

# **INFORMATION HANDOUT**

For Contract No. 04-1J6301

At 04-SCL-101-PM 16.0 to 27.8

Project ID 0414000303

## **PERMITS**

1. U.S. Fish and Wildlife Service, Dated 03-17-15

## **MATERIAL INFORMATION**

1. Materials Recommendation, Dated 11-18-14



In Reply Refer to:  
08ESMF00-2014-I-  
0672-1

## United States Department of the Interior

FISH AND WILDLIFE SERVICE  
Sacramento Fish and Wildlife Office  
2800 Cottage Way, Suite W-2605  
Sacramento, California 95825-1846



**MAR 17 2015**

Ms. Melanie Brent, Office Chief  
Caltrans District 4 Environmental Analysis  
California Department of Transportation  
P.O. Box 23660  
Oakland, California 94623-0660

**Subject:** Informal Consultation on the Proposed State Route 101 Capital Maintenance Project,  
Santa Clara County, California (Caltrans EA 04-1J630)

Dear Ms. Brent:

This letter responds to your letter dated October 20, 2014, requesting informal consultation and written concurrence for the proposed State Route 101 (SR-101) Capital Maintenance Project, Santa Clara County, California. The U.S. Fish and Wildlife Service (Service) received your letter on October 23, 2014. This consultation concerns the effects of the proposed action on the threatened California red-legged frog (*Rana draytonii*), threatened California tiger salamander (*Ambystoma californiense*) Central Valley Distinct Population Segment (Central California tiger salamander), and threatened Bay checkerspot butterfly (*Enphrydras editha bayensis*). No designated or proposed critical habitat for any of these species is present within the action area. This letter is issued under the authority of the Endangered Species Act of 1973, as amended (16 U.S.C. 1531 et seq.) (Act).

The Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU) legislation (23 U.S.C. 327) allows the Secretary of the U.S. Department of Transportation acting through the Federal Highway Administration (FHWA) to establish a Surface Transportation Project Delivery Pilot Program, whereby a State may assume the FHWA responsibilities under the National Environmental Policy Act (NEPA) for environmental review, agency consultation and other action pertaining to the review or approval of a specific project. California Department of Transportation (Caltrans) assumed these responsibilities for the FHWA on July 1, 2007 through a Memorandum of Understanding (MOU) within the State of California ([http://www.dot.ca.gov/ser/downloads/MOU's/NEPA\\_delegation/sec6005mou.pdf](http://www.dot.ca.gov/ser/downloads/MOU's/NEPA_delegation/sec6005mou.pdf)).

The action area is defined in 50 CFR §402.02, as "all areas to be affected directly or indirectly by the Federal action and not merely the immediate area involved in the action." For the purposes of the proposed action the Service considers the action area to comprise 11.4 miles along SR-101 from East Dunne Avenue in Morgan Hill at Post Mile (PM) 16.3 to 0.6-mile north of Silicon Valley Boulevard at PM 27.7 and encompasses the project footprint, including all construction access, staging areas, vehicle parking, and construction work zones as specified by Caltrans and submitted to

the Service in the October 20, 2014, letter requesting informal consultation, supporting documentation provided by Caltrans, and email and phone correspondence. Habitat within the action area consists of paved roadways and shoulders, gravel shoulders, bare ground, and ruderal habitat.

The purpose of the proposed action is to preserve and extend the service life of the existing pavement and improve ride quality. Caltrans proposes to resurface the existing pavement using the cold-planing method to minimize disturbance beyond the existing paved surface. The roadway section between the edges of pavement would be removed up to a depth of 0.25-foot and replaced with a 0.25-foot layer of Hot Mix Asphalt (HMA) (Type A). The pavement removal/cold-planing and placement of HMA Type A would be extended across the entire travel lane, including the shoulders, in both directions. All paving and concrete slab replacement operations would occur on the roadway of the mainline freeway and all equipment would be restricted to operate within the existing paved surface, except in designated temporary staging/storage areas. Existing vehicle detector stations (loop detectors) will be replaced. The loop detectors will be placed within the paved surface and concrete slabs to a depth of no more than two inches. There are 12 locations of detectors on the mainline to be replaced. Existing dikes will be repaired, replaced, or upgraded where needed to meet current standards. Asphalt concrete (AC) dike work will involve removing AC pavement sections to a depth of no more than 0.35-foot. The total length of AC dikes is approximately about 120,000 linear feet.

