APPENDIX D

CALIFORNIA TIGER SALAMANDER AND CALIFORNIA RED-LEGGED FROG HABITAT ASSESSMENT

Planning for Success.

HABITAT ASSESSMENT REPORT
FOR CALIFORNIA TIGER SALAMANDER
AND CALIFORNIA RED-LEGGED FROG

BORONDA ROAD CONGESTION RELIEF PROJECT (CIP NO. 9510)

PREPARED FOR

City of Salinas

January 21, 2020

EMC PLANNING GROUP INC.
A LAND USE PLANNING & DESIGN FIRM

301 Lighthouse Avenue Suite C Monterey California 93940 Tel 831·649·1799 Fax 831·649·8399
www.emcplanning.com

Habitat Assessment Report
for California Tiger Salamander and California Red-Legged Frog

Boronda Road Congestion Relief Project (CIP No. 9510)

PREPARED FOR

City of Salinas
Josie Lantaca, Assistant Engineer
200 Lincoln Ave.
Salinas, CA 93901
Tel 831.758.7185

PREPARED BY

EMC Planning Group Inc.
301 Lighthouse Avenue, Suite C
Monterey, CA 93940
Tel 831.649.1799
Fax 831.649.8399
Janet Walther, Principal Biologist
www.emcplanning.com

January 21, 2020

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1.0
INTRODUCTION

In accordance with the *Interim Guidance on Site Assessment and Field Surveys for Determining Presence or a Negative Finding of the California Tiger Salamander* [United States Fish and Wildlife Service (USFWS) 2003], and the *Revised Guidance on Site Assessments and Field Surveys for the California Red-legged Frog* (USFWS 2005), EMC Planning Group has prepared this Habitat Assessment Report for the California Tiger Salamander ("CTS," *Ambystoma californiense*), and California Red-Legged Frog ("CRLF," *Rana draytonii*), for the Boronda Road Congestion Relief Project, CIP No. 9510, located in the City of Salinas in Monterey County, California, hereinafter referred to as the project.

The project site is located within the known distribution of CRLF, which is federally listed as Threatened and state listed as a Species of Special Concern, and CTS, which is federally and state listed as Threatened (USFWS 2002, CDFW 2017). Under current USFWS guidelines, any project with potentially suitable habitat within the distribution of CRLF and CTS species must include site assessments for potential CTS and CRLF within 1.24 miles and 1.0 mile, respectively, of the edge of the project site.

EMC Planning Group biologist Emily Malkauskas first conducted a records search for special-status species, and found locality data for CTS and CRLF within 1.24 miles of the project site. After reviewing the locality data, range maps and aerial photos of the surrounding landscape, it was determined that potential habitat for CTS and CRLF exists within the project vicinity and a habitat assessment should be completed. Emily Malkauskas conducted field survey work for this habitat assessment within the project site boundary and within 1.24 miles of the project site on August 9, 11, and 14, 2017.

1.1 PROJECT DESCRIPTION

The City of Salinas has proposed the widening of East Boronda Road from Dartmouth Way to Independence Boulevard in the northern portion of the City of Salinas, Monterey County, California. Figure 1, Project Location, shows the regional location of the project site; Figure 2, Aerial Photograph and Project Site Boundary, illustrates the existing conditions and the extent of proposed improvements. In order to accommodate current and anticipated future traffic demands and localized growth, the City of Salinas is proposing to widen East Boronda Road from two lanes to four lanes from east of Dartmouth Way to east of Independence Boulevard (Figure 3, Project Plans). Roundabouts would be incorporated at the four major intersections of McKinnon Street, El Dorado Drive, Natividad Road, and Independence Boulevard. Within the Future Growth Area, Boronda Road would be widened along the north edge of the existing roadway into areas currently under active agricultural cultivation.

This widening would occur in three phases. The first phase of the project would include widening East Boronda Road from just east of Dartmouth Way to approximately 1,900 feet east of McKinnon Street for a total length of approximately 3,500 feet. It would also include a roundabout at the intersection of McKinnon Street and East Boronda Road. The second phase of the project would continue the widening of East Boronda Road from just east of McKinnon Street to approximately 1,100 feet east of Natividad Road. It would also include roundabouts at the intersections of El Dorado Drive and Natividad Road. The remainder of the improvements including widening of the bridge crossing at Gabilan Creek and the construction of a roundabout at the intersection of Independence Boulevard and East Boronda Road, would be constructed as the third phase of the project.

The proposed project includes the following improvements to East Boronda Road from just east of Dartmouth Way to just east of Independence Boulevard:

1. Widen East Boronda Road from just east of Dartmouth Way to just east of Independence Boulevard from two lanes to four lanes;
2. Construct multi-lane roundabouts at McKinnon Street, El Dorado Drive, Natividad Road, and Independence Boulevard;
3. Relocate existing agricultural ditches along the north side of East Boronda Road to the north;
4. Relocate existing agricultural ditch along the east side of Natividad Road to the east;
5. Construct storm water treatment facilities and bioretention facilities in the roadway medians, islands, and adjacent to sidewalks;
6. Construct buffered bike lanes;

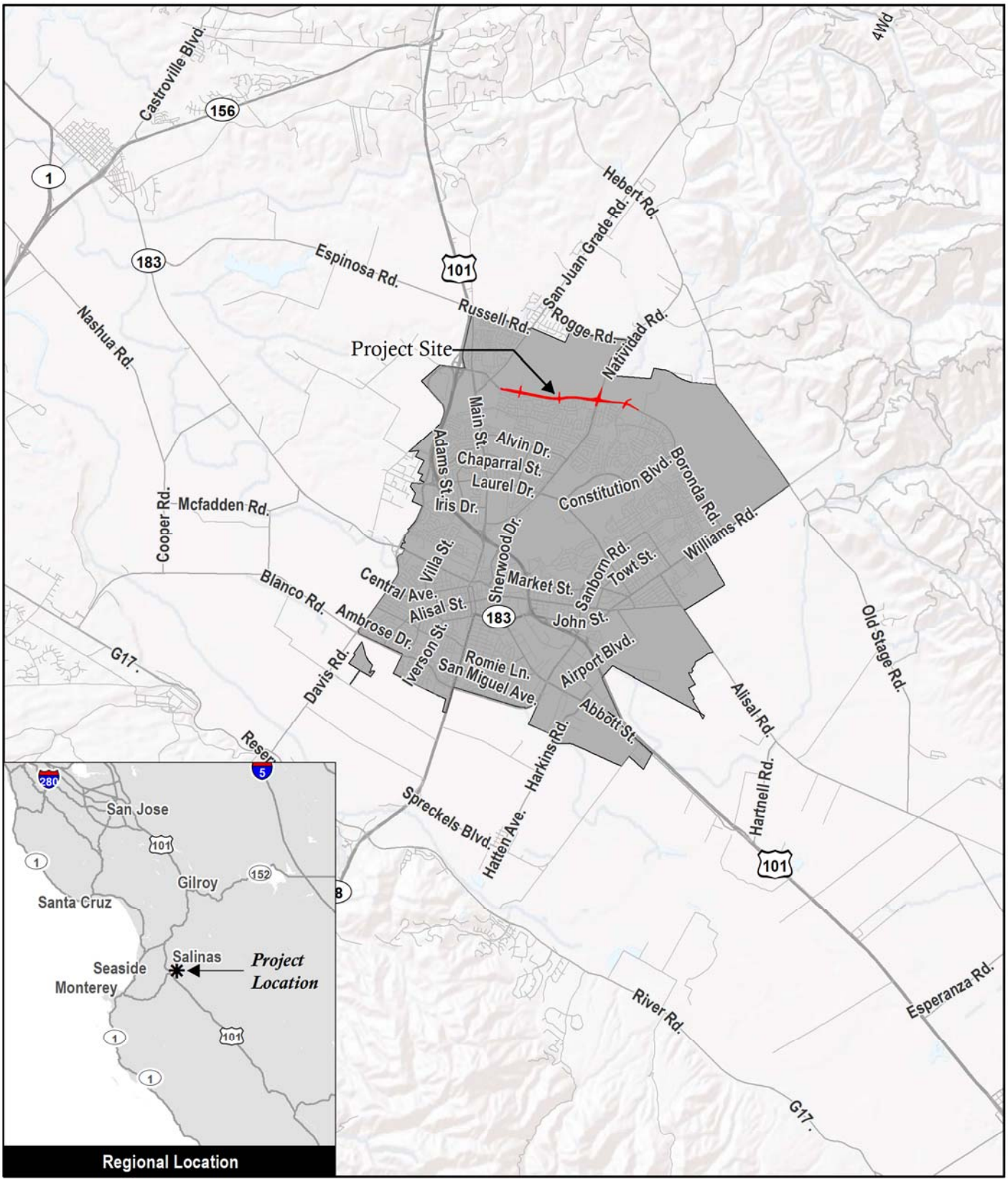

Figure 1

Project Location

Boronda Road Congestion Relief Project; CIP No. 9510: Habitat Assessment

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Figure 2

Aerial Photograph and Project Site Boundary

Boronda Road Congestion Relief Project; CIP No. 9510: Habitat Assessment

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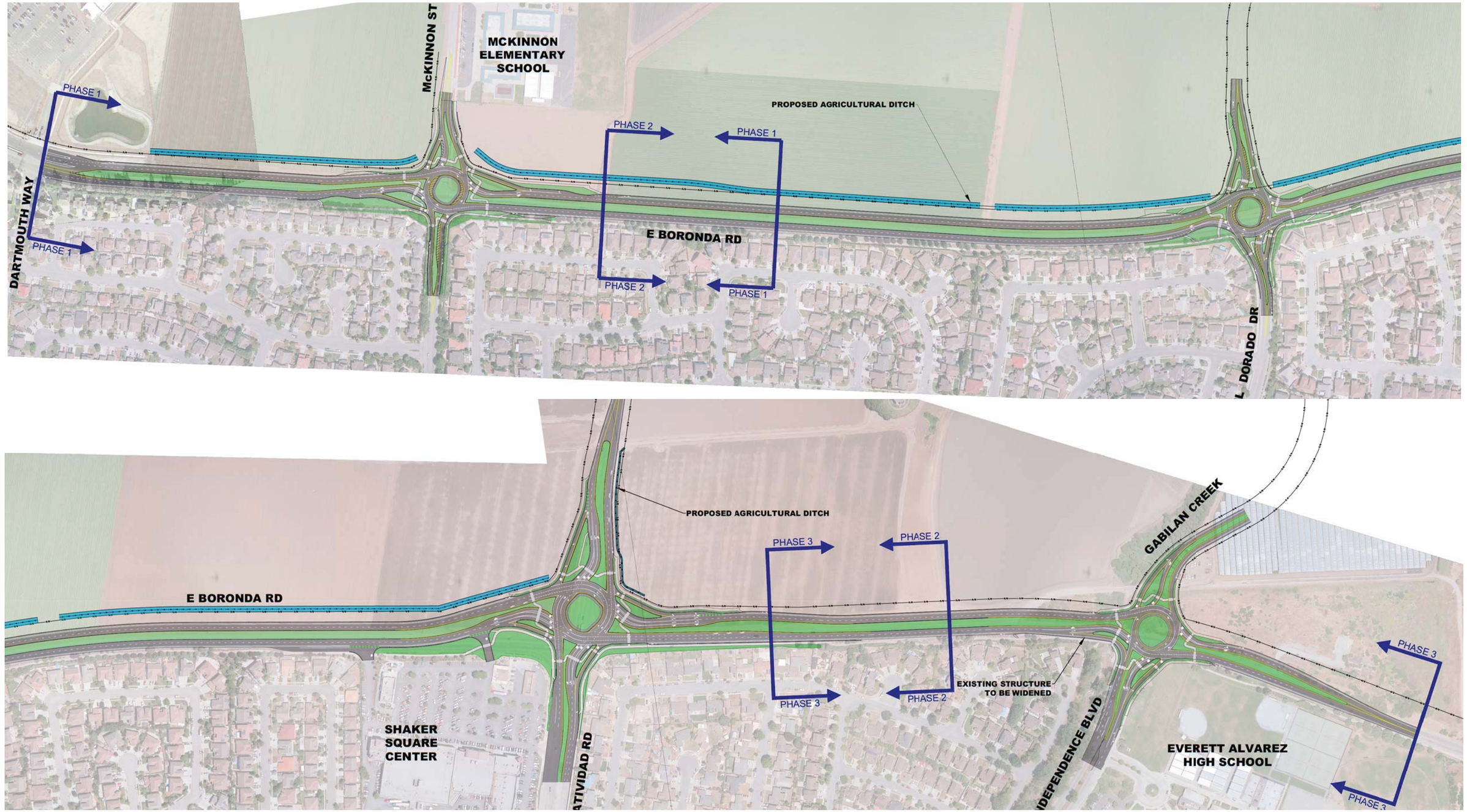

Source: Wallace Group 2019

Figure 3
Project Plans

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7. Construct shared-use paths around the perimeter of the roundabouts;
8. Install a Rectangular Rapid Flashing Beacon (RRFB) or some other approved pedestrian activated beacon at the single-lane crossings (see details below);
9. Widen the East Boronda Road Bridge over Gabilan Creek to accommodate the road widening and roundabout (see details below);
10. Construct bus pullouts, replace sidewalk, ADA compliant pedestrian access ramps at all crosswalks; and storm drain lines, sanitary sewer mainline installation and extensions, and pavement delineation and updated signs; and
11. Install landscaping.

