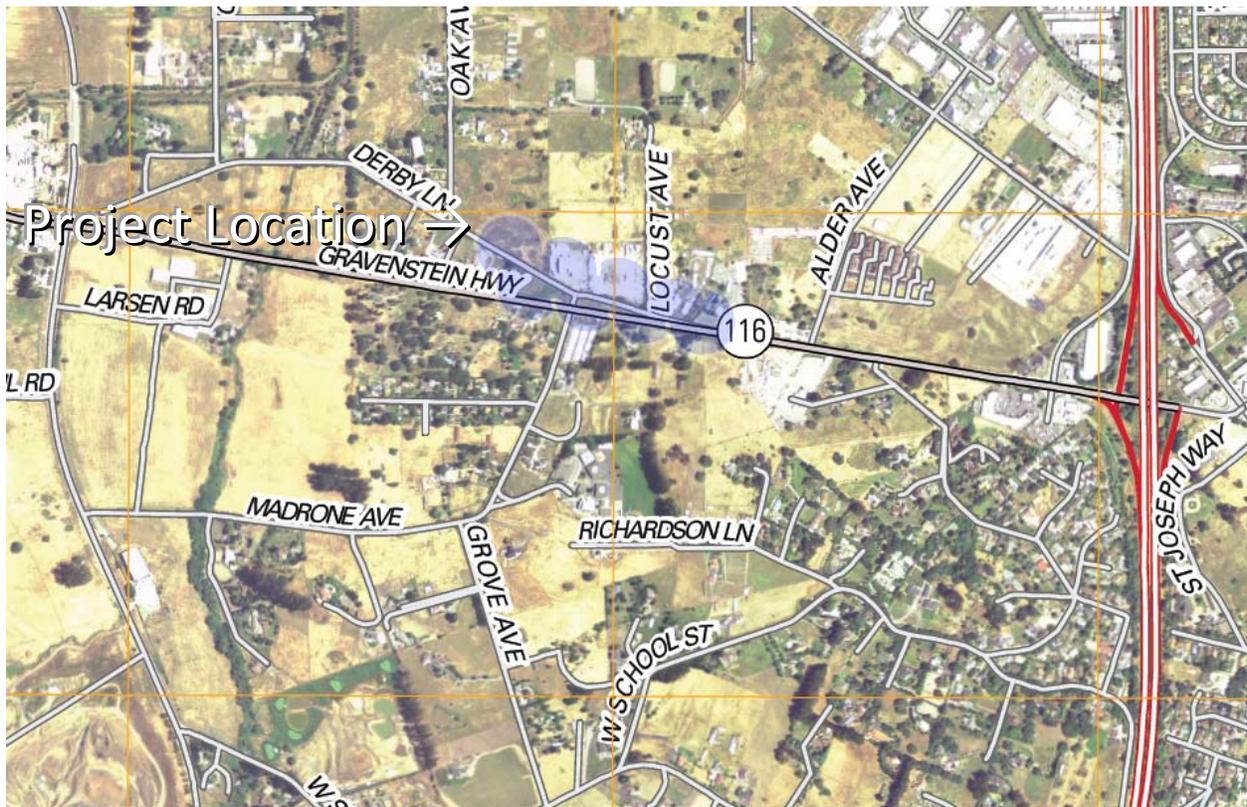


Madrone Channelization Project

SONOMA COUNTY, CALIFORNIA
DISTRICT 4 – SON – 116 (PM 34.09/34.47)
Caltrans Expenditure Authorization 1G2401
SCH#2012042005

Recirculated Initial Study with Mitigated Negative Declaration



Prepared by the

State of California Department of Transportation



May 2012



Figure 1. Existing condition

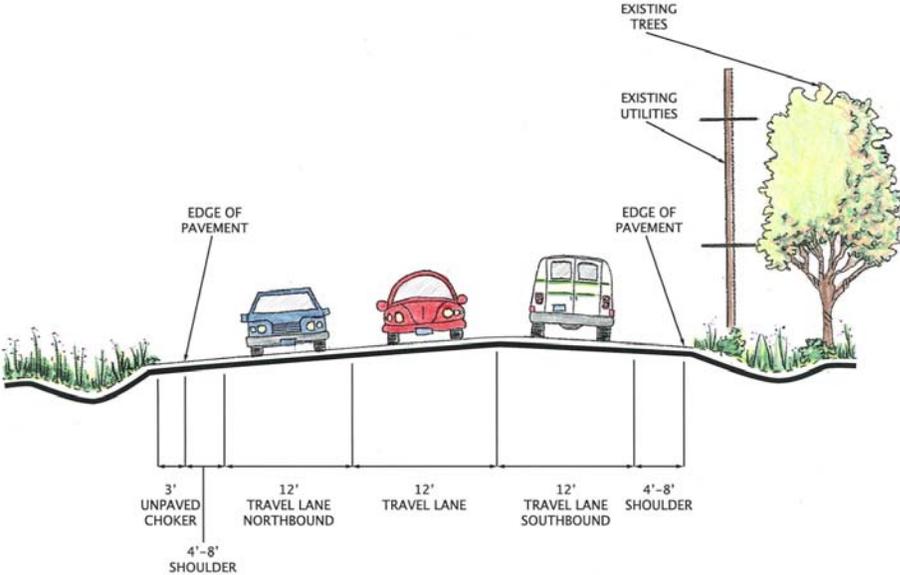


Figure 2. Typical cross-section, post construction (no scale)

GENERAL INFORMATION ABOUT THIS DOCUMENT

04-SON-116

34.09/34.47

1G2401

Dist.-Co.-Rte.

P.M/P.M.

E.A.

Project Title:	Madrone Avenue Left-Turn Channelization Project
Lead agency name and address:	California Department of Transportation 111 Grand Avenue, Oakland, CA 94612
Contact person and phone number:	Lilian Acorda, Project Manager (510) 286-4927
Project Location:	Cotati, Sonoma County
General plan description:	Transportation
Zoning:	Transportation
Other public agencies whose approval is required (e.g. permits, financial approval, or participation agreements):	Section 7 incidental take statement from the US Fish and Wildlife Service Section 2081 incidental take permit from California Department of Fish and Game for California Tiger Salamander Clean Water Act 404 Permit from the US Army Corps of Engineers Clean Water Act 401 Water Quality Certification from the Regional Water Quality Control Board

Additional copies of this document, as well as of the technical studies we relied on in preparing it, are available for review at the district office, 111 Grand Ave., Oakland, CA 94612.

Hard copies or compact disks of the document are available by writing to Caltrans District 4, Attn: V. Shearer, PO Box 23660 MS 8B, Oakland, CA 94623-0660; electronic copies are online at <http://www.dot.ca.gov/dist4/envdocs.htm>.

To obtain a copy in Braille, in large print, on computer disk, or on audiocassette, please contact: Caltrans, Attn: Valerie Shearer at the address above, call at 510-286-5594, or use the California Relay Service TTY number, 711.

A. Project Information

1. Location

Caltrans proposes a project on SR-116 (Old Gravenstein Highway) in the City of Cotati and within unincorporated Sonoma County (PM 34.09 to PM 34.47) at the intersection with Madrone Ave. to install left-turn pockets in both directions from SR-116 to Madrone Ave. The project will widen the roadway, extend existing cross-culverts beneath the roadway, modify part of the existing unlined drainage gutter, and install a new longitudinal pipe.

2. Project goal

The purpose of the project is to reduce congestion and improve safety. The rate of fatal accidents is higher than the state average for highway intersections of this type.

3. Project Description

The existing roadway will be widened from a maximum of 36 feet to a maximum of 46 feet in order to accommodate one left turn pocket in each direction at the intersection of SR-116 and Madrone Ave. See Figure 2, page 2. The widened roadway will consist of one additional 12-foot lane, and a maximum of 5' additional shoulder, plus a "choker" (an unpaved 3-foot shoulder) on the north side, for a total maximum width of 20 feet. No widening is proposed for the south side. In order for the cross slope of the widened roadway to match the existing one, the existing alignment is maintained. Each new turn pocket will be 350 feet long. The connection between the existing and replacement edge of shoulder and travel way, called a "conform", will be made at the east and west ends of the project area and at the Madrone Avenue intersection in both directions, 45 feet from the edge of pavement on the north side of the mainline and 22 feet on the south side.