Existing metal beam guardrail (MBGR) wood posts will be removed and new wood posts will be installed away from old postholes for stability. An auger will be used to drill new pilot holes to a depth of no more than 3.5 feet for new wood posts. Clean dirt will be used to backfill old wood postholes. Unused dirt from hole drilling will be hauled away to a Caltrans approved facility and disposed of by the contractor. A thin layer (3 inches thick by 4 feet wide) of minor concrete will be placed under the newly installed MBGR for vegetation control treatment. Some excavation or ground disturbing work is proposed outside of existing paved areas for installing vegetation control treatment that extends up to 2 feet both sides of the MBGRs and terminal system end treatments which will be approximately 3 inches in depth. Some MBGR locations will be re-aligned and brought closer to the travel ways to reduce the environmental impact when installing vegetation control treatments. The maximum area of permanent impact would be 0.37-acre. The existing drainage inlets will be covered and protected during construction. Staging will occur on the southwest quadrant of the interchange area at the Coyote Creek Drive on-ramp to southbound SR-101. There are no proposed staging areas outside of the State right-of-way.

The September 30, 2014, letter to the Service indicated that no Bay checkerspot butterfly host plants were observed in the action area, but CNDDDB reported occurrences are located within 0.08-mile. It also identified no aquatic features within the action area and stated that the roadside verge did not provide suitable upland or underground refugia habitat for California red-legged frogs or Central California tiger salamanders. Caltrans is proposing to implement conservation measures that avoid take of these listed species.

The Service has reviewed the submitted project as described in the October 20, 2014, letter to the Service, supporting documentation, email correspondence, and evaluation of project effects. The Service concurs with the determination that the project as described is not likely to adversely affect the California red-legged frog, Central California tiger salamander, and Bay checkerspot butterfly as the effects will be discountable. The Service concurs that the proposed action is not likely to adversely affect the California red-legged frog, Central California tiger salamander, and Bay checkerspot butterfly based on the following: (1) construction activities, including staging, laydown

and vehicle parking, will occur within paved or unvegetated road shoulders; (2) no work or habitat disturbance will occur within suitable habitat for these species; (3) construction will occur outside any designated environmentally sensitive areas; (4) Caltrans will implement construction and erosion control Best Management Practices; (5) preconstruction surveys will be conducted to identify any Bay checkerspot butterfly host plants and any suitable California red legged frog or Central California tiger salamander habitat (e.g. ground squirrel burrows) within the action area prior to project commencement; (6) all on site personnel will attend environmental awareness training prior to beginning project activities; (7) work will be conducted during the dry season between May 1 and November 1; and (8) Service-approved biological monitors will conduct preconstruction surveys prior to ground disturbing activities and remain on-site to monitor construction activities adjacent to California red-legged frog, Central California tiger salamander, and Bay checkerspot butterfly habitat.

This concludes informal consultation on the proposed SR-101 Capital Maintenance Project, Santa Clara County, California. Therefore, unless new information reveals effects of the proposed action that may affect listed species in a manner or to an extent not considered, or a new species is listed, no further action pursuant to the Act is necessary. If you have questions please contact Jerry Roe, Endangered Species Biologist, or Ryan Olah Coast Bay/Forest Foothills Division Chief, at the letterhead address (916) 414-6600, or via email at [Jerry\\_Roe@fws.gov](mailto:Jerry_Roe@fws.gov) or [Ryan\\_Olah@fws.gov](mailto:Ryan_Olah@fws.gov).