An RRFB is a crosswalk enhancement tool which may help alert drivers to a pedestrian intending to cross but keeps the crosswalk uncontrolled. Pedestrians can choose to activate the RRFB if they choose to or feel they need assistance crossing. This is consistent with the City's crosswalk policy.

The proposed widening and roundabout at the intersection of East Boronda Road and Independence Boulevard will necessitate widening of the existing crossing over Gabilan Creek. The existing creek crossing consists of a buried three-bay box culvert with a trapezoidal concrete-lined channel both upstream and downstream of the box culvert.

Widening of the creek crossing to accommodate a multi-lane East Boronda Road section will be accomplished on the northerly (upstream) side of the existing box culvert. Two alternatives for widening the creek crossing are currently being considered: (1) extension of the existing three-bay box culvert with possible extension of the trapezoidal concrete-lined channel; or (2) spanning of the upstream silting basin by construction of a buried flat slab bridge over the upstream concrete-lined channel.

For the box culvert extension alternative, it is possible that drainage calculations may require extending the silting basin directly upstream of the crossing. For the spanning alternative, construction may or may not avoid the extension of the silting basin by spanning over it. Figure 2, Aerial Photograph and Project Site Boundary, shows the maximum project impact boundary that would be taken by either approach. Hydrologic analysis will be required for either option, in addition to coordination with regulatory and permitting agencies to determine permit and mitigation options for the crossing.

1.2 SITE DESCRIPTION

The project site is located within the City of Salinas. The section of East Boronda Road proposed for improvements is generally bordered on the south by existing development and on

the north by agricultural lands. The land to the north is planned for urban development in the *2002 Salinas General Plan* (general plan). Figures 4-7, Site Photographs A-D, present existing conditions on and adjacent to the site.

The city is currently undertaking CEQA compliance for specific plans addressing development of the area to the north, also referred to as Future Growth Areas. The general plan calls for East Boronda Road to be widened from two lanes to six lanes with standard intersection improvements. However, based upon recent studies documented in the May 16, 2017 staff report to the City Council regarding Measure X and Senate Bill 1 Update and Roundabout Concept for East Boronda Road Widening Project, CIP No. 9510, city staff recommended widening the road from two lanes to four lanes with roundabouts at the intersections. These improvements would address existing traffic congestion, as well as accommodate increases in traffic volumes that would be generated as the Future Growth Area is developed. The City Council approved the roundabout concept and other changes in the planned improvements by Resolution 21169.

The approximately 46.0-acre project site (maximum impact boundary) includes a range of features in addition to the existing segment of East Boronda Road. Developed and ornamental (landscaped) areas are located immediately south of the road, including mainly single family residences, but also associated neighborhood schools and commercial properties. Active agricultural fields with unpaved private access roads (along with the McKinnon Elementary School paved access road) are located immediately north of the road. The eastern end of the project site also includes a small area of Gabilan Creek willow woodland riparian habitat, along with adjacent upland coyote brush (*Baccharis pilularis*) scrub/non-native grassland habitat. The project site is generally flat. It is located within the Salinas and Natividad U.S. Geological Survey (USGS) quadrangles at an elevation of approximately 100 to 130 feet. The site is within the lower portion of the Salinas River Watershed.

The USFWS *National Wetlands Inventory* (NWI) includes Gabilan Creek with its associated riparian habitat, and also includes on-site man-made ditches labeled as Riverine to the south and southwest of McKinnon Elementary School, and immediately west and east of Gabilan Creek. The man-made ditches were constructed to collect drainage from agricultural runoff.

1 Drainage ditch north of East Boronda Road within main project site (2017)

2 Active construction and agricultural water run-off at western boundary of project site (2017)

3 Source of agricultural water run-off at northern project boundary on Natividad Road (2017)

Source: ESRI 2019
Photographs: EMC Planning Group 8/11/2017

4 Agricultural water run-off entering drainage ditch west of Gabilan Creek (2017)

5 Agricultural water run-off draining to project site east of McKinnon School (2017)

6 Coyote brush scrub habitat east of Gabilan Creek (2017)

Figure 4
Site Photographs A

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1 Small mammal burrows along McKinnon Street (2017)

2 Intake culvert at McKinnon Street (2017)

3 Drainage ditch containing water and aquatic vegetation adjacent to small mammal burrows (2017)

Project Site

Source: ESRI 2019
Photographs: EMC Planning Group 8/11/2017

4 On-site drainage ditch southeast of McKinnon School (2017)

5 Drainage ditch southeast of McKinnon School (2017)

6 Drainage ditches at western end of project site (2017)

Figure 5
Site Photographs B

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1 Agricultural basin along Natividad Road at CTS Occurrence Number 993 (2017)

2 Agricultural stock pond adjacent to Gabilan Creek at Natividad Road (2017)

3 Gabilan Creek south of Natividad Road (2017)

Source: ESRI 2017
Photographs: EMC Planning Group 8/11/2017

Project Site
Project Buffer of 1.24 Miles
City of Salinas

4 Tributary of Natividad Creek at CRLF Occurrence Number 601 (2017)

5 Agricultural stock pond containing bullfrogs adjacent to tributary of Natividad Creek (2017)

6 Natividad Creek south of East Boronda Road (2017)

Figure 6
Site Photographs C

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1 Gabilan Creek at East Boronda Road (2017)

2 Gabilan Creek south of East Boronda Road (2017)

3 Pool in Gabilan Creek containing treefrog tadpoles at East Boronda Road (2017)

Project Site City of Salinas

Source: ESRI 2019
Photographs: EMC Planning Group 8/11/2017

4 Large pool in Gabilan Creek at East Boronda Road (2017)

5 Coyote brush habitat west of Gabilan Creek (2017)

6 Small mammal burrows on project site west of Natividad Road (2017)

Figure 7
Site Photographs D

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The western portions of the proposed project to be widened in phases 1 and 2 have surface drainage flow to the west. This portion of the site lacks direct hydrologic connectivity to the City's Reclamation Ditch system based on the lengthy underground storm drainage system pathway, which ultimately delivers storm water to the Reclamation Ditches. After a long and indirect path under the City, storm water discharges into the Markeley Swamp channel that connects to the Reclamation Ditch system, which ultimately drains to Monterey Bay at Moss Landing Harbor.

The last phase of the proposed project includes widening the Gabilan Creek crossing at the eastern end of the site, which will impact the creek to some degree, as well as man-made drainage ditches to the west and east that drain into the creek. In the vicinity of the East Boronda Road crossing, Gabilan Creek is bordered by existing urban development south of the roadway. To the north of the roadway, agricultural row crops are generally planted up to the edge of the narrow Gabilan Creek riparian corridor.

1.3 NATURAL HISTORY OF THE CALIFORNIA TIGER SALAMANDER

The CTS Central Valley Distinct Population Segment (DPS) was listed as Federally Threatened August 4, 2004 (69 FR 47212-47248). Critical Habitat for the Central Valley Population of CTS was designated on August 23, 2005 (70 FR 49379-49458). Draft Recovery Plans are available for the Santa Barbara DPS and the Sonoma County DPS. The USFWS initiated a five-year review for the Central Population on May 25, 2011 (USFWS 2011). In 2017, the USFWS released a Recovery Plan for the Central California Distinct Population Segment of CTS (USFWS 2017).

CTS requires two primary habitat components: aquatic breeding sites and upland terrestrial aestivation or refuge sites. Adult CTS spend most of their time underground in upland subterranean refugia. Underground retreats usually consist of California ground-squirrel (*Otospermophilus beecheyi*) or Botta's pocket gopher (*Thomomys bottae*) burrows, but also under logs and piles of lumber (Holland et al. 1990, Barry and Shaffer 1994, Jennings and Hayes 1994). CTS primarily utilizes California ground squirrel burrows as upland refuge sites (Loredo et al. 1996, Trenham 2001). Suitable upland and aestivation habitat for CTS typically includes grazed annual grassland containing small mammal burrows or other underground habitat within 2,200 feet of potential aquatic breeding habitat where there are no obvious barriers to dispersal (USFWS 2003).

CTS emerges from underground to breed and lay eggs primarily in vernal pools and other ephemeral water bodies. Adults migrate from upland habitats to aquatic breeding sites during the first major rainfall events, between November and February (Shaffer and Fisher 1991, Barry and

Shaffer 1994), and return to upland habitats after breeding. Ponds, depressional pools, vernal pools and other wetlands are used by CTS to breed and lay their eggs. These sites must remain inundated for at least 10 weeks, the minimum time needed for larvae to complete metamorphosis. Permanent human-made ponds (e.g., stock ponds), reservoirs, and small lakes that do not support predatory fish or bullfrogs, are also used (Zeiner et al. 1988). Eggs are laid singly or in clumps on both submerged and emergent vegetation and on submerged debris in shallow water (Stebbins 1972, Shaffer and Fisher 1991, Barry and Shaffer 1994, Jennings and Hayes 1994). Larvae develop rapidly, and metamorphosis begins in late spring or early summer (Loredo-Prendeville 1995). Juveniles disperse from aquatic breeding sites to upland habitats after metamorphosis (Storer 1925, Holland et al. 1990).

The California tiger salamander, Central population, is threatened by habitat destruction, degradation, and fragmentation due to urban development and conversion to intensive agriculture (USFWS 2004). In addition, it is threatened by hybridization with non-native tiger salamanders, predation by non-native predators, disease, exposure to contaminants, rodent population control efforts, mortality due to crossing roads, and several other factors (USFWS 2004). Hybridization is of particular concern in the Central Coast as practically all populations of CTS from Santa Clara County to south of the San Luis Obispo County Line, and east into San Benito County, including in Monterey County, have non-native genes. Larger, hybrid and non-native tiger salamanders will predate on the smaller Central California tiger salamanders. Currently, the USFWS believes that predation by hybrid tiger salamanders is a threat to all native California tiger salamanders where they co-occur. However, it is unknown to what degree this affects California tiger salamander populations (USFWS 2017).

Central California tiger salamanders in the Salinas Valley are particularly threatened by hybridization with non-native tiger salamanders. Approximately 60 years ago, a large-scale introduction of non-native, barred tiger salamanders took place there in support of the bass-bait industry. These introduced salamanders have been documented as having bred with the native Central California tiger salamanders and the invasion has spread from the Salinas Valley source populations to the coast range portion of the range of the species (USFWS 2017).

1.4 NATURAL HISTORY OF THE CALIFORNIA RED-LEGGED FROG

CRLF is the largest native frog in the western United States, ranging from one and a half to five inches in length. The abdomen and hind legs of adults are largely red; the back is characterized by black flecks and irregular dark blotches on a brown, gray, olive, or reddish background color. CRLF populations have been found from coastal Sonoma County and western Glenn County south along the coast to Baja California Norte, and from near Redding (Shasta County) south along the Sierra Nevada foothills to Fresno County (Storer 1925; Jennings and Hayes 1994).

CRLF occur primarily in perennial or ephemeral ponds, pools, and streams where water remains long enough (14-28 weeks) for breeding and metamorphosis of tadpoles (Fellers 2005; Jennings and Hayes 1994). Specific breeding sites include streams, creeks, ponds, marshes, sag ponds, deep pools, backwater areas, dune ponds, lagoons, and estuaries. Habitats with the highest densities of CRLF often contain dense emergent or shoreline riparian vegetation closely associated with fairly shallow (< 0.5 meter) to deep (> 0.5 meter), still, or slow-moving water (USFWS 2002). Emergent vegetation, undercut banks, and semi-submerged rootballs afford shelter from predators and structure on which to attach egg masses (USFWS 1997). The types of riparian and wetland vegetation that seem to be most structurally suitable are willows (*Salix* spp.), cattails (*Typha* spp.), and bulrushes (*Schoenoplectus* spp.). However, CRLF often successfully breed in artificial ponds with little or no emergent vegetation, and have been observed in stream reaches with only sparse riparian vegetation.

