner Road over Turlock Irrigation District
Lateral 5 Bridge (No. 38C0302) Replacement Project
Federal Project No. BRLO-5938(196)*

Project Design

Design shows the location of the proposed Project on a local scale as well as the final design. The project also proposes to improve four existing T.I.D. access roads at the corners of the bridge to conform to the new bridge profile.

Removal of the existing bridge and installation of temporary falsework for construction of the new bridge will require temporary dewatering of a section of the T.I.D. Canal. Approximately 130 feet (50 feet upstream and downstream of the new bridge) will be dewatered. Dewatering will consist of installation of a temporary earthen berm along this length.

Utility poles along Tegner Road and the north side of Harding Road will require relocation due to the reconstruction of roadway approaches.

Project staging will be located in an agricultural field in the northwest corner of the intersection. The proposed staging area is approximately 75 feet by 75 feet.

Tegner Road will be closed during construction and a local detour using adjacent streets will be used to accommodate local traffic. Access for private residences during the road closure will be provided at all times during construction.

Project construction is scheduled to begin in November 2015 and end in March 2016, lasting one work season.

Typical equipment used on the project will include trucks, scrapers, excavators, graders, loaders, backhoes, and bulldozers.

Chapter 2. Setting

The quality of water in an area depends upon several factors, including land use, topography, geology, soils, surface and groundwater hydrology, and climate. Following is a brief description of these general characteristics in the Project area and surroundings.

2.1. Land Use

The County of Stanislaus adopted an updated General Plan in 2006, which provides a land use blueprint for long-term growth to at least the year 2035. Land uses in the Project area consist of agricultural with scattered residences.

2.1.1. Topography/Geology/Soils

Stanislaus County consists of three distinct geologic regions: the eastern dissected uplands, the San Joaquin Valley, and the western mountains. The eastern portion of the county comprises Pliocene and Pleistocene non-marine and sedimentary deposits, recent river- and major stream–channel deposits, Pliocene non-marine sedimentary rocks, Quaternary non-marine terrace deposits, undivided Eocene and Miocene non-marine sedimentary rocks, and Jurassic and/or Triassic metavolcanic rocks. The San Joaquin Valley portion is primarily made up of recent alluvial fan deposits, recent river- and major stream–channel deposits, and recent basin deposits. The western mountain portion of the county is composed of rocks of the Franciscan Formation, Mesozoic rocks, upper Cretaceous marine sedimentary rocks, Paleocene and Eocene marine sedimentary rocks, and Pliocene non-marine sedimentary rocks.

According to the Natural Resources Conservation Service Soil Survey of Stanislaus County, the Project site contains three different types of soil, including: Madera sandy loam, 0 to 2 percent slopes (MdA); Delhi loamy sand, silty substratum, 0 to 3 percent slopes (DgA); and, Dinuba sandy loam, 0 to 1 percent slopes (DrA).

2.1.2. Climate

Stanislaus County has cool, wet winters and very warm, dry summers. Typical of the Central Valley, the community often has dense ground fog during the winter months.

Average January temperatures are a maximum of 53.7°F and a minimum of 37.6°F. Average July temperatures are a maximum of 94.2°F and a minimum of 59.9°F. There are an average of 80.0 days with highs of 90°F (32°C) or higher and an average

of 20.3 days with lows of 32°F (0°C) or lower. The record high temperature of 113°F was on July 23, 2006. The record low temperature of 18°F occurred on December 13, 1932, and January 11, 1949.

Average annual rainfall is 12.22 inches, falling on an average of 51 days annually. The summer months are usually very dry except for occasional thunderstorms. The wettest year was 1983 with 27.39 inches of rain and the driest year was 1929 with 5.70 inches of rain. Snow is very rare in the County.

2.1.3. Water Resources

This section addresses the surface water and groundwater present in the Project vicinity, and discusses its quality from both regional and Project-level perspectives.

Surface Water. The Project area is in the San Joaquin River Basin (Turlock Subbasin). The San Joaquin River, which flows 2.2 miles east of the Project site, drains into the southern part of the San Joaquin valley, and flows south into the Sacramento-San Joaquin River Delta.

This portion of the San Joaquin River is currently on the Clean Water Act (CWA) Section 303(d) list of Water Quality Limited Segments and, therefore, does not currently meet state water quality standards. Diazinon, pesticides, and mercury are known pollutants exceeding current standards for the river.

The Turlock Irrigation Canal is a part of the Turlock Irrigation District (TID). The TID serves over 4,900 irrigation customers covering approximately 150,000 acres of farmland. TID owns and maintains more than 250 miles of canals and laterals. Approximately 90% of the District's canals are concrete-lined to curb seepage and erosion.

Wetlands. Wetlands are highly productive natural habitats used for foraging and nesting by many types of wildlife. These areas are given a high priority for protection by the California Department of Fish and Game and the U.S. Fish and Wildlife Service.

Surface water resources located throughout Stanislaus County include a variety of wetlands. Typically, they are found at the margins of ponds, lakes, and streams, in low-lying areas that collect precipitation, and in areas where groundwater intercepts the ground surface.

Wetlands may be seasonal or perennial. Additionally, there are many constructed ponds (stockponds, etc.) throughout the county that may be classified as wetlands.

Groundwater. The Project site is located within the Delta-Mendota Groundwater Subbasin (subbasin of the San Joaquin Valley groundwater basin). The Delta-Mendota subbasin is bounded on the west by the Tertiary and older marine sediments of the Coast Ranges, and on the north by the Stanislaus/San Joaquin county line. The eastern boundary follows the San Joaquin River and Chowchilla Bypass to the eastern border of Farmer's Water District. Heading northward, it follows the eastern, northern, and northwestern boundary of San Joaquin Valley – Westside Groundwater Subbasin (corresponding with Westlands Water District boundaries).

Groundwater quality in the Delta-Mendota Subbasin remains suitable for urban and agricultural uses throughout most of the region. Pollutants that can be found in areas of the Delta-Mendota Subbasin include salinity, nitrates, iron and manganese, boron, arsenic, radionuclides, bacteria, pesticides, trichloroethylene, and other trace organics.

2.1.4. Water Quality

Water quality data sources for both surface and groundwater resources in Stanislaus County are widely dispersed. Data is available for rivers, some reservoirs, and streams near proposed major county or commercial development. Groundwater data from domestic or monitoring wells is also available mainly from these same sources. The U.S. Forest Service also has qualitative and some quantitative data on surface and groundwater quality for the 11 percent of the county that lies within the Stanislaus National Forest. The U.S. Geological Survey, in coordination with numerous state and federal agencies, is currently conducting an extensive investigation of groundwater quality in the local area through the Groundwater Ambient Monitoring and Assessment Program.