To accommodate widening, the ditches alongside the roadway will be filled and then recreated at the edge of the widened roadway. Culverts running under the roadway will be extended by securely connecting a pipe of similar size and material to the exposed and prepared end of the existing pipe, which will extend to the daylight edge of the proposed embankment or to additional drainage system(s). One new lateral pipe will be constructed. All proposed new drainage inlets (DIs) will tie into existing drainage facilities, cross culverts, or other existing offsite drainage features.

Two 15-foot wide biofiltration strips sufficient to treat stormwater runoff from 0.5 acres of additional impervious area will be constructed within the cut/fill line on either side of the Madrone intersection from STA38+00 to 39+80 Left and STA 40+30 to 44+00 Left. For biostrip construction, compost will be incorporated two to four inches into native soil, and then the soil surface hydroseeded with an appropriate seed mixture.

All construction spoils and debris will be removed and disposed of properly. Permanent erosion control will be installed as determined necessary by the Caltrans contract plans and permit requirements.

There will be a designated staging area of 0.08 acres (temporary impact) at the north-west side of Madrone Avenue.

The project will include the addition of 0.36 acres of impervious pavement. Permanent effects will amount to approximately 0.62 acres (including tree removal impact) beyond areas currently paved, currently occupied by a drainage structure, etc.

All Caltrans right-of-way within the project area not used for project construction will be flagged as an Environmentally Sensitive Area (ESA). ESA fencing will be installed along the perimeters of all sensitive habitat to prevent encroachment of construction vehicles and personnel.

One oak tree and one pine tree that are located approximately 17.5 and 24 feet, respectively, to the north from the existing edge of the pavement, at station 36+20+/- and 35+80+/- respectively, will be cut to flush with the existing surface. The impact area associated with tree removal is about 300 sq ft, (0.007 acres).

Three oak trees will be planted inside of the staging area to replace the lost oak. Caltrans will also plant or reseed all slopes affected by the proposed project with native grasses and shrubs to stabilize the slopes against erosion. Following construction, Caltrans will install native (and non-native if appropriate, e.g., landscaped areas) plant species appropriate for the location of the disturbed area.

Drainage details

The project will require up to 15 feet by approximately 270 feet of fill to be placed in the existing 30-foot-wide (4,060 square feet) unlined drainage ditch on the northern side of the roadway to accommodate widening. The ditch, on the north side of SR 116 and west of Madrone Avenue, will be recreated at the edge of the unpaved area at the edge of the roadway, up to 8 feet away from its original location. It will be a triangular unlined channel with side slopes at 4:1 on the roadside and at 2:1 before the catch point (point where the slope meets the existing ground), and about 12 feet wide and 2 feet deep.

The project will construct two drainage inlets (DIs) linked by a longitudinal pipe along the north side of the roadway. Excavation for each will be 4 feet in length, by 4 feet in width and 4 feet deep (32 square feet). A second longitudinal pipe will link to the second of the two DIs. The second pipe's outflow, west of the Madrone Avenue intersection, is equipped with a dissipater and rock slope protection (RSP) pad. Excavation for the associated RSP pad will be approximately 9 feet in length by 3 feet (27 square feet).

Four existing corrugated metal pipe (CMP) cross-culverts will be extended to accommodate the widening. The culverts will require a trench for placement, and two existing headwalls will be removed, with the new outfalls falling within the existing unlined ditch on the northern side. The excavation area dimensions for the new DI replacing the existing headwall, and new pipe extension to the west of the intersection of Madrone Avenue and SR 116, will be approximately 6 feet by 4 feet (24 square feet) and 1.5 feet by 30 feet (45 square feet) respectively.

Two additional DIs are proposed for extending the culverts, of which one will be used to connect the culvert extension to the existing CMP. The excavation for the new pipe extension at the intersection of SR 116 and Madrone Avenue will be approximately 2.5 feet by 18 feet (45 square feet). The new pipe extension and the new headwall, located east of the intersection of Madrone Avenue with SR 116 and

west of where Derby Lane enters SR 116, will require an excavation area of approximately 1.5 feet by 13 feet for the pipe and 7 feet by 2 feet for the headwall (47 square feet total). Four additional DIs will be installed along this extension.

Pavement-construction details

To construct the widened pavement section, the existing roadway will be saw cut along the fog line along the entire north side of this roadway section. Excavation depth for the new pavement section will be up to approximately three feet from the proposed finished roadway surface. The structural section is then built up by placing pavement structural base layers (combinations of graded rock and sand) followed by asphalt concrete (AC). Each layer will be compacted after being applied up to 0.1' below finished grade. The final asphalt concrete applications are cold-planed for an even join with the existing pavement surface. The choker will be compacted to 90% of maximum strength; small areas of fill in the choker may be required. The project will raise manhole covers to the new finish grade where required in the new widening and in the AC overlay area.

Stage construction and equipment

Construction activities will include placement of K-rail (temporary concrete barriers) along the existing edge of the saw cut roadway. Temporary crash cushions filled with sand will be placed at the ends of the K-rails. The K-rails are intended to provide a safety barrier between the vehicle traffic on SR 116 and the improvement work that will primarily be taking place outside the existing roadway. Activities will also include clearing and grubbing, which typically involve the use of excavators, dozers, and mulchers. A construction staging area will be established within the project boundary, to the northwest from the intersection of Madrone Avenue and SR 116, depicted on Figure 2 as the temporary impact area. There will be exclusionary fencing with an approximate buffer of about five feet from the vegetation/wetland features adjacent to the staging area.

Excavators will be used to dig the trenches needed to construct culverts. Dozers and excavators will likely be used for general grading and contouring. Rollers will be used to compact the soil, and water trucks will supply water used to aid soil compaction and dust control. Dump trucks, graders, and compactors will be used to lay the road aggregate subbase and aggregate base. In the first stage, AC will be placed up to 0.1 foot below finished grade. The second stage of construction will overlay the entire roadway width with AC, for consistency and smooth transition between the old and new pavement. Hauling trucks, pavers and rollers will be used to place and compact the AC. Pavement delineation, such as stripping and "bot dots," will be installed using specialized equipment.

Cold-planing will be used to build the conforms at the eastern and western ends of the project, and the northern and southern intersections of Madrone Avenue.

The majority of the construction work will take place during daylight hours behind the K-rail. However, excavation will occur at night to avoid peak traffic, particularly because one-way traffic control will be required.

A speed limit of 15 miles per hour (mph) in the project area in unpaved areas will be enforced to reduce dust and excessive soil disturbance.

Construction access, staging, storage, and parking areas will be located within the Caltrans right-of-way and outside of any designated ESAs. Access routes and the number and size of staging and work areas will be limited to the minimum necessary to construct the proposed project. Routes and boundaries of roadwork will be clearly marked prior to initiating construction or grading.

All food and food-related trash items will be enclosed in sealed trash containers at the end of each day and removed completely from the site at least once every 3 days. No pets from project personnel will be allowed anywhere in the proposed project work area during construction. All equipment will be maintained such that there will be no leaks of automotive fluids such as gasoline, oils or solvents and a Spill Response Plan will be prepared.

The project will require 70 work days. The construction of the project is scheduled to begin in June 2013.

B. Environmental setting

The proposed project is situated in a low-lying area of east of the California North Coast Range. The geographical region is known as the Santa Rosa Plain and the dominant natural feature of the region is a drainage called the Laguna de Santa Rosa.

The project location is a paved transportation facility: a rural highway with one lane in each direction, intersected by a local street with one lane in each direction. This segment of SR 116 serves as a major connector between Highway 101 to the east and the Sebastopol area and the coastal area to the west. The Madrone Avenue intersection serves as one of the access routes to Thomas Page Elementary School.

The intersection of Old Gravenstein Highway and Madrone Avenue is located in an area that is a combination of rural residential, agricultural, and limited commercial land uses, with the rural residential and commercial uses clustered around Old Gravenstein Highway. The more densely populated and more suburban area of Cotati is about a third of a mile to the east. Visually, the immediate vicinity of the project can be characterized as somewhat urbanized, given the close proximity of a trucking concern and a self-storage facility. See Figure 1, page 2.

The facility is bordered by unpaved areas covered with ruderal vegetation. Existing drainage facilities comprise a combination of buried corrugated metal pipe and unlined drainage ditches.

Lead levels in the shallow soil in the Gravenstein corridor have been raised by human activities, i.e., leaded-fuel emissions, but the average for the corridor is not high enough to make surplus soil a hazardous waste. Regulatory databases do not show any known contaminated sites that could impact the project area.

No historic structures have been identified in the immediate vicinity of the project. No archaeological resources are known to be present.

