

August 31, 2007

Mr. Mark Rouscher,  
Surfrider Foundation  
P.O. Box 6010  
San Clemente, CA 92674-6010

Subject: Orange County Toll Road – Comments on Skelly Reports  
PWA Reference #: 1815.01

Dear Mark,

This letter summarizes PWA's assessment of prior studies on the potential effects of the Orange County Toll Road (OCTR) on the Trestles surfing area (Trestles). These comments are based primarily on the review of key reports prepared for the Transportation Corridor Agencies (TCA)<sup>1,2</sup>, and by PWA<sup>3</sup>.

The TCA reports cited herein generally conclude that the OCTR will not have a significant effect on Trestles because the OCTR will not have a significant impact on the discharge of water, sediment or pollutants. This conclusion is developed partly by reliance on a number of other studies by the TCA team. The PWA report raises questions whether the TCA findings are correct and whether sufficient analysis has been accomplished to assess the effects of the OCTR. The most important disagreements are listed below:

1. Watershed Impacts – Sediment Delivery: The OCTR is likely to have a significant adverse effect on lower San Mateo Creek because it impacts an average of about 40% of the areas of the eight lower subwatersheds on the west side of San Mateo Creek (immediately upstream from Trestles). While detention basins are proposed to limit runoff and catch pollutants, PWA has raised the concern that

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<sup>1</sup> Skelly Engineering, April 3, 2000, *Final Report, Impacts of Foothill Transportation Corridor – South on Surfing Resources*, Letter report to Transportation Corridor Agencies, 13 pp.

<sup>2</sup> GeoSoils, Incorporated, April 5, 2006, Letter to RBF Consulting, *Additional Discussion of Surfing Resources in the Vicinity of San Mateo Creek and Potential Impacts of the Proposed Toll Road, Orange County, California*, 5 pp.

<sup>3</sup> PWA, January 11, 2006, *Potential Toll Road Impacts on San Mateo Creek Watershed Processes, Mouth Morphology and Trestles Surfing Area, Final Report*, Prepared for Surfrider Foundation, 25 pp.

EXHIBIT NO. 21

APPLICATION NO.

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these subwatersheds are likely to be de-stabilized, resulting in increased fine sediment delivery to San Mateo Creek and the lagoon.

2. Direct Impacts to Creek - The proposed OCTR junction with I-5 is located directly over San Mateo Creek and is likely to affect the ecology and morphology of the area during construction and possibly thereafter.
3. Watershed Impacts – Water Quality: Since the watershed is largely undisturbed in the vicinity of the proposed OCTR, water quality detention facilities would need to be extremely effective in trapping pollutants to avoid degrading water quality in the Creek. PWA questions whether this is likely to be achieved and therefore disagrees that water quality impacts are insignificant.
4. Mouth Impacts – Sediment Delivery: Both TCA and PWA reports acknowledge that Trestles is located at the mouth of San Mateo Creek and is therefore likely to be influenced by sediment delivery from San Mateo Creek. As with many California systems, sediment delivery to the shore is episodic, being delivered in relatively large slugs during periods of strong rainfall runoff. The discharges include sediment yield from lesser rainfall events that has accumulated in the lower reaches of the creek. The discharged sediment is then redistributed along the shore and nearshore over time by incident wave action. There may also be long-term responses to any changes in sediment yield. The statement by Geosoils (2006) that the OCTR impacts will be small because the impacts only occur when the mouth is open does not consider the time that discharged sediments are re-worked by waves, and sediment supply effects on mouth morphology.
5. Lagoon Impacts: Increased fine sediment delivery may accumulate in the lagoon at the creek mouth, changing its ecology over time.
6. Cobble Transport: Cobble transport can be greatly affected by the amount of finer sediment resident within the sediment deposit. Under wave action, increased porosity (absence of finer sediments) can result in cobbles moving onshore, while a lack of porosity resulting from the presence of smaller sediment can result in offshore movement (PWA, 2006). The TCA conclusion that cobble transport will not be affected because the OCTR will be located in a silty part of the watershed (Geosoils, 2006) ignores the effect of finer sediments on coarse sediment transport and may be incorrect. Therefore, impacts to cobble transport are potentially significant and unmitigated.
7. Sediment Transport Analysis – TCA studies of sediment delivery are based on the presumption that changes in water discharge are small because the paved area will be small relative to the total watershed area. PWA notes that the impact to eight subwatersheds near the mouth will be around 40%

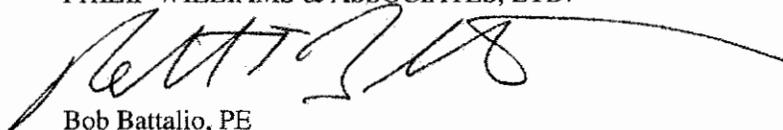
by area on average, which is much greater than the 10% to 25% threshold for destabilization of channels. Actual flowrates have not been measured, and the post-project watershed discharges have not been modeled. This level of analysis leaves too much uncertainty in the effects of the proposed project and is not sufficient to gauge the likely effects of the OCTR on sediment delivery. Therefore, impacts to sediment transport are potentially significant and unmitigated.

8. Surf break sensitivity to sand discharge – PWA interviewed several local surfers who are knowledgeable of the surfing conditions at Trestles. It is their observation that sand supply affects the surf break quality and is an important consideration. PWA finds this observation to be logical and consistent with many California coastal locations. In contrast, the TCA consultant concludes that “The toll road will have no long term impact or cumulative impacts on the surfing resources because the project does not impact the delivery of cobbles to the delta.” Therefore, impacts to the surfing resource due to changes in sand transport changes are potentially significant and the effects are unmitigated.

In summary, we are concerned that the project may have a significant adverse effect on water and sediment delivery and therefore could adversely affect the geomorphology and ecology of the lower reaches of the Creek. Water quality may also be impacted, even with the proposed Best Management Practices described by the TCA. Areas that could be affected include the lagoon, creek mouth and nearshore area (and associated surfing conditions in the area known as Trestles). There is a high degree of uncertainty associated with the TCA analyses including the individual items 1 through 8, above, and the aggregate effect of these items. Also, given the unique and highly valued surfing resource that is Trestles, we recommend careful and more complete study prior to moving forward with the project. The scope of these studies is an important consideration, and we recommend that the scope be developed with input from the surfing and broader technical communities. It is unlikely that significant adverse effects to Trestles could be mitigated. The TCA studies do not provide a sufficient basis to move forward with the project.

Simply put, the toll road and associated earthwork cut and fill and drainage changes could destabilize steep canyon-like subwatersheds. Resulting erosion would worsen water quality and change the sediment deposition that supports the famous waves. Once this damage is done, it may not be repairable.

Sincerely,  
PHILIP WILLIAMS & ASSOCIATES, LTD.



Bob Battalio, PE  
Principal

May 9, 2007

Mr. Mark Rouscher,  
Surfrider Foundation  
P.O. Box 6010  
San Clemente, CA 92674-6010

Subject: Orange County Toll Road – Best Management Practices  
PWA Reference #: 1881

Dear Mark,

We have completed a review of project materials addressing mitigation of project impacts via application of best management practices (BMPs). Enclosed is a list of findings. We have provided a list of possible additional review actions separately.

It appears that the design criteria for the BMPs do not include matching pre-project hydrographs and therefore the BMPs will not likely mitigate the effects of the project on water discharge and sediment delivery. The effects of the project on sediment processes, with and without the BMPs, are not addressed sufficiently to assess the project impacts on downstream areas.

A key unknown is whether the design criteria will require matching pre-project runoff hydrographs (flowrates at a particular location following a rainfall event), often referred to as hydro-modification avoidance regulation. Our review indicates that a restriction on hydro-modification may be a condition of the Orange County storm water permit. This emerging regulatory approach goes beyond the simplified criterion of matching or reducing the pre-project peak flow rate, and restricts the timing and volume of discharged water. Restrictions on hydro-modification are being required to reduce the risk that downstream sediment processes (erosion, deposition, total yield) will be modified by a proposed development. The extent that the proposed BMPs would need to be modified to comply with hydro-modification restrictions is not clear to us, but we anticipate that infiltration would need to be increased.

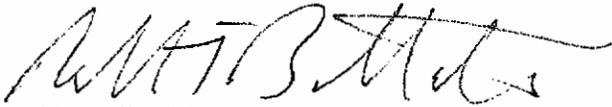
In addition, the assessment of project impacts in the Environmental Impact Statement (EIS) is flawed. It is based on simplified watershed modeling applied with the assumption that the project impact is proportional to the small percentage of the watershed area covered by the road footprint, and ignores proximity to the resource of interest. However, we have found that the project will affect a large

Mark Rauscher  
May 9 2007  
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percentage of many sub-watersheds close to the coastal zone and the aggregate effects are likely to be much greater than stated in the EIS<sup>1</sup>.

In summary, we are concerned that the project may have a significant adverse effect on water and sediment delivery and therefore could adversely affect the geomorphology and ecology of the lower reaches of the Creek including the lagoon and creek mouth and nearshore contours (and associated surfing conditions in the area known as Trestles).

Sincerely,  
PHILIP WILLIAMS & ASSOCIATES, LTD.



Bob Battalio, PE  
Principal

Attachments  
Attachment 1. Proposed Next Steps Memorandum

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1. PWA, 2006; *Potential Toll Road Impacts on San Mateo Creek Watershed Processes, Mouth Morphology and Trestles Surfing Area, Final Report*, Project 1811, Prepared for Surfrider Foundation, January 11, 2006.

## 1881.00 OC TOLL ROAD BMP REVIEW

### Scope

1. Review readily available, pertinent documents
2. Provide brief letter report summarizing comments on adequacy and appropriateness of the BMPs

### Deliverables

1. Inventory of Materials Memo – list of materials we have and materials we need
2. Annotated Bibliography Memo – memo summarizing materials reviewed
3. Next Steps Memo – possible further analyses

### *Summary of Findings*

#### SOCTIIP Mitigation Approach

- Objectives
  1. comply with Special Areas Management Plan (SAMP) with respect to SAMP criteria (i.e. hydrologic integrity, water quality integrity and habitat integrity) and
  2. applicable water quality permits
- Applicable water quality permits:
  - Caltrans NPDES Permit
  - Caltrans Statewide Storm Water Management Plan
  - Caltrans Statewide General Permit for Construction Activities
  - Orange County Municipal Separate Storm Sewer Systems General Storm Water Permit
- Separate on-site and off-site drainage – Off-site drainage will be routed through culverts to the downstream drainageway (culverts sized by Caltrans Highway Design Manual). On-site drainage from highway will be routed to treatment BMPs. On-site drainage from cut/fill slopes will be directed toward flow splitters and discharged to drainage ways.

- BMPs
  1. pollution prevention BMPs (design, construction); and
  2. Treatment BMPs (detention and biofiltration)
- Joint Water Quality/Hydromodification Mitigation – Extended detention basins will be sized to store two times the water quality volume to mitigate for pollutant concentrations and downstream hydromodification .
- Erosion/Sedimentation Mitigation: The additional volume detained in the extended detention basins was determined to prevent hydromodification. The assessment of erosion and sedimentation impacts relies on the relationship between discharge and suspended sediment load and does not account for supply loss due to loss of erodible surface (to impervious road surface) or supply enhancement due to steep cut/fill slopes and the discharge of “hungry water”.
- Hydrologic analyses were modeled after the Orange County Hydrology Manual (1986) and addendum (1996).