Surface water quality is generally satisfactory, improving in quality (relative to drinking standards) at higher elevations. Representatives from Turlock Irrigation District (TID) were contacted on April 12, 2013 to determine the quality of the water in TID Lateral No. 5 Canal under the Tegner Bridge overcrossing. According to TID water quality sampling does not occur on TID Lateral No. 5 and the closest water quality sampling site is a little over two miles downstream from the Project site.

This area where water quality sampling occurs is blended with water from other pumps and canals and is not representative of the water quality of TID Lateral No. 5 at the proposed Project site.¹

Groundwater quality is generally within most drinking water standards, although some areas of the lower foothills have very high iron content as well as certain other minerals in specific locations. This is due to the slow movement of groundwater through mineralized rock formations as expected in a mineral-rich region such as Stanislaus County. Specific information on groundwater for the Project area was not investigated because the proposed project is not expected to substantially affect groundwater resources. No wells would be constructed, and construction activities would not intercept or alter groundwater recharge, discharge, or flow condition.

¹ Personal Communication between Chris Graham, Environmental Planner, LSA Associates, with Todd Troglin, Supervising Engineering Technician, TID Water and Power, on April 12, 2013.

Chapter 3. Findings

The Tegner Road Bridge was classified as “structurally deficient” by Caltrans and has recently been determined to be eligible for replacement. The purpose of the Project is to replace the bridge with a wider, longer, and higher structure that meets current design and loading standards, and to improve the hydraulics and free board clearance at the crossing to accommodate a 100-year storm event.

Potential water quality effects from Project related construction activities can be minimized and reduced through implementation of Best Management Practices (BMPs) and compliance with existing regulatory requirements. Based on this analysis and the implementation of mitigation measures and BMPs specified below, the Project would not significantly impact water quality within the Project vicinity.

Construction activities necessary to complete the proposed Project have a slight chance of impacting the water quality of the irrigation canal. The potential impacts to water quality can be attributed to suspended solids being introduced into surface waters from grading activities or movement of construction equipment. Minimization measures for construction and long-term impacts would focus on the control of sediment and suspended solids from entering waterways. Commonly-used construction activity BMPs would be required to minimize any potential impacts to the maximum extent practicable (MEP).

3.1. Short-Term (Temporary) Water Quality Impacts

Development of the proposed Project would include the replacement of existing Tegner Road Bridge over TID Lateral # 5 Canal with a new two lane concrete slab bridge that would be approximately 35 feet wide and 28 feet long. The replacement bridge would be developed to be set on the same horizontal alignment as the existing bridge, but on a slightly higher vertical profile so that the new bridge can pass the maximum design flow of the TID Lateral No. 5 Canal without a pressure flow. The increase in vertical profile would be no more than approximately 2-feet higher than that of the existing roadway. In addition to the work involved in the bridge replacement, roadway work associated with rebuilding approaches along Tegner Road and Harding Road would occur. The proposed Project includes a detour to allow full road/bridge closure to more efficiently remove and replace the existing bridge over TID Lateral No. 5.

Construction activities associated with the canal are expected to commence November 2014 and be completed prior to March 2015. TID Lateral # 5 has an operating capacity of 165 cubic feet of water flow per second (cfs). During the summer months, which are considered the irrigation season, this canal operates at near capacity conditions (on average 100 cfs) to support agricultural crops in the area. During the off-season (November 1st through March 1st) the canal may be utilized to convey ground water pumped into it and runoff from precipitation. TID Lateral # 5 is the second or third choice for conveying major storm water flows and would typically have a flow rate of 0 to 15 cfs during the off-season. Barring a 100-year storm or an unplanned outage of other TID storm water route(s), the flows in TID Lateral # 5 during construction of the proposed Project are expected range from 0 to 15 cfs.²

Stormwater runoff (during construction activities) from the proposed Project may transport pollutants to the Turlock Irrigation Canal if BMPs are not properly implemented. Generally, as the Disturbed Soil Areas (DSA) increase, the potential for temporary water quality impacts also increases. Implementation of mitigation measures WQ-1 through WQ-4 would reduce short term water quality impacts associated with construction of the proposed Project. Short-term impacts would be less than significant.

3.2. Long-Term (Permanent) Water Quality Impacts

After Project completion, the potential for adverse long term impacts to water quality would be reduced.

Long term water quality impacts are usually due to changes in stormwater drainage. The proposed Project would be developed in a similar fashion as the original bridge and the stormwater drainage pattern of the area would remain the same. Water runoff and water quality issues would not occur at surrounding waterways or canals with implementation of the proposed Project. The area of the new bridge would be slightly larger than the original bridge; thus nominally increasing the amount of impervious surfaces in the Project area. However, the nominal increase in impervious surfaces in the Project area would not result in a measureable increase in water runoff or increase water quality issues for TID Lateral #5. Implementation of mitigation measures WQ-2 and WQ-4 would include the use of Design Pollution Prevention and Treatment Control BMPs and sedimentation control measures to reduce stormwater drainage and water quality issues during operation of the proposed Project.

² Personal communication between Chris Graham, Environmental Planner, LSA Associates and Todd Troglin, Supervising Engineering Technician, TID Water and Power, E-mail correspondence, April 15, 2013.

With implementation of these mitigation measures long-term water quality impacts associated with the proposed Project would be less than significant.

3.2.1. Mitigation Measures

- WQ-1 Preparation and implementation of construction site temporary BMPs in compliance with the provisions of the Caltrans Statewide NPDES Permit and any subsequent permit as they relate to construction activities for the Project. This would include submission of a Notice of Construction (NOC) to the Central Valley Regional Water Quality Control Board (RWQCB) at least 30 days before the start of construction and submission of a Notice of Construction Completion (NCC) to the RWQCB upon completion of construction and stabilization of the Project site. The temporary BMPs would be installed prior to any construction operations and would be in place for the duration of the contract. The removal of these BMPs would be the final operation, along with the Project site cleanup.
- WQ-2 The Project would be required to follow Design Pollution Prevention (DPP) and Treatment Control BMPs for the Project in accordance with the procedures outlined in the Stormwater Quality Handbooks, Project Planning and Design Guide. This would include coordination with the RWQCB with respect to feasibility, maintenance, and monitoring of Treatment Control BMPs as set forth in Caltrans' Statewide Stormwater Management Plan (SWMP). Since the project will disturb less than one acre, a Water Pollution Control Program (WPCP) will need to be prepared by a Qualified SWPPP Practitioner (QSP).
- WQ-3 All refueling, maintenance, and staging of equipment and vehicles would occur at least 18.3 meter (60 feet) from riparian habitat or water bodies and not in a location from where a spill would drain directly toward aquatic habitat. Regular monitoring would ensure contamination of habitat does not occur during such operations. Prior to the onset of work, the County shall provide Caltrans (on behalf of the FHWA) with a plan for prompt and effective response to any accidental spills. All workers would be informed of the importance of preventing spills and of the appropriate measures to take should a spill occur.