Predators such as bullfrogs and predatory fishes, particularly centrarchids (i.e., sunfishes and basses), may feed on the larvae at higher levels than naturally co-evolved predators (Jennings and Hayes 1994); thus, CRLF occupy habitats that are nearly or completely free of these invasive predators. The timing of breeding varies geographically, but generally occurs between November and late April (Fellers 2005).

CRLF may disperse from their aquatic breeding habitats to upland habitats during the dry season. They prefer upland habitats that provide moisture to prevent desiccation and protection from predators including downed logs, woody vegetation, boulders, moist leaf litter, or other refugia during the dry season. In areas where upland habitats do not contain structure, they take refuge in burrows (EMC Planning Group 2016). However, if there is sufficient water at their breeding location, they may remain in aquatic habitats year-round instead of moving to adjacent uplands.

Dispersal and migration of CRLF can be highly variable depending on site conditions and individual frogs. Fellers and Kleeman (2007) found that some CRLF spend little time in a breeding pond before moving to adjacent uplands, while others will remain in the same pond until it has almost completely dried. Dispersal between breeding sites, upland sites, and nonbreeding aquatic habitats tends to be straight-line movements regardless of vegetation or topography (Bulger et al. 2003), though movement along waterways has also been documented (Fellers and Kleeman 2007). During wet seasons, frogs can move long distances between habitats, traversing upland areas or ephemeral drainages. Dispersal distances are typically less than 0.5 km (0.3 mile), with a few individuals moving 2.0-3.6 kilometers (1.2-2.2 miles) (Bulger et al. 2003). Seeps and springs in open grasslands can also function as foraging habitat or refugia for wandering frogs (Jennings and Hayes 1994).

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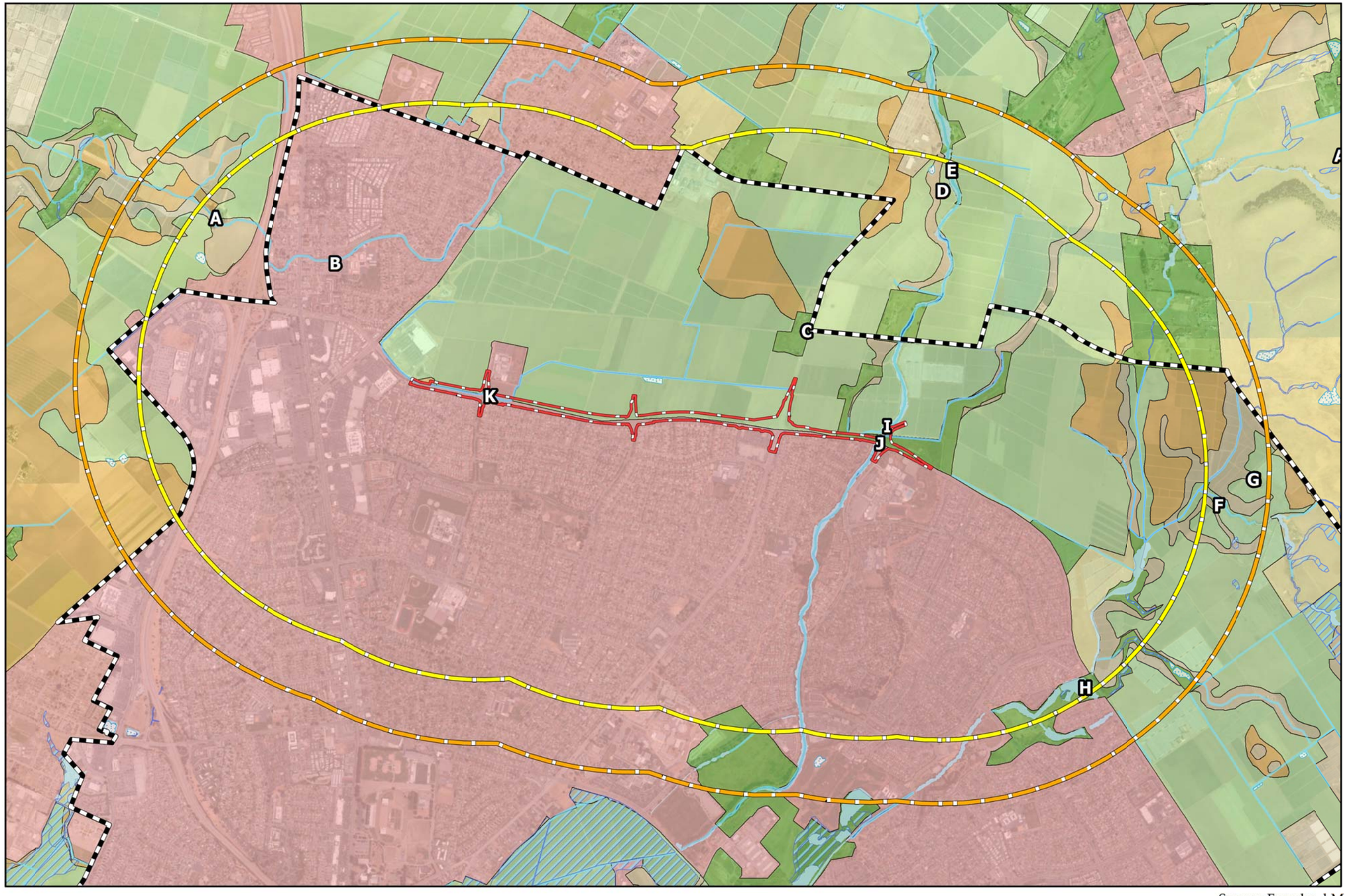
2.0
METHODS

The initial field investigation was preceded by a literature review. Historical CTS and CRLF records were obtained from a search of the CDFW *California Natural Diversity Database* (CNDDB) for the Moss Landing, Prunedale, San Juan Bautista, Marina, Salinas, Natividad, Seaside, Spreckles, and Chualar U.S. Geological Survey (USGS) quadrangles (CDFW 2017), and from a search of the catalogues of the Museum of Vertebrate Zoology, UC Berkeley (UC Berkeley 2017) and the VertNet data portal (VertNet 2017) for Monterey County. In addition, Appendix E, *Biological Resources Report from the Central Area Specific Area Plan* (Lyons and Mori 2005), was referenced for information about species occurrences from recent field studies in the area.

To identify suitable habitats within the vicinity, the NWI was queried for all freshwater features within 1.24 miles of the project limits. Additional aquatic features and suitable habitat were identified using Google Earth aerial imagery, and via examining CNDDB occurrence maps for CTS and CRLF. On August 9, 11, and 14, 2017, EMC Planning Group wildlife biologist Emily Malkauskas conducted field investigations. The East Boronda Road Widening project site and surrounding habitat areas were mapped and photographed from access routes through the agricultural production area. All suitable habitats within 1.24 miles of the project limits were visited where access was allowed. It was not possible to visit all of the habitat features identified within 1.24 miles of the project limits due to private property and other access restrictions.

For each aquatic habitat feature visited, a datasheet was completed using the template included in Appendix D of the *USFWS Revised Guidance on Site Assessments and Field Surveys for the California Red-legged Frog* (USFWS 2005). Habitats were classified either as ponds or as streams. For pond habitats, parameters recorded included size (approximate length and width), maximum depth, dominant vegetation, substrate, and apparent seasonality (perennial vs. ephemeral). For stream habitats, bank-full width, maximum depth, stream gradient, presence of pools, dominant vegetation, substrate, apparent seasonality, and a description of the bank were

recorded. Features visited are shown on Figure 8, Habitat Map, as aquatic features A through K. Due to their length and variable access restrictions, these habitats could not be visited for their entirety within the 1.24 mile buffer area. Segments of streams that were within the project limits were visited and assessed, and other accessible representative areas upstream and/or downstream from these on-site features were visited.



Legend

- Project Site
- Project Buffer of 1 Mile
- Project Buffer of 1.24 Miles
- Salinas City Limits
- A — Aquatic Features Visited

Land Use

- Prime Farmland
- Farmland of Statewide Importance
- Unique Farmland
- Grazing Land
- Urban and Built-Up Land
- Other Land (X)

USFWS National Wetlands Inventory

- Freshwater Emergent Wetland
- Freshwater Forested/ Shrub Wetland
- Freshwater Pond
- Riverine
- Constructed Channel

0 2,000 feet

Source: Farmland Mapping and Monitoring Program 2016, U.S. Fish and Wildlife Service 2015, Esri 2017

Figure 8
Habitat Map

Boronda Road Congestion Relief Project; CIP No. 9510: Habitat Assessment

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3.0
RESULTS

3.1 PROJECT AREA DESCRIPTION

Habitats within Project Boundary

The project site includes East Boronda Road, active farmland with intensive agricultural production, roadside ditches, and additional side streets (Figure 4, Site Photographs A). The on-site agricultural and roadside drainage ditches are regularly mechanically disturbed, and possibly also sprayed with herbicide. Therefore, in most areas within the project site, only sparse ruderal (weedy) vegetation is present, such as non-native cheeseweed (*Malva parviflora*), flax-leaved horseweed (*Erigeron bonariensis*), purslane (*Portulaca oleracea*), and bur-clover (*Medicago polymorpha*). Other common, non-native vegetation species were also present on the margins of fields.

A portion of the on-site drainage ditch, flowing from the southeast corner of the McKinnon School property to the west and through the western boundary of the project site, is listed on the NWI as Riverine (Figure 4, Photo 5 and Figure 5, Photos 3, 4, and 5). An assessment to determine if features are considered jurisdictional by the U.S. Army Corps of Engineers, Regional Water Quality Control Board, and/or CDFW and the appropriate permitting processes is underway. Water was present within this portion of the drainage ditch at the time of the survey and flows from the agricultural fields located to the north of the project site into two major intake culverts on the project site. These culverts, located where McKinnon Street and Dartmouth Way intersect with East Boronda Road, drain into the Reclamation Ditch system (Figure 6, Photo 2). Some aquatic vegetation was observed in this portion of the drainage ditch during the survey. Aquatic, riparian habitat is also present on the project site where East Boronda Road crosses over Gabilan Creek. There, aquatic vegetation, pools of water within the creek, and overhanging riparian vegetation species were noted at the time of the survey. These

aquatic habitat components potentially provide refugia and breeding habitat for amphibian species. Some small mammal burrows were also noted within the project site. Therefore, potential upland habitats were also found for special-status amphibians within the project impact areas.

Habitats in Adjacent Areas

Terrestrial Habitats

The dominant habitats within the assessment area surrounding the site are agricultural fields, grazing land, urban, and ornamental landscaping interspersed with native trees and shrubs. Remnant patches of non-native grasslands, coyote brush scrub, and willow riparian vegetation were interspersed throughout the assessment area. The topography of the area includes valley bottom and the foothills of the Gabilan range to the east.

Land uses within the site assessment area include rural residential, agricultural, grazing, urban, public parks, roads and highways, and commercial. The assessment area encompasses the northern portion of the City of Salinas, including medium and high-density residential development, commercial areas, and roads (Figure 8, Habitat Map).

Non-native grassland patches in the area were typically dominated by non-native ripgut brome (Bromus diandrus), soft chess (*Bromus hordeaceus*), barley (*Hordeum murinum*), slender wild oat (*Avena barbata*), and rye grass (*Festuca perennis*); this habitat also supported common non-native weeds such as cheeseweed (*Malva parviflora*), California burclover (*Medicago polymorpha*), wild radish (*Raphanus sativus*), poison hemlock (*Conium maculatum*), sweet fennel (*Foeniculum vulgare*), shortpod mustard (*Hirschfeldia incana*), and bindweed (*Convolvulus arvensis*). Coyote brush scrub dominated by native coyote brush (*Baccharis pilularis*) shrubs was intermixed with patches of non-native grassland in some upland areas.

Aquatic Habitats, Creeks, and Tributaries

The review of the NWI data, aerial imagery provided by Google Earth, and background documentation identified two freshwater creek drainages and associated tributaries within the assessment area, a network of agricultural canals, and 73 ponds/freshwater emergent wetlands (Figure 8, Habitat Map). The assessment area includes tributaries and portions of Gabilan Creek and Natividad Creek. These creeks and their tributaries originate in the Gabilan Range, where they flow through wooded canyons or open grasslands until they converge in the valley bottom.