Comments on adequacy and appropriateness of the BMPs

- Extended detention basins and biofiltration strips are commonly recommended as BMPs to treat/detain storm water runoff from highways (Caltrans Highway Design Manual, NCHRP Evaluation of Best Management Practices for Highway Runoff Control).
- The extended detention basin and biofiltration swale schematics are consistent with Caltrans Storm Water Manuals.
- The incorporation of both detention and infiltration is an above average mitigation effort. However, the effectiveness of their approach is also dependent upon the adequacy of the sizing and design and this has not been reviewed in detail.
- It is unclear whether the science conducted to inform the BMP sizing and design is appropriate or adequate (including hydrologic information to inform existing conditions models, models chosen, calculations chosen, etc).
- Both the Caltrans NPDES and Orange County MS4 permits require mitigation for polluted runoff from the highway. The Caltrans NPDES permit does not require mitigation for hydromodification. There is a tentative order to reissue the Orange County MS4 permit with hydromodification requirements. It is unclear whether or not the SOCTIIP will be required to comply with the new requirements. If so, their mitigation approach would have to incorporate infiltration to match pre-project runoff volumes.

**Mark Rauscher**

**May 9 2007**

**Findings for Orange County Toll Road, BMP**

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- The most effective joint water quality/hydromodification BMP approaches incorporate detention and infiltration to match pre-project hydrograph conditions. The SOCTIIP states that the extended detention basins have been designed to match pre-project hydrograph peaks however designs for outlet structures have not been reviewed. The effectiveness of the approach is dependent on the dimensions ratio and drawdown time for which designs have not been included. It is unclear whether they intend to match pre-project flow durations (their intents are most likely evident in the flow calculations made for the biofiltration swale designs which are contained in Appendix E and F of the RMP).
- It is unclear how sediment processes will be effected by:
  1. loss of erodible surface due to coverage by road,
  2. contribution of cut/fill slope erosion,
  3. discharge of clear water from the detention basins into small subwatershed tributaries.
- It is unclear what range of storm events the extended detention basins will mitigate for. It is possible that the volume they are sized for is not large enough volume to mitigate for the erosive effects of larger storms.
- Because the toll road runs parallel to the creek through the San Mateo Creek watershed, mitigation of the toll road presents unique circumstances. The watershed is rural and undeveloped and therefore any slight change could upset the ecologic balance. The most effective mitigation for the highway under these circumstances may not be the cookie cutter approach generally recommended elsewhere.
- The project, even if mitigated for, may have unforeseeable impacts. The SOCTIIP did not model or evaluate the impacts of the mitigated project on hydrology/water quality. It is therefore not clear what the impacts on hydrology/water quality will be under mitigated project conditions (impacts to sediment transport, water temperatures, downstream habitat, breach hydrology of the lagoon, etc.).



# California Regional Water Quality Control Board San Diego Region



Linda S. Adams  
Secretary for  
Environmental Protection

Over 50 Years Serving San Diego, Orange, and Riverside Counties  
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JUN 29 2007

CALIFORNIA  
COASTAL COMMISSION

June 27, 2007

In reply refer to:  
**NWU:18-2006064.02:jhaas**  
**CIWQS Place ID 254876**

Mr. Mark Delaplaine  
Manager, Energy, Ocean Resources, and Federal Consistency Division  
California Coastal Commission  
45 Fremont Street, Suite 2000  
San Francisco, CA 94105-2219

Dear: Mr. Delaplaine

**SUBJECT: Foothill Transportation Corridor – South (State Route 241)**

Please find contained herein responses from the California Regional Water Quality Control Board, San Diego Region (Regional Board), to your letter of May 21, 2007 that requested input on water quality issues at San Onofre and San Mateo Creek mouths. Specifically, you sought analysis and advice on the Transportation Corridor Agency (TCA) assertion that the proposed State Route 241-South project would provide significant water quality improvement at those creek mouths as a result of new storm water detention basins that would treat runoff from Interstate 5 (I-5). Storm water is not currently treated from that section of I-5, which is owned and operated by Caltrans.

**Responses to Your Water Quality Questions**

1. There is little available data regarding water quality at the lower San Onofre and San Mateo Creek and lagoon areas. The relative ecological health of a stream may be estimated using benthic macroinvertebrate index of biotic integrity (IBI) scores,<sup>1</sup> but there is little data to assess water quality objectives or IBI scores for the areas of concern.
2. The paucity of data makes a comparison of water quality and habitat conditions difficult. However, these estuaries are likely in better relative condition than other coastal streams and small estuaries in our region because of the relative low amount of urban and agricultural development and associated hydromodification upstream of the estuaries.

<sup>1</sup> Ode, Peter R., Andrew C. Rehn, and Jason T. May (2005) "A Quantitative Tool for Assessing the Integrity of Southern Coastal California Streams." Environmental Management Vol. 35(1)

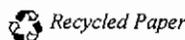


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3. None of the available data suggests an existing water quality impairment, and the lower portions of San Onofre and San Mateo Creeks have not been proposed for addition to the Clean Water Act Section 303(d) list of impaired water bodies. The following is a summary of the known data for those areas.
  - A. Surfzone: The County of San Diego monitors for indicator bacteria in the surfzone of San Onofre and San Mateo Creeks, but there is no other routine monitoring in the tidal areas or proposed areas of I-5 widening. The data demonstrate water quality is very good with respect to indicator bacteria.
  - B. Christianitos Creek: The County of Orange collects data twice a year from a monitoring station on Christianitos Creek, just upstream of the Orange / San Diego County boundary. The data do not indicate any significant water quality problems at that location.
  - C. San Mateo Creek: The State of California Surface Water Ambient Monitoring Program (SWAMP) program has assessed data from the middle and upper San Mateo Creek watershed. Those sites appear to exhibit good water quality and are not expected to be affected by I-5 or the proposed project.
  - D. San Onofre Creek: A consulting firm has provided raw data from bioassessment and aquatic chemistry surveys at two locations in lower San Onofre Creek. The source and quality of the data are currently being investigated. A bioassessment station for this data is located near I-5.
4. The State Water Resources Control Board has issued Caltrans an NPDES permit (Order No. 99-06-DWQ), which includes requirements for implementing post-construction BMPs when adding lanes or reconstructing existing roads. Our expectation is that if I-5 is widened as part of the 241 South project, then post-construction BMPs must be added pursuant to the Caltrans NPDES permit. It is unclear at this point whether TCA is proposing to treat runoff from a larger section of I-5 than would be required by the Caltrans NPDES permit.
5. Quantifying benefits from the proposed project is difficult without baseline data. Baseline data are currently lacking for both runoff quality and receiving water quality. The current pollutant loading from the I-5 highway and expected reductions from the proposed storm water detention basins may be estimated from existing Caltrans studies. Estimating the environmental benefits, however, requires pre-project data that are not available.

Mr. Delaplaine  
Foothill Transportation Corridor  
South (State Route 241)

- 3 -

June 27, 2007

6. Although TCA has applied for Clean Water Act Section 401 water quality certification, the Regional Board has not conducted a full assessment of the potential impacts to water quality from the proposed project. The application is currently "Denied Without Prejudice" pending the review of additional requested materials. A date has not been established for a decision on the application. The Regional Board has requested supplemental information from TCA regarding the runoff pollutants of concern, post-construction BMP design, habitat restoration within the estuaries, and water quality monitoring. The Regional Board has not drawn final conclusions about the proposed project because additional relevant information has not yet been received.

The heading portion of this letter includes a Regional Board code number noted after "In reply refer to:" In order to assist us in the processing of your correspondence please include this code number in the heading or subject line portion of all correspondence and reports to the Regional Board pertaining to this matter. Please contact Jeremy Haas at 858-467-2735 or [jhaas@waterboards.ca.gov](mailto:jhaas@waterboards.ca.gov) if you have any questions about the application for section 401 water quality certification.

Respectfully,



JOHN H. ROBERTUS  
Executive Officer

JHR:mm;jgs;jh:  
CIWQS Place: 254876  
CIWQS Reg Msr: 326628

Enclosure: none



# California Regional Water Quality Control Board San Diego Region



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September 24, 2007

In reply refer to:  
NWU:18-2006064.02:jhaas  
CIWQS Place ID no. 254876

Richard Beck, Regulatory Manager  
RBF Consulting  
14725 Alton Parkway  
Irvine, CA 92618

Dear Mr. Beck:

## South Orange County Transportation Infrastructure Improvement Project Foothill-South 241 Toll Road

The California Regional Water Quality Control Board, San Diego Region (Regional Board), has reviewed recent supplemental application materials for Clean Water Act Section 401 Water Quality Certification for the South Orange County Transportation Infrastructure Improvement (SOCTIIP) Project (401 no. 06C-064). Your application remains denied without prejudice for one or more of the following reasons:

- Application is incomplete and the certification time period will expire [23 CCR § 3835(b)].
- Supplemental information that was requested was not forthcoming [23 CCR § 3836(b)].
- Final CEQA documentation is lacking [23 CCR § 3836(c)].
- The Regional Board intends to take action, but will not be able to do so within the regulatory time constraints [23 CCR § 3838(c)].

The supplemental information that was received on August 20, 2007 did not include sufficient detail to address outstanding concerns and did not demonstrate the proposed project would meet water quality standards. For instance, concerns regarding the proposed habitat mitigation plan, the runoff management plan, and water quality monitoring have not been adequately addressed in the submitted materials.

General descriptions of these outstanding issues were provided by email on September 7, 2007 and September 12, 2007, and specific deficiencies were discussed with you and other project representatives on September 13, 2007. A summary of these outstanding concerns is included as Attachment No. 2 to this letter. Please provide complete responses to these issues in order to resume the application process.

*California Environmental Protection Agency*

Mr. Richard Beck  
RBF Consulting, Inc.

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September 24, 2007

As described by letter dated November 13, 2006, the Regional Board intends to schedule a single action on both the Certification application and associated waste discharge requirements (WDRs) for related discharges of fill to non-federal waters. Supplemental information provided will be considered for both the Certification and WDRs.

Denial without prejudice is done for procedural, not substantive, reasons and does not include any judgment on the technical merits of the project [23 CCR § 3831(h)]. The applicant has the option of withdrawing the application until the procedural issues have been resolved. If you wish to withdraw this 401 Water Quality Certification application, please notify the Regional Board in writing within 14 days of the date of this letter. For voluntary withdrawal or denial without prejudice, no new application fee is required if you respond within 12 months, procedural problems are fixed, and there are no significant project changes.

The heading portion of this letter includes a Regional Board code number noted after "In reply refer to:" In order to assist us in the processing of your correspondence please include this code number in the heading or subject line portion of all correspondence and reports to the Regional Board pertaining to this matter. If you have any questions, please contact Jeremy Haas directly at 858-467-2735 or [jhaas@waterboards.ca.gov](mailto:jhaas@waterboards.ca.gov).

Respectfully,



JOHN H. ROBERTUS  
Executive Officer

Attachment 1: Selected Sections from California Code of Regulations, Title 23,  
Division 3, Chapter 28

Attachment 2: Summary of outstanding concerns

JHR:js:jch  
WDID no. 9 000001497  
CIWQS Party ID no. 46197  
CIWQS Reg Msr ID no. 314915  
CIWQS Place ID no. 254876

Mr. Richard Beck  
RBF Consulting, Inc.

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September 24, 2007

cc [all via email]:

Mark Durham, U.S. Army Corps of Engineers, Regulatory Branch, Los Angeles District

Maria Levario, Principal Environmental Analyst, Transportation Corridor Agencies

SWANCC-ROWD, Wetlands and Certifications Unit, Division of Water Quality, State Water Resources  
Control Board

Rich Rozzelle, State Park Superintendent; California Department of Parks and Recreation, Orange Coast  
District

Laura Coley Eisenberg; Rancho Mission Viejo

William White; Shute, Mihaly & Weinberger LLP

Joel Reynolds; Natural Resources Defense Council

Rick Wilson, Coastal Management Coordinator; Surfrider Foundation

Mark Delaplaine, Manager, Energy, Ocean Resources, and Federal Consistency Division; California  
Coastal Commission

Naeem Siddiqui, Environmental Scientist; Department of Fish and Game; South Coast Region

Grace Pina-Garrett; NPDES Coordinator, Caltrans District 12.