- WQ-4 To control sedimentation during and after Project implementation, Caltrans and county would implement best management practices outlined in any authorizations or permits, issued under the authorities of the CWA that it receives for the specific Project. If best management practices are ineffective, Caltrans would attempt to remedy the situation immediately, in consultation with the regulatory and resource agencies.

With the implementation of the above mitigation measures, impacts to water quality would be less than significant.

3.2.2. Beneficial Uses Impacts

Under the guidance of the Porter-Cologne Water Quality Control Act, the Central Valley RWQCB has established water quality objectives for surface and ground water in the region. These water quality objectives are listed in Basin Plans designated for respective regions. Water quality objectives consist of both narrative and numerical goals and are established to preserve existing and potential future designated beneficial uses of regional water bodies. The water quality objectives must comply with the State Anti-Degradation Policy (State Board Resolution No. 668-16).

Due to the Project being over a manmade irrigation canal and not a natural waterway the canal has no designated beneficial uses nor would it drain or connect a natural waterway. Therefore, beneficial uses would not be discussed further.

Chapter 4. References

Stanislaus County Web site: <http://www.co.stanislaus.ca.us/>

California Regional Water Quality Control Board North Central Valley, *The Water Quality Control Plan (Basin Plan) for the California Regional Water Quality Control Board, Central Valley Region, Fourth Edition*, October 2011.

Department of Water Resources Website: <http://www.water.ca.gov>

Natural Resources Conservation Service Soil Survey of Stanislaus County, 1993.

APPENDIX E
CONSTRUCTION NOISE TECHNICAL MEMORANDUM

CONSTRUCTION NOISE TECHNICAL MEMORANDUM

Tegner Road Bridge Replacement Project - Federal Aid No. BRLO – 5938(196)

The project will replace the existing Tegner Road Bridge with a new two-lane concrete slab bridge that will be approximately 35 feet wide and 28 feet long. The replacement bridge will be set on the same horizontal alignment as the existing bridge, but on a slightly higher vertical profile so that the bridge can pass the maximum design flow of the Turlock Irrigation District Lateral Number 5 Canal without a pressure flow. The increase in vertical profile will be no more than approximately 2 feet higher than that of the existing roadway. In addition to the work involved in the bridge replacement, the project will include roadway work associated with rebuilding the approaches along Tegner Road and Harding Road.

The project location and vicinity and the tentative layout plans for the project are shown in the attached Figures 1 and 2, respectively.

23 CFR 772

23 Code of Federal Regulations (CFR) 772 provides procedures for preparing operational and construction noise studies and evaluating noise abatement considered for federal and federal-aid highway projects. Under 23 CFR 772.7, projects are categorized as Type I, Type II, or Type III projects. The Federal Highway Administration defines a Type I project as a proposed federal or federal-aid highway project for the construction of a highway on a new location, or the physical alteration of an existing highway that substantially changes either the horizontal or vertical alignment or increases the number of through-traffic lanes. A Type II project is a noise barrier retrofit project that involves no changes to highway capacity or alignment. A Type III project is a project that does not meet the classifications of a Type I or Type II project. Type III projects do not require a noise analysis.

Traffic Noise Impact Assessment

Because Tegner Road would remain a two-lane road, it is not anticipated that vehicular trips through the project area would increase in the future. The referenced project meets the criteria for a Type III project established in 23 CFR 772. Therefore, the project requires no analysis for highway traffic noise impacts. This project (i.e., Type III project) does not involve an increase in traffic volumes based on the projected traffic with this project, construction of new through lanes or auxiliary lanes, substantial changes in the horizontal or vertical alignment of the roadway, or exposure of noise sensitive land uses to a new or existing highway noise source. The proposed 2 foot change in the vertical alignment would not affect the line of sight by any significant amount. Stanislaus County acknowledges that a

noise analysis is required if changes to the proposed project result in reclassification to a Type I project.

Construction Noise

During construction of the project, noise from construction activities may intermittently dominate the noise environment in the immediate area of construction. Two types of short-term noise impacts would occur during project construction. The first type would be from construction crew commutes and the transport of construction equipment and materials to the project site, which would incrementally raise noise levels on access roads leading to the site. The pieces of heavy equipment for demolishing the existing bridge and construction of the replacement structure will be moved on site, will remain for the duration of each construction phase, and will not add to the daily traffic volume in the project vicinity. There is a potential for a high single-event noise exposure at a maximum level of 87 A-weighted decibels (dBA) maximum instantaneous noise level (L_{max}) from trucks passing at 50 feet. However, the projected construction traffic will be minimal when compared to existing traffic volumes on Tegner Road, and its associated long-term noise level change will not be perceptible. Therefore, short-term construction-related worker commutes and equipment transport noise impacts would be less than significant.

The second type of short-term noise impact is related to noise generated during bridge removal and construction. Construction is performed in discrete steps, each of which has its own mix of equipment and, consequently, its own noise characteristics. These various sequential phases would change the character of the noise generated and, therefore, the noise levels at the project site as construction progresses. Despite the variety in the type and size of construction equipment, similarities in the dominant noise sources and patterns of operation allow construction-related noise ranges to be categorized by work phase. Table 1 lists typical construction equipment noise levels (L_{max}) recommended for noise impact assessments, based on a distance of 50 feet between the equipment and a sensitive noise receptor.

Potential bridge construction areas are located as close as approximately 150 feet (to the southeast end of the bridge) from the nearest noise sensitive receptor (i.e., residential land use) shown in Figure 3. Accordingly, the focus of this analysis is on noise generated by the potential construction areas. It is expected that pile drivers will be the equipment that will generate the highest noise levels. As seen in Table 1, the maximum noise level generated by pile drivers is assumed to be approximately 93 dBA L_{max} at 50 feet from the pile driver when it is in full operation. Other construction equipment expected to be used include haul/dump trucks which would generate approximately 88 dBA L_{max} at 50 feet at full power. Each doubling of the sound source with equal strength increases the noise level by 3 dBA due to the logarithmic nature of the decibel scale. Each piece of construction equipment operates as an individual point source. Assuming each piece of construction equipment operates at some distance away from the other equipment, the predicted combined noise level during this phase of construction is approximately 95 dBA L_{max} at a distance of 50 feet from an active construction staging area.