Gabilan Creek flows north to south through farm fields in the northern portion of the assessment area into the residential neighborhoods to the south. In the study area, it is mostly within a

natural channel and is primarily lined with dense willow riparian vegetation (Figure 6, Photo 3). It flows through large box culverts underneath East Boronda Road (Figure 7, Photos 1 and 3) and Natividad Road, and the residential streets within the urbanized southern portion of the study area. A few small patches of non-native grassland and/or grassland mixed with coyote brush scrub that could be considered suitable upland habitat for CTS or CRLF were found adjacent to Gabilan Creek in the study area (Figure 4, Photo 6 and Figure 7, Photo 5). Irrigation canals from the surrounding agricultural fields discharge into the creek, leading to the presence of water in sections of the creek even during the typically dry summer months. Some large pools were observed in Gabilan Creek, two of which contained water. Both of these pools were located in the box culvert beneath East Boronda Road. One pool was covered with duckweed (*Lemna* sp.), and contained emergent vegetation in the concrete lined portion of the channel. Where the box culvert joined the natural channel on the north side of the bridge, the creek bed was overhung by large red willows (*Salix laevigata*) and arroyo willows (*Salix lasiolepis*) with an understory of Himalayan blackberry (*Rubus armeniacus*), cape ivy (*Delareia odorata*), and forbs such as mugwort (*Artemisia douglasiana*). The other pool with water was located directly beneath the bridge and contained several Sierran tree frog (*Pseudacris sierra*) tadpoles at the time of the survey (Figure 7, Photo 3). Due to access restrictions, the entire reach of Gabilan Creek was not observable. Given that water was flowing through the irrigation canals that discharge into Gabilan Creek in the assessment area, additional pools with perennial water are likely to be present.

Within the study area limits but outside of the project site boundary, Natividad Creek is divided into tributaries that flow out of the Gabilan Range in the northeastern and eastern portion of the study area. As the tributaries flow downslope they converge and form two large meandering tributaries that flow into the valley bottom and converge within the agricultural production area. The northernmost tributary flows through a ranch, into roadside ditches, and through a series of yards with livestock holding areas. Vegetation is limited to highly disturbed areas and a small strip of willow riparian that was not visited due to access limitations. The meandering southernmost tributary supports willow riparian vegetation as it flows into farmland in the valley bottom. The northernmost tributary flows through a manmade irrigation canal for approximately 0.65 miles before joining the southernmost tributary.

The southernmost tributary flows through manmade irrigation canals for approximately 0.35 miles before joining in the northernmost tributary (EMC Planning Group 2016). The junction of where these two tributaries converge is where the main stem of the creek begins. The main creek flows through the surrounding agricultural farms, under East Boronda Road, and into Natividad Creek Park. The main stem of the creek contained a series of large pools with an Ordinary High Water Mark (OHWM) from two to five feet deep and a riparian area dominated by willows and coyote brush. Some of these pools near where Natividad Creek crosses beneath East Boronda Road were near a large grassland area mixed with non-native grassland species and coyote brush

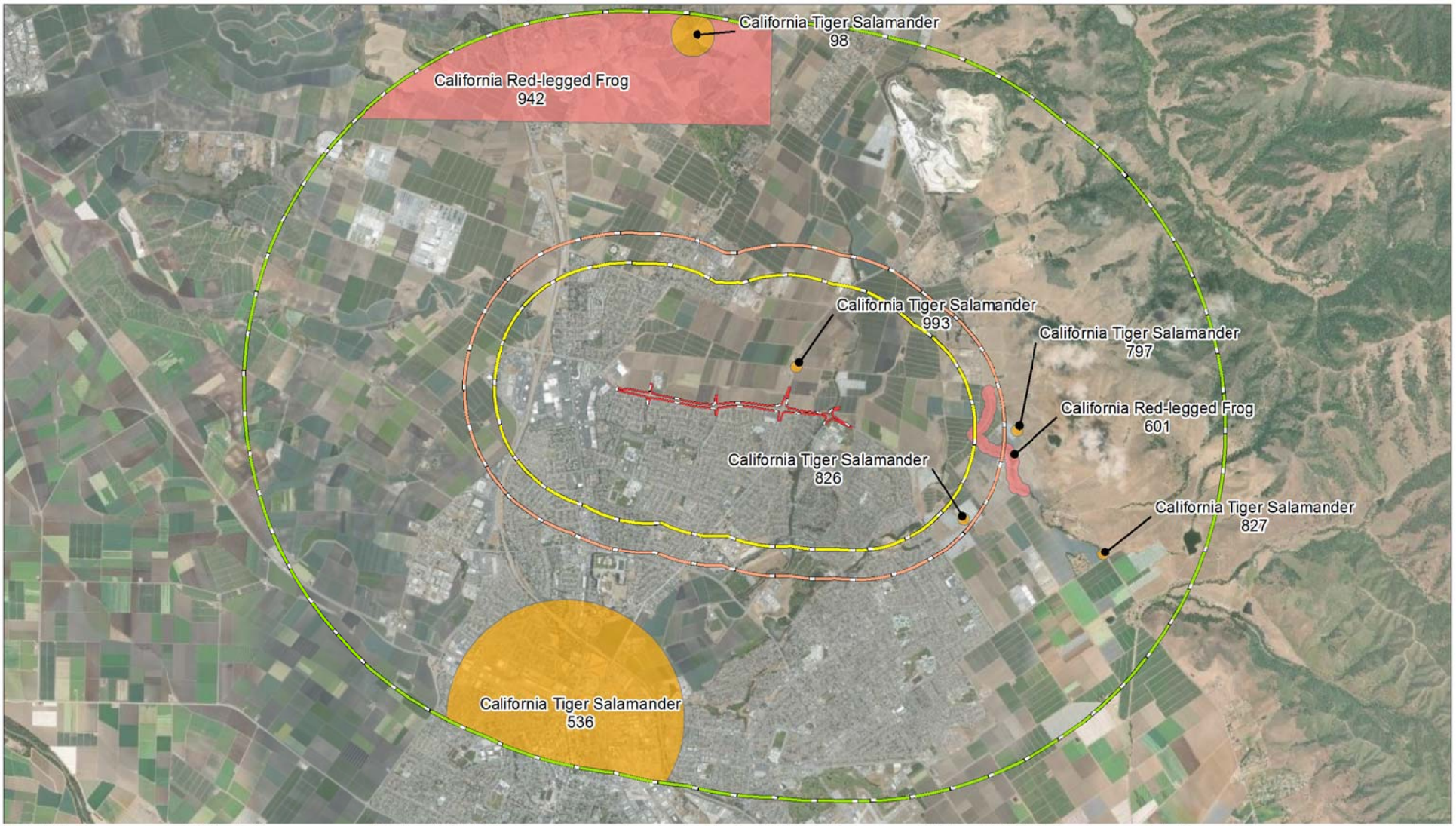
scrub. The creek channel at this location contained scattered patches of cattail (*Typha* sp.) and southern bulrush (*Schoenoplectus californicus*), and patches of ladies thumb (*Persicaria maculosa*), yellow nut-grass (*Cyperus esculentus var. leptostachyus*), and curly dock (*Rumex crispus*). South of East Boronda Road, Natividad Creek flows into Natividad Creek Park, which has a large population of California ground squirrels within a patch of non-native grassland that parallels the creek. In this area, the channel has a natural flow divided into small channels that form shallow pools from one to two feet deep at intervals. The riparian woodland around the creek is wider and of higher quality than the other riparian habitat within the assessment area (EMC Planning Group 2016).

Several stock ponds also exist within the agricultural fields surrounding the project site. Many of these were not visited due to access limitations. Breeding hybrid California tiger salamanders have been recently documented within these ponds (CDFW 2017) and many of them provide potentially suitable breeding habitat for both CTS and CRLF.

A total of 11 aquatic features shown on the NWI were visited in the assessment area (Figure 8, Features A – K). These features included stock ponds, creeks, constructed channels in the form of drainage ditches containing agricultural run-off water, and locations where CTS or CRLF records have been documented in the past. These features were each assessed for their potential to provide suitable habitat for CTS or CRLF and are described more thoroughly in Appendix A.

3.2 CTS OCCURRENCES IN THE VICINITY OF THE PROJECT AREA

Per the guidelines in the *Interim Guidance on Site Assessment and Field Surveys for Determining Presence or a Negative Finding of the California Tiger Salamander* (USFWS 2003), documented occurrences of CTS within 3.1 miles of the project boundary are assessed to place the project site in a regional perspective. Occurrences within 1.24 miles are assessed based on the observed mobility of the species and for their potential to act as source populations for breeding or upland habitat potentially present at the project site. Six occurrences of CTS were found within 3.1 miles and two occurrences of CTS were found within 1.24 miles of the project site in the CNDDB (CDFW 2017) (Figure 9, CTS and CRLF Observations Within the Project Vicinity). Occurrence #993 is located approximately 0.3 miles from the project site in a stock pond near Natividad Road (Figure 8, Feature C). In 2007, salamander larvae sampled here proved to be hybrid tiger salamanders. Occurrence #826 is located approximately 1.3 miles from the project site in an agricultural stock pond. In 2004, salamander larvae sampled here also proved to be hybrid tiger salamanders. Occurrence #797 is located approximately 1.5 miles from the project site. It is from a road-killed tiger salamander found on Old Stage Road in 2002.



Note: This figure presents California Natural Diversity Database (CNDDB) occurrence records maintained by the California Department of Fish and Wildlife. Species records indicate positive occurrences only; lack of occurrence data does not indicate species are not present. Some records represent historical and/or extirpated occurrences. There may be additional special-status species occurrences within this area which have not been observed or reported.

Source: ESRI 2019,
CNDDB 2019, Wallace Group 2019

0 1.1 Mile

Project Buffer of 1 Mile
Project Buffer of 1.24 Miles
Project Buffer of 3.1 Miles
Project Site
California Red Legged Frog
California Tiger Salamander

Figure 9

CTS and CRLF Observations Within the Project Vicinity

Boronda Road Congestion Relief Project; CIP No. 9510: Habitat Assessment

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The taxonomic status of this individual was uncertain. Occurrence #827 is located approximately 2.5 miles from the project site in an agricultural stock pond. In 2004, salamander larvae sampled here proved to be hybrid tiger salamanders. Occurrence #536 is located approximately 2.8 miles from the project site. In 2005, aerial imagery showed that the area had been entirely developed and/or had been converted into agricultural fields. No suitable habitat appears to remain. Occurrence #98 is located approximately 2.9 miles from the project site in a pond located 2,500 feet west of residential developments. One tiger salamander larvae was found at this location; the taxonomic status was unspecified.

3.3 CRLF OCCURRENCES IN THE VICINITY OF THE PROJECT AREA

One occurrence of CRLF was found within one mile of the project site in the CNDDB (CDFW 2017) (Figure 9, CTS and CRLF Observations within the Project Vicinity). Occurrence #601 was found approximately one mile from the project site. This occurrence includes observations of eight live adults and one live metamorph between 2002 and 2004, and one adult road-killed frog on Old Stage Road in 2003.

3.4 HABITAT ASSESSMENT

Breeding Habitat and Upland Aestivation/Refugia Habitat

Potentially suitable breeding habitat was found on the project site and within the surrounding assessment area for CTS and CRLF. The closest potentially suitable breeding habitat for CTS and CRLF was found within Gabilan Creek at East Boronda Road. Two ponds containing water, one of which containing emergent aquatic vegetation, were observed during the assessment at this location (Figure 8, Feature J). No CTS or CRLF were detected here at the time of the assessment, but Sierran tree frog tadpoles were observed within one of the pools. Emergent vegetation including duckweed, ladies thumb, yellow-nut grass, and overhanging willow riparian vegetation provide potential cover and refugia for breeding amphibians. This portion of Gabilan Creek contained several more areas that appear to pond under normal rainfall conditions that may have the potential to provide additional suitable breeding habitat in the area. Coyote brush scrub habitat containing small mammal burrows located on either side of Gabilan Creek at this location provides potentially suitable upland/aestivation habitat for CTS and CRLF adults.

The next closest potentially suitable breeding habitat was 0.3 miles to the north of the project site at CTS occurrence #993 (Figure 8, Feature C). This area consisted of an agricultural stock pond

with substantial submergent vegetation. Little emergent vegetation was observed at this location during the assessment. The stock pond is surrounded by active agricultural production in all directions and is immediately bordered by Natividad Road to the west. In 2007, 30 hybrid tiger salamander larvae were recorded in this pond. Due to the fact that little refugia is present for cover as well as to the fact that barriers to dispersal are immediately present in all directions, this pond provides low quality breeding habitat for CTS and CRLF. Therefore, this pond could potentially provide a source of CTS or CRLF individuals that could migrate to or through the project site.

The next closest potentially suitable breeding habitat for CTS and CRLF was 0.9 miles to the north of the project site at an agricultural stock pond adjacent to Gabilan Creek at Natividad Road (Figure 8, Feature D). The stock pond contained substantial emergent vegetation, is surrounded by active agricultural production, and is bordered by Natividad Road to the west. The emergent vegetation present provides cover and refugia for potential breeding amphibians. Suitable breeding habitat is also likely present in Gabilan Creek approximately 0.04 miles to the east of this location, which was dry at the time of the assessment but contains areas that appear to pond under normal rainfall conditions. This stock pond could potentially provide a source of individuals that could migrate to or through the project site.