Dan Silver, Executive Director; Endangered Habitats League

### **Attachment No. 1**

#### **§3831. Definitions.**

- (h) "Denial without prejudice" means an inability to grant certification for procedural rather than substantive reasons. This form of denial carries with it no judgment on the technical merits of the activity or compliance of any discharge with water quality standards. A certifying agency may reconsider a revised application package which corrects the procedural problems that caused the original denial without prejudice.

#### **§3835. Complete, Incomplete, and Valid Applications.**

- (b) If an application is determined to be incomplete by the certifying agency, an extension of the federal period for certification cannot be obtained, and the federal period for certification will expire before the certifying agency can receive and properly review the missing information, the certifying agency shall deny without prejudice certification for any discharge resulting from the proposed activity unless the applicant in writing withdraws the request for certification.

#### **§3836. Additional Information.**

- (b) If an application is determined to be complete by the certifying agency but supplemental information is requested by the certifying agency pursuant to Subsection (a) of this Section, an extension of the federal period for certification cannot be obtained, and the federal period for certification will expire before the certifying agency can receive and properly review the supplemental information, the certifying agency shall deny without prejudice certification for any discharge resulting from the proposed activity unless the applicant in writing withdraws the request for certification.
- (c) If an application is determined to be complete by the certifying agency, but CEQA requires that the certifying agency review a final environmental document before taking a certification action, an extension of the federal period for certification cannot be obtained, and the federal period for certification will expire before the certifying agency can receive and properly review the necessary environmental documentation, the certifying agency shall deny without prejudice certification for any discharge resulting from the proposed activity unless the applicant in writing withdraws the request for certification.

#### **§3838. Authority of Executive Director, Executive Officers, and Regional Boards.**

- (c) A regional board, at its discretion, may take any action its executive officer is authorized to take under Subsection (b) of this Section. If a regional board directs that a water quality certification action will be taken by that regional board, but an extension of the federal period for certification cannot be obtained, and the federal period for certification will expire before the regional board can take an action, the executive officer shall deny without prejudice certification for any discharge resulting from the proposed activity before the period allowed for certification expires, unless the applicant in writing withdraws the request for certification. Such denial shall be in effect only until the regional board takes an action on the request for certification. The applicant shall not be required to submit a new application or supply an additional fee before the regional board takes an action, unless the project changes significantly in scope or potential for adverse impact and further technical review is necessary.

**Attachment No. 2**

**Summary of concerns with supplemental information submitted on  
August 20, 2007**

A. Final Runoff Management Plan State Route 241. Saddleback Constructors, July 26, 2007.

1. The BMPs as described in the Runoff Management Plan (RMP) do not provide sufficient treatment, especially extended detention basins (EDBs) discharging to San Mateo and San Onofre creeks. For example,
  - a. The RMP dismisses media filters without the level of review called for by the 2007 Caltrans Project Planning and Design Guide referred to in the RMP. Additional evaluation of media filters should be provided.
  - b. The RMP does not provide sufficient documentation to support the conclusion that infiltration-based measures are infeasible. The relationship of native and post-project soil conditions to EDB locations should be documented. Please provide a figure showing the soil types (or classifications) in the areas proposed for EDBs.
  - c. The RMP fails to recognize that environmentally-sensitive areas adjacent to the project route, such as San Mateo and San Onofre creeks, should receive specific design review for construction-phase and post-construction management practices. The RMP assumes all aquatic areas will receive some baseline construction-phase measures loosely called for in the EIR. Similarly, the evaluation of post-construction storm water discharges does not account for the presence of sensitive species in the receiving waters. The RMP should be revised to demonstrate that the appropriate level of attention will be provided when developing specific management measures for discharges to areas occupied by threatened and endangered species.

- d. The RMP assumes most pollutants will be captured in the EDBs because Caltrans research shows that most expected pollutants are associated with particulates. However, Caltrans studies also note that expected size of the particles with adsorbed pollutants may not be contained in the EDBs.<sup>1</sup> Additional information should be provided to support the expectation that the EDBs would retain the particles expected to runoff the project's impervious surfaces. For instance, information regarding the particle sizes of runoff from similar roads in the vicinity (e.g., SR 73) may provide useful information.
  - e. The RMP calls for lining the EDBs that discharge to the lower San Mateo and San Onofre creeks because of high groundwater elevations, but does not discuss measures to provide additional treatment to offset the effect of the lining. In response to comments on the EIR (comment no. F2-4, impacts to groundwater), the Transportation Corridor Agencies (TCA) suggests that the project's EDBs will infiltrate approximately 40 percent of the inflow volume. This implies that TCA expects a 40 percent reduction in effectiveness as a result of lining the EDBs. Additional measures should be evaluated and designed for basins proposed to be lined.
2. Water quality mitigation measures in the project's Final Supplemental Environmental Impact Report (EIR, November 2005) are not provided in the RMP. The RMP should be revised to ensure that appropriate mitigation measures are included. For reference, see Table 4.9-6 in the EIR.
- a. The RMP does not implement measures 10b, 10c, 10d, or 10f, although the project design features cited in the EIR are intended to ensure that the RMP addresses those mitigation measures. TCA should clarify which mitigation measures are being met by the RMP and identify the means by which others will be met.
  - b. In addition, The EIR summary (page ES-62) claims that EDBs will result in potential contaminants in runoff that are less than or the same as pre-project conditions. However, the design of EDBs in the RMP does not reflect that statement. Instead, the EDBs are designed based on Caltrans guidance that is intended to result in significant reduction in runoff pollutants from the project area, without regard to pre-project conditions. This discrepancy should be clarified.

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<sup>1</sup> See Grant et al. 2003. *A Review of the Contaminants and Toxicity Associated with the Particles in Stormwater Runoff*. Caltrans CTSW-RT-03-059.73.15; and Stenstrom and Kayhanian 2005. *First Flush Phenomenon Characterization*. Caltrans CTSW-RT-05-73-02.6.

3. Hydromodification assumptions in the RMP must be better supported.
  - a. The RMP assumes that storm water discharges from EDBs would not threaten to increase conditions of erosion in receiving water conditions if flows are released at one-tenth the rate of a two-year storm (i.e., assumptions used in Santa Clara County). However, the RMP lacks discussion of the receiving water morphological conditions that could be used to support the assumption.
    - i. Please provide figures showing the federal waters and non-federal waters of the State in the vicinity of each post-construction BMP.
    - ii. Please provide a description of the morphological conditions of receiving waters at the EDB discharge locations.
  - b. The RMP should provide an estimate of the discharges and velocities expected from the EDBs in order to support the conclusions drawn from Table 7-1 that flows from the EDBs will be insignificant compared to the flows necessary in the receiving waters to cause conditions of erosion.
  - c. The RMP should support the assumption that the reduction of pervious soils associated with the project is unlikely to result in adverse hydromodification effects. The assumption is that the change in imperviousness in the drainage areas of the EDBs is insignificant relative to the entire drainage area of San Mateo and San Juan creeks. However, the change within the EDB drainage area, and how that may affect the EDB receiving water, is more important to assess site-specific runoff effects of the discharge.
  - d. The RMP does not adequately describe how the proposed flow splitters will ensure that the first-flush runoff from each segment of roadway will be routed to the EDBs.
  - e. Please verify whether hillslope runoff from the project footprint (including fill slopes and landscaped areas) will be routed to extended detention basins.

B. Conceptual Habitat Mitigation and Monitoring Plan. Prepared by Earthworks Restoration, Inc., Glenn Lukos Associates, and BonTerra Consulting. August 2007.

1. Please provide figures showing all locations of proposed temporary and permanent discharges of fill to federal waters and non-federal waters of the State.

2. Please provide figures of proposed mitigation areas that clearly and separately delineate areas proposed for creation, restoration, and enhancement. Also, please indicate in acres and linear feet<sup>2</sup> the total quantity of waters of the U.S. and non-federal waters of the State for each compensatory mitigation type.
  - a. Please identify whether each proposed compensatory mitigation area is expected to be considered waters of the U.S., non-federal waters of the State, or neither.
  - b. Finally, please verify that each area in the figure and table can be readily matched to the functional assessment tables in the Hybrid Functional Assessment (HFA).
3. Compensatory mitigation should be further pursued in the San Mateo Creek watershed. Reasons cited for not conducting mitigation within the San Mateo Creek watershed continue to be insufficient to support concentrating compensatory mitigation activities near the northern terminus of the project. It is not clear that the project proponent has fully considered and pursued options for conducting compensatory mitigation in the San Mateo Creek watershed. For instance, the existence of a grazing plan on land owned by Rancho Mission Viejo does not preclude restoration or enhancement of water bodies and associated riparian zones affected by grazing. Further, it is not clear whether other land owners in the watershed have been contacted. If compensatory mitigation will not be proposed in the San Mateo Creek watershed to compensate the loss of waters and beneficial uses in the watershed, then the project proponent should consider reducing permanent effects to the water bodies.
4. There are still insufficient details in the Habitat Mitigation and Monitoring Plan (HMMP) to constitute a mitigation plan for the "temporary" impacts, especially at the San Mateo and San Onofre Creek locations. Descriptions of existing conditions, performance objectives, success criteria, and methods are lacking.
5. There are insufficient details in the HMMP to constitute a mitigation plan for effects to the aquatic and riparian habitat within Talega's Cristianitos flood control basin. Descriptions of existing conditions, performance objectives, success criteria, and methods are lacking.
6. Performance Standards: The success criteria have been partly clarified, but the outstanding issues remain regarding the general approach and specific details in the HMMP.

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<sup>2</sup> The August 20, 2007 supplemental application states only that 0.82 acres of wetlands would be created and 5.45 acres of waters of the U.S. would be restored. Habitat types are not identified.

- a. The proposed success standards in the HMMP allow for up to 25 percent cover of non-natives. The HMMP should be revised to require that mitigation areas must be maintained free of perennial exotic plants and annual exotic plant species must not occupy more than five percent of the onsite or offsite mitigation areas.
  - b. Please clarify in which situations the success criteria will apply to specific metrics and functions, rather than overall HFA score as implied in Table 8. In particular, "success" cannot be defined solely by meeting vegetation metrics. Some level of performance must be attained for each proposed success criteria.
  - c. The HMMP must be revised to include functional success standards for the Riparian Oak/Elderberry Woodland and Ephemeral Drainage enhancement areas.
  - d. Please identify the proposed reference sites that will be used in evaluating the microtopographic complexity and habitat heterogeneity success standards for the wet meadow, southern willow woodland, mule fat scrub, freshwater marsh and arroyo willow forest mitigation areas.
7. Hybrid Functional Assessment (HFA). The HFA fails to adequately support conclusions regarding increases in water body functions provided by the project.
- a. The Table showing pre-project mitigation area assessments still assigns no functions to the existing stream channels in the area, even though it portrays those areas as currently providing functions. The assessment should clarify why value, but no acreage, is assigned to the pre-project condition.
  - b. Conversely, the assessment should clarify why the indirect impacts table assigns acreage, but no value, to many of the water bodies considered.
  - c. Please clarify what areas are identified as "EDB 1" and "EDB 2" in the post-project mitigation table. These areas were not included in earlier versions of the HMMP or HFA. Note that proposing compensatory mitigation within extended detention basins is inappropriate.
  - d. Additional indirect impacts to habitat functions with the "action area" of 500 feet do not appear to be addressed in the "Indirect Impacts" table. Such effects could include significant disturbances to biotic functions from habitat fragmentation, edge effects, increased exotic species, etc.