Table 1: Typical Construction Equipment Noise Levels

Type of Equipment	Range of Maximum Sound Levels Measured (dBA at 50 ft)	Suggested Maximum Sound Levels for Analysis (dBA at 50 ft)
Pile Drivers, 12,000 to 18,000 ft-lb/blow	81–96	93
Rock Drills	83–99	96
Jackhammers	75–85	82
Pneumatic Tools	78–88	85
Pumps	74–84	80
Scrapers	83–91	87
Haul Trucks	83–94	88
Cranes	79–86	82
Portable Generators	71–87	80
Rollers	75–82	80
Dozers	77–90	85
Tractors	77–82	80
Front-End Loaders	77–90	86
Hydraulic Backhoe	81–90	86
Hydraulic Excavators	81–90	86
Graders	79–89	86
Air Compressors	76–89	86
Trucks	81–87	86

Source: Noise Control for Buildings and Manufacturing Plants, Bolt, Beranek & Newman 1987.

ft-lb/blow = foot-pound per blow

ft = feet/foot

dBA = A-weighted decibels

The closest sensitive receptor to the southeast end of the project is a residence, which is located approximately 150 feet from the potential bridge construction area shown in Figure 3. At this distance, this receptor may be subject to short-term noise reaching 85.5 dBA L_{max} generated by construction activities assuming roadway improvement work and bridge replacement would be occurring simultaneously.

To minimize the construction noise impact for sensitive receptors adjacent to the project site, construction noise is regulated by the California Department of Transportation (Caltrans) Standard Specification Section 14-8.02, “Noise Control,” and also by Caltrans Standard Special Provisions S5-310, “Noise Control.” These regulations state that noise levels generated during construction shall comply with applicable local, state, and federal regulations; therefore, compliance with the construction hours specified in local ordinances would be required. Construction noise would be short-term and intermittent. Further, implementing the following measures would minimize the temporary noise impacts from construction on any sensitive receptors in the project vicinity:

- The Contractor shall comply with all local sound control and noise level rules, regulations, and ordinances that apply to any work performed pursuant to the contract.
- Each internal combustion engine, used for any purpose on the job or related to the job, shall be equipped with a muffler of a type recommended by the manufacturer. No internal combustion engine shall be operated without a muffler.
- Between the hours of 7:00 p.m. and 7:00 a.m. (night work), the noise level from the Contractor's operations shall not exceed 86 dBA at a distance of 50 feet; or shall not exceed an average sound level greater than 75 dBA $L_{eq}(h)$ as measured on the property of any residential dwelling unit. Work is permitted Monday through Saturday, but not allowed on Sundays, unless specifically permitted by contract. This requirement shall not relieve the Contractor from responsibility for complying with local ordinances (Exhibit 1) regulating construction noise levels. The noise level requirement shall apply to the equipment on the job or related to the job, including but not limited to trucks, transit mixers, or transient equipment that may or may not be owned by the Contractor. The use of loud sound signals shall be avoided in favor of light warnings except those required by safety laws for the protection of personnel.

As directed by Caltrans and the County, the Contractor shall implement appropriate additional noise mitigation measures, including changing the location of stationary construction equipment, turning off idling equipment, rescheduling construction activity, notifying adjacent residents in advance of construction work, and installing acoustic barriers around stationary construction noise sources.

Attachments: Figure 1: Project Vicinity Map
Figure 2: Project Layout
Figure 3: Closest Noise Sensitive Receptor
Exhibit 1: Stanislaus County Noise Control Ordinance

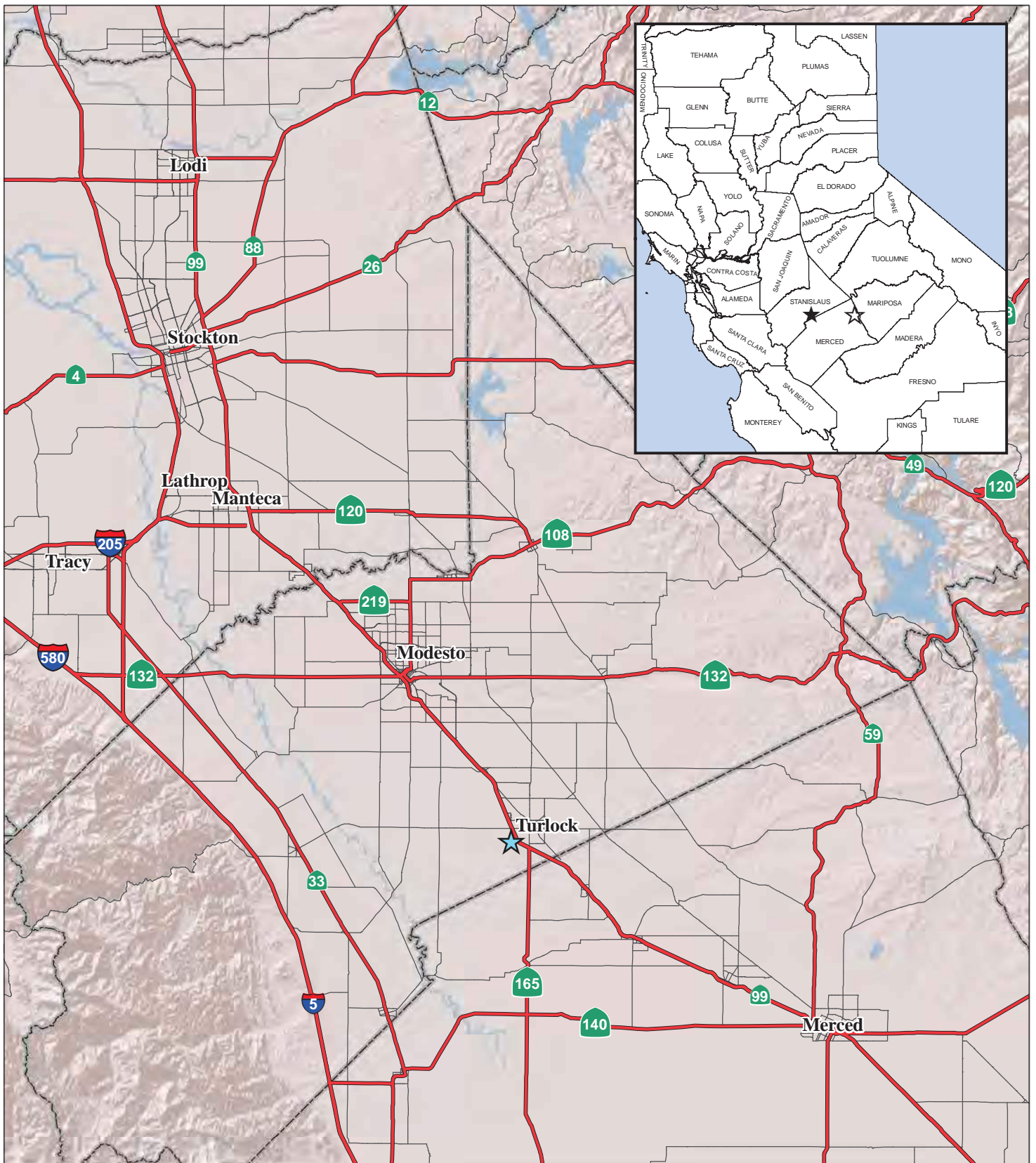
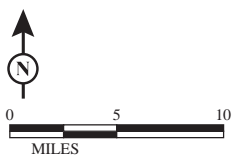