The project area falls within the Santa Rosa Plain Conservation Strategy Area, and portions of the project area are identified by the Strategy as being within 1.3 miles of known breeding sites of the endangered California Tiger Salamander (CTS) (*Ambystoma californiense*), and within federally-designated Critical

Habitat for the distinct Sonoma population of the CTS. Although most of the project area is mapped by the Strategy as developed and unfit for habitat, some suitable upland dispersal habitat for CTS occurs within the project area in the form of open grassland habitat within the dispersal distance of breeding ponds. It is unlikely that the roadside ditches within or near the project area would be a CTS breeding source because the upland habitat is fragmented by development and roadways, the roadside ditches have not been observed to contain a sufficient amount of water to be considered a suitable breeding pond, and the project area has documented CTS predators, such as raccoons, opossums, and feral cats.

Aquatic resources include roadside ditches.

Consistency with existing zoning, plans, and other applicable land use controls

The Santa Rosa Plain Conservation Strategy is a comprehensive plan created and implemented by a consortium of local, state, and federal agencies¹ to guide long-term conservation sufficient to mitigate potential adverse effects due to future development within the Santa Rosa Plain on a suite of plant and wildlife species protected under the Federal Endangered Species Act, in addition to habitat for the federally listed California tiger salamander and for four federally endangered plant species. The proposed project is located adjacent to the conservation area boundary established by the Santa Rosa Plain Conservation Strategy. Most of the project area is mapped by the Strategy as “developed”. The project proposes compensation for affects to protected resources and minimization measures incorporated into construction that are consistent with the Strategy.

¹ The US Fish and Wildlife Service, the California Department of Fish and Game, the US Army Corps of Engineers, the US Environmental Protection Agency, the North Coast Regional Water Quality Control Board, the County of Sonoma , the Cities of Cotati, Rohnert Park, Santa Rosa, and Windsor, the Laguna de Santa Rosa Foundation, and representatives of the local community.

C. ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED

The environmental factors checked below would be potentially affected by this project. Please see the checklist beginning on page 9 for additional information.

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

D. DETERMINATION

On the basis of this initial evaluation:

<input type="checkbox"/>	I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.
<input checked="" type="checkbox"/>	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.
<input type="checkbox"/>	I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.
<input type="checkbox"/>	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.
<input type="checkbox"/>	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: <i>Hardeep Takhar</i>	Date: <i>6-11-12</i>
Printed Name: <i>HARDEEP TAKHAR</i>	For: <i>HS</i>

Mitigated Negative Declaration

Pursuant to: Division 13, Public Resources Code

Project Description

The California Department of Transportation (Department) proposes to improve safety at the intersection of Madrone Ave. and State Route 116 (Old Gravenstein Highway) by including a left-turn lane in each direction on Old Gravenstein Highway. The project will widen the pavement several feet northwards towards Derby Lane to make the needed room.

Determination

This proposed Mitigated Negative Declaration (MND) is included to give notice to interested agencies and the public that it is the Department's intent to adopt an MND for this project. This does not mean that the Department's decision regarding the project is final. This MND is subject to modification based on comments received by interested agencies and the public.

An Initial Study has been prepared by the Department, District 4. On the basis of this study, it is determined that the proposed action with the incorporation of the identified mitigation measures will not have a significant effect on the environment for the following reasons:

The proposed action will not have a significant effect on the endangered California Tiger Salamander because the following mitigation measures will be taken:

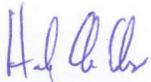
- Prior to the start of construction activities, the biologist(s) will survey the project area for California Tiger Salamanders (CTS). If CTS is found, the designated biologist shall contact the pertinent regulatory agencies to determine if relocating the salamander is appropriate. If the agencies approve relocation of animals, the biologist shall be allowed sufficient time to move the salamander from the work site before construction activities begin.
- A qualified biological monitor will be onsite each day during construction, and during initial site grading of development sites where CTS presence is inferred. The designated biologist(s) will be active on the project until such time as all construction activities that may result in take of CTS are complete. Before the start of work each morning, the biological monitor will check for animals under any equipment such as vehicles and stored pipes. At the end of each work day, the contractor shall create an escape ramp at each end of any open trench greater than one foot deep, to allow any animals that may have become entrapped in the trench to climb out overnight.
- Initial grading and clearing will be conducted between April 15 and October 31, outside the Central and Northern California rainy season, and depending on the level of rainfall and/or site conditions. This time period is when drainages would be either dry or at their lowest water level to minimize potential impacts to species that use the drainage habitats such as migrating California tiger salamander.

Any effects to natural communities are minimal and are offset by re-establishment of the affected environmental values within the project area, or by purchase of credits at a mitigation bank or through contributions to a similar institution. Any possible contributions to cumulative impacts are minimized by the application of Caltrans BMPs and restrictions on construction to minimize impacts. Tree loss is compensated by replanting and maintaining replacement trees in the project area.

The Department has prepared an Initial Study for this project, and following public review, has determined from this study that the proposed project would not have a significant effect on the environment for the following reasons: see section E., below.

The proposed project would have no effect on traffic/transportation, recreation, public services, growth, agriculture, air quality, cultural resources, geology, greenhouse gasses, hazardous waste, land use, mineral resources, or noise.

In addition, the proposed project would have no significant effect on utilities, or on visual, biological, aquatic, or hydrologic resources.



Hardeep Takhar
Deputy District Director (Acting)
District 4
California Department of Transportation



Date

E. CEQA Environmental Checklist

This checklist identifies physical, biological, social and economic factors that might be affected by the proposed project. In many cases, background studies performed in connection with the projects indicate no impacts. A NO IMPACT answer in the last column reflects this determination. Where there is a need for clarifying discussion, the discussion is included either following the applicable section of the checklist or is within the body of the environmental document itself. The words "significant" and "significance" used throughout the following checklist are related to CEQA, not NEPA, impacts. The questions in this form are intended to encourage the thoughtful assessment of impacts and do not represent thresholds of significance.

	Potentially Significant Impact	Less Than Significant with Mitigation	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 checked="" type="checkbox"/>	<input type="checkbox"/>
c) Substantially degrade the existing visual character or quality of the site and its surroundings?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" 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"/>

The intersection of Old Gravenstein Highway and Madrone Avenue is located in an area that is a combination of rural residential, agricultural, and limited commercial land uses. The facility is bordered by unpaved areas covered with ruderal vegetation. The immediate vicinity of the project can be characterized as somewhat urbanized, given the close proximity of a trucking concern and a self-storage facility. Existing drainage facilities comprise a combination of buried corrugated metal pipe and unlined drainage ditches.

A sparsely branched oak with a small canopy will be removed, and a ponderosa pine on adjoining private land will be heavily pruned. The trees contribute little visually to the area. As there are no sensitive visual elements in the immediate vicinity of the proposed widening for left turn lanes, and only a relatively small loss of open ground in an area with a relative abundance of unpaved area despite its urbanizing character, there is no visual impact.

II. AGRICULTURE AND FOREST RESOURCES: In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Dept. of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state's inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment Project. and the forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board. Would the project:

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" 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 forest land or conversion of forest land 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 forest land to non-forest use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

No agricultural lands are affected by the project.

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 type="checkbox"/>	<input checked="" type="checkbox"/>
b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" 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 type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Expose sensitive receptors to substantial pollutant concentrations?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Create objectionable odors affecting a substantial number of people?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

The project will not increase traffic capacity and so will not affect air quality.

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"/>
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	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
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 US Fish and Wildlife Service?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" 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 checked="" type="checkbox"/>	<input 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 type="checkbox"/>	<input type="checkbox"/>	<input checked="" 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 type="checkbox"/>	<input checked="" 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 checked="" type="checkbox"/>	<input type="checkbox"/>

Biological observations.

Caltrans biologists and project engineers held a series of meetings during which biological resource maps and project design maps were compared. The team then focused on determining a means of developing project engineering designs or construction approaches that would reduce impacts to the maximum extent practicable. The outcome of the meetings was an overall reduction of the proposed project footprint or area of impact within special-status species habitat or in sensitive habitat types. As a result, construction of new pavement is restricted to the north side of the roadway to avoid additional impacts to biological resources.

On November 14, 15, and 22, 2011, Caltrans informally consulted (via email) with the U.S. Fish and Wildlife Service (USFWS) regarding potential effects of the Madrone Avenue left-turn channelization. The proposed project was introduced to Mr. John Cleckler, USFWS, and the general approach taken to date to conduct the analysis was discussed. Mr. Cleckler directed Caltrans to use the 2007 programmatic opinion for the Santa Rosa Plain Conservation Strategy (SRPCS) as guidance (USFWS 2007). In addition, Stephanie Buss, CDFG Environmental Scientist, conducted a site visit with Caltrans biologists on November 8, 2011. The group observed numerous small animal burrows within the project area, and standing water outside the project area in portions of the ditch adjacent to Derby Road. Based on these observations and the recorded occurrence of an adult California Tiger Salamander (CTS) on the north side of Derby Road, Ms. Buss concluded that CTS could be present.