Additional potentially suitable breeding habitat for CRLF and CTS includes pools located within Natividad Creek at East Boronda Road approximately one mile southeast of the project site (Figure 8, Feature H), a tributary of Natividad Creek at the location of CRLF occurrence #601 (Figure 8, Feature F), and a stock pond adjacent to this occurrence approximately 1.2 miles from the project site (Figure 8, Feature G). These habitats could potentially provide a source of individuals that could migrate to or through the project site.

Upland aestivation habitat was also present throughout the project site in the form of small mammal burrows. In addition to the aforementioned burrows located adjacent to Gabilan Creek at East Boronda Road, many additional burrows were found along the drainage ditches that span the project site. Several burrows were noted near the McKinnon Street intake culvert, as well as along East Boronda Road to the west of Natividad Road.

4.0
CONCLUSIONS

As discussed above, potential upland aestivation habitat and moist refugia were found within the project site for both CTS and CRLF. Potential breeding habitat was also found within the project site at Gabilan Creek, the bed of which may or may not be impacted by the project depending on which project impact option is carried out at this location. For the purposes of this assessment, the highest level of impact at Gabilan Creek, including impacts to the bed of the channel and therefore to the breeding amphibian habitat at this location, is being considered.

Ponds with known populations of hybrid tiger salamanders are located within 1.24 miles of the project site, and a record of CRLF is located within one mile of the project site, near a southern tributary of Natividad Creek and Old Stage Road. Potential upland refugia is present in the form of small mammal burrows within the coyote brush scrub habitat at the eastern end of the project site as well as along the drainage ditches on site. The farmed areas adjacent to the project site represent a hostile matrix to cross, due to there being frequent human disturbances and many obstructions. However CRLF are known to travel in straight line distances from breeding habitat to suitable upland refugia or breeding ponds with little regard to the terrain (Bulger et al. 2003). Given that road-killed CTS and CRLF were found on Old Stage Road near the southern tributary to Natividad Creek, that there are stock ponds suitable for breeding located throughout the agricultural fields adjacent to the project site, and that suitable breeding/upland aestivation habitat was found on the project site in Gabilan Creek, it is likely that this area supports a population of CTS and CRLF that move between these habitat patches.

The conclusion of a habitat assessment should include a quantitative determination regarding the potential presence of special-status species. A determination of "high" potential would be indicated by observed or well-documented special-status species on or immediately adjacent to the subject area. A determination of "moderate" potential would be indicated by the occurrence of less well-documented or older records from the subject area, and the presence of suitable habitat in the subject area within a short distance from previously recorded observations. A

determination of "low" potential would be indicated by the occurrence of records within the subject area vicinity, with potential habitat within the subject area that could reasonably be accessed by the special-status species as breeding, aestivating, or migratory habitat.

For the reasons listed above, this habitat assessment demonstrates that there is a low to moderate potential for both CTS and CRLF to occur within the project site and in areas adjacent to and surrounding the project site. Given that the project site potentially contains suitable upland aestivation habitat, moist upland refugia, and breeding habitat for CRLF and CTS at Gabilan Creek, there is a low to moderate potential for both CTS and CRLF to use this area for breeding, aestivating, and dispersing between other suitable habitat patches. If individual CRLF or CTS were killed, injured, or harmed as a result of project activities, this would constitute a 'take' according to the federal and state Endangered Species Acts, and incidental take permits from the USFWS and CDFW would be required before work is allowed to continue.

Based on delineation work and guidance from Keith Hess, Regulator with the USACE (at a site visit on November 2, 2017 and through subsequent discussions), impacts to federally protected wetland and aquatic resources were identified as a result of the proposed project. Because a permit will be required from the USACE, they will act as the lead federal agency and conduct informal consultation with the USFWS. Measures to protect federally regulated biological resources and incidental take authorization will be included in a Biological Opinion (BO) as part of the USACE permit.

Incidental Take Authorization. The project proponent shall obtain incidental take authorization from the USFWS and CDFW for potential project impacts to CRLF and CTS, and implement all avoidance, minimization, and compensatory mitigation measures required by these permits. The project proponent shall also implement the avoidance and minimization measures identified below, unless otherwise specified by the permit(s), before/during construction to minimize the potential for "take" of CRLF and CTS.

a. As detailed below, at least 15 days prior to ground disturbance, the project proponent shall submit the name and credentials of the project biologists who would conduct activities specified in the following measures. No project activities shall begin until the project proponent has received written approval from the USFWS and CDFW that the project biologists are qualified to conduct the work.

    - Qualified project biologists will be retained by the project proponent and approved in advance by the City of Salinas Public Works Department, USFWS, and CDFW to conduct preconstruction surveys, lead worker environmental awareness training, and monitor for sensitive biological resources during construction. A project biologist will be on the site during initial ground disturbance, vegetation removal, and clearing to monitor biological resource protection measures, and at any time when impacts to sensitive biological resources could occur.

b. Qualified project biologists approved by the USFWS and CDFW shall supervise and/or implement all species protection measures. Construction contracts shall expressly include language requiring compliance with the protection measures. Construction personnel shall attend a training session regarding the protection measures, as described below:

    - Before construction activities begin, a qualified project biologist will conduct a worker environmental awareness training session for all construction personnel. At a minimum, the training will include a description of protected biological resources, species descriptions and habitat requirements, and general measures being implemented to protect sensitive resources during construction. Informational handouts with photographs clearly illustrating species appearances will be used in the training session.

    - Training topics will include special-status species with potential to occur on the project work site as determined by final site plan impact boundaries and results of any completed focused surveys. Species are expected to include California red-legged frog, California tiger salamander, as well as additional protected species identified in the analysis conducted for the California Environmental Quality Act (CEQA) document completed for the proposed project.

    - The training session will include information about steps to take if a special-status species is encountered, including contact information for the biological monitoring staff and measures to protect species during construction. Additionally, the biological monitor will be available to answer any questions about the protected species. All new construction personnel will undergo this mandatory worker environmental awareness training when they start work on the project. Training will occur prior to the start of construction and periodically as needed if new construction personnel begin work at the project work sites. Each worker shall sign a statement that they received training and the statement will be posted or easily available for viewing at the project work sites.

c. The project biologists shall have the authority to halt construction work at any time to prevent harm to CRLF and CTS or when any of the permit-specified protection measures have been violated. Work shall re-commence only when authorized by the project biologists. If work is stopped due to potential harm to protected species, the project biologists shall contact the USFWS and/or CDFW by telephone or email on the same day to communicate the event and coordinate appropriate action.

d. A project biologist shall be present during all initial ground disturbance activities; the biologist shall conduct biological construction monitoring in all work areas with potential to impact CRLF or CTS. Before the start of work each day, a project biologist or a designated representative (such as the construction manager, foreman, or resident

engineer) shall check for wildlife under any equipment such as vehicles and stored pipes within active construction zones that are fenced. A project biologist or designated representative shall also check all excavated steep-walled holes or trenches greater than one foot deep for trapped animals. If CRLF or CTS is observed within an active construction zone, a project biologist shall be notified immediately and all work within 100 feet of the individual animal shall be halted and all equipment turned off until the biologist has captured and removed the individual from the work area. CRLF and CTS shall be relocated to a USFWS/CDFW-approved off-site location according to permit specifications.

e. Initial site clearing and grading shall be conducted and completed only during the dry season, which typically extends from April 15 to November 15. Initial site clearing and grading shall halt if significant rainfall, defined as greater than 0.5 inches per 24 hours within the local watershed, is either forecasted or observed to avoid environmental conditions when CRLF or CTS would have the potential to be active.

f. A designated representative that is onsite during all construction activities (such as the construction manager, foreman or resident engineer) shall be appointed by the City who will be the contact source for any employee or contractor who may inadvertently kill or injure a special-status species or find one dead, injured, or trapped, in addition to the qualified biologist. The designated representative shall be legally responsible to notify the qualified biologist, USFWS, and CDFW immediately in the event that "take" of any special-status wildlife species occurs. The designated representative shall be identified during the Employee Education Program and his/her contact information shall be provided to USFWS and CDFW. This individual will be present onsite every day and will be accessible to regulatory agency personnel.

g. Access routes and the main project site shall be fenced with wildlife fencing that will prevent CRLF and CTS from entering project impact areas. Typical amphibian exclusion fencing usually consists of silt fencing, however for long-term construction projects, a more weather resilient fence is recommended. The exclusion fence shall consist of a 3-foot wall of ¼-inch mesh, galvanized wire (i.e., welded wire hardware cloth - no woven wire would be allowed) or other commercially available exclusion fencing (e.g. ERTEC Fence). If more permanent fencing is cost prohibitive, orange silt fencing that is erected such that folds that could collect water or provide shelter are not present where the silt fence meets the ground should be used. This fence shall be inspected weekly by a qualified biologist for holes and tears that could allow frogs or salamanders to pass. Holes or tears will be repaired within 24 hours of discovery. In addition, the fence and the site will be inspected by a qualified biologist after significant rain events to ensure that no frogs or salamanders are sheltering along the fence or

attempting to walk around it. In the unforeseen event that CRLF or CTS are encountered, the site biologist shall contact the USFWS and/or CDFW immediately to determine the best course of action. At a minimum, all construction activities within 100 feet of the sighting will cease until the frog or salamander leaves the work area. To the extent that avoidance of the CRLF/CTS is not possible, then mitigation shall be provided for the project following consultation with USFWS and CDFW. Mitigation may include, but not be limited to, species salvage and relocation, habitat enhancement, or compensatory mitigation.

h. Due to the potential for wildlife entanglement, the contractor shall avoid the use of monofilament netting on the job including in temporary and permanent erosion control materials (fiber rolls, and blankets). Loosely woven natural fiber erosion control matting is acceptable.

i. All food-related and other trash shall be disposed of in closed containers and removed from the project area at least once a week during the construction period or more often if trash is attracting avian or mammalian predators. Construction personnel shall not feed or otherwise attract wildlife to the area. These instructions to the construction crew shall be reiterated during the employee education program and during update meetings with construction crews. The instructions shall also be posted conspicuously on the site.

j. Biological monitoring reports shall be submitted to the City of Salinas Public Works Department providing documentation that these measures have been implemented.

Mitigation for Loss of Habitat. If the project will result in impacts to CTS and/or CRLF, compensation for the permanent loss of aquatic and/or upland habitat may be required. In compliance with the applicable incidental take permit requirements, the City of Salinas Public Works Department will preserve or purchase in-kind habitat that is known to provide aquatic and upland habitat for CTS and/or CRLF at a minimum 2:1 ratio of area preserved to area impacted. Compensatory mitigation may be accomplished through one of the following options:

- Establishing a conservation easement on or off the site in a suitable Monterey County location and providing a non-wasting endowment for management and monitoring of the property in perpetuity. Lands placed in a conservation easement must be documented to support California tiger salamander and/or California red-legged frog;
- Depositing funds into an USFWS- and CDFW-approved in-lieu fee program; or
- Purchasing credits in a USFWS- and CDFW-approved conservation bank that includes the project site in its service area.

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APPENDIX A

USFWS CRLF SITE ASSESSMENT DATA SHEETS

Appendix D.
California Red-legged Frog Habitat Site Assessment Data Sheet

Site Assessment reviewed by_____ _____ _____
(FWS Field Office) **(date)** **(biologist)**

Date of Site Assessment: 8/9/2017
(mm/dd/yyyy)

Site Assessment Biologists: Malkauskas (Last name) Emily (first name)

_____ (Last name) _____ (first name)

_____ (Last name) _____ (first name)

_____ (Last name) _____ (first name)

Site Location: Monterey County, 36˚43'35.2603"N, 121˚39'43.1996"W
(County, General location name, UTM Coordinates or Lat./Long. or T-R-S).

****ATTACH A MAP** (include habitat types, important features, and species locations)**

Proposed project name: East Boronda Road Widening Project

Brief description of proposed action:

Widening of East Boronda Road is proposed from Dartmouth Way to Independence Boulevard in the City of Salinas, Monterey County, California. East Boronda Road would be widened from two lanes to four lanes, incorporating roundabouts at major intersections. The widening would occur in phases and would take place along the northern edge of the existing road corridor in areas now under active agricultural cultivation. Construction includes relocating an existing agricultural ditch along the north side of East Boronda Road further north, creation of bike and shoulder lanes, widening the East Boronda Road bridge over Gabilan Creek, creation of bus pullout(s), sidewalk replacement and landscaping.