FIGURE 1

LEGEND

★ Project Location



SOURCE: ESRI Imagery (4/2008)

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Tegner Road Bridge Replacement Project
Stanislaus County, California
Project Vicinity Map

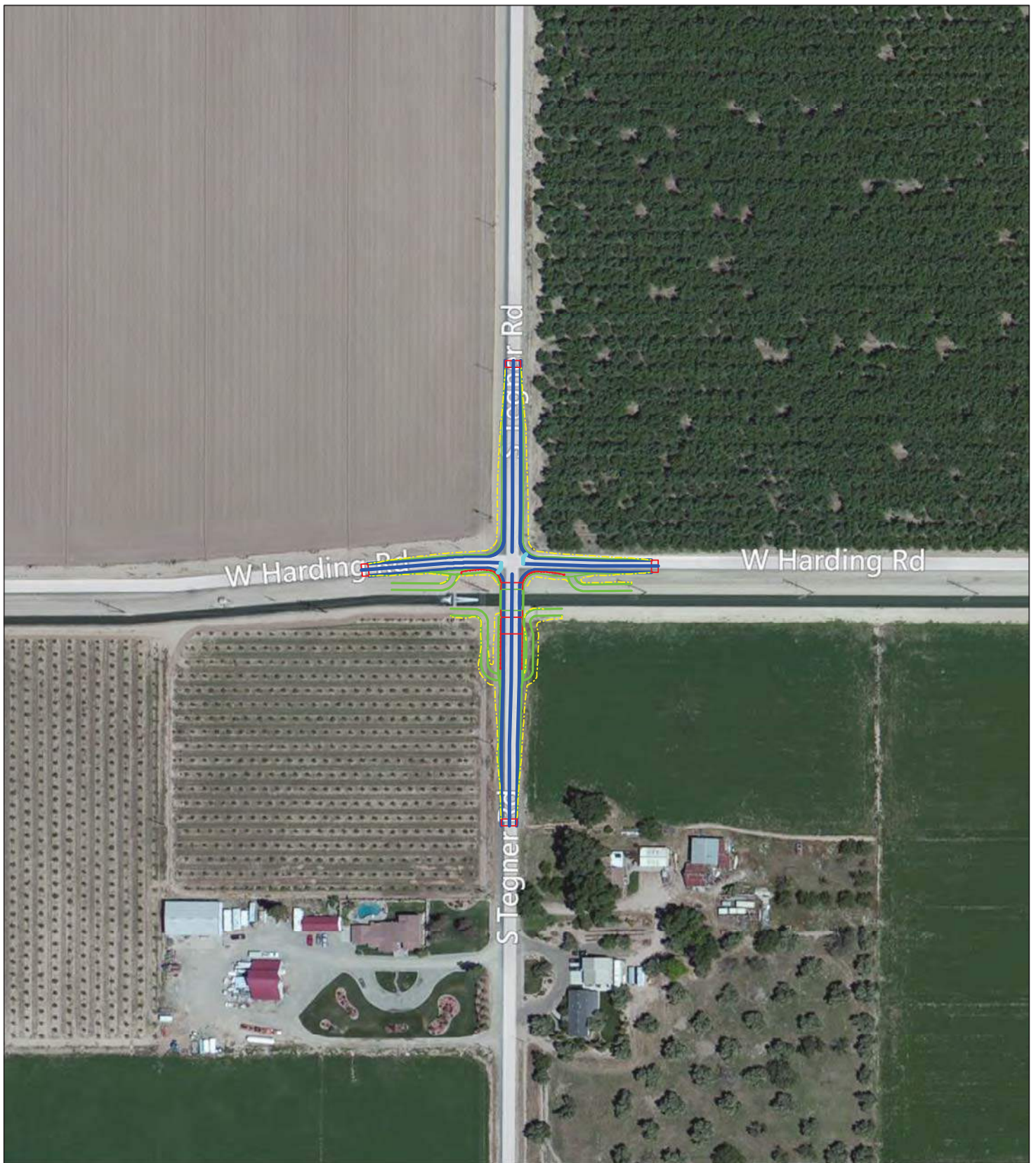
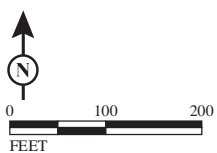


FIGURE 2



SOURCE: Microsoft Bing Aerial (2010)

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Tegner Road Bridge Replacement Project
Stanislaus County, California
 Project Layout