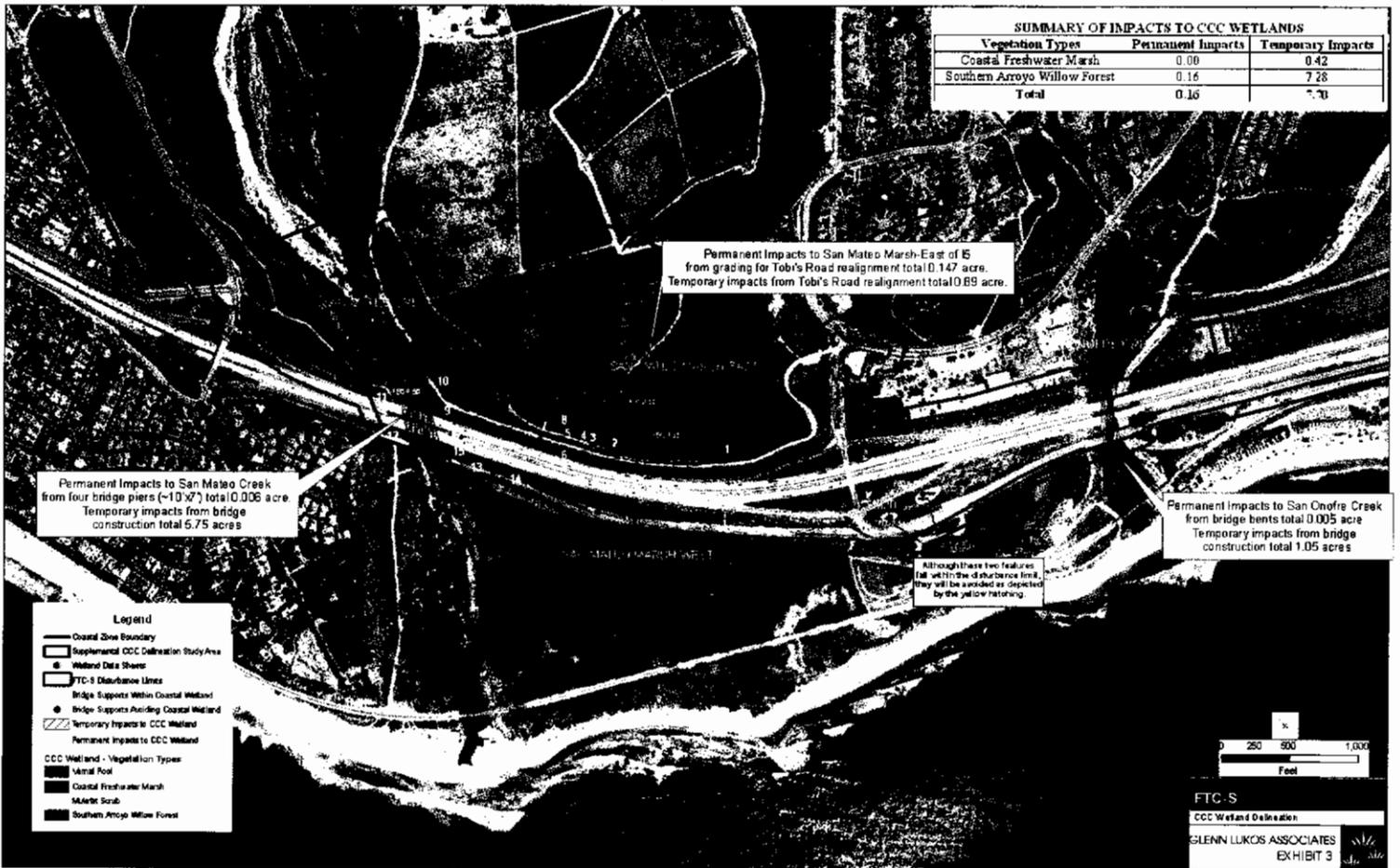
- e. The HFA should justify its assumption that the oak woodland within the upper Chiquita site will achieve optimal scores in all habitat functions for all 13 acres, while other mitigation activities are not expected to achieve such ideal results.
  - f. The HFA and HMMP should clarify expectations for increase in functions at the Tesoro South site. The HFA assigns credit for 11.13 acres, while the HMMP envisions scores of greater than optimal. This is unclear.
  - g. The HFA and HMMP should clarify accounting for acreage at the Chiquita site. The HMMP states there are 13 acres of drainages, while the HFA assigns credits to three acres of streambed enhancement and 13 acres of oak-riparian woodland habitat creation. It is unclear which areas are proposed for enhancement as opposed to creation. The figures requested above in comment B should also help to clarify this.
8. Please clarify whether and how the proposed toll road will indirectly affect the adjacent Tesoro Mitigation Area A. This mitigation area appears to be within or very close to the footprint and action area of the road. Indirect effects should be included in the HFA.
9. Please provide additional details concerning the newly proposed mitigation areas labeled EDB 1 and EDB 2 in the HFA post-project tables.
10. The HMMP does not adequately provide descriptions of anticipated effects and proposed mitigation measures related to water-dependent threatened and endangered species in the project area.
- a. Please discuss anticipated direct and indirect effects to the Tidewater Goby from dewatering and flow diversion activities within the vicinity of occupied areas.
  - b. Please identify proposed preventative and compensatory mitigation measures for the RARE beneficial uses associated with the Arroyo Toad, Least Bells's vireo, and Tidewater Goby. This description should also identify the watershed of impact and proposed compensatory mitigation.
11. There are insufficient details in the HMMP to constitute an assessment of effects to the habitat recently restored by Caltrans for its San Mateo Creek bridge project. The HMMP also lacks sufficient details to constitute a mitigation plan for adverse effects to the area.

C. Baseline Water Quality Investigation for the Foothill Transportation Corridor.  
Prepared by RBF Consulting, Inc. and G. Fred Lee & Associates. November 2000.

1. The "Baseline" investigation does not provide an adequate representation of baseline conditions, nor does it provide the level of information portrayed in the EIR (see EIR Table 4.9-6). As a result, the investigation is insufficient for documenting pre-project water quality and for assessing effects of post-project discharges.
2. Baseline water quality conditions should be provided consistent with the commitments of the EIR. In particular monitoring should include water quality conditions expected to be affected by the project's discharges.

D. Response to Comments Matrix Submitted on August 20, 2007

1. Please note that many deficiencies in the Response to Comments Matrix (matrix) are discussed in the above sections on the RMP and HMMP.
2. A water quality monitoring plan has not been submitted, nor are there any indications that one will be prepared or implemented. Recall that post-construction water quality monitoring of the project's runoff and representative downstream receiving waters is a commitment made in the EIR. The EIR states that water quality monitoring would be provided through project design features and water quality mitigation measures. The response matrix subsequently defers all post-construction activities to Caltrans. The response suggests that Caltrans is obligated under its statewide NPDES permit to monitor BMP discharges. However, there is no indication that Caltrans intends to conduct water quality monitoring associated with this project. If TCA expects Caltrans to conduct post-project water quality monitoring, then confirmation from Caltrans should be provided. A water quality monitoring plan that is designed to assess both the quality of water discharged to receiving waters from the project and the quality of representative receiving waters should be submitted.
3. Please clarify when the Operations, Maintenance, and Monitoring Plan will be prepared. The EIR indicates that one would be prepared when an alternative alignment is selected. However, the response matrix indicates that Caltrans will develop one in the future.



SUMMARY OF IMPACTS TO CCC WETLANDS		
Vegetation Types	Permanent Impacts	Temporary Impacts
Coastal Freshwater Marsh	0.00	0.42
Southern Arroyo Willow Forest	0.16	7.28
<b>Total</b>	<b>0.16</b>	<b>7.70</b>

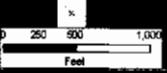
Permanent Impacts to San Mateo Marsh-East of I5 from grading for Tob's Road realignment total 0.147 acre. Temporary impacts from Tob's Road realignment total 0.69 acre.

Permanent Impacts to San Mateo Creek from four bridge piers (~10'x7') total 0.006 acre. Temporary impacts from bridge construction total 5.75 acres.

Permanent Impacts to San Onofre Creek from bridge bents total 0.005 acre. Temporary impacts from bridge construction total 1.05 acres.

Although these two features fall within the disturbance limit, they will be avoided as depicted by the yellow hatching.

- Legend**
- Coastal Zone Boundary
  - Supplemental CCC Disturbance Study Area
  - Wetland Data Shores
  - TC-5 Disturbance Lines
  - Bridge Supports Within Coastal Wetland
  - Bridge Supports Avoiding Coastal Wetland
  - Temporary Impacts to CCC Wetland
  - Permanent Impacts to CCC Wetland
- CCC Wetland - Vegetation Types
- Uprift Pool
  - Coastal Freshwater Marsh
  - Mixed Scrub
  - Southern Arroyo Willow Forest



FTC-S  
 CCC Wetland Disturbance  
 GLENN LUKOS ASSOCIATES  
 EXHIBIT 3

EXHIBIT NO. 23
APPLICATION NO.
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**Table 4.27-1  
Benefit/Impact Comparison**

Alternative	Benefits	Impacts/Costs
FEC-W-I&U	<ul style="list-style-type: none"> <li>• Improvements to 14 arterial intersections.</li> <li>• Improvements to 5 I-5 freeway mainline segments.</li> <li>• Improvements to 1 freeway/tollway ramp.</li> <li>• Short-term construction jobs: 17,000 jobs (I) and 21,000 jobs (U).</li> <li>• Travel time savings: 20,000 hr/day (RMV) and 34,000 hr/day (OCP).</li> <li>• Increased safety.</li> <li>• Additional travel route opportunities.</li> </ul>	<ul style="list-style-type: none"> <li>• Deficiencies 4 freeway/tollway ramps (indirect).</li> <li>• Construction costs: \$637 million (I) and \$798 million (U).</li> <li>• Acquisition/relocation costs: \$68 million (I) and \$72 million (U).</li> <li>• 32 ha (78 ac) (I) and 32 ha (80 ac) (U) of rated agricultural land.</li> <li>• 109 ha (269 ac) (I) and 111 ha (275 ac) (U) of agricultural reserves.</li> <li>• Impacted riparian habitat: 16 ha (I) and 16 ha (U)</li> <li>• Impacted plant communities: 444 ha (I) and 462 ha (U)</li> <li>• Impacted waters of the US: 12 km (I) and 13 ha (U).</li> </ul>
FEC-M-I&U	<ul style="list-style-type: none"> <li>• Improvements to 14 arterial intersections.</li> <li>• Improvements to 5 I-5 freeway mainline segments.</li> <li>• Improvements to 1 freeway/tollway ramp.</li> <li>• Short-term construction jobs: 19,000 jobs (I) and 23,000 jobs (U).</li> <li>• Travel time savings: 20,000 hr/day (RMV) and 34,000 hr/day (OCP).</li> <li>• Increased safety.</li> <li>• Additional travel route opportunities.</li> </ul>	<ul style="list-style-type: none"> <li>• Deficiencies in 4 freeway/tollway ramps (indirect).</li> <li>• Construction costs: \$696 million (I) and \$842 million (U).</li> <li>• Acquisition/relocation costs: \$66 million (I) and \$69 million (U).</li> <li>• 21 ha (53 ac) (I) and 24 ha (58 ac) (U) of rated agricultural land.</li> <li>• 123 ha (307 ac) (I) and 133 ha (328 ac) (U) of agricultural reserves.</li> <li>• Impacted riparian habitat: 20 ha (I) and 22 ha (U)</li> <li>• Impacted plant communities: 459 ha (I) and 486 ha (U)</li> <li>• Impacted waters of the US: 15 km (I) and 16 km (U).</li> </ul>
CC-I&U	<ul style="list-style-type: none"> <li>• Improvements to 11 arterial intersections.</li> <li>• Improvements to 5 I-5 freeway mainline segments.</li> <li>• Improvements to 2 freeway/tollway ramps.</li> <li>• Short-term construction jobs: 23,000 jobs (I) 31,000 jobs (U).</li> <li>• Travel time savings: 18,000 hr/day (RMV) and 26,000 hr/day (OCP).</li> <li>• Increased safety.</li> <li>• Additional travel route opportunities.</li> </ul>	<ul style="list-style-type: none"> <li>• Deficiencies in 1 arterial intersection.</li> <li>• Deficiencies in 2 freeway tollway ramps.</li> <li>• Deficiencies in 3 freeway/tollway ramps (indirect).</li> <li>• Construction costs: \$703 million (I) and \$944 million (U).</li> <li>• Acquisition/relocation costs: \$419 million (I) and \$435 million (U).</li> <li>• Displaced housing units: 593 units (I) and 602 units (U).</li> <li>• Displaced persons: 1,380 persons (I) and 1,405 persons (U).</li> <li>• 1,100 displaced employees.</li> <li>• 106 displaced uses (89 commercial uses).</li> <li>• 18 ha (43 ac) (I) and 22 ha (53 ac) (U) of rated agricultural land.</li> </ul>