1) Is this site within the current or historic range of the CRF (circle one)? (YES) NO

2) Are there known records of CRF within 1.6 km (1 mi) of the site (circle one)? (YES) NO
If yes, attach a list of all known CRF records with a map showing all locations.

GENERAL AQUATIC HABITAT CHARACTERIZATION

(if multiple ponds or streams are within the proposed action area, fill out one data sheet for each)

POND:

Size: _____ Maximum depth: _____

Vegetation: emergent, overhanging, dominant species: _____

_____

_____

Substrate: _____

_____

Perennial or Ephemeral *(circle one).* If ephemeral, date it goes dry: _____

Appendix D.
California Red-legged Frog Habitat Site Assessment Data Sheet

STREAM:

Bank full width: 3.5 ft
Depth at bank full: 1.5 ft
Stream gradient: ~ 2%

Are there pools (circle one)? YES (NO)

If yes,

Size of stream pools: _____
Maximum depth of stream pools: _____

Characterize non-pool habitat: run, riffle, glide, other: Riffle within agricultural field runoff ditch

Vegetation: emergent, overhanging, dominant species: Emergent: non-native grasses, ladies thumb (Persicaria maculosa); Overhanging: poison hemlock, eucalyptus; Dominant: eucalyptus

Substrate: Sandy-mud

Bank description: ~1 foot tall throughout, sandy with eucalyptus roots exposed and leaf litter covering a majority; eucalyptus roots stabilizing banks and providing some cover; bank is not particularly uniform throughout this short segment (banks cut by water and loose where not stabilized by roots)

(**Perennial**) **or Ephemeral** *(circle one)*. If ephemeral, date it goes dry: Perennial due to run-off

Other aquatic habitat characteristics, species observations, drawings, or comments:

Site is a small eucalyptus grove surrounded by active agricultural fields on private property. Two small run-off ditches converge to form one at this location. Location is on private property and survey time was cut short upon encountering access issues. Information presented is all that had been collected upon being asked to leave the site. Additional information was not able to be collected at time of survey.

Necessary Attachments:

1. All field notes and other supporting documents
2. Site photographs: See below
3. Maps with important habitat features and species location: See Figures 4 and 8 of Habitat Assessment

Appendix D.

California Red-legged Frog Habitat Site Assessment Data Sheet

Stream B on Maps: Santa Rita Creek;
adjacent to Santa Rita Elementary School

Appendix D.

California Red-legged Frog Habitat Site Assessment Data Sheet

Site Assessment reviewed by_____ _____ _____
(FWS Field Office) **(date)** **(biologist)**

Date of Site Assessment: 8/9/2017
(mm/dd/yyyy)

Site Assessment Biologists: Malkauskas (Last name) Emily (first name) _____ (Last name) _____ (first name)

_____ (Last name) _____ (first name) _____ (Last name) _____ (first name)

Site Location: Monterey County, 36˚43'28.2997"N, 121˚39'13.4183"W
(County, General location name, UTM Coordinates or Lat./Long. or T-R-S).

****ATTACH A MAP** (include habitat types, important features, and species locations)**

Proposed project name: East Boronda Road Widening Project

Brief description of proposed action:

Widening of East Boronda Road is proposed from Dartmouth Way to Independence Boulevard in the City of Salinas, Monterey County, California. East Boronda Road would be widened from two lanes to four lanes, incorporating roundabouts at major intersections. The widening would occur in phases and would take place along the northern edge of the existing road corridor in areas now under active agricultural cultivation. Construction includes relocating an existing agricultural ditch along the north side of East Boronda Road further north, creation of bike and shoulder lanes, widening the East Boronda Road bridge over Gabilan Creek, creation of bus pullout(s), sidewalk replacement and landscaping.

1) Is this site within the current or historic range of the CRF (circle one)? (YES) NO

2) Are there known records of CRF within 1.6 km (1 mi) of the site (circle one)? (YES) NO
If yes, attach a list of all known CRF records with a map showing all locations.

GENERAL AQUATIC HABITAT CHARACTERIZATION

(if multiple ponds or streams are within the proposed action area, fill out one data sheet for each)

POND:

Size: _____ Maximum depth: _____

Vegetation: emergent, overhanging, dominant species: _____

_____

_____

Substrate: _____

_____

Perennial or Ephemeral *(circle one).* If ephemeral, date it goes dry: _____

Stream B on Maps: Santa Rita Creek;
adjacent to Santa Rita Elementary School

Appendix D.

California Red-legged Frog Habitat Site Assessment Data Sheet

STREAM:

Bank full width: ~11 ft at bridge; ~6 ft upstream

Depth at bank full: ~5 ft at bridge; ~2 ft upstream

Stream gradient: ~1%

Are there pools (circle one)? YES (NO)

If yes,

Size of stream pools: _____

Maximum depth of stream pools: _____

Characterize non-pool habitat: run, riffle, glide, other: Slight riffle; slow-moving and not much water present

Vegetation: emergent, overhanging, dominant species: Emergent: ladies thumb (Persicaria maculosa), yellow nut-grass (Cyperus esculentus var. leptostachyus), non-native grasses; Overhanging: none; Dominant: non-native grasses

Substrate: Mud

Bank description: Concrete-lined beneath bridge at Santa Rita St; gradually sloped and covered with non-native grasses just upstream (east) of Santa Rita St; concrete-lined just downstream (west) of Santa Rita St

(**Perennial**) **or Ephemeral** *(circle one)*. If ephemeral, date it goes dry: wet at time of survey (very low water level)

Other aquatic habitat characteristics, species observations, drawings, or comments:

A trickle of water was observed flowing within the channel beneath Santa Rita St; no pool habitat observed and very little refugia present for amphibian use (tall, non-native grasses provide the only refugia at this location).

Necessary Attachments:

1. All field notes and other supporting documents
2. Site photographs: See below
3. Maps with important habitat features and species location: See Figures 4 and 8 of Habitat Assessment

Appendix D.
California Red-legged Frog Habitat Site Assessment Data Sheet

Pond C on Maps: Agicultural basin - concurrent with CTS occurrence No. 993 from CNDDB

Appendix D.

California Red-legged Frog Habitat Site Assessment Data Sheet

Site Assessment reviewed by_____ _____ _____
(FWS Field Office) **(date)** **(biologist)**

Date of Site Assessment: 8/9/2017
(mm/dd/yyyy)

Site Assessment Biologists: Malkauskas (Last name) Emily (first name)

_____ (Last name) _____ (first name)

_____ (Last name) _____ (first name)

_____ (Last name) _____ (first name)

Site Location: Monterey County, 36˚43'15.4888"N, 121˚37'17.2330"W
(County, General location name, UTM Coordinates or Lat./Long. or T-R-S).

****ATTACH A MAP** (include habitat types, important features, and species locations)**

Proposed project name: East Boronda Road Widening Project

Brief description of proposed action:

Widening of East Boronda Road is proposed from Dartmouth Way to Independence Boulevard in the City of Salinas, Monterey County, California. East Boronda Road would be widened from two lanes to four lanes, incorporating roundabouts at major intersections. The widening would occur in phases and would take place along the northern edge of the existing road corridor in areas now under active agricultural cultivation. Construction includes relocating an existing agricultural ditch along the north side of East Boronda Road further north, creation of bike and shoulder lanes, widening the East Boronda Road bridge over Gabilan Creek, creation of bus pullout(s), sidewalk replacement and landscaping.

1) Is this site within the current or historic range of the CRF (circle one)? (YES) NO

2) Are there known records of CRF within 1.6 km (1 mi) of the site (circle one)? (YES) NO
If yes, attach a list of all known CRF records with a map showing all locations.

GENERAL AQUATIC HABITAT CHARACTERIZATION

(if multiple ponds or streams are within the proposed action area, fill out one data sheet for each)

POND:

Size: 0.25 acres Maximum depth: ~5 ft

Vegetation: emergent, overhanging, dominant species: Submergent: algae: Emergent: none; Overhanging: none; Dominant: algae (species unknown)

Substrate: Mud

(**Perennial**) **or Ephemeral** *(circle one).* If ephemeral, date it goes dry: Perennial due to agricultural runoff

Pond C on Maps: Agicultural basin - concurrent with CTS occurrence No. 993 from CNDDB

Appendix D.

California Red-legged Frog Habitat Site Assessment Data Sheet

STREAM:

Bank full width: _____

Depth at bank full: _____

Stream gradient: _____

Are there pools (circle one)? YES NO

If yes,

Size of stream pools: _____

Maximum depth of stream pools: _____

Characterize non-pool habitat: run, riffle, glide, other: _____

_____

_____

Vegetation: emergent, overhanging, dominant species: _____

_____

_____

Substrate: _____

_____

Bank description: _____

_____

_____

Perennial or Ephemeral *(circle one)*. If ephemeral, date it goes dry: _____

Other aquatic habitat characteristics, species observations, drawings, or comments:

Location is a stock pond within an active agricultural operation (private property), alongside Natividad Road. Concurrent with California tiger salamander (CTS; Ambystoma californiense) CNDDB record number 993. In 2007, 30 CTS-hybrid larvae were recorded in this pond.

Pond was surrounded by fencing and could not be described from closer than ~10 feet away during the time of survey. Has a low potential to support CRLF breeding, though completely lacking cover/refugia.

Necessary Attachments:

1. All field notes and other supporting documents
2. Site photographs: See below
3. Maps with important habitat features and species location: See Figures 4 and 8 of Habitat Assessment

Appendix D.

California Red-legged Frog Habitat Site Assessment Data Sheet

Pond D on Maps: Large stock pond within active agricultural operation

Appendix D.
California Red-legged Frog Habitat Site Assessment Data Sheet

Site Assessment reviewed by_____ _____ _____
(FWS Field Office) **(date)** **(biologist)**

Date of Site Assessment: 8/9/2017
(mm/dd/yyyy)

Site Assessment Biologists: Malkauskas (Last name) Emily (first name) _____ _____

_____ _____ _____ _____

Site Location: Monterey County, 36˚43'47.5028"N, 121˚36'48.6994"W
(County, General location name, UTM Coordinates or Lat./Long. or T-R-S).

****ATTACH A MAP** (include habitat types, important features, and species locations)**

Proposed project name: East Boronda Road Widening Project

Brief description of proposed action:

Widening of East Boronda Road is proposed from Dartmouth Way to Independence Boulevard in the City of Salinas, Monterey County, California. East Boronda Road would be widened from two lanes to four lanes, incorporating roundabouts at major intersections. The widening would occur in phases and would take place along the northern edge of the existing road corridor in areas now under active agricultural cultivation. Construction includes relocating an existing agricultural ditch along the north side of East Boronda Road further north, creation of bike and shoulder lanes, widening the East Boronda Road bridge over Gabilan Creek, creation of bus pullout(s), sidewalk replacement and landscaping.

1) Is this site within the current or historic range of the CRF (circle one)? (YES) NO

2) Are there known records of CRF within 1.6 km (1 mi) of the site (circle one)? (YES) NO
If yes, attach a list of all known CRF records with a map showing all locations.

GENERAL AQUATIC HABITAT CHARACTERIZATION

(if multiple ponds or streams are within the proposed action area, fill out one data sheet for each)

POND:

Size: approximately 30 ft X 40 ft Maximum depth: ~ 3 - 5 ft

Vegetation: emergent, overhanging, dominant species: Emergent: tule, cattail ;
Overhanging: none; Dominant: tule, cattail

Substrate: Mud

(**Perennial**) **or Ephemeral** *(circle one).* If ephemeral, date it goes dry: Perennial due to agricultural runoff

Pond D on Maps: Large stock pond within active agricultural operation

Appendix D.

California Red-legged Frog Habitat Site Assessment Data Sheet

STREAM:

Bank full width: _____

Depth at bank full: _____

Stream gradient: _____

Are there pools (circle one)? YES NO

If yes,

Size of stream pools: _____

Maximum depth of stream pools: _____

Characterize non-pool habitat: run, riffle, glide, other: _____

_____

_____

Vegetation: emergent, overhanging, dominant species: _____

_____

_____

Substrate: _____

_____

Bank description: _____

_____

_____

Perennial or Ephemeral *(circle one)*. If ephemeral, date it goes dry: _____

Other aquatic habitat characteristics, species observations, drawings, or comments:

Large stock pond fed by agricultural run-off; good breeding habitat; appears to stay wet year-round [tall, emergent vegetation (~5-7 ft above surface of water) is present]. Banks surrounding pond are approximately 8 ft tall, creating a depression where the stock pond resides.