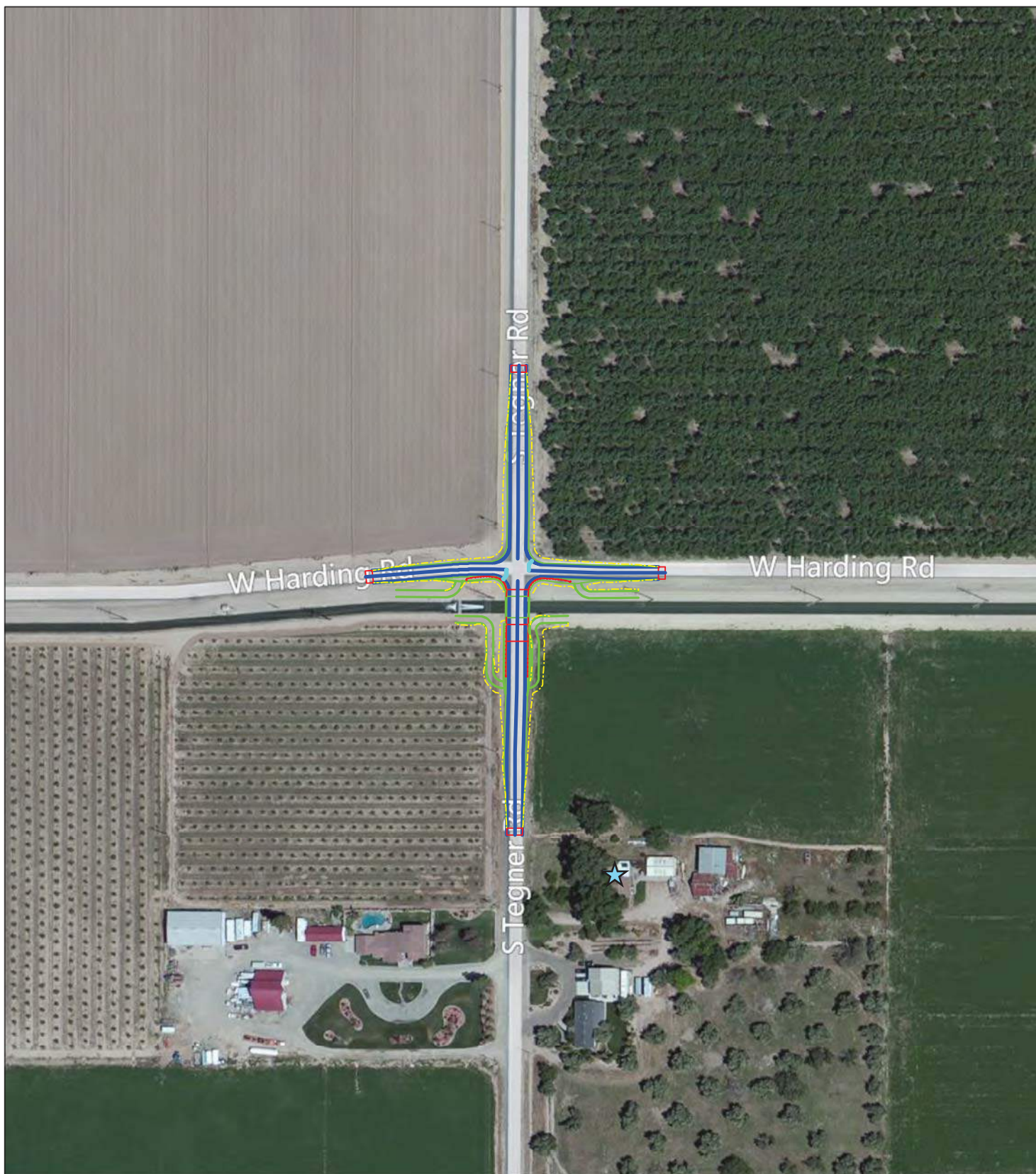
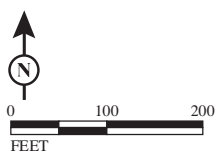


FIGURE 3

LEGEND
 ★ Receptor Location



SOURCE: Microsoft Bing Aerial (2010)

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Tegner Road Bridge Replacement Project
Stanislaus County, California
 Closest Noise Sensitive Receptor Location

Stanislaus County Code

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Chapter 10.46 NOISE CONTROL

[10.46.010 Title.](#)

The ordinance codified in this chapter may be cited as the “Stanislaus County Noise Control Ordinance.” (Ord. CS 1070 §2, 2010).

[10.46.020 Findings and policy.](#)

The Stanislaus County board of supervisors hereby finds that every person is entitled to an environment in which the noise is not detrimental to his or her life, health, and enjoyment or property; that the peace, health, safety, and welfare of its citizens require protection from disturbing, excessive, offensive and loud noises from any and all sources in the unincorporated areas of the county; and the establishment of maximum permissible noise levels will further the public health, safety, welfare and peace and quiet of county inhabitants.

In order to control unnecessary, excessive and annoying noise in the county, it is hereby declared to be the policy of the county to prohibit such noise generated from or by all sources as specified in this chapter. It shall be the policy of the county to maintain quiet in areas that exhibit low noise levels and to implement programs aimed to reduce noise in those areas within the county where noise levels are above acceptable values.

It is determined that certain noise levels are detrimental to the public health, welfare and safety, and are contrary to public interest. Therefore, the board of supervisors declares that creating, maintaining, causing or allowing to be created, caused or maintained, any noise in a manner prohibited by or not in conformity with the provisions of this chapter, is a public nuisance and shall be punishable as such. (Ref. California Noise Control Act of 1973, Division 28, Sections 46000 et seq., of the California Health and Safety Code.) (Ord. CS 1070 §2, 2010).

[10.46.030 Definitions.](#)

A. “Ambient noise level” means the all encompassing noise level associated with a given environment, being a composite of sounds from all sources, excluding the alleged offensive noise, at the location and approximate time at which a comparison with the alleged offensive noise is to be made.

B. “A-weighted sound level” means the total sound level in decibels of all sound as measured with a sound level meter with a reference pressure of twenty microPascals using the A-weighted network (scale) at slow response. The unit of measurement shall be defined as dB(A).

C. “Construction equipment” means any machine used in the construction, erection, enlargements, alteration, conversion or movement of any building, structures or land together with any scientific surveys associated therewith.

D. “Decibel (dB)” means a unit for measuring the amplitude of sounds, equal to twenty times the logarithm to the base ten of the ratio of the pressure of the sound measured to the reference pressure, which is twenty microPascals.

E. “Dwelling unit” means a single unit providing complete independent living facilities for one or more persons including permanent provisions for living, sleeping, eating, cooking and sanitation.

F. “Impulsive noise” means a noise of short duration with an abrupt onset and rapid decay.

G. “Lmax” means the maximum A-weighted sound level recorded during a noise event.

H. “Person” means a person, firm, association, partnership, joint venture, corporation or any entity, public

or private in nature.

I. “Pure tone noise” means any noise that is distinctly audible as a single pitch (frequency) or set of pitches. A pure tone shall exist if the one-third octave band sound pressure level in the band with the tone exceeds the arithmetic average of the sound pressure levels of the two contiguous one-third octave bands by five decibels for center frequencies of five hundred Hertz and above and by eight decibels for center frequencies of between one hundred sixty and four hundred Hertz and fifteen decibels for center frequencies less than or equal to one hundred twenty-five Hertz.

J. “Sound level meter” means an instrument used for measurement of sound levels, which at a minimum meets the American National Standards Institute (ANSI) Standard S1.4-1983 (R2006) or S1.4a-1985 (R2006) “Specifications for Sound Level Meters,” Type 2, or most recent version thereof.