On January 26, 2012, Caltrans biologists met Mr. Cleckler and Ms. Buss at the project site further to discuss the potential for the roadside ditches within the project area to provide suitable CTS breeding habitat. On January 30, 2012, Dr. Jeff Wilkinson, H.T. Harvey & Associates Senior herpetologist, conducted an assessment of the roadside ditches for use by breeding California tiger salamanders. After considering the best available scientific data and the site conditions, Dr. Wilkinson concluded that the roadside ditches do not provide viable CTS breeding habitat (based on ponding duration and depth).

Impacts to Wetlands, Waters of the United States, and CTS Upland Habitat.

The project will result in permanent loss of some areas determined to provide upland habitat for CTS. However, the project will not result in the fragmentation of existing critical habitat and will not modify or destroy areas determined to be CTS critical habitat. The project will also result in the loss of a small amount of potential wetlands and 'Waters' as defined under the Clean Water Act.

Biological Resource	Temporary Impacts(acres)	Permanent Impacts (acres)
Roadside Ditch/Wet Roadside Ditch (Wetlands)	0.000	0.007
Roadside Ditches (Waters)	0.020	0.000
California Tiger Salamander (non-breeding upland habitat)	0.077	0.620

Compensation for impacts will include contributions to approved wetland and CTS compensation banks in the Santa Rosa Plain region, including Hale Mitigation Bank. Roadside ditches will be relocated where possible in kind at a 1:1 ratio within the project area. A plan will be prepared and will include a description of the proposed off-site compensation.

Caltrans proposes to compensate for permanent effects to potential CTS upland habitat and wetlands through purchase of 1.24 acres at an agency approved mitigation bank. 0.007 acres (approx. 150 square feet) of ditch wetland will not be replaced by new unlined ditch. To compensate, wetland credits will also be purchased, if it is found that the CTS bank purchase does not also cover wetlands compensation.

Measures to prevent impacts to biological resources.

To the extent practicable, shrub and tree trimming and/or removal activities associated with the proposed project will be conducted outside the nesting season (generally between February 1 and August 31) for migratory birds. If shrub and tree removal is scheduled to occur during the nesting season, a qualified wildlife biologist, familiar with the nesting bird species and habitats in the project area, will conduct preconstruction surveys for nesting birds within suitable nesting habitat in the project area. The nesting bird surveys should be conducted within at least 1 week before initiation of construction activities within those habitats, and during construction throughout the nesting season. If no active nests are detected during surveys, construction may proceed. If active nests are detected then a no-disturbance buffer will be established around active nests identified during preconstruction surveys. The extent of the no-disturbance buffers will be determined by a wildlife biologist in coordination with California Department of Fish and Game (CDFG) and will depend on the specific species to be affected, the level of noise or construction disturbance, line of sight between the nest and the disturbance, ambient levels of noise and other disturbances, and other topographical or artificial barriers. Within this buffer, all non-essential construction activities (e.g., equipment storage, meetings) should be avoided; however, construction activities can proceed if the biological monitor determines that nesting birds are not likely to abandon the nest during construction.

Impacts to CTS

Due to the project's proximity to a recorded occurrence and the presence of numerous small animal burrows, construction activities have the potential to kill a small number of CTS adults. CTS are also vulnerable to being crushed or entombed if construction activities damage burrows where they are aestivating and the harm might never be detected since it would happen

underground.

Mitigation measures are available to reduce this impact to a level of Less than Significant.

- Prior to the start of construction activities, the biologist(s) will survey the project area for CTS. If CTS is found, the designated biologist shall contact the USFWS and CDFG to determine if relocating the salamander is appropriate. If the USFWS and CDFG approve relocation of animals, the biologist shall be allowed sufficient time to move the salamander from the work site before construction activities begin.
- A qualified biological monitor will be onsite each day during construction, and during initial site grading of development sites where CTS presence is inferred. The designated biologist(s) will be active on the project until such time as all construction activities that may result in take of CTS are complete. Before the start of work each morning, the biological monitor will check for animals under any equipment such as vehicles and stored pipes. At the end of each work day, the contractor shall create an escape ramp at each end of any open trench greater than one foot deep, to allow any animals that may have become entrapped in the trench to climb out overnight.
- Initial grading and clearing will be conducted between April 15 and October 31, outside the Central and Northern California rainy season, and depending on the level of rainfall and/or site conditions. This time period is when drainages would be either dry or at their lowest water level to minimize potential impacts to species that use the drainage habitats such as migrating California tiger salamander.

The minimal direct effects combined with the implementation of avoidance, minimization and mitigation measures will ensure that the project does not contribute to cumulatively-considerable effects to CTS.

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

No historic structures have been identified in the immediate vicinity of the project. No archaeological resources are known to be present, and as the project is constructed on areas that have been previously disturbed or are man-made fill, there is little risk of damage to unknown archaeological resources.

Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
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VI. GEOLOGY AND SOILS: Would the project:

- | | | | | |
|--|--------------------------|--------------------------|--------------------------|-------------------------------------|
| a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving: | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
|--|--------------------------|--------------------------|--------------------------|-------------------------------------|

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 type="checkbox"/>	<input checked="" type="checkbox"/>
ii) Strong seismic ground shaking?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
iii) Seismic-related ground failure, including liquefaction?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
iv) Landslides?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Result in substantial soil erosion or the loss of topsoil?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" 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 type="checkbox"/>	<input checked="" 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"/>

The project contains no components which would contribute to soil or slope instability. All slopes will be stabilized using standard Caltrans erosion-control BMPs.

VII. GREENHOUSE GAS EMISSIONS: Would the project:

a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	While Caltrans has included this good faith effort in order to provide the public and decision-makers as much information as possible about the 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. See http://www.dot.ca.gov/hq/tpp/offices/ogm/key_reports_files/State_Wide_Strategy/Caltrans_Climate_Action_Program.pdf			
b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	Potentially Significant Impact	Less Than Significant with Mitigation	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 type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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- | | | | | |
|--|--------------------------|--------------------------|--------------------------|-------------------------------------|
| 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 type="checkbox"/> | <input type="checkbox"/> | <input checked="" 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 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 type="checkbox"/> | <input checked="" 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"/> |

Previous investigations have indicated the presence of aerially deposited lead next to the edge of pavement in this area, but the project involves little excavation of existing unpaved soil. Soils at a distance from the roadway, at the location of the new ditch, would not contain lead in concentrations that would pose a hazard or trigger regulatory action. Thermoplastic striping would be removed and disposed of in compliance with standard Caltrans procedures.

Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
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IX. HYDROLOGY AND WATER QUALITY: Would the project:

- | | | | | |
|---|--------------------------|--------------------------|--------------------------|-------------------------------------|
| a) Violate any water quality standards or waste discharge requirements? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" 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 type="checkbox"/> | <input type="checkbox"/> | <input checked="" 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 type="checkbox"/> | <input checked="" 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 type="checkbox"/> | <input type="checkbox"/> | <input checked="" 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 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"/> |

The project will add 0.62 acres of impervious area, which includes 0.36 acres of new pavement and 0.26 acres of reworked pavement. The projected total disturbed soil area is 0.95 acres. Additional treatment for increased runoff from this increased impervious area is provided by the biostrips which are a component of this project. Sediment from construction will be minimized by the use of Caltrans's construction best management practices for stormwater.

Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
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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 type="checkbox"/> | <input checked="" 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"/> |

The project proposes compensation for effects to protected resources and minimization measures incorporated into construction that are consistent with the Santa Rosa Plain Conservation Strategy.

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?

There are no documented mineral resources within the project area.

XII. NOISE: Would the project result in:

- 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?
- b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?
- c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?
- d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?
- 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?
-) 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?

The project does not increase traffic capacity and should improve congestion at the intersection. As such, it would not introduce new noise impacts or increase noise levels. Construction noise would be temporary and would be within acceptable levels for construction activity as specified by local plans.

Potentially Significant Impact	Less Than Significant with Mitigation	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)?
- b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?
- c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?

No additional residential or commercial right-of-way is required to construct this project. As such, no displacements will occur.