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**Table 4.27-1 (continued)  
Benefit/Impact Comparison**

Alternative	Benefits	Impacts/Costs
CC-ALPV-I&U	<ul style="list-style-type: none"> <li>• Improvements to 8 arterial intersections.</li> <li>• Improvements to 3 I-5 freeway mainline segments.</li> <li>• Improvements to 1 freeway/tollway ramp.</li> <li>• Short-term construction jobs: 15,000 jobs (I) and 18,000 jobs (U).</li> <li>• Travel time savings: 8,000 hr/day (RMV and OCP)</li> <li>• Additional travel route opportunities.</li> </ul>	<ul style="list-style-type: none"> <li>• 84 ha (208 ac) (I) and 110 ha (272 ac) (U) of agricultural reserves.</li> <li>• Impacted riparian habitat: 22 ha (I) and 24 ha (U).</li> <li>• Impacted plant communities: 491 ha (I) and 528 ha (U).</li> <li>• Impacted waters of the US: 17 km (I) and 18 km (U).</li> <li>• Deficiencies in 4 arterial intersections.</li> <li>• Deficiencies in 3 freeway/tollway ramps.</li> <li>• Deficiencies in 3 freeway/tollway ramps (indirect).</li> <li>• Construction costs: \$457 million (I) and \$560 million (U).</li> <li>• Acquisition/relocation costs: \$55 million (I) and \$68 million (U).</li> <li>• Displaced housing units: 2 units (I) and 14 units (U).</li> <li>• Displaced persons: 7 persons (I) and 44 persons (U).</li> <li>• 18 ha (43 ac) (I) and 22 ha (53 ac) (U) of rated agricultural land.</li> <li>• 84 ha (208 ac) (I) and 110 ha (272 ac) (U) of agricultural reserves.</li> <li>• Impacted riparian habitat: 20 ha (I) and 23 ha (U)</li> <li>• Impacted plant communities: 324 ha (I) and 370 ha (U)</li> <li>• Impacted waters of the US: 14 km (I) and 15 km (U).</li> </ul>
A7C-FEC-M-I&U <sup>1</sup>	<ul style="list-style-type: none"> <li>• Improvements to 13 arterial intersections.</li> <li>• Improvements to 5 I-5 freeway mainline segments.</li> <li>• Improvements to 2 freeway/tollway ramps.</li> <li>• Short-term construction jobs: 17,000 jobs (I) and 21,000 jobs (U).</li> <li>• Travel time savings: 21,000 hr/day (RMV) and 25,000 hr/day (OCP).</li> <li>• Additional travel route opportunities.</li> </ul>	<ul style="list-style-type: none"> <li>• Deficiencies in 4 freeway/tollway ramps (indirect).</li> <li>• Construction costs: \$645 million (I) and \$800 million (U).</li> <li>• Acquisition/relocation costs: \$70 million (I) and \$73 million (U).</li> <li>• Displaced housing units: 80 units (I) and 92 units (U)</li> <li>• Displaced persons: 256 persons (I) and 293 displaced persons (U)</li> <li>• 2 ha (6 ac) (I) and (U) of rated agricultural land.</li> <li>• 89 ha (220 ac) (I) and 92 ha (227 ac) (U) of agricultural reserves</li> <li>• Impacted riparian habitat: 17 ha (I) and 19 ha (U)</li> <li>• Impacted plant communities: 447 ha (I) and 464 ha (U).</li> <li>• Impacted waters of the US: 14 km (I) and 15 km (U).</li> <li>• Deficiencies in 4 arterial intersections.</li> </ul>
A7C-ALPV-I&U	<ul style="list-style-type: none"> <li>• Improvements to 8 arterial intersections.</li> </ul>	<ul style="list-style-type: none"> <li>• Deficiencies in 4 arterial intersections.</li> </ul>

**Table 4.27-1 (continued)  
Benefit/Impact Comparison**

Alternative	Benefits	Impacts/Costs
	<ul style="list-style-type: none"> <li>• Improvements to 3 I-5 freeway mainline segments.</li> <li>• Improvements to 1 freeway/tollway ramp.</li> <li>• Short-term construction jobs: 28,000 jobs (I) and 30,000 jobs (U).</li> <li>• Vehicle travel time savings: 8,000 hr/day (RMV and OCP).</li> <li>• Additional travel route opportunities.</li> </ul>	<ul style="list-style-type: none"> <li>• Deficiencies in 3 freeway/tollway ramps.</li> <li>• Deficiencies in 3 freeway/tollway ramps (indirect).</li> <li>• Construction costs: \$876 million (I) and \$924 million (U).</li> <li>• Acquisition/relocation costs: \$86 million (I) and \$96 million (U).</li> <li>• Displaced housing units: 80 units (I) and 92 units (U)</li> <li>• Displaced persons: 256 persons (I) and 293 displaced persons (U)</li> <li>• 3 ha (8 ac) (I) and 3 ha (9 ac) (U) of rated agricultural land</li> <li>• 171 ha (423 ac) (I) and 183 ha (451 ac) (U) of agricultural reserves</li> <li>• Impacted riparian habitat: 9 ha (I) and 13 ha (U)</li> <li>• Impacted plant communities: 371 ha (I) and 430 ha (U)</li> <li>• Impacted waters of the US: 7 km (I) and 8 km (U)</li> </ul>
AIO	<ul style="list-style-type: none"> <li>• Improvements to 4 arterial intersections.</li> <li>• 11,000 short-term construction jobs.</li> <li>• Travel time savings: 5,000 hr/day (RMV) and 8,000 hr/day (OCP).</li> <li>• Increased safety.</li> <li>• Improvements to existing circulation system.</li> </ul>	<ul style="list-style-type: none"> <li>• Deficiencies in 12 arterial intersections.</li> <li>• Deficiencies in 7 freeway/tollway ramps.</li> <li>• Deficiencies in 1 freeway/tollway ramp (indirect).</li> <li>• Construction costs: \$351 million.</li> <li>• Acquisition/relocation costs: \$171 million.</li> <li>• 263 displaced housing units.</li> <li>• 827 displaced persons.</li> <li>• 200 displaced employees.</li> <li>• 17 displaced uses (4 commercial uses).</li> <li>• 6 ha (14 ac) rated agricultural land.</li> <li>• 15 ha (37 ac) of agricultural reserves.</li> <li>• Impacted riparian habitat: 4 ha.</li> <li>• Impacted plant communities: 230 ha.</li> <li>• Impacted waters of the US: 6 km.</li> </ul>
I-5	<ul style="list-style-type: none"> <li>• Improvements to 9 arterial intersections.</li> <li>• Improvements to 5 freeway/tollway ramps.</li> <li>• Improvements to 9 freeway (I-5) mainline segments.</li> <li>• 43,000 short-term construction jobs.</li> <li>• Travel time savings: 20,000 hr/day (RMV) and 22,000 hr/day (OCP).</li> </ul>	<ul style="list-style-type: none"> <li>• Deficiencies in 2 arterial intersections.</li> <li>• Deficiencies in 4 freeway/tollway ramps.</li> <li>• Construction costs: \$1.331 billion.</li> <li>• Acquisition/relocation costs: \$1.07 billion.</li> <li>• 838 displaced housing units.</li> </ul>

**Table 4.27-1 (continued)  
Benefit/Impact Comparison**

Alternative	Benefits	Impacts/Costs
	<ul style="list-style-type: none"> <li>• Increased safety.</li> <li>• Improvements to existing circulation system.</li> </ul>	<ul style="list-style-type: none"> <li>• 1,970 displaced persons.</li> <li>• 4,150 displaced employees.</li> <li>• 382 uses (336 commercial uses).</li> <li>• Impacted riparian habitat: 6 ha.</li> <li>• Impacted plant communities: 230 ha.</li> <li>• Impacted waters of the US: 5 km.</li> </ul>
No Action Alternative – OCP-2000	<ul style="list-style-type: none"> <li>• No additional costs.</li> </ul>	<ul style="list-style-type: none"> <li>• Deficiencies in 27 arterial intersections.</li> <li>• Deficiencies in 10 I-5 freeway mainline segments.</li> <li>• Deficiencies in 16 freeway/tollway ramps.</li> </ul>
No Action Alternative – RMV Development Plan	<ul style="list-style-type: none"> <li>• No additional costs.</li> </ul>	<ul style="list-style-type: none"> <li>• Deficiencies in 27 arterial intersections.</li> <li>• Deficiencies in 10 I-5 freeway mainline segments.</li> <li>• Deficiencies in 14 freeway/tollway ramps.</li> </ul>

Source: P&D Consultants (2003).

Note: (I) denotes Initial

(U) denotes Ultimate

(RMV) assumes 14,000 dus on RMV

(OCP) assumes 21,000 dus on RMV

<sup>1</sup> See Section 2.2 and Executive Summary for more information regarding the benefits of the Preferred Alternative.

alternatives. The Draft EIS/SEIR also included several land use development scenarios so that the impacts of the alternatives could be compared using different assumptions regarding future growth in the SOCTIIP area.

The purpose of the SOCTIIP is to provide improvements to the transportation infrastructure system that would help alleviate future traffic congestion and accommodate the need for mobility, access, goods movement, and future traffic demands on I-5 and the arterial network in the action area. The Preferred Alternative meets this purpose because it provides the number of traffic lanes necessary to meet forecasted traffic demand through 2025, which is the design forecast year for the SOCTIIP and the planning horizon year for regional plans and socioeconomic forecasts. The Preferred Alternative also meets the purpose because it accommodates the need for mobility, access, and goods movement by providing increased traffic capacity and because it provides an alternative route to I-5.

One of the project purposes is to improve the projected future level of service (LOS) and reduce the amount of congestion and delay on the freeway system and, as a secondary objective, the arterial network, in southern Orange County. The overall goal is to improve projected levels of congestion and delay as much as is feasible and cost-effective. This may include strategies that lead to a reduction in the length of time LOS F will occur, even if the facility will still operate at LOS F for a short period of time, if the strategy will result in benefits to the traveling public and more efficient movement of goods by reducing total delay. The Preferred Alternative furthers this objective by increasing overall regional capacity and reducing congestion on I-5 and local arterials.

For additional information regarding the purpose and need of the project, refer to Section 1.0 of this document.