K. “Sound level” in decibels, means twenty times the logarithm to the base ten of the ratio of the pressure of the sound to a reference pressure that is twenty microPascals. (Ord. CS 1070 §2, 2010).

10.46.040 Sound level measurement.

A. Sound level measurements may be made anywhere within the boundaries of a property. Where practical, the point of measurement should be positioned three to five feet above the ground and away from reflective surfaces. The actual location of a sound level measurement shall be at the discretion of the enforcement official.

B. Sound level measurements shall be made with a sound level meter which has been certified as meeting the standards of the American National Standards Institute within the last twelve months and the measurement shall be performed by an enforcement official trained in the use of the sound level meter. (Ord. CS 1070 §2, 2010).

10.46.050 Exterior noise level standards.

A. It is unlawful for any person at any location within the unincorporated area of the county to create any noise or to allow the creation of any noise which causes the exterior noise level when measured at any property situated in either the incorporated or unincorporated area of the county to exceed the noise level standards as set forth below:

1. Unless otherwise provided herein, the following exterior noise level standards shall apply to all properties within the designated noise zone:

Table A
 EXTERIOR NOISE LEVEL STANDARDS

Designated Noise Zone	Maximum A-Weighted Sound Level as Measured on a Sound Level Meter (LMAX)	
	7:00 a.m.—9:59 p.m.	10:00 p.m.—6:59 a.m.
Noise Sensitive	45	45
Residential	50	45
Commercial	60	55
Industrial	75	75

2. Exterior noise levels shall not exceed the following cumulative duration allowance standards:

Table B
CUMULATIVE DURATION
ALLOWANCE STANDARDS

Cumulative Duration	Allowance Decibels
Equal to or greater than 30 minutes per hour	Table A plus 0 dB
Equal to or greater than 15 minutes per hour	Table A plus 5 dB
Equal to or greater than 5 minutes per hour	Table A plus 10 dB
Equal to or greater than 1 minute per hour	Table A plus 15 dB
Less than 1 minute per hour	Table A plus 20 dB

3. Pure Tone Noise, Speech and Music. The exterior noise level standards set forth in Table A shall be reduced by five dB(A) for pure tone noises, noises consisting primarily of speech or music, or reoccurring impulsive noise.

4. In the event the measured ambient noise level exceeds the applicable noise level standard above, the ambient noise level shall become the applicable exterior noise level standard.

B. Noise Zones Defined.

1. Noise Sensitive. Any public or private school, hospital, church, convalescent home, cemetery, sensitive wildlife habitat, or public library regardless of its location within any land use zoning district.

2. Residential. All parcels located within a residential land use zoning district.

3. Commercial. All parcels located within a commercial or highway frontage land use zoning district.

4. Industrial. All parcels located within an industrial land use zoning district.

5. The noise zone definition of any parcel not located within a residential, commercial, highway frontage, or industrial land use zoning district shall be determined by the director of Stanislaus County planning and community development department, or designee, based on the permitted uses of the land use zoning district in which the parcel is located. (Ord. CS 1070 §2, 2010).

10.46.060 Specific noise source standards.

The following sound sources are subject to the following additional standards. The failure to comply with these additional standards constitutes a separate violation of this chapter:

A. Motor Vehicle Sound Systems. No person shall operate a motor vehicle sound system, whether affixed to the vehicle or not, between the hours of ten p.m. and seven a.m., such that the sound system is audible to the human ear inside any inhabited dwelling. No person shall operate a motor vehicle sound system, whether affixed to the vehicle or not, at any other time such that the sound system is audible to the human ear at a distance greater than fifty feet from the vehicle. (Ref. California Vehicle Code Section 27007.)

B. Power Tools and Equipment. No person shall operate any power tools or equipment between the hours of ten p.m. and seven a.m. such that the power tools or equipment are audible to the human ear inside an inhabited dwelling other than a dwelling in which the power tools or equipment may be located. No person shall operate any power tools or equipment at any other time such that the power tools or equipment are audible to the

human ear at a distance greater than one hundred feet from the power tools or equipment.

C. Audio Equipment. No person shall operate any audio equipment, whether portable or not, between the hours of ten p.m. and seven a.m. such that the equipment is audible to the human ear inside an inhabited dwelling other than a dwelling in which the equipment may be located. No person shall operate any audio equipment, whether portable or not, at any other time such that the equipment is audible to the human ear at a distance greater than fifty feet from the equipment.

D. Sound-Amplifying Equipment and Live Music. No person shall install, use or operate sound-amplifying equipment, or perform, or allow to be performed, live music unless the sound emanating from the sound-amplifying equipment or live music shall not be audible to the human ear at a distance greater than two hundred feet. To the extent that these requirements conflict with any conditions of approval attached to an underlying land use permit, these requirements shall control.

E. Construction Equipment. No person shall operate any construction equipment so as to cause at or beyond the property line of any property upon which a dwelling unit is located an average sound level greater than seventy-five decibels between the hours of seven p.m. and seven a.m.

F. Burglar Alarms. Any building burglar alarm must have an automatic cutoff, capable of terminating its operation within fifteen minutes of the time it is activated. Notwithstanding the requirements of this provision, any member of the sheriff's department shall have the right to take such steps as may be reasonable and necessary to disconnect any such alarm during the period of its activation. Any structure upon which a burglar alarm has been installed shall prominently display the telephone number at which communication may be made with the owner of such structure.

G. Vehicle Alarms. No owner of a motor vehicle shall have in operation an audible burglar alarm therein unless such burglar alarm shall be capable of terminating its operation within fifteen minutes of the time it is activated. Notwithstanding the requirements of this provision, any member of the sheriff's department of Stanislaus County shall have the right to take such steps as may be reasonable and necessary to disconnect any such alarm installed on a motor vehicle at any time during the period of its activation. (Ref. California Vehicle Code Section 22651.5.) (Ord. CS 1070 §2, 2010).

10.46.070 Vibration.

Operating or permitting the operation of any device that creates vibration that is above the vibration perception threshold of any individual at or beyond the property boundary of the source if on private property, or at one hundred fifty feet from the source if on a public space or public right-of-way is prohibited. For the purpose of this section, "vibration perception threshold" means the minimum ground-borne or structure-borne vibration motion necessary to cause a reasonable person to be aware of the vibration by such direct means as, but not limited to, sensation by touch or visual observation of moving objects, or a measured motion velocity of 0.01 in/sec over the range of one to one hundred Hertz. (Ord. CS 1070 §2, 2010).