XIV. PUBLIC SERVICES:

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?	<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"/>

Caltrans will prepare a Traffic Management Plan that will ensure accessibility through the project area for vehicles associated with essential services, and to the nearby school. Project construction should yield a benefit to public services by reducing congestion at the intersection.

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
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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"/> |

The project does not include any recreational areas.

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 type="checkbox"/> | <input checked="" 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 type="checkbox"/> | <input checked="" type="checkbox"/> |
| c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results 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 type="checkbox"/> | <input checked="" type="checkbox"/> |
| e) Result in inadequate emergency access? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" 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 type="checkbox"/> | <input checked="" type="checkbox"/> |

To maintain the flow of traffic during construction, Caltrans will prepare a Traffic Management Plan that will ensure accessibility through the project area for vehicles associated with essential services, and to the nearby school. Project construction should yield a benefit to public services by reducing congestion at the intersection.

	Potentially Significant Impact	Less Than Significant with Mitigation	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 type="checkbox"/>	<input checked="" 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 type="checkbox"/>	<input checked="" type="checkbox"/>
g) Comply with federal, state, and local statutes and regulations related to solid waste?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

The project proposes alterations to existing drainage facilities and will add 0.5 acres of additional impervious area. Additional treatment for increased runoff from this new impervious area is provided by the biostrips which are a component of this project. The total volume of additional runoff flowing away from the project area will not cause increases that will result in impacts for the connecting drainage systems, and improvements to local drainage will probably reduce local flooding.

Potentially Significant Impact	Less Than Significant with Mitigation	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, substantially reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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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 type="checkbox"/>	<input checked="" type="checkbox"/>
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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 type="checkbox"/>	<input checked="" type="checkbox"/>
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Caltrans's application of best management practices; the re-establishment of ditches and vegetation in kind, and at increased ratios for oaks; incorporation of minimization measures into project construction; and compensation for losses to protected natural communities ensure that there are no residual impacts from this project that can contribute to cumulative impacts.

Appendix A: References

Madrone Channelization Project Natural Environment Survey. Caltrans District 4 Office of Biological Studies and Permits, Oakland, CA, March 2012

Sonoma 116 Left Turn Channelization Visual Impact Analysis, Caltrans District 4 Office of Landscape Architecture, February 2012.

Section 106 Review of the Madrone Ave. Safety Project on HWY 116, PM 2.09/34.47 in Sonoma County, California. Caltrans District 4 Office of Cultural Studies, August 2010.

Section 106 Reassessment/Revalidation and CEQA/5024 Review of Madrone Road and SON-116 (PM 34.09/34.47) Left-Turn Channelization, Unincorporated Sonoma County. Caltrans District 4 Office of Cultural Studies, December 2011.

Santa Rosa Plain Conservation Strategy. U.S. Fish and Wildlife Service. February 28, 2012.
<http://www.fws.gov/sacramento/ES/Recovery-Planning/Santa-Rosa/es_recovery_santa-rosa-strategy.htm>

Water Quality Study. Caltrans Office of Environmental Engineering, January, 2010, revised March 2012.

Chris Wilson, "Re: Madrone Channelization", e-mail to Oliver Iberien. August 5, 2010.

Glenn Kinoshita, "Comments from the Air/Noise/Energy Branch". Memorandum, Caltrans Office of Environmental Engineering, November 8, 2011

Chris Wilson, "Comments from the Hazardous Waste Branch". Memorandum, Caltrans Office of Environmental Engineering, December 27, 2011

Chris Wilson, "Comments from the Hazardous Waste Branch". Memorandum, Caltrans Office of Environmental Engineering, June 6, 2011

Chris Wilson, "Comments from the Hazardous Waste Branch". Memorandum, Caltrans Office of Environmental Engineering, January 3, 2010

Appendix B: The March 29, 2012 Notice of Intent to Adopt a Negative Declaration

<p><u>PUBLIC NOTICE</u> Notice of comment period until April 30, 2012 for the Initial Study for the Madrone Ave. Left-Turn Channelization Project</p>
<p>Caltrans plans to improve safety at the intersection of Madrone Ave. and State Route 116 (Old Gravenstein Highway) by including a left-turn lane in each direction on Old Gravenstein Highway. The project will widen the pavement several feet northwards towards Derby Lane to make the needed room. In doing so, it will extend drainage culverts to the edge of the new pavement. Drainage ditches that the project will fill will be replaced with new ditches and culverts.</p> <p>The California Environmental Quality Act requires that Caltrans disclose the projected environmental impacts of this project, and allow the public a set period of time in which to comment on the Initial Study (IS) that Caltrans has prepared to document its assessment.</p> <p>Our assessment is that the project will result in small impacts to marginal habitat for the endangered California Tiger Salamander; to wetlands, in the form of ditches; and to water quality, due to a small increase in paved surface area. These impacts are not considered significant, but Caltrans will minimize them by providing for replacement habitat in Sonoma County, and by incorporating stormwater runoff treatment on the project site. The project will also provide three replacement oak trees on the project site for a tree that will be removed.</p> <p>On the basis of the Initial Study, Caltrans intends to adopt a negative declaration under CEQA. The IS is available for download at http://www.dot.ca.gov/dist4/envdocs.htm. To request a print copy, or an open-house presentation of the project by Caltrans staff, write to Caltrans District 4, Attn: V. Shearer, PO Box 23660 MS 8B, Oakland, CA 94623-0660.</p> <p> The public may send comments about Caltrans projects at any time, but the official comment period is your opportunity to have your comments addressed as part of the legally mandated environmental-review process. Caltrans will respond to comments in the final version of the IS. Email your comments to the email address indicated in the IS, or send postal mail to the address given above. Comments must be received by 5:00 p.m. on April 30, 2012.</p> <p>2576988 - Pub. Mar. 31, 2012 1ti.</p>

This is the advertisement for the previous version of this document. It ran in the in the Santa Rosa Press-Democrat on March 31, 2012.

Appendix C: List of Preparers

Darcangelo, Jennifer	Caltrans District 4 Office of Cultural Studies
Green, Kirsten	Caltrans District 4 Office of Cultural Studies
Iberien, Oliver	Caltrans District 4 Office of Environmental Analysis
Kinoshita, Glenn	Caltrans District 4 Office of Environmental Engineering
Lindsay, Susan	Caltrans District 4 Office of Landscape Architecture
Martinez, Fernando	Caltrans District 04 Office of Biological Studies and Permits
Martono, Wilfung	Caltrans District 4 Office of Environmental Engineering
Massarweh, Anthony	Caltrans District 4 Office of Landscape Architecture
Mc, Kee, Lissa	Caltrans District 4 Office of Cultural Studies
Montero, Carie	Caltrans District 4 Office of Cultural Studies
Uribe, Ana	Caltrans District 4 Office of Environmental Engineering
Wilson, Christopher	Caltrans District 4 Office of Environmental Engineering

Appendix D: Title VI Statement

Appendix E: Response to Comments



Christine Penney

christinepenney@att.net

04/21/2012 10:04 PM

To <valerie_shearer@dot.ca.gov>

cc

Subject Madrone Ave. Left-Turn Channelization Project in Sonoma County

I recently received a postcard in my mailbox (probably meant for our landlord - I'll pass it on to him) concerning the notice of your intent to add left turn lanes on Old Gravenstein Hwy in Cotati, by Madrone.

I am one of the residents living within very close proximity to where this project is intended to take place. Whereas I understand the crucial need to make Madrone and Gravenstein safer, especially following 2 fatalities, I fail to understand how 2 left turn lanes **without the protection** of traffic light signals or stop signs will accomplish this.

The first fatality occurred because a driver facing westbound was waiting to make a southbound turn from Gravenstein onto Madrone to pick up family members from the elementary school, when a neglectful westbound driver doing who knows what (but obviously not paying attention to the road) rammed into the rear of her car, shoving her into an oncoming big rig heading eastbound. This poor woman didn't stand a chance. Would a left turn lane have helped her? Maybe, maybe not (even a neglectful driver pulling into a left turn lane at an unsafe speed could have caused the same result).

The second fatality occurred because the driver, due to an error in judgment (it was dark outside) or neglect, made an unsafe left turn in front of an oncoming pickup truck, causing the fatality of her passenger (we were home and heard this collision). Would a left turn lane have prevented this accident? **Absolutely not.**

I have resided here for several years now, and my neighbors on this property have been here even longer. What I have observed is that people are in such a hurry that they will go onto the right shoulder to pass, no matter where they are on Gravenstein Hwy, between Hwy 101 and Stony Point, instead of slowing down and stopping to allow someone to make a left turn. Madrone is not the only street where this happens. As to the issue of traffic congestion - that is everywhere now. The more there are attempts made to accommodate traffic, the more traffic there becomes.