#### ES.2.3.4 Process for Identification of the Preferred Alternative

Selection of the Preferred Alternative represents a coordinated, and balanced approach to minimizing harm to both the natural and built environments.

The Draft EIS/SEIR included a comprehensive evaluation of six corridor build alternatives, two non-corridor build alternatives and two no build alternatives. After release of the Draft environmental document and review of the comments received on the Draft EIS/SEIR, the SOCTIIP Collaborative began a multi-dimensional evaluation of the alternatives in order to identify a Least Environmentally Damaging Practicable Alternative (LEDPA). Using Table ES.6-1 and other information in the Draft EIS/SEIR, the Collaborative prepared a comprehensive matrix to assist in evaluating the alternatives using several parameters including: traffic conditions, air quality, aquatic resources (including compliance with Section 404 of the Clean Water Act/CDFG Streambed Alteration Program), water quality, endangered species impacts (including compliance with Section 7 of the ESA), socioeconomic impacts, land use impacts, military impacts on MCB Camp Pendleton, earth resources, cultural and historic resources, recreational resources, and project costs. The Collaborative used this multi-layer process to determine which alternatives were likely to qualify as the LEDPA. For more information on the LEDPA selection process, refer to Section 2.0 in the Final SEIR.

The Collaborative thoroughly reviewed and discussed the evaluation matrix at several SOCTIIP Collaborative meetings. The Collaborative used the evaluation matrix to screen those Alternatives that might qualify as the least environmentally damaging practicable alternative. The Collaborative determined that the shorter alternatives (CC-ALPV and A7C-ALPV) do not provide a substantial improvement in traffic conditions but do result in less effects to the natural environment because these alignments were shorter and crossed areas that had recently been developed. The CC Al providing good traffic relief, entails very substantial adverse impacts on the human and bu

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and on socioeconomics because it requires the removal of 763 homes and 106 businesses. The CC Alternative also has adverse impacts to endangered species, habitat loss and fragmentation, and has high wetland impacts. The full-length alternatives (FEC-M, FEC-W and A7C-FEC-M) perform well in traffic relief, minimize impacts on the built environment (because they do not require acquisition of homes or businesses) but have adverse impacts to endangered species, habitat loss and fragmentation, and wildlife connectivity.

Recognizing that the selection of the Preferred Alternative required assessment of its regional significance, the SOCTIIP Collaborative agreed that the selection of the Preferred Alternative required a balanced approach that evaluated the compatibility of the Preferred Alternative with the ongoing Orange County Southern Natural Community Conservation Plan (NCCP) and Special Area Management Plan (SAMP) processes. The Collaborative agreed to consider the alternatives in relation to the evaluation matrix and the NCCP and SAMP planning processes. These planning processes have implications for the SOCTIIP because they will determine the location and extent of development and open space uses in the SOCTIIP study area.

The Collaborative recognized that the impacts of a preferred alternative could be further reduced by insuring that the alternative is located as much as possible in an area contemplated for development in the NCCP and SAMP. Doing so has the further advantages of minimizing fragmentation of habitat and minimizing cumulative and growth-inducing impacts.

#### ES.2.3.4.1 Practicability

The Collaborative considered the regulations and guidance documents prepared by the U.S. Army Corps of Engineers and the U.S. EPA concerning the NEPA/404 MOU and the Section 404(b)(1) Guidelines for the discussion of practicability. The 404(b)(1) Guidelines define the concept of a "practicable alternative" as one that is available<sup>2</sup> and capable of being done<sup>3</sup> after taking into consideration: (1) cost<sup>4</sup>; (2) existing technology; and (3) logistics in light of the overall project purposes.

The Collaborative measured each alternative against the criteria described in the Section 404(b)(1) Guidelines, guidance documents and applicable case law. The NEPA/404 guidance paper lists seven criteria for evaluating the practicability of alternatives, six of which are relevant to SOCTIIP (one is transit-related). According to the Guidance Paper, an Alternative is not considered practicable if:

- a. It does not meet the project purpose and need;
- b. Cost of construction (including mitigation) is excessive;
- c. There are severe operational or safety problems;
- d. There are unacceptable adverse, social, economic, or environmental impacts;
- e. There would be serious community disruption;
- f. There are unsuitable demographics (for transit Alternatives); and
- g. There are logistical or technical constraints.

The Collaborative applied the seven criteria listed to the eight SOCTIIP Alternatives. Based on that evaluation, the following SOCTIIP Alternatives were determined to be not practicable: Central Corridor (CC) (yellow); Central Corridor-Avenida La Pata (CC-ALPV) (light orange); Alignment 7 Corridor-

<sup>2</sup> "Available" means obtainable for meeting the project purposes. Available site may include property already owned by a permit applicant, as well as properties that could be obtained, utilized, expanded, or managed.

<sup>3</sup> "Capable of being done" means that it is possible to achieve the basic purpose on a given site, after consideration of cost, existing technology, and logistics.

<sup>4</sup> If an Alternative is unreasonably expensive to the applicant, the Alternative is not practicable.

Avenida La Pata (A7C-ALPV) (dark orange); Arterial Improvements Only (AIO) (blue); the I-5 Widening Alternative (I-5) (red); and the No Action Alternatives.

The reasons for the determinations are as follows:

Criterion 1: It does not meet the project purpose and need

- No Action Alternatives

Criterion 2: Cost of construction (including mitigation) is excessive

- CC Alternative
- I-5 Widening Alternative
- A7C-ALPV Alternative
- AIO Alternative

Criterion 3: There are severe operational or safety problems

- CC Alternative

Criterion 4: There are unacceptable adverse, social, economic, or environmental impacts

- CC Alternative (aquatic resources, built environment and social and economic impacts)
- CC-ALPV Alternative (aquatic resources, built environment and social and economic impacts)
- A7C-ALPV Alternative (built environment, social and economic impacts)
- AIO Alternative (built environment, social and economic impacts)
- I-5 Widening Alternative (built environment, social and economic impacts)

Criterion 5: There would be serious community disruption

- CC Alternative
- CC-ALPV Alternative
- A7C-ALPV Alternative
- AIO Alternative
- I-5 Widening Alternative

Criterion 6: There are unsuitable demographics

- None. (This criterion applies to mass transit Alternatives, not highway Alternatives)

Criterion 7: There are logistical and technical constraints

- AIO Alternative
- I-5 Widening Alternative

Using the above criteria, FHWA, Caltrans and TCA proposed that the Collaborative consider the Far East Crossover-Modified (FEC-M) (purple); the Far East Crossover-West (FEC-W) (lavender); and the Alignment 7 Corridor-Far East Crossover-Modified (A7C-FEC-M) (green) to be practicable alternatives for further consideration by the Collaborative.

After review and discussion of the joint proposal, the Collaborative agreed that the AIO Alternative and the I-5 Widening Alternative were not practicable because of the absence of available funding. There is

no established funding for the I-5 or AIO alternatives. No potential funding sources have been identified or reserved for these alternatives. There was also recognition of the severe community disruption that would occur with implementation of the CC Alternative, CC-ALPV Alternative, and the A7C-ALPV Alternative. The Collaborative then evaluated whether the above alignments could be further modified to avoid severe community disruption.

The Collaborative agreed that it would consider all factors related to the human and natural environment when identifying a practicable alternative that results in least environmental harm, i.e., the LEDPA.

#### ES.2.3.4.2 Comparison of A7C-FEC-M, FEC-W and FEC-M Alternatives

The Collaborative agreed that there were opportunities to adjust the A7C-FEC-M, FEC-W and FEC-M alternatives to accomplish further avoidance of impacts. Several members of the Collaborative agreed that the A7C-FEC-M alternative appeared to be less environmentally damaging than the FEC-W and FEC-M alternatives. To further evaluate the practicability of these three alternatives, the TCA, FHWA, and Caltrans reviewed and compared the individual impacts of each alternative. The comparison indicates that the A7C-FEC-M Alternative is environmentally preferable to the other two alternatives.

Advantages of the A7C-FEC-M that were considered in the selection process are presented briefly below.

**Preservation of Large Blocks of Open Space and Retention of Wildlife Corridors.** The FEC-W and FEC-M cross Cañada Gobernadora and bifurcate open space areas east of the A7C-FEC-M Alternative. The FEC-M alternative has the greatest impact on existing open space and has an adverse impact on retention of large blocks of open space on the RMV property. The FEC-M alternative is in very close proximity to Cristianitos Creek and impacts a large number of thread leaved brodiaea plants. The A7C-FEC-M Alternative (the Preferred Alternative), with its more western location minimizes impacts on open space areas by being located in proximity to existing development and within the areas approved for development in the Ranch Plan. It allows for retention of large blocks of open space east of the alignment and retains major wildlife movement corridors and allows greater wildlife connectivity between the RMV property and the Cleveland National Forest.

The Preferred Alternative incorporates bridges and wildlife crossings into the design to minimize the effect of habitat fragmentation. The NCCP/HCP identifies several important linkages connecting these open space habitat block areas. Out of the 20 habitat linkages and wildlife movement areas identified from field surveys in the NCCP/HCP planning area, 15 are applicable to the wildlife corridor existing conditions in the SOCTIIP biological study area. Bridge, arch culverts, and box culverts that provide for wildlife undercrossings of the Preferred Alternative have been incorporated into the project design at locations that are consistent with the linkages identified pursuant to the NCCP/HCP guidelines.

**Consistency with Approved Land Use Plans.** The Rancho Mission Viejo Company (RMV) expressed opposition to the FEC-W alternative because of its proximity to the RMV heritage sites (cow camp and the family cemetery).

The Preferred Alternative generally transects the center portion of the Ranch Plan, including Planning Areas 2 and 5 designated for development as well as areas designated as open space (Planning Area 10) in the approved Settlement Agreement Plan. The Preferred Alternative avoids impacts to large areas dedicated to resource open space in the eastern portion of the Ranch Plan referred to as the "Eastern block." Overall, the alignment would impact approximately 257 acres designated open space and infrastructure in the Ranch Plan reflected in the Settlement Agreement. This represents 1.42 percent of the 16,945 acre open space in the Ranch Plan. This occurs where the Preferred Alternative traverses the northern portion of Planning Area 2 within the area from Planning Area 2 over San Juan Creek into

Planning Area 5. A portion of this impact from the Preferred Alternative represents the alignment on bridge structure. Figure 2.2-1 illustrates the compatibility of the Preferred Alternative with the proposed Ranch Plan and future NCCP design, and demonstrates that the SOCTIIP Preferred Alternative is compatible with both these regional planning processes.

#### ES.2.3.4.3 Benefits of the Preferred Alternative

**Congestion Relief and Increased Mobility.** The I-5 freeway in south Orange County, between El Toro Road and the county line, will realize considerable traffic benefits from construction of the Preferred Alternative. With implementation of the Preferred Alternative, the deficient segments are reduced to only 3 segments in the AM and 3 segments in the PM peak periods. Traffic forecasts for the year 2025 indicate that if the No Action Alternative is adopted there will be 10 deficient segments in the AM and 10 deficient segments in the PM peak hour periods along this segment of the I-5.

Another benefit of the Preferred Alternative is that the I-5 freeway segments that are deficient will remain that way for a much shorter period of time when compared to the No Action scenario. For example, in 2025 under the No Action Alternative four sections of the I-5 between Ortega Highway and Camino Estrella are forecast to experience more than 4 hours of LOS F congestion in the PM. With construction of the Preferred Alternative, only one of these segments, between Ortega Highway and Camino Capistrano, will be deficient and the time in which the congestion will last is reduced from more than four hours to two hours or less.