Sincerely,



*for* Eric Tattersall  
Deputy Assistant Field Supervisor

cc:

Melissa Escaron, California Department of Fish and Wildlife, Napa, California

## Memorandum

*Flex your power!  
Be energy efficient!*

**To:** STEWART LEE  
District Branch Chief  
Office of Design SHOPP

**Date:** November 18, 2014

**Attn:** Bach-Yen Nguyen

**File:** Project ID 0414000303  
EA: 04-1J6301  
04-SCL-101 PM 16.0/27.6  
PCC Slab Replacement &  
AC Surfacing (CAPM)

**From:** SAMIA ARA, P.E.  
Materials Design Engineer *SMA*  
Engineering Services – Materials B

**Concurred by:**

*RMC*  
RICHARD M. CHAN, P.E.  
District Materials Engineer  
Branch Chief, Materials B

**Subject:** Materials Recommendations for PS&E (Revised)  
*6/30/16*

This memorandum is in response to your memo dated August 28, 2014 requesting materials recommendations for preparation of Plans, Specifications, and Estimates (PS&E) for a Capital Preventive Maintenance (CAPM) project on US-101 between East Dunne Avenue and 0.6 mile north of Silicon Valley Blvd. in the Cities of Morgan Hill and San Jose in Santa Clara County. The project proposes to resurface the existing AC pavement and to repair the concrete pavement of the mainline only. We understand that due to project schedule and other constraints the proposed project excludes any ramp work as well as other incidental works. All work will be limited within the existing edges of pavement.

Our evaluation for this project was based on:

- Review of available as-built plans in Caltrans' DRS files, Caltrans Pavement Condition Report (2011),
- Review of Google Aerial and Street View Maps, and
- Site visits.

Previously we have provided preliminary materials recommendations for preparation of Project Scope Summary Report (PSSR) in a memo dated May 8, 2014. This memo updates our preliminary recommendations for PSSR using information obtained from a recent site visit.

Route 101 within the project limits includes 3 to 4 traffic lanes in each direction consisting of both PCC and asphalt pavements. Considering the variability of pavement condition within the project limits, we have broken down the project length into the following segments and provided our recommendations specific to each segment.

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Attn: Bach-Yen Nguyen  
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Approximate PM 16.0/17.5

This segment consists of PCC traffic lanes and asphalt paved limited extent exit lanes and inner and outer shoulders. In general, the pavement within this area appears old and distressed. From a review of available as-built plans we understand that the PCC pavement in this area consists of 0.75' PCC/0.45' CTB/0.50' AS.

As observed during our recent site visit, a number of broken PCC slabs have already been replaced within this area. We recommend that all remaining severely broken slabs and all PCC slabs with 3<sup>rd</sup> stage cracking be replaced as part of this project. The replacement of the PCC slabs should include removal of the existing PCC slab and the underlying CTB layer, making the total thickness of replacement concrete slab to be 1.2' with a bond breaker at the replaced base level. We recommend using Rapid Strength Concrete (RSC) for slab replacement due to anticipated short night construction window. The replaced slabs should include dowel bars as shown on Caltrans 2010 Standard Plan RSP P8.

Spalled longitudinal and transverse joints should be properly repaired using Polyester grout. Following slab replacement and other corrective measures, all PCC pavements should be ground to remove step faulting greater than 1/2".

The asphalt paved exit lanes and shoulders are showing variable surface distress. We recommend overlaying these asphalt areas with 0.15' Rubberized Hot Mix Asphalt – Type G (RHMA-G) following cold planning of the same thickness.

Approximate PM 17.5/17.8

This segment presently consists of 3-lane asphalt pavement in each direction with asphalt shoulders. From a review of as-built plans we understand that the existing pavement consists of 0.15' RAC/0.35' AC/0.15' ATPM/0.65' CTB/0.75' AS. Existing asphalt surface shows significant distress including frequent longitudinal and transverse cracking and localized failure.

We recommend cold planning of the travelled lanes to a depth of 0.25' from the existing surface. The cold planed areas should be backfilled with a 0.10' layer of HMA-A, followed by placement of paving mat, and then a final layer of 0.15' RHMA-G.

For any existing severely deteriorated asphalt areas the cold planning should be deeper, to 0.35' below existing surface. This additional cold planning of 0.10' should be backfilled with 0.10' HMA-A, which should then be followed by above recommended backfill materials consisting of 0.15' RHMA-G/Paving Mat/0.10' HMA-A.