As noted in your report, this is a mixed residential and business area. I saw that the report made note of the trucking company and the storage rental place, but gave little thought to the residences between Madrone and Stony Point. Can I tell you what a challenge it is for us to pull out of our driveways onto Gravenstein? It never fails to amaze me how, when one of our neighbors across the street is facing westbound on Gravenstein to make a left (southbound) turn into his driveway, vehicles will actually pull partially into our driveway (right shoulder) not caring one iota that one of the tenants here is in that driveway waiting to pull out onto Gravenstein (I've had the same experience on Madrone, waiting to turn

westbound onto Gravenstein after dropping my grandson off at school). The metal bar on the shoulder east of our driveway slows drivers down but doesn't stop them - these right shoulder passers just give us a defiant look and keep right on going.

Yes, having these left turn lanes on Gravenstein would prevent west and eastbound drivers **from partially pulling into Madrone** (right shoulder passing) and endangering drivers waiting to turn off Madrone (as currently happens all too often now), but it does not make it any easier or safer for people still trying to enter Gravenstein from the residential driveways between Madrone and Stony Point. It also doesn't necessarily make it any easier or safer for drivers attempting to enter Gravenstein from Madrone, because if anything, **it helps speed up traffic**, and as long as people along this corridor (not just at Madrone) need to turn left, drivers are still pulling onto the right shoulder violating traffic laws.

My suggestion is to either put a traffic light there, or make it a 4-way stop. At least it will be safer for drivers, bicyclists (there have been injuries to bike riders as well) and pedestrians (there are pedestrians) coming off Derby Lane and Madrone to cross and/or turn onto Gravenstein.

And LOWER the SPEED LIMIT!! There is absolutely no logic to why there is a speed limit sign just a few short feet from our driveway increasing the westbound speed to 50 mph when the probability is that the driver is going to have to slow down moments later for a red traffic light at Stony Point. This increased speed limit also endangers the vehicles trying to pull onto Gravenstein between Madrone and Stony Point, because most drivers have speeded up to at least 55 or 60 before they even pass that posted sign. I won't bother describing to you what a mutilated animal looks like when it has been hit by a vehicle at that speed. It is not a sight I like to see when I pull out of my driveway, either, but unfortunately, I can't drive with my eyes closed. In addition to the 2 fatalities at Madrone, there have been some non-injury accidents along Gravenstein between Madrone and Stony Point. Now how do you suppose people are doing that?! Driving at unsafe speeds. Drivers begin speeding up in advance of the westbound posted 50 mph sign and most have already exceeded that limit before they even pass the sign; drivers also don't bother slowing down for the decreased eastbound posted 45 mph sign across the street from us. But, if they knew they were going to have to stop for a 4-way stop sign, most would begin to slow down in preparation to stopping.

I've also noticed over the past year or so that there seems to be increased traffic along this corridor, possibly due to the Hwy 101 widening projects and people using this corridor as a detour to Stony Point, and this is adding to the already unsafe conditions. Adding to that, the traffic lights between Redwood Hwy and Stony Point are not very coordinated. Just as all the westbound traffic from the Redwood Hwy traffic light has passed and you think you might safely be able to pull onto Gravenstein from a side street or driveway, the eastbound traffic from Stony Point now has the green light and you have to wait for them to pass, hoping you will be able to turn onto Gravenstein before the westbound traffic comes through again.

More important than left turn lanes, a **traffic light or 4-way stop signs** and a **lowered speed limit** would **decrease accidents** and **increase the safety** of everyone who works, resides or takes their children to the local elementary school here. I truly do not understand how your planners cannot see or comprehend this, themselves. Yes, a 4-way stop sign would cause pockets of congestion during morning commute and evening commute, but no more so than the lights at Redwood Hwy and Stony Point. If people don't like having to slow down or stop, they'll either get themselves back onto Hwy 101, find a different detour around the Hwy 101 traffic, or push for public transit.

Christine Penney
7812 B Derby Lane
Cotati, CA 94931

Response:

In limiting highway improvements to the construction of left-turn pockets, Caltrans is addressing the issues behind recent fatal accidents. Five accidents occurred in the three-year period from January 1, 2008 to December 31, 2010. All five accidents involved left-turning vehicles from the highway.

This safety project addresses the left turn collisions by constructing left turn pockets that will provide a refuge area for left turn vehicles away from the through traffic lane. Vehicles waiting to turn left in a left turn pocket are not rushed to take unsafe turns due to cars queuing behind.

Caltrans has a safety monitoring system for all routes that generates quarterly reports from accident data. Locations that reach a threshold of accident concentrations high enough to be considered significant are identified, and a Traffic Investigation Report (TIR) is prepared to address safety concerns at those locations.

Although some accidents at this location have been reported, the TIR threshold has not been reached. No accidents involving vehicles from Madrone Avenue have been reported. Additionally, for this section of the SR-116 corridor, the current accident rate is approximately equal to the state average with similar facilities, which indicates that in general there are no exceptional conditions in this area that would compromise safety.

Similarly, there are a set of threshold conditions ("warrants") considered by Caltrans traffic engineers in evaluating the potential safety and operational benefits of traffic signals under average, normal conditions. Warrants include traffic volumes and accident history, and are not met for this intersection. For more information, see the California Manual on Uniform Traffic Control Devices, available on our website.

Passing on the right is allowed under certain conditions. California Vehicle Code 21754 states that the driver of a vehicle may overtake and pass to the right of another vehicle when the vehicle overtaken is making or about to make a left turn.

Traffic entering the highway from a driveway or intersection is expected to wait until it is safe to do so. This is true whether the vehicle is entering from a side street or a driveway.

The speed limit on the state highway system is not set arbitrarily. The determination of an enforceable speed limit is a legal process documented in the California Vehicle Code at CVC 22354 and is based on the 85th percentile speed of traffic. The 85th percentile speed is arrived at by an engineering and traffic survey. Speeds are measured in the field and a report prepared to determine the speed limit.

Speeds in rural areas are typically higher than in urban areas that have higher density of development, and a greater frequency of driveways and side streets. Speeds are also higher on the state highway system, which carries a legislative mandate to serve the State's heavily traveled rural and urban corridors, connect the communities and regions of the State, and serve the State's economy by connecting centers of commerce, industry, agriculture, mineral wealth, and recreation.

Research conducted throughout the country over several decades has shown that drivers are influenced by the character of the roadway, current traffic conditions, and the amount of development along the highway, not the posted speed limit. Although it is often believed that installing a lower speed limit will cause drivers to slow down and reduce accidents, facts indicate otherwise. Artificially low speed limits invite violations, and unrealistically low speed limits create a "speed trap" that cannot be enforced.



Memorandum

Date: April 20, 2012

To: Ms. Melanie Brent
California Department of Transportation
Post Office Box 23660
Oakland, CA 94623-0660


From: Scott Wilson, Acting Regional Manager
Department of Fish and Game – Bay Delta Region, 7329 Silverado Trail, Napa, California 94558

Subject: Madrone Avenue Left-Turn Channelization Project, Initial Study with Proposed Negative Declaration, SCH #2012042005, City of Cotati, Sonoma County

The Department of Fish and Game (DFG) has reviewed the Initial Study (IS) with Proposed Negative Declaration (ND) for the Madrone Avenue Left-Turn Channelization Project (Project). DFG is providing comments as a Responsible and Trustee Agency. As Trustee for the State's fish and wildlife resources, DFG has jurisdiction over the conservation, protection and management of the fish, wildlife, native plants, and the habitat necessary for biologically sustainable populations of such species for the benefit and use by the people of California.

The Project proposes to install left-turn pockets in both directions from State Route 116 to Madrone Avenue by widening the roadway, extend existing cross-culverts, modify part of an existing unlined drainage, and install a new longitudinal pipe. The Project will impact the existing paved State Route 116 and undeveloped ruderal upland habitat.