Traffic relief on the local arterials is also a component of the project Purpose and Need that is achieved by the Preferred Alternative. In 2025 under the No Action Alternative, there are forecast to be 13 arterial intersections that are considered deficient during AM and PM peak hours. With the Preferred Alternative the number of deficient intersections is reduced from 13 to 4 in the AM and from 13 to 6 in the PM peak hours.

Forecasts for the year 2025 indicate that traffic congestion on the I-5 and local arterials in south Orange County will increase significantly from present levels. Implementation of the Preferred Alternative will result in considerable beneficial impacts that will reduce the anticipated traffic congestion.

**Compatibility with Regional Planning:** The TCA evaluated the Preferred Alternative for its compatibility with the Natural Communities Conservation Plan (NCCP) and the proposed Rancho Mission Viejo Ranch Plan. The Preferred Alternative is compatible with the Ranch Plan as reflected in the Settlement Agreement because the Preferred Alternative is located adjacent to existing development or within the areas shown for development in the Ranch Plan and Settlement Agreement wherever feasible. As a result, the Preferred Alternative retains the large blocks of open space contemplated for the RMV property in the Ranch Plan and the Settlement Agreement. The NCCP is anticipated to be similar to the Ranch Plan as reflected in the Settlement Agreement. Also refer to Response to Comments Attachment 10 "SOCTIIP Analysis of the NCCP/HCP Planning Guidelines and SAMP/MSAA Watershed Planning Principles" for a complete analysis of the Preferred Alternative compatibility/consistency with NCCP/HCP reserve design guidelines and the SAMP/MSAA Watershed Planning Principles.

**Improved Water Quality on I-5:** I-5 currently has no water runoff treatment system in the vicinity of Trestles beach. With each storm event, untreated water from the I-5 freeway runs directly into the creeks and ocean, potentially polluting Trestles Beach. TCA will install treatment systems meeting Regional Water Quality Control Board standards on the new roadway and an approximately two-mile portion of I-5 north and south of the connection to SR-241. SOCTIIP would construct extended detention facilities to treat the runoff from this existing portion of I-5 as well as the new connector roadways from the project. Based on engineers' calculations, nearly one million gallons of runoff per design water quality storm

event (those storms with about 0.6-inch of rain) would receive treatment with the project. Over the past two years of record, about five design water quality events have occurred annually. Using this estimate, the project would treat five million gallons of water each year that currently flows untreated into San Onofre and San Mateo Creeks.

**Emergency Evacuation Benefits:** I-5 is the major emergency evacuation route for SONGS, and is virtually the only non-signalized evacuation route between SONGS and I-405 to the north. Ortega Highway, north of SONGS, provides a route from I-5 to the east that is two lanes and non-signalized over most of its length. The Preferred Alternative would provide an additional evacuation route from I-5, immediately south of San Clemente, to Ortega Highway and to State Route 241 (SR-241), north of Ortega Highway and east of I-5. To the north, SR-241 connects with State Route 91 to the east, affording access to Riverside and Los Angeles Counties, and connects to I-5 and I-405 to the west, providing access to the north and northwest, respectively. The Preferred Alternative would have the beneficial effect of increasing the speed at which evacuations could be completed and would provide an alternate route should I-5 become impassable for some reason.

#### **Avoids/Minimizing Environmental Impacts:**

The Preferred Alternative has the following additional environmental benefits:

- It avoids impact to high value wetlands in the Tesoro wetlands area – ramps for the Oso Parkway Interchange were shifted to the east to avoid Tesoro Wetlands.
- It avoids crossing of Cañada Gobernadora which is the location of Gobernadora Environmental Reserve Area.
- It bridges over San Juan Creek. A 2,100-foot long and 60-foot high bridge structure will cross over San Juan Creek allowing virtually unobstructed water flow and continued wildlife movement.
- It minimizes visual impacts to Talega residents by keeping the alignment behind a natural ridgeline. There was an extensive design effort to locate the alignment behind the existing ridgeline to minimize views of the road by homeowners.
- It avoids the Blind/Gabino wetlands located at the confluence of Blind Canyon and Gabino Canyon
- It avoids occupied Pacific Pocket Mouse habitat.
- It bridges over San Mateo Creek. TCA minimized impacts to jurisdictional waters by reducing the size and number of structural supports in San Mateo Creek by locating those required structural columns outside of high value jurisdictional resources. In order to reduce the number of structural columns, TCA maximized bridge span by increasing the structural strength of the bridge and increasing the bridge depth. The 3,200 feet long bridge over San Mateo Creek and existing I-5 minimizes impacts to San Mateo creek and wetlands.

#### ES.2.3.5 Least Environmentally Damaging Practicable Alternative (LEDPA)

The agencies represented in the Collaborative rigorously evaluated the alternatives described in the technical reports and in the Draft EIS/SEIR.

The NEPA/Section 404 MOU establishes a process for the federal transportation and environmental agencies to identify the project Purpose and Need, select alternatives for evaluation in the Draft EIS/SEIR, and select the Preferred Alternative and Least Environmentally Damaging Practicable Alternative (LEDPA).

Section 404 of the Clean Water Act (CWA) requires that all appropriate and practicable steps must be undertaken by the applicant to first avoid and then minimize adverse impacts to the aquatic ecosystem prior to incorporating compensatory mitigation. The Refinement Process discussed in Section 4.10 of the Draft EIS/SEIR as well as the PDFs and BMPs discussed in Sections 4.8, 4.9, 4.10 and 4.11 provide the framework for avoidance and minimization of impacts to jurisdictional waters to the maximum extent practicable.

Specifically, direct impacts to both wetlands and non-wetland waters were avoided and/or minimized during the Refinement Process discussed in Section 4.10 in the Draft EIS/SEIR. Avoidance and minimization measures included refining the grading limits to reduce cut and fill by following natural contours, placement of bridge structures across major high order drainages, and shifting the alignment to avoid sensitive resources, including the Tesoro Wetlands area. Additionally, TCA sought to minimize impacts to jurisdictional waters by reducing the size and number of structural supports and by locating those required structural columns outside of high value jurisdictional resources. In order to reduce the number of structural columns, TCA maximized bridge span by increasing the structural strength of the bridge and increasing the bridge depth.

A more detailed description of aquatic resources and associated acreages is provided in Section 4 of the Wetlands Delineation Technical Report (Glenn Lukos Associates [GLA] 2004), which has been verified by the ACOE, and is included as Attachment 12 to the Response to Comments document. The Wetlands Delineation Technical Report was prepared for impacts associated with the SOCTIIP Alternatives, consistent with recommendations from the ACOE. The Alternatives evaluated in the delineation include the CC, CC-ALPV, A7C-ALPV, A7A-FEC-M, FEC-M and FEC-W Alternatives. Table 1.3-2 in the Wetlands Delineation Technical Report (GLA 2004) provides a quantitative summary of impacts to Waters of the United States (WoUS), including wetland and non-wetland waters, for each alternative.

ACOE will make the final decision on the LEDPA and a determination of compliance with the Section 404 (b)(1) Guidelines during the 30-day review period for the Final EIS.

Because it was the goal of the Collaborative to select a Preferred Alternative that would also be selected as the LEDPA, the evaluation and screening of the SOCTIIP Alternatives included evaluation of the Alternatives according to the NEPA/404 Evaluation criteria. The Collaborative applied the definition of "practicability" adopted by the Corps of Engineers and the U.S. EPA in the section 404(b)(1) Guidelines. A summary of the evaluation criteria and screening process is provided below.

#### ES.2.3.6 Evaluation Criteria and Screening Process

**Summary of Jurisdictional Delineation Evaluation.** A Jurisdictional Determination and Wetlands Delineation Technical Assessment was prepared for six of the project Alternatives in August 2004 and revised in April 2005 by Glenn Lukos Associates, Inc. (GLA). The report is Attachment 12 of the Response to Comments document. The Wetlands Delineation Technical Report describes the location and extent of aquatic features located within the disturbance limits of six of the corridor alternatives considered in the EIS/SEIR. The impacts of the six corridor alternatives are compared in Table ES.2-2 below.

**Table ES.2-2**  
**Summary of Permanent Impacts to Corps Jurisdiction (Acres)**

Alternative	Corps		
	Total	Non-Wetland	Wetland
Preferred Alternative (A7C-FEC-M - Initial)	6.27	5.45	0.82
A7C-FEC-M Ultimate	6.90	5.97	0.93
CC - Initial	14.87	1.47	13.40
CC - Ultimate	15.08	1.51	13.57
CC-ALPV - Initial	12.38	0.97	11.41
CC-ALPV - Ultimate	13.39	1.01	12.38
A7C-ALPV - Initial	2.52	1.96	0.56
A7C-ALPV - Ultimate	3.34	1.98	1.36
FEC-W - Initial	6.69	4.07	2.62
FEC-W - Ultimate	6.96	4.32	2.64
FEC-M - Initial	5.44	3.73	1.71
FEC-M - Ultimate	6.02	4.04	1.99

Source: Glen Lukos 2004

In the planning level impact analysis conducted by the ERDC (Potential Impacts of Alternative Transportation Corridors on Waters of the U.S. and Riparian Ecosystems for the Southern Orange County Transportation Infrastructure Improvement Project, 2003), provided in the Draft EIS/SEIR the analyses assume that all drainages within the disturbance limits are permanently filled. This initial functional assessment conducted by ERDC did not account for bridges or culverts, but assumed a complete fill; this resulted in higher than actual estimates for post-project reductions in aquatic function. More recently, at the ACOE request, an updated functional assessment has been prepared by R.D Smith of ERDC which clarifies the impact analyses addressing the avoidance of impacts by the construction of bridges and culverts.

Review of the results indicate that of the eight categories evaluated (Criteria 1, 2, 3a, 3b, 3c, 4a, 4b and 4c), the Preferred Alternative is ranked best in four categories (3a, 3b, 3c and 4a), second in two categories (2 and 4b), fourth in one category (1) and fifth in one category (4c). Being ranked at the top in four categories is the best for any of the alternatives evaluated. The normalized rank score for each of the integrity indices evaluated in the functional assessment for each the six corridor alternatives is provided in Table ES.2-3 below.

**Table ES.2-3**  
**Normalized Rank Scores for all Criteria and Corridor Alternatives for the Initial Corridor Footprints**

Corridor Alternatives (Initial)	Criteria 1: Miles of Stream Channel	Criteria 2: Acres of Riparian	Criteria 3: Hydrology	Criteria 3: Water Quality	Criteria 3: Habitat	Criteria 4: Hydrology	Criteria 4: Water Quality	Criteria 4: Habitat	Total Normalized Rank Scores
A7C-ALPV	0.4	0.4	0.4	0.5	0.4	0.6	0.5	0.7	3.9
A7C-FEC-M (Preferred Alternative)	0.8	0.3	0.2	0.2	0.2	0.4	0.6	0.9	3.7
CC-ALPV	0.7	0.9	0.9	0.9	0.9	0.9	0.9	0.9	7.0
CC	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	8.0
FEC-M	0.9	0.4	0.4	0.4	0.4	0.9	1.0	0.9	5.2
FEC-W	0.7	0.2	0.2	0.2	0.2	0.5	0.7	0.7	3.6

Source: R.D. Smith, ERDC, 2005

The Jurisdictional Determination and Wetlands Delineation Technical Assessment quantify impacts to wetlands and the Updated Functional Assessment quantifies loss of function. Together, these two technical analysis documents will provide the ACOE with the information required to ensure a complete understanding of the nature and degree of impact of the proposed discharge resulting from the SOCTIIP Alternatives. See Section 4.10 of this Final SEIR, and both Attachment 12 and Attachment 16 of the RTC document, for more information on these technical evaluations.