Necessary Attachments:

1. All field notes and other supporting documents
2. Site photographs: See below
3. Maps with important habitat features and species location: See Figures 4 and 8 of Habitat Assessment

Appendix D.
California Red-legged Frog Habitat Site Assessment Data Sheet

Appendix D.
California Red-legged Frog Habitat Site Assessment Data Sheet

Site Assessment reviewed by_____ _____ _____
(FWS Field Office) (date) (biologist)

Date of Site Assessment: 8/9/2017
(mm/dd/yyyy)

Site Assessment Biologists: Malkauskas (Last name) Emily (first name)

_____ (Last name) _____ (first name)

_____ (Last name) _____ (first name)

_____ (Last name) _____ (first name)

Site Location: Monterey County, 36˚43'49.3194"N, 121˚36'44.2541"W
(County, General location name, UTM Coordinates or Lat./Long. or T-R-S).

****ATTACH A MAP** (include habitat types, important features, and species locations)**

Proposed project name: East Boronda Road Widening Project

Brief description of proposed action:

Widening of East Boronda Road is proposed from Dartmouth Way to Independence Boulevard in the City of Salinas, Monterey County, California. East Boronda Road would be widened from two lanes to four lanes, incorporating roundabouts at major intersections. The widening would occur in phases and would take place along the northern edge of the existing road corridor in areas now under active agricultural cultivation. Construction includes relocating an existing agricultural ditch along the north side of East Boronda Road further north, creation of bike and shoulder lanes, widening the East Boronda Road bridge over Gabilan Creek, creation of bus pullout(s), sidewalk replacement and landscaping.

1) Is this site within the current or historic range of the CRF (circle one)? (YES) NO

2) Are there known records of CRF within 1.6 km (1 mi) of the site (circle one)? (YES) NO
If yes, attach a list of all known CRF records with a map showing all locations.

GENERAL AQUATIC HABITAT CHARACTERIZATION

(if multiple ponds or streams are within the proposed action area, fill out one data sheet for each)

POND:

Size: _____ Maximum depth: _____

Vegetation: emergent, overhanging, dominant species: _____

_____

_____

Substrate: _____

_____

Perennial or Ephemeral *(circle one).* If ephemeral, date it goes dry: _____

Stream E on Maps: Gabilan Creek
downstream of Natividad Road

Appendix D.

California Red-legged Frog Habitat Site Assessment Data Sheet

STREAM:

Bank full width: ~35 - 40 ft

Depth at bank full: 5 ft

Stream gradient: ~ 2%

Are there pools (circle one)? YES (NO)

If yes,

Size of stream pools: _____

Maximum depth of stream pools: _____

Characterize non-pool habitat: run, riffle, glide, other: Creek is dry; likely riffle when wet (coarse substrate, log and stone structures present)

Vegetation: emergent, overhanging, dominant species: Emergent: horseweed, stinging nettle, himalayan blackberry; Overhanging: willow, arundo donax, poison hemlock, box elder, sycamore; Dominant: willow, poison hemlock, stinging nettle

Substrate: coarse sand

Bank description: West bank = gradually sloping and composed of mud/sand substrate, with non-native grasses, willow trees, arundo donax, poison hemlock, and horseweed present. East bank = steeply-sloped, composed of mud-sand and some concrete-brick block structures, with non-native grasses, poison hemlock, and willows present

Perennial or (Ephemeral) *(circle one)*. If ephemeral, date it goes dry: unknown at this location of the creek

Other aquatic habitat characteristics, species observations, drawings, or comments:

Creek is dry with coarse sand substrate throughout; abundant willow/riparian vegetation species located along bank edges; no pooling habitat is evident at this location of Gabilan Creek, though abundant logs, branches, and structures within the creek bed likely create some pool habitats during the wet season.

Necessary Attachments:

1. All field notes and other supporting documents
2. Site photographs: See below
3. Maps with important habitat features and species location: See Figures 4 and 8 of Habitat Assessment

Appendix D.
California Red-legged Frog Habitat Site Assessment Data Sheet

Stream F on Maps: Tributary to Natividad Creek at CRLF Occurence No. 601 in CNDDB

Appendix D.

California Red-legged Frog Habitat Site Assessment Data Sheet

Site Assessment reviewed by_____ _____ _____
(FWS Field Office) **(date)** **(biologist)**

Date of Site Assessment: 8/9/2017
(mm/dd/yyyy)

Site Assessment Biologists: Malkauskas (Last name) Emily (first name)

_____ (Last name) _____ (first name)

_____ (Last name) _____ (first name)

_____ (Last name) _____ (first name)

Site Location: Monterey County, 36˚42'43.6234"N, 121˚35'35.2493"W
(County, General location name, UTM Coordinates or Lat./Long. or T-R-S).

****ATTACH A MAP** (include habitat types, important features, and species locations)**

Proposed project name: East Boronda Road Widening Project

Brief description of proposed action:

Widening of East Boronda Road is proposed from Dartmouth Way to Independence Boulevard in the City of Salinas, Monterey County, California. East Boronda Road would be widened from two lanes to four lanes, incorporating roundabouts at major intersections. The widening would occur in phases and would take place along the northern edge of the existing road corridor in areas now under active agricultural cultivation. Construction includes relocating an existing agricultural ditch along the north side of East Boronda Road further north, creation of bike and shoulder lanes, widening the East Boronda Road bridge over Gabilan Creek, creation of bus pullout(s), sidewalk replacement and landscaping.

1) Is this site within the current or historic range of the CRF (circle one)? (YES) NO

2) Are there known records of CRF within 1.6 km (1 mi) of the site (circle one)? (YES) NO
If yes, attach a list of all known CRF records with a map showing all locations.

GENERAL AQUATIC HABITAT CHARACTERIZATION

(if multiple ponds or streams are within the proposed action area, fill out one data sheet for each)

POND:

Size: _____ Maximum depth: _____

Vegetation: emergent, overhanging, dominant species: _____

_____

_____

Substrate: _____

_____

Perennial or Ephemeral *(circle one).* If ephemeral, date it goes dry: _____

Stream F on Maps: Tributary to Natividad Creek at CRLF Occurence No. 601 in CNDDB

Appendix D.

California Red-legged Frog Habitat Site Assessment Data Sheet

STREAM:

Bank full width: 22 ft

Depth at bank full: 5 ft

Stream gradient: ~ 2%

Are there pools (circle one)? (YES) NO

If yes,

Size of stream pools: 7 ft x 5 ft

Maximum depth of stream pools: 3 ft

Characterize non-pool habitat: run, riffle, glide, other: Creek is dry; likely run when wet

Vegetation: emergent, overhanging, dominant species: Emergent: yellow nut-grass (Cyperus esculentus var. leptostachyus); Overhanging: willow; Dominant: willow

Substrate: mud

Bank description: Sloped, mud substrate, one bench present on both banks

Perennial or (Ephemeral) *(circle one)*. If ephemeral, date it goes dry: unknown at this location of the creek

Other aquatic habitat characteristics, species observations, drawings, or comments:

Tributary to Natividad creek where CRLF occurrence number 601 in the CNDDB was found in 2004. Creek dry at time of assessment, surrounded by active agricultural fields. A few stock ponds containing water at time of assessment present in the surrounding farm fields.

Necessary Attachments:

1. All field notes and other supporting documents
2. Site photographs: See below
3. Maps with important habitat features and species location: See Figures 4 and 8 of Habitat Assessment

Appendix D.
California Red-legged Frog Habitat Site Assessment Data Sheet

Pond G on Maps: Stock pond adjacent to CRLF occurrence no. 601 in CNDDB in active ag fields

Appendix D.

California Red-legged Frog Habitat Site Assessment Data Sheet

Site Assessment reviewed by_____ _____ _____
(FWS Field Office) **(date)** **(biologist)**

Date of Site Assessment: 8/9/2017
(mm/dd/yyyy)

Site Assessment Biologists: Malkauskas (Last name) Emily (first name) _____ (Last name) _____ (first name)

_____ (Last name) _____ (first name) _____ (Last name) _____ (first name)

Site Location: Monterey County, 36˚42'48.2580"N, 121˚35'27.1273"W
(County, General location name, UTM Coordinates or Lat./Long. or T-R-S).

****ATTACH A MAP** (include habitat types, important features, and species locations)**

Proposed project name: East Boronda Road Widening Project

Brief description of proposed action:

Widening of East Boronda Road is proposed from Dartmouth Way to Independence Boulevard in the City of Salinas, Monterey County, California. East Boronda Road would be widened from two lanes to four lanes, incorporating roundabouts at major intersections. The widening would occur in phases and would take place along the northern edge of the existing road corridor in areas now under active agricultural cultivation. Construction includes relocating an existing agricultural ditch along the north side of East Boronda Road further north, creation of bike and shoulder lanes, widening the East Boronda Road bridge over Gabilan Creek, creation of bus pullout(s), sidewalk replacement and landscaping.

1) Is this site within the current or historic range of the CRF (circle one)? (YES) NO

2) Are there known records of CRF within 1.6 km (1 mi) of the site (circle one)? (YES) NO
If yes, attach a list of all known CRF records with a map showing all locations.

GENERAL AQUATIC HABITAT CHARACTERIZATION

(if multiple ponds or streams are within the proposed action area, fill out one data sheet for each)

POND:

Size: approximately 60 ft X 100 ft Maximum depth: unknown (likely ~5 ft)

Vegetation: emergent, overhanging, dominant species: Emergent: tule, cattail ;
Overhanging: willow; Dominant: willow

Substrate: coarse sand

(**Perennial**) **or Ephemeral** *(circle one).* If ephemeral, date it goes dry: Perennial due to agricultural runoff

Pond G on Maps: Stock pond adjacent to CRLF occurrence no. 601 in CNDDB in active ag fields

Appendix D.

California Red-legged Frog Habitat Site Assessment Data Sheet

STREAM:

Bank full width: _____

Depth at bank full: _____

Stream gradient: _____

Are there pools (circle one)? YES NO

If yes,

Size of stream pools: _____

Maximum depth of stream pools: _____

Characterize non-pool habitat: run, riffle, glide, other: _____

_____

_____

Vegetation: emergent, overhanging, dominant species: _____

_____

_____

Substrate: _____

_____

Bank description: _____

_____

_____

Perennial or Ephemeral *(circle one)*. If ephemeral, date it goes dry: _____

Other aquatic habitat characteristics, species observations, drawings, or comments:

Stock pond providing breeding habitat and refugia for amphibian species. Many American bullfrogs were seen at time of assessment (~30 individuals, likely more present). Habitat is suitable for CRLF breeding, though predation from bullfrogs would be likely. This pond is located adjacent to CRLF occurrence number 601 in the CNDDB (separated from it by an active agricultural field.

Additional species observed include: jack rabbit, brewer's blackbird, mockingbird.

Necessary Attachments:

1. All field notes and other supporting documents
2. Site photographs: See below
3. Maps with important habitat features and species location: See Figures 4 and 8 of Habitat Assessment

Appendix D.
California Red-legged Frog Habitat Site Assessment Data Sheet

Appendix D.
California Red-legged Frog Habitat Site Assessment Data Sheet

Site Assessment reviewed by_____ _____ _____
(FWS Field Office) **(date)** **(biologist)**

Date of Site Assessment: 8/9/2017
(mm/dd/yyyy)

Site Assessment Biologists: Malkauskas (Last name) Emily (first name)

_____ (Last name) _____ (first name)

_____ (Last name) _____ (first name)

_____ (Last name) _____ (first name)

Site Location: Monterey County, 36˚42'07.0247"N, 121˚36'07.8296"W
(County, General location name, UTM Coordinates or Lat./Long. or T-R-S).

****ATTACH A MAP** (include habitat types, important features, and species locations)**

Proposed project name: East Boronda Road Widening Project

Brief description of proposed action:

Widening of East Boronda Road is proposed from Dartmouth Way to Independence Boulevard in the City of Salinas, Monterey County, California. East Boronda Road would be widened from two lanes to four lanes, incorporating roundabouts at major intersections. The widening would occur in phases and would take place along the northern edge of the existing road corridor in areas now under active agricultural cultivation. Construction includes relocating an existing agricultural ditch along the north side of East Boronda Road further north, creation of bike and shoulder lanes, widening the East Boronda Road bridge over Gabilan Creek, creation of bus pullout(s), sidewalk replacement and landscaping.

1) Is this site within the current or historic range of the CRF (circle one)? (YES) NO

2) Are there known records of CRF within 1.6 km (1 mi) of the site (circle one)? (YES) NO
If yes, attach a list of all known CRF records with a map showing all locations.