10.46.080 Exemptions.

The following sources are exempt from the provisions of this chapter:

- A. Sounds for the purpose of alerting persons to the existence of an emergency;
- B. Radios, sirens, horns, and bells on police, fire, and other emergency response vehicles;
- C. Parades, fireworks displays, and other special events for which a permit has been obtained from the county are exempted provided there is compliance with all conditions that have been noted in writing on the permit. Noise produced as a result of noncompliance with any condition specified on the permit is not exempted from the requirements of this chapter;
- D. Activities on or in publicly owned property and facilities, or by public employees while in the authorized

discharge of their responsibilities, are exempt provided that such activities have been authorized by the owner of such property or facilities or its agent or by the employing authority;

E. Religious worship activities, including, but not limited to, bells, organs, singing, and preaching;

F. Locomotives and other railroad equipment, and aircraft;

G. The collection of solid waste is exempted to the extent that the noise of such collection is regulated by the Stanislaus County refuse ordinance (Chapters 9.02, 9.04, 9.08, 9.09, 9.10 and 9.12). Noise not covered by the Stanislaus County refuse ordinance is not exempted from the requirements of this chapter.

H. Agricultural activity, as such term is defined in Section 9.32.010(B), and any operation, facility or appurtenances thereof, that are conducted or maintained on agricultural lands for commercial purposes in a manner consistent with proper and accepted customs and standards as established and followed by similar agricultural operations in Stanislaus County.

I. Federal or State Preempted Activities. This chapter shall not apply to any activity to the extent regulation thereof has been preempted by state or federal law.

J. Public Entity or Public Utility Activity. This chapter shall not apply to construction or maintenance activities performed by or at the direction of any public entity or public utility.

K. Residential Maintenance Activity. Noise associated with the maintenance of residential property, including, but not limited to, the operation of lawnmowers, leaf blowers, etc., provided such activity occurs between the hours of seven a.m. and ten p.m. (Ord. CS 1070 §2, 2010).

10.46.090 Waiver.

A. Application. The property owner may request a permit for a waiver from any provision of this chapter.

1. The application for a waiver shall be filed with the department of planning and community development for presentation to the planning commission in writing, on a form prescribed by the director and shall be signed by the owner or authorized agent.

2. The application shall include the information deemed necessary by the director, including, but not limited to:

a. The nature and location of the noise source for which such application is made;

b. The reason for which the waiver is requested, including the hardship that will result to the applicant, or the public if the permit of waiver is not granted;

c. The level of noise that will occur during the period of the waiver;

d. The section or sections of this chapter for which the waiver shall apply;

e. A description of interim noise control measures to be taken for the applicant to minimize noise and the impacts of such noise control measures; and

f. A specific schedule of the noise control measures that shall be taken to bring the source into compliance with this chapter within a reasonable time.

B. A filing fee, in such amount as may be fixed from time to time by resolution of the board of supervisors, shall be paid at the time the application is filed.

C. Notice. The director shall give notice of the request for waiver to all the surrounding properties that would be impacted by the exception, for example, those properties that would experience a noise level at their property line that exceeds the standards as set forth in this chapter.

D. Standard for Issuance of Waiver. A permit to allow a waiver from the provisions contained in all or a portion of this chapter may be issued by the planning commission if the commission determines that:

1. Noise levels occurring during the period of the waiver will not constitute a danger to public health;

2. Compliance with the ordinance would impose an unreasonable hardship on the applicant without equal or greater benefits to the public; and

3. Strict compliance would be unreasonable due to the circumstances of the requested exception.

E. Factors considered for all requests for waiver, other than construction or special events, shall include, but not be limited to, the following:

1. Conformance with the intent of this chapter and general plan policies;
2. Uses of property and existence of sensitive receptors within the area affected by sound;
3. The ability of the applicant to apply the best practical noise control measures;
4. Age and useful life of the existing sound source;
5. The time of the day or night the waiver or waivers will occur;
6. The duration of the waiver; and
7. The general public interest, welfare and safety.

F. Within thirty days of receipt of a completed application, the director shall refer the request directly to the planning commission for action at the next available board meeting. The planning commission may impose reasonable conditions that minimize the public detriment and may include, but are not limited to, restrictions on sound level, sound duration and operating hours, an approved method of achieving compliance and a time schedule for its implementation.

G. Where a request for waiver is associated with a discretionary permit, the waiver shall be processed concurrently with the discretionary permit. In which case the planning commission shall be the approving authority for the exception. The planning commission must consider those factors identified above. The planning commission shall either: (1) approve or conditionally approve such request in whole or in part; or (2) deny the request. The planning commission may impose reasonable conditions that minimize the public detriment and may include, but are not limited to, restrictions on sound level, sound duration and operating hours, an approved method of achieving compliance and a time schedule for its implementation.

H. Where a waiver has been approved by the planning commission and verified complaints are received related to the waiver the commission has the authority to amend, condition or revoke the waiver, as the commission deems necessary so as to secure the purpose of this chapter.

I. Any person aggrieved by the decision of the planning commission may appeal to the board of supervisors by filing written notice of appeal with the director within ten days of the decision. The board of supervisors' decision shall be final and shall be based upon the considerations set forth in this section. All appeals shall be accompanied by an appeal fee as established from time to time by resolution of the board of supervisors. (Ord. CS 1070 §2, 2010).

10.46.100 Enforcement.

Stanislaus County sheriff officers shall have the primary responsibility for enforcement of this chapter. Violations may be prosecuted as described in Section 10.46.120 of this chapter, but nothing in this chapter shall prevent the sheriff from engaging in efforts to obtain voluntary compliance by means of warnings, notices, educational programs or any other means. (Ord. CS 1070 §2, 2010).

10.46.110 Duty to cooperate.

No person shall refuse to cooperate with, or obstruct, the enforcement officials identified herein when they are engaged in the process of enforcing the provisions of this chapter. This duty to cooperate may require a person to extinguish a sound source so that it can be determined whether sound emanating from the source violates the provisions of this chapter. (Ord. CS 1070 §2, 2010).

10.46.120 Violations and penalties.

A. Any person violating provisions of this chapter is guilty of an infraction, and, upon conviction thereof, shall be punished as an infraction as set forth in Stanislaus County Code Section 1.36.020. Every violation of any provision of this chapter shall be construed as a separate offense for each day during which such violation continues and shall be punishable as provided in this section.

B. All violations of this chapter constitute a public nuisance which, in addition to or in lieu of the penalty provisions set forth above, may be abated in any manner set forth in the Stanislaus County Code, including Chapter 2.92, which may include, but is not limited to, abatement or issuance of administrative citations. (Ord. CS 1070 §2, 2010).