**Summary of Biological Resources Evaluation.** The proposed project will involve removal of vegetative resources that are known to provide or may have the potential to provide habitat for ten federally-listed threatened, endangered, or proposed wildlife and plant species. Threatened and endangered wildlife species and plant species that may or will be directly affected by implementation of the Preferred Alternative are the tidewater goby, southern steelhead trout, arroyo toad, coastal California gnatcatcher, and thread-leaved brodiaea. The thread-leaved brodiaea is also state listed.

Threatened and endangered plant species that would not be directly impacted, and for which potential habitat is available, are as follows: Braunton's milk-vetch, Nevin's barberry, spreading navarretia, Orcutt's grass, and Gambel's watercress.

The following threatened and endangered wildlife species would not be directly impacted, but potential habitat for them is available in the project area: vernal pool fairy shrimp, San Diego fairy shrimp, Riverside fairy shrimp, Quino checkerspot butterfly, California red-legged frog, least Bell's vireo, southwestern willow flycatcher, and Pacific pocket mouse.

The Preferred Alternative selected by the TCA and FHWA includes many conservation and avoidance methods to minimize impacts to the natural environment, including adverse impacts to sensitive species and other natural resources. Indirect impacts will be limited through project design features. For example, the drainage and water quality features will prevent water quality impacts to sensitive species. The Preferred Alternative will limit lighting to areas around toll plazas and interchanges, and low-light design features will be incorporated to the maximum extent feasible while maintaining consistency with Caltrans design standards. (See Project Design Features described in Section 2.5.1.7). Table 2.2-4 includes information regarding the conservation and avoidance features of the location refinement to the Preferred Alternative.

**Community Impacts.** The proposed southern extension of existing SR-241 has been subject to planning efforts for over 20 years and has been on the County of Orange MPAH since 1981. Therefore, development in the study area has been able to anticipate and accommodate the future implementation of a transportation facility in this area. The potential direct and indirect effects of the Preferred Alternative on existing land uses are reduced by the siting of the proposed facility to minimize impacts to existing uses, combined with existing topography and committed open space areas that separate the Preferred Alternative from existing residential uses.

The Preferred Alternative does not result in direct or indirect impacts to existing homes and businesses, Chiquita Water Reclamation Plant, or the Prima Deshecha Landfill. Although the Preferred Alternative is adjacent to Tesoro High School, it would not result in direct or indirect adverse impacts to this land use. Because Tesoro High School was constructed with the knowledge of the proposed extension of the Foothill Corridor, the Final EIR for the high school included measures to mitigate potential indirect noise impacts associated with a transportation facility in the area of the SOCTIIP corridor Alternatives. There are no significant adverse indirect impacts to existing homes due to the distance from the proposed alignment, combined with existing topography and the existing buffer provided in the Talega residential development.

### ES.2.3.7 Consideration of Other Factors

**Marine Corps Base—Camp Pendleton.** The Department of the Navy (DON) owns the property on which the Preferred Alternative traverses the Marine Corps Base in San Diego County. In 1988, the Marine Corps agreed that only one potential alignment of the proposed extension of the Foothill South project could be evaluated on Camp Pendleton as long as it met certain criteria, the most important of which was that any on-Base portion of this proposed toll road must be as closely located to the northern Base boundary as possible and it must be routed in such a manner that it does not impact the Marine Corps mission nor interfere with Camp Pendleton's operational flexibility. The Preferred Alternative (for that section of the toll road which crosses through Camp Pendleton) meets the Marine Corps criteria.

SOSB is located entirely on lands leased from the DON; the State does not own the land. SOSB is operated by the State, pursuant to a 1971 agreement of lease (the "lease") with the United States. The California Department of Parks & Recreation (CDPR) lease with the United States is specifically subject to the reserved right of the United States to grant additional easements and rights-of-way over the leased property. Thus, in implementing the authority to lease, CDPR agreed that the United States may grant a right-of-way to a third party. Congress has adopted legislation authorizing the Navy to grant to the TCA an easement within this portion of Camp Pendleton.

**San Onofre State Beach.** The Preferred Alternative extends south through Subunit 1 of San Onofre State Beach (SOSB), leased from MCB Camp Pendleton, impacting biological and habitat resources value, and the overall size of the SOSB Subunit 1. No camping sites in the San Mateo Campground would be removed as a result of implementation of the Preferred Alternative, but the Preferred Alternative has visual and aesthetic impacts on the camping experience at the San Mateo Campground. No impacts to the SOSB Trestles Subunit (Subunit 2) are expected as a result of the elevated ramp connecting the Preferred Alternative to I-5. Continued access to Trestles Beach will be provided during and after construction of the Preferred Alternative and, as described in Section 4.25, there will be no effect on the quality of the surf and sediment supply will be virtually unchanged in the after-project condition.

Construction activities associated with implementation of the Preferred Alternative could impact Camp Pendleton San Onofre Recreation Beach. Impacts to recreation uses at San Onofre Recreation Beach would relate mostly to noise, access, and dust during construction. These short-term impacts would not change land uses at San Onofre Recreation Beach or military uses at Green Beach.

**The Donna O'Neill Land Conservancy.** The Preferred Alternative takes land in The Conservancy. The SOCTIP Collaborative agreed that the beneficial affects of the Preferred Alternative crossing into the western portion of The Conservancy outweighed the potential impacts. The benefits include: greater habitat connectivity into eastern Orange County; avoidance of high value aquatic resources including wetlands in the Blind Canyon/Gabino Canyon confluence; keeping in close proximity to neighboring development thereby minimizing habitat fragmentation; and minimization of viewshed impacts to residents in developed areas of San Clemente, including Talega. The Conservancy would be compensated for this impact. The TCA has initiated discussions with The Conservancy Board of Directors and the landowner to discuss right-of-way acquisition and potential mitigation strategies for impacts to The Conservancy. Mitigation strategies presented to The Conservancy included open space land for additional set-aside areas, either contiguous or non-contiguous to the existing Conservancy, or monetary compensation to The Conservancy.

**Section 4(f) Resources/Cultural.** There are 25 identified cultural resource sites within the Preferred Alternative. Of these, seven have been recommended ineligible for the NRHP under any criteria. Fourteen of the identified cultural resource sites have been recommended eligible for listing on the

NRHP. Of the sites that are eligible for the NRHP, two are eligible under Criterion D only. Ten NRHP-eligible sites are elements of the San Mateo Archaeological District (SMAD) and are considered eligible under Criteria A and D. The SMAD is also considered a Traditional Cultural Property by local Native American Groups. Eight of the identified resources have not been formally evaluated, in consultation with the SHPO, for eligibility. The eight unevaluated resources are located within the RMV Lands, Conservancy Land, adjacent to the Talega Development, and along I-5 in San Diego. Mitigation Measures are provided that will minimize or mitigate impacts to these resources to the extent feasible. In addition, avoidance of these resources within the Preferred Alternative Study Area has also been investigated, and avoidance has been achieved for two resources considered the "core" of the SMAD (CA-ORA-22 and CA-SDI-8435). Where possible, ground disturbing impacts of the Preferred Alternative were placed on deflating landforms where there is little likelihood of buried components for impacted 4(f) resources.

**Farmland Resources.** The Preferred Alternative would not result in the loss of rated farmland as defined by the Natural Resources Conservation Service on RMV. Due to alignment shifts, the Preferred Alternative would affect an additional 1 ha (2.57 ac) more than the A7C-FEC-M-Ultimate. The Preferred Alternative would result in the loss of approximately 63 ha (155 ac) less agricultural preserve land than the A7C-FEC-M Initial and approximately 65 ha (162 ac) less than the A7C-FEC-M-Ultimate.

#### ES.2.4 PREFERRED ALTERNATIVE AND LEDPA SELECTION

Of the three corridor alternatives remaining after the practicability analysis, the A7C-FEC-M-Initial corridor with design modification incorporated was selected by the Collaborative as the Preferred Alternative. In addition to meeting the seven criteria for evaluating the practicability of alternatives listed in the NEPA/404 MOU Guidance Paper and being better or comparable to the other two alternatives in terms of impacts to aquatic and biological resources, the Preferred Alternative allows the greatest wildlife connectivity and is more compatible with local existing land use plans. More specifically, the Preferred Alternative was selected over the FEC-M Alternative because it does not cross Cañada Gobernadora and it minimizes impacts on open space areas contemplated by the RMV Ranch Plan and does not impact RMV heritage sites.

Selection of the Preferred Alternative represents a coordinated balanced approach to minimizing harm to both the natural and built environments. The A7C-FEC-M and the Preferred Alternative culminates years of analysis and evaluation, engineering refinement, inter-agency consultation and coordinated consensus. ACOE will make the final decision on the LEDPA and a determination of compliance with the Section 404 (b)(1) Guidelines during the 30-day review period for the Final EIS.

### **ES.3 PROJECT HISTORY**

The proposed southern extension of existing State Route 241 (SR-241) also referred to as the Foothill Transportation Corridor-South (FTC-S), has been subject to planning efforts for approximately 20 years. Final EIR 123, which was certified by the County of Orange in 1981, resulted in a conceptual alignment for a transportation corridor facility being placed on the County's Master Plan of Arterial Highways (MPAH). The MPAH shows the alignment of the existing SR-241 and a conceptual alignment for the FTC-S. Between 1989 and 1991, the TCA prepared TCA EIR 3, pursuant to CEQA, for the selection of a locally preferred road alignment for the FTC-S. TCA EIR 3 addressed the C and BX road alignments, developed as part of the alternatives analysis phase of the project, as the primary build Alternatives. On October 10, 1991, the Modified C Alignment was selected by the TCA as the locally Preferred Alternative. Subsequently, at the request of the United States Fish and Wildlife Service (USFWS), the Modified C Alignment was slightly altered to avoid high quality scrub communities, protect sensitive



**Existing Vegetation**

- Former Agricultural Fields (Inactive)
- Transportation

**Proposed Vegetation**

- Disturbance Limits
- Southern Willow Woodland (1.0 acre)

0 200 400 800 Feet

N

**SOCTIIP**

Mitigation Area D

**GLENN LUKOS ASSOCIATES**

EXHIBIT 8

EXHIBIT NO. 26
APPLICATION NO.
CC-18-07

Permit No. 183-73

Amendment No. 6-81-300-A

Condition H. MITIGATION OF LOST ACCESS

Within 30 days of the date of the Applicants' written acceptance of the amended permit, the Applicants shall deposit \$3-million into an escrow account or reserve account established by the Applicants (if it is determined by the parties that the reserve procedure would be significantly less expensive and would ensure implementation of this condition), pursuant to an escrow agreement and instructions in form and content approved by the Executive Director. The escrow agreement and instructions shall provide that funds in the escrow or reserve account shall be used in mitigation of the lost and diminished public access opportunities at the project site in accordance with the following terms:

(i) Beginning 60 days after the time the amended permit becomes final, during the next following 24 months, funds from the escrow or reserve account shall be payable only to the California Department of Parks and Recreation ("Parks Department") upon demand of the Parks Department and with the approval of the Executive Director for the purpose of improving Parcel 1 of San Onofre State Beach, as shown on the map attached hereto as Exhibit 4. The funds shall be applied in a manner which will result in creation and opening for public use of a public recreational facility having approximately 200 improved campsites and linked to the beach by a hiking trail.

(ii) At any time after the start of the twenty-seventh month after the amended permit becomes final, funds from the escrow or reserve account may be disbursed only as directed by the Commission after public hearing and only for the purpose of securing a public coastal access or recreational benefit which will serve the population affected by the loss of access at the project site and which will adequately mitigate for the loss of access at San Onofre.

(iii) All interest and other earnings of the account shall be retained in the account and applied toward the purposes of the account as set forth in the escrow agreement and instructions.

(iv) The escrow agreement shall be irrevocable.

(v) The principals of the escrow agreement shall be the California Coastal Commission and the