The Project is within the range of the California tiger salamander (*Ambystoma californiense*; CTS), a species designated as threatened under the California Endangered Species Act (CESA) and endangered under the federal Endangered Species Act. CTS is known to aestivate within 1.3 miles of their breeding pool in rodent burrows in upland habitat where they remain underground until they migrate to breeding pools on raining nights during the rainy season. Two adult CTS have been documented within 500 feet of the Project limits and a CTS breeding pool has also been documented within 0.5 miles of the Project. The Project site contains numerous rodent burrows in the upland habitat where CTS may be present. The Project will be grading, digging, and filling within these areas of upland habitat. The Project may result in incidental take of CTS in the form of mortality from crushing and/or entombing which could have a potentially significant impact to CTS. Take under CESA is defined in Section 86 of Fish and Game Code as "hunt, pursue, catch, capture, or kill or attempt to hunt, pursue, catch, capture, or kill." The Project may also result in take by the Biologists' attempts to catch and/or capture.

The IS has identified impacts to CTS as "Less-than-Significant". Because this Project may result in take of a state and federally listed species, the Project may have a significant adverse impact to CTS. DFG recommends revising the California Environmental Quality

Act (CEQA) Environmental Checklist to "Less-Than-Significant with Mitigation", revise the document to identify the impact of take of CTS, identify the minimization and mitigation measures to be implemented for the impacts to CTS, and provide a Mitigation Monitoring and Reporting Program.

The Department of Transportation applied for a CESA Incidental Take Permit (ITP) on December 27, 2011. DFG will require the above revisions to provide a Mitigated Negative Declaration to issue the CESA ITP.

The draft CEQA document proposes to purchase 1.24 CTS credits at an agency approved bank. To fully mitigate for impacts to CTS, DFG recommends the document state that impacts to CTS will be mitigated at a two to one ratio (2:1) at a DFG and U.S. Fish and Wildlife Service-approved conservation or mitigation bank located in the Santa Rosa Plain.

The draft CEQA document states initial grading and clearing will be conducted between April 15 and October 31. DFG recommends the initial and clearing be revised to state that these activities will take place between April 15 and October 15.

If you have any questions, please contact Ms. Melissa Escaron, Staff Environmental Scientist, at (707) 339-0334; or Mr. Craig Weightman, Acting Environmental Program Manager, at (707) 944-5577.

cc: State Clearinghouse

Bijan Sartipi – Department of Transportation
Jeffrey Jensen – Department of Transportation

Response:

Caltrans has considered the comments provided in the letter from the California Department of Fish and Game. Caltrans has concluded that there is a small but not nonexistant possibility that project construction could harm CTS individuals. See page 15 for the revised analysis of impacts to biological resources.



North Coast Regional Water Quality Control Board

April 25, 2012

Ms. Melanie Brent
California Department of Transportation
P.O. Box 23660
Oakland, CA 94623-0660

Dear Ms. Brent:

Subject: Comments on the Highway 116 Madrone Ave. Left-Turn Channelization Project, SCH No. 2012042005

Thank you for the opportunity to comment on the Initial Study with Proposed Negative Declaration (ISND) for the Highway 116 Madrone Ave. Left-Turn Channelization Project (project) located in the city of Cotati of Sonoma County. The North Coast Regional Water Quality Control Board (Regional Water Board) is a responsible agency for this project, with jurisdiction over the quality of ground and surface waters (including wetlands) and the protection of the beneficial uses of those waters.

The proposed project consists of constructing a 350-foot long left-turn lane in each direction at the intersection of Madrone Avenue and Highway 116 (Old Gravenstein Highway). The project will widen the pavement 36-46 feet northwards towards Derby Lane and extend drainage culverts to the edge of the new pavement. Drainage ditches that the project will fill will be replaced with new ditches and culverts.

The project will result in an increase of 0.36 acres of impervious pavement, 0.26 acres of reworked pavement, 0.95 acres of disturbed soil area, 0.62 acres of permanent effects California Tiger Salamander (CTS) upland habitat. In addition, the project will result in temporary impacts to 0.011 acres of roadside ditches and permanent impacts of 0.003 acres of wetlands each identified as waters of the U.S. and State.

Based on the information provided we have the following comments:

We have included storm water and Low Impact Development (LID) information and attached a LID resource list to guide the preparation of additional drainage plans and to aid the project plans with the proposed use of Best Management Practices (BMPs).

DAVID M. NOREN, CHAIR | CATHERINE KUHLMAN, EXECUTIVE OFFICER

5550 Skylane Blvd., Suite A, Santa Rosa, CA 95403 | www.waterboards.ca.gov/northcoast

The project site is designated as being within critical habitat for the California Tiger Salamander; we have included some information on habitat connectivity for your review.

The project includes the loss of potential wetlands and waters of the State as defined under the Clean Water Act (CWA); although the project provides some potential mitigation, (including mitigation credits) we have included additional mitigation information for your reference.

Coverage under the CWA section 401 Water Quality Certification and Waste Discharge Requirements pursuant to the Porter Cologne Water Quality Control Act will be required by our agency.

Storm Water and Low Impact Development

The Regional Water Board requires the use of LID and BMPs to mitigate potential impacts to water quality. LID BMPs that treat and retain (infiltrate, capture, evapotranspire and store) storm water runoff on the project site are efficient and cost effective.

LID is a development site design strategy with a goal of maintaining or reproducing the pre-development hydrologic system through the use of design techniques to create a functionally equivalent hydrologic setting. LID emphasizes conservation and the use of on-site natural features integrated with engineered, small-scale hydrologic controls to more closely reflect pre-development hydrologic functions. Hydrologic functions of storage, infiltration, and ground water recharge, as well as the volume and frequency of discharges, are maintained through the use of integrated and distributed storm water retention and detention areas, reduction of impervious surfaces, and the lengthening of flow paths and runoff time. LID seeks to mimic the pre-development site hydrology through infiltration, interception, reuse, and evapotranspiration. LID requires that the storm water runoff volume from small storms be retained onsite.

Other LID strategies include the preservation and protection of environmentally sensitive site features such as riparian buffers, wetlands, steep slopes, valuable trees, flood plains, woodlands, native vegetation and permeable soils. Natural vegetation and soil filters storm water runoff and reduces the volume and pollutant loads of storm water runoff. Other benefits from LID implementation include reducing global warming impacts from new development (preserving carbon sequestering in native soils and retaining native vegetation), increasing water supply (by encouraging ground water recharge) and reducing energy consumption.

LID requires the use of landscape-based BMPs that filter storm water runoff using vegetation and amended soil prior to infiltration. Examples of these types of BMPs are rain gardens and vegetated swales. LID BMPs need to be sized to treat the storm water runoff from all impervious surfaces (e.g. roads, roofs, walkways, patios) using the Storm Water Low Impact Development Technical Design Manual found at

www.srcity.org/stormwaterLID (required to be used for projects within Santa Rosa and parts of Sonoma County, but recommended for projects elsewhere), or using the following sizing criteria:

1. The volume of runoff produced from the 85th percentile of 24-hour rainfall event, as determined from the local historical rainfall record; or
2. The volume of runoff produced by the 85th percentile 24-hour rainfall event, determined using the maximized capture storm water volume for the area, from the formula recommended in Urban Runoff Quality Management, WEF Manual of Practice No. 23/ASCE Manual of Practice No. 87, p. 170-178 (1998); or
3. The volume of annual runoff based on unit basin storage water quality volume, to achieve 80 percent or more volume treatment by the method recommended in California Storm Water Best Management Practices Handbook-Industrial/Commercial (1993).

BMPs to prevent erosion and the release of sediment or hazardous materials during construction activities should be included in the subsequent environmental review documents to prevent sediment and other pollutants reaching surface waters or leaving the site in storm water runoff. These can include scheduling grading to take place during the dry season, identifying staging areas for work vehicles that are separated from sensitive areas, training employees in procedures for cleaning up spills of hazardous materials, and erosion and sediment control techniques.

Habitat Connectivity

"Habitat connectivity" refers to the need for plant and animal populations to have some mobility over the landscape to avoid becoming both physically and genetically isolated. A large body of research has demonstrated that isolated populations face a high probability of eventual extinction, even if their immediate habitats are spared. In general, the smaller an isolated population, the more quickly it will become extinct. Urban development typically fragments habitats by creating artificial landscapes, which are movement barriers for most species. Unless mitigation measures are taken, buildings, roads, and artificial landscaping prevent healthy wetland and riparian corridors.

In the context of wetlands, habitat connectivity refers to two related phenomena:

1. The need of some animals to have access to both wetland and upland habitats at different stages of their life cycle; and
2. The ecological relationship between separate wetlands. Some wetland communities and their associated species comprise networks of "patches" throughout a landscape. Wetland plants and animals have adapted to the presence of wetland complexes within a watershed and are dependent on

moving among the wetlands within the complex, either regularly or in response to environmental stressors such as flood or drought, local food shortage, predator pressure, or influx of pollution. Removing one such water from the complex will reduce the biological quality of the rest. Thus, the simplified wetland complex will eventually be incapable of supporting some species, even though some wetlands remain.