The asphalt shoulders should be overlaid with 0.15' RHMA-G following cold planning of the same thickness.

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Approximate PM 17.8/27.6

This segment, covering majority of the project limits, consists of both asphalt and PCC pavements. With the exception of a small full width asphalt segment at approximate PM 26.3, this area includes one to two inner lanes of PCC pavement and outer two to three lanes of asphalt pavement.

The PCC lanes were constructed as part of two inside widening projects under Contract #04-439904 (PM 17.8/25.3 as-built dated July, 2004) and Contract #04-438304 (PM 25.4/28.1, as-built dated March, 2005). The PCC inside lanes (including the inside shoulder) were generally constructed of 0.95' PCC/0.5' LCB/0.7' AS. Additionally, as shown on as-built plans, a 0.25' CTPB layer was installed between the PCC slab and the LCB layer within a few short segments. Dowel bars and tie bars were installed at transverse and longitudinal joints, respectively.

At present the inner PCC lanes, mainly Lane #1, show significant longitudinal cracks between Burnett Avenue and Metcalf Road. A few slabs have already been replaced under Contract #04-2A8104 (PM 20.4/21.7, as-built dated April, 2008). Generally, the southbound PCC lanes show more cracks than the northbound lanes. These cracks are mostly narrow and many are already sealed. The inside PCC shoulder constructed along with inner PCC lanes is presently in good condition.

Based on our review we anticipate minimal PCC slab replacement needed within this area. Any replacement slab should consist of 1.45' thick RSC with bond breaker at the replaced base level. As stated above, a CTPB layer is present at a few locations between the PCC slab and the base (LCB) layer. In case, during construction, if the CTPB layer is encountered following removal of any PCC slab, the existing CTPB should be kept in place. The slab replacement in such case should include replacement of the PCC slab only following placement of a bond breaker over the exposed CTPB surface. All replaced slabs should include dowel bars as shown on Caltrans 2010 Standard Plan RSP P8.

Spalled longitudinal and transverse joints should be properly repaired using Polyester grout. Following slab replacement and other corrective measures, all PCC pavements should be ground to remove step faulting greater than 1/2". The existing cracks, that are not already sealed, should be properly sealed with silicone crack sealant as part of this project.

Outside of the PCC areas, based on information obtained from Caltrans as-built plans, we understand that the asphalt pavement generally consists of 0.15' RAC/0.35' AC/0.15' ATPM/0.65' CTB/0.75' AS. The existing condition of asphalt surface varies along the project length. The most significant distress observed within this area is lateral cracking at frequent interval probably reflected from the underlying CTB layer.

Significant surface distress is observed along the junction of outer edge of asphalt travelled lane and shoulder. We believe this is due to overloading of this area from shifting of lane line during

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Attn: Bach-Yen Nguyen

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construction of the inner PCC lanes. Resurfacing of this distressed strip has already been performed by maintenance crew at frequent intervals.

Additionally, as observed during our recent site visit, many of the highly deteriorated asphalt areas observed during preparation of materials recommendation for PSSR have already been improved by resurfacing through maintenance contracts.

For the proposed project, we recommend cold planning of asphalt travelled lanes to a depth of 0.25' from the existing surface. The cold planed areas should be backfilled with a 0.10' layer of HMA-A, followed by placement of paving mat, and then a final layer of 0.15' RHMA-G.

For any existing severely deteriorated asphalt areas the cold planning should be deeper, to 0.35' below existing surface. This additional cold planning of 0.10' should be backfilled with 0.10' HMA-A, which should then be followed by above recommended backfill materials consisting of 0.15' RHMA-G/Paving Mat/0.10' HMA-A.

The asphalt shoulder should be overlaid with 0.15' RHMA-G following cold planning of the same thickness.

When needed we will provide you all applicable materials related Special Provisions required for this project.

If you have any questions, please contact Samia Ara at (510) 622-8794.

c: RChan, SAra, Route File, Daily File  
SA/SCL-101 – PCC Slab Replacement & Asphalt Overlay