GENERAL AQUATIC HABITAT CHARACTERIZATION

(if multiple ponds or streams are within the proposed action area, fill out one data sheet for each)

POND:

Size: _____ Maximum depth: _____

Vegetation: emergent, overhanging, dominant species: _____

_____

_____

Substrate: _____

_____

Perennial or Ephemeral *(circle one).* If ephemeral, date it goes dry: _____

Stream H on Maps: Natividad Creek at Boronda Road (south of bridge)

Appendix D.

California Red-legged Frog Habitat Site Assessment Data Sheet

STREAM:

Bank full width: ~60 - 80 ft

Depth at bank full: ~8 - 11 ft

Stream gradient: ~ 2 - 3%

Are there pools (circle one)? (YES) NO

If yes,

Size of stream pools: 5 ft x 5 ft

Maximum depth of stream pools: ~3 ft (in wetter conditions)

Characterize non-pool habitat: run, riffle, glide, other: Run through ample emergent vegetation

Vegetation: emergent, overhanging, dominant species: Emergent: ladies thumb (Persicaria maculosa), cattail, yellow nut-grass (Cyperus esculentus var. leptostachyus); Overhanging: willow; Dominant: willow

Substrate: mud

Bank description: Gradually sloped with a large floodplain, banks and floodplain are made up of coarse-sand substrate

(**Perennial**) **or Ephemeral** *(circle one)*. If ephemeral, date it goes dry: _____

Other aquatic habitat characteristics, species observations, drawings, or comments:

A lot of water present at time of assessment. Abundant cover (vegetation, branches, etc) present for amphibian refugia. Additional vegetation species in the area include: curly dock (Rumex crispus), rabbitsfoot grass (Polypogon monspeliensis), non-native grasses, poison hemlock, coyote bush (baccharis pilularis)

Necessary Attachments:

1. All field notes and other supporting documents
2. Site photographs: See Below
3. Maps with important habitat features and species location: See Figures 4 and 8 of Habitat Assessment

Appendix D.
California Red-legged Frog Habitat Site Assessment Data Sheet

Appendix D.

California Red-legged Frog Habitat Site Assessment Data Sheet

Site Assessment reviewed by_____ _____ _____
(FWS Field Office) **(date)** **(biologist)**

Date of Site Assessment: 8/11/2017
(mm/dd/yyyy)

Site Assessment Biologists: Malkauskas (Last name) Emily (first name)

_____ (Last name) _____ (first name)

_____ (Last name) _____ (first name)

_____ (Last name) _____ (first name)

Site Location: Monterey County, 36˚42'56.7994"N, 121˚36'58.1335"W
(County, General location name, UTM Coordinates or Lat./Long. or T-R-S).

****ATTACH A MAP** (include habitat types, important features, and species locations)**

Proposed project name: East Boronda Road Widening Project

Brief description of proposed action:

Widening of East Boronda Road is proposed from Dartmouth Way to Independence Boulevard in the City of Salinas, Monterey County, California. East Boronda Road would be widened from two lanes to four lanes, incorporating roundabouts at major intersections. The widening would occur in phases and would take place along the northern edge of the existing road corridor in areas now under active agricultural cultivation. Construction includes relocating an existing agricultural ditch along the north side of East Boronda Road further north, creation of bike and shoulder lanes, widening the East Boronda Road bridge over Gabilan Creek, creation of bus pullout(s), sidewalk replacement and landscaping.

1) Is this site within the current or historic range of the CRF (circle one)? (YES) NO

2) Are there known records of CRF within 1.6 km (1 mi) of the site (circle one)? (YES) NO
If yes, attach a list of all known CRF records with a map showing all locations.

GENERAL AQUATIC HABITAT CHARACTERIZATION

(if multiple ponds or streams are within the proposed action area, fill out one data sheet for each)

POND:

Size: _____ Maximum depth: _____

Vegetation: emergent, overhanging, dominant species: _____

_____

_____

Substrate: _____

_____

Perennial or Ephemeral *(circle one).* If ephemeral, date it goes dry: _____

Stream I on Maps: Gabilan Creek north of Boronda Road bridge and box culvert

Appendix D.
California Red-legged Frog Habitat Site Assessment Data Sheet

STREAM:

Bank full width: 55 - 65 ft
Depth at bank full: ~4 - 5 ft
Stream gradient: ~ 3%

Are there pools (circle one)? YES (NO)

If yes,

Size of stream pools: _____
Maximum depth of stream pools: _____

Characterize non-pool habitat: run, riffle, glide, other: Creek is dry

Vegetation: emergent, overhanging, dominant species: Emergent: ladies thumb (Persicaria maculosa), yellow nut-grass (Cyperus esculentus var. leptostachyus); Overhanging: red willow, arroyo willow, stinging nettle, cape ivy, himalayan blackberry; Dominant: red willow, arroyo willow, himalayan blackberry

Substrate: sand

Bank description: Sloped, covered in non-native vegetation, willows stabilize the banks and provide root habitat/refugia for amphibians

Perennial or Ephemeral *(circle one)*. If ephemeral, date it goes dry: unknown at this location (creek is wet downstream)

Other aquatic habitat characteristics, species observations, drawings, or comments:

Creek was dry at this location during time of assessment but wet just downstream. Creek is overgrown with overhanging vegetation, contains some root wad habitat and refugia for amphibian species.

Necessary Attachments:

1. All field notes and other supporting documents
2. Site photographs: See below
3. Maps with important habitat features and species location: See Figures 4 and 8 of Habitat Assessment

Appendix D.
California Red-legged Frog Habitat Site Assessment Data Sheet

Appendix D.
California Red-legged Frog Habitat Site Assessment Data Sheet

Site Assessment reviewed by_____ _____ _____
(FWS Field Office) **(date)** **(biologist)**

Date of Site Assessment: 8/11/2017
(mm/dd/yyyy)

Site Assessment Biologists: Malkauskas (Last name) Emily (first name) _____ (Last name) _____ (first name)

_____ (Last name) _____ (first name) _____ (Last name) _____ (first name)

Site Location: Monterey County, 36˚42'54.2722"N, 121˚37'00.2770"W
(County, General location name, UTM Coordinates or Lat./Long. or T-R-S).

****ATTACH A MAP** (include habitat types, important features, and species locations)**

Proposed project name: East Boronda Road Widening Project

Brief description of proposed action:

Widening of East Boronda Road is proposed from Dartmouth Way to Independence Boulevard in the City of Salinas, Monterey County, California. East Boronda Road would be widened from two lanes to four lanes, incorporating roundabouts at major intersections. The widening would occur in phases and would take place along the northern edge of the existing road corridor in areas now under active agricultural cultivation. Construction includes relocating an existing agricultural ditch along the north side of East Boronda Road further north, creation of bike and shoulder lanes, widening the East Boronda Road bridge over Gabilan Creek, creation of bus pullout(s), sidewalk replacement and landscaping.

1) Is this site within the current or historic range of the CRF (circle one)? (YES) NO

2) Are there known records of CRF within 1.6 km (1 mi) of the site (circle one)? (YES) NO
If yes, attach a list of all known CRF records with a map showing all locations.

GENERAL AQUATIC HABITAT CHARACTERIZATION

(if multiple ponds or streams are within the proposed action area, fill out one data sheet for each)

POND:

Size: _____ Maximum depth: _____

Vegetation: emergent, overhanging, dominant species: _____

_____

_____

Substrate: _____

_____

Perennial or Ephemeral *(circle one).* If ephemeral, date it goes dry: _____

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California Red-legged Frog Habitat Site Assessment Data Sheet

STREAM:

Bank full width: ~65 ft

Depth at bank full: ~7 - 8 ft

Stream gradient: ~ 3%

Are there pools (circle one)? (YES) NO

If yes,

Size of stream pools: 1) 11 x 9 ft; 2) 20 x 10 ft

Maximum depth of stream pools: 1 - 1.5 ft

Characterize non-pool habitat: run, riffle, glide, other: Run

Vegetation: emergent, overhanging, dominant species: Emergent: ladies thumb (Persicaria maculosa), yellow nut-grass (Cyperus esculentus var. leptostachyus), duckweed; Overhanging: willow, sycamore, coyote bush; Dominant: willow, ladies thumb

Substrate: concrete-lined at bridge

Bank description: concrete-lined at bridge; downstream of bridge = concrete to mud, stabilized by sycamore trees and willows

(**Perennial**) **or Ephemeral** *(circle one)*. If ephemeral, date it goes dry: _____

Other aquatic habitat characteristics, species observations, drawings, or comments:

Treefrog tadpoles present in pool habitat beneath bridge (approximately 20 individuals seen). Pool habitat suitable for breeding amphibians and refugia present in tree roots and within emergent vegetation.

Necessary Attachments:

1. All field notes and other supporting documents
2. Site photographs: See below
3. Maps with important habitat features and species location: See Figures 4 and 8 of Habitat Assessment

Appendix D.

California Red-legged Frog Habitat Site Assessment Data Sheet

Appendix D.
California Red-legged Frog Habitat Site Assessment Data Sheet

Site Assessment reviewed by_____ _____ _____
(FWS Field Office) **(date)** **(biologist)**

Date of Site Assessment: 8/14/2017
(mm/dd/yyyy)

Site Assessment Biologists: Malkauskas (Last name) Emily (first name)

_____ (Last name) _____ (first name)

_____ (Last name) _____ (first name)

_____ (Last name) _____ (first name)

Site Location: Monterey County, 36˚43'02.2814"N, 121˚38'36.0398"W
(County, General location name, UTM Coordinates or Lat./Long. or T-R-S).

****ATTACH A MAP** (include habitat types, important features, and species locations)**

Proposed project name: East Boronda Road Widening Project

Brief description of proposed action:

Widening of East Boronda Road is proposed from Dartmouth Way to Independence Boulevard in the City of Salinas, Monterey County, California. East Boronda Road would be widened from two lanes to four lanes, incorporating roundabouts at major intersections. The widening would occur in phases and would take place along the northern edge of the existing road corridor in areas now under active agricultural cultivation. Construction includes relocating an existing agricultural ditch along the north side of East Boronda Road further north, creation of bike and shoulder lanes, widening the East Boronda Road bridge over Gabilan Creek, creation of bus pullout(s), sidewalk replacement and landscaping.

1) Is this site within the current or historic range of the CRF (circle one)? (YES) NO

2) Are there known records of CRF within 1.6 km (1 mi) of the site (circle one)? (YES) NO
If yes, attach a list of all known CRF records with a map showing all locations.

GENERAL AQUATIC HABITAT CHARACTERIZATION

(if multiple ponds or streams are within the proposed action area, fill out one data sheet for each)

POND:

Size: _____ Maximum depth: _____

Vegetation: emergent, overhanging, dominant species: _____

_____

_____

Substrate: _____

_____

Perennial or Ephemeral *(circle one).* If ephemeral, date it goes dry: _____

Stream K on Maps: Project site at McKinnon St intake

Appendix D.

California Red-legged Frog Habitat Site Assessment Data Sheet

STREAM:

Bank full width: ~4.5 ft (drainage ditch)

Depth at bank full: ~2 ft

Stream gradient: ~ 2% (leading up to intake)

Are there pools (circle one)? YES (NO)

If yes,

Size of stream pools: _____

Maximum depth of stream pools: _____

Characterize non-pool habitat: run, riffle, glide, other: Riffle

Vegetation: emergent, overhanging, dominant species: Emergent: ladies thumb (Persicaria maculosa), yellow nut-grass (Cyperus esculentus var. leptostachyus), willow herb (Epilobium ciliatum), rabbitsfoot grass (Polypogon monspeliensis); barnyard grass (Echinochloa crus-galli); Dominant: ladies thumb, yellow nut-grass

Substrate: sandy-mud

Bank description: uneven, broken up and pushed by adjacent farmland activities; bank is not very stablized but it dry and caked together in most places. It is likely fairly loose and muddy during the wet season.

(**Perennial**) **or Ephemeral** *(circle one)*. If ephemeral, date it goes dry: due to agricultural runoff

Other aquatic habitat characteristics, species observations, drawings, or comments:

"Stream" habitat is a drainage ditch within the project site. The ditch at this location is adjacent to several small mammal burrows that could potentially serve as upland habitat for amphibians. Burrows are on the smaller side and ~ 50% active/inactive. No pooling is present in the drainage ditch. Water is steadily flowing through the ditch and into a large intake culvert adjacent to McKinnon St. No refugia present for amphibians. Ample emergent vegetation is present within the ditch. The intake culvert pipe is large (~4.5 ft diameter). This habitat is not likely to support breeding amphibians, though burrows adjacent to the ditch have the potential to support adults.

Necessary Attachments:

1. All field notes and other supporting documents
2. Site photographs: See below
3. Maps with important habitat features and species location: See Figures 4 and 8 of Habitat Assessment

Appendix D.
California Red-legged Frog Habitat Site Assessment Data Sheet