As noted above, habitat connectivity is critical to biodiversity maintenance, especially given the effects of global climate change. Significant range shifts and other responses to global climate change are already occurring. The ability of biotic populations to move across the landscape may be critical to their survival in coming decades.

Attempts to manage the adverse effects of urban development form a large part of the workload of the Regional Water Board's nonpoint source, storm water, and water quality certification programs, as well as our efforts to establish total maximum daily loads for impaired water bodies. Many of the water bodies currently on the State's list of impaired water bodies are affected by conditions within the purview of local agency planning. However, after-the-fact regulatory control is at best a partial substitute for planning which avoids water quality degradation. We therefore welcome the opportunity to work with you on this and other planning projects.

Mitigation

In general the required compensatory mitigation should be located within the same watershed as the impact site, and should be located where it is most likely to successfully replace lost functions and services, taking into account such watershed scale features and aquatic habitat diversity, habitat connectivity, relationships to hydrologic sources (including availability of water rights), trends in land use, ecological benefits, and compatibility with adjacent land uses. Mitigation should be located where it will help protect or restore the health and condition of aquatic resources within a watershed or other appropriate area within an ecological landscape.

Wherever possible, existing watershed and environmental planning information should be analyzed in advance of mitigation to: (a) Determine the location of relatively intact, natural areas in a watershed (b) identify those areas for preservation and protection, and (c) identify nearby degraded areas that are amenable to enhancement, restoration or establishment, and that would contribute to the sustainability of natural areas and the overall health of a watershed's aquatic resources.

Waste Discharge Requirements (WDRs) or a Conditional Waiver of WDRs

Under authority of the Water Code, the Regional Water Board may issue WDRs for any project which discharges or threatens to discharge waste to waters of the State. Projects that may impact waters of the State (including discharges of wastewater, reclaimed wastewater, post-construction storm water runoff, grading activities within stream courses or wetlands, ground disturbance subject to erosion or sediment

mobilization, and removal of riparian vegetation in some cases) require permitting by the Regional Water Board. An application may be printed from the State Water Resources Control Board website at: www.swrcb.ca.gov/sbforms/.

Water Quality Certification (401 Certification):

Permit issued for activities resulting in dredge or fill within waters of the United States. All projects must be evaluated for the presence of jurisdictional wetlands and other waters of the state. Destruction of or impacts to these waters should be avoided. Under the Clean Water Act Sections 401 and 404, disturbing wetlands requires a permit from the United States Army Corps of Engineers (ACOE) and a state 401 permit.

The ISND states that Caltrans will increase the impervious surface 0.36 acres and provide 0.5 acres of treatment through biofiltration strips. To promote an expedited review time please include the proper design specifications, dimensions, water quality calculations, and maintenance period for the treatment BMPs in the application for 401 certification. In addition, including the proof of purchase from an agency approved mitigation bank for impacts to CTS and wetlands will help reduce permit processing time.

If you have any questions or comments, please contact me at (707) 570-3761 or mdougherty@waterboards.ca.gov or Staff Environmental Specialist/Caltrans Liaison Jeremiah Puget at (707) 576-2835 or jpuget@waterboards.ca.gov

Sincerely,



Mona Dougherty
Senior Water Resources Control Engineer

120425_MA_MadroneAvenueTurn_response

cc: Scott Morgan, State Clearinghouse, P.O. Box, 3044, Sacramento, CA 95812
Re: SCH No. 2012042005

Low Impact Development Resources

Santa Rosa's Storm Water Program and LID Technical Manual (developed with the North Coast Regional Water Board):

www.srcity.org/stormwaterpermit

www.srcity.org/stormwaterLID

Low Impact Development Center: <http://www.lowimpactdevelopment.org/>

Puget Sound LID manual: http://www.psp.wa.gov/downloads/LID/LID_manual2005.pdf

Green Infrastructure Municipal Handbooks:

<http://cfpub2.epa.gov/npdes/greeninfrastructure/munichandbook.cfm>

Oregon Rain Garden Guide, landscaping for clean water and healthy streams:

<http://seagrant.oregonstate.edu/sqpubs/onlinepubs/h10001.pdf>

Pennsylvania Stormwater BMP Manual:

<http://www.blairconservationdistrict.org/SWBMP.htm#pa%20manual>

Philadelphia Stormwater Guidance Manual:

<http://www.phillyriverinfo.org/Programs/SubProgramMain.aspx?Id=StormwaterManual>

Marin County's LID manual:

http://www.mcstoppp.org/acrobat/GuidanceforApplicantsv_2-5-08.pdf

San Diego County's LID manual – LID for roads:

<http://www.sdcounty.ca.gov/dplu/docs/LID-Handbook.pdf>

Low Impact Development – Sustainable Storm Water Management:

http://www.waterboards.ca.gov/water_issues/programs/low_impact_development/

EPA Green Infrastructure Basic Information:

<http://cfpub.epa.gov/npdes/greeninfrastructure/information.cfm>

Managing Wet Weather with Green Infrastructure:

http://cfpub.epa.gov/npdes/home.cfm?program_id=298

Contra Costa Manual and Guidance to Municipalities:

<http://www.cccleanwater.org/new-developmentc3/stormwater-c3-guidebook/>

Contra Costa approach powerpoint to implement LID:

<http://www.cccleanwater.org/Publications/StormCon-5-06/5-ContraCostaApproach-I-Dalziel-Cloak.ppt>

Portland Stormwater Management Manual:

<http://www.portlandonline.com/bes/index.cfm?c=47952>

City of Portland's Sustainable Storm Water Management Program – LID for streets:

<http://www.portlandonline.com/bes/index.cfm?c=34598>

Streetscape improvements and water quality design:

<http://www.lowimpactdevelopment.org/nhb/lid.htm>

LID Urban Design tools – design software for different BMPs: <http://www.lid-stormwater.net/homedesign.htm>

LID design fact sheet: <http://www.coastal.ca.gov/nps/lid-factsheet.pdf>

Storm Water Runoff Calculator: <http://www.stormulator.com>

Storm Water Management and LID at EPA headquarters – BMP choice and design:

http://www.epa.gov/owow/nps/lid/stormwater_hq/

Governor's Office of Planning and Research Technical Advisory using LID to protect water quality through CEQA review:

http://www.opr.ca.gov/ceqa/pdfs/Technical_Advisory_LID.pdf

State Water Board Resolution on LID and Sustainable Water Resources Management:

http://www.waterboards.ca.gov/board_decisions/adopted_orders/resolutions/2008/rs2008_0030.pdf

Resolution of the California Ocean Protection Council Regarding Low Impact Development:

http://www.resources.ca.gov/copc/05-15-08_meeting/05_LID/0805COPC05_%20LID%20Res%20amended.pdf

Storm Water Resources:

North Coast Regional Water Board Municipal Storm Water Program:

http://www.waterboards.ca.gov/northcoast/water_issues/hot_topics/santa_rosa_ms4_npdes_stormwater_permit/

State Water Board Storm Water Program:

http://www.waterboards.ca.gov/water_issues/programs/stormwater/

California Stormwater Quality Association: <http://www.casqa.org/>

EPA Storm Water Program: http://cfpub.epa.gov/npdes/home.cfm?program_id=6

Erase the Waste Campaign – California Storm Water Toolbox (outreach materials for permittees and non-profits):

http://www.waterboards.ca.gov/water_issues/programs/outreach/erase_waste/

The San Francisco Regional Water Board Storm Water Resources Website:

http://www.waterboards.ca.gov/sanfranciscobay/water_issues/programs/stormwater/avail_docs.shtml

State Water Board Storm Water Grant Program:

http://www.waterboards.ca.gov/water_issues/programs/grants_loans/prop84/index.shtml

Federal Funding Sources for Watershed Protection: <http://cfpub.epa.gov/fedfund/>

Stormwater Manager's Resource Center: <http://www.stormwatercenter.net/>

For more information, please contact Mona Dougherty at

mdougherty@waterboards.ca.gov

Updated: August 26, 2010

Response:

As per this letter and and follow-up discussions with the Water Board, Caltrans will follow the Water Board's recommendations in implementation of an LID manual, specifically City of Santa Rosa and County of Sonoma LID Technical Manual (May 2012).

As per the "Water Quality Certification (401) certification", the Department will provide Stormwater Treatment BMP through a combination on-site and off-site treatment to offset the increase in impervious surface of 0.36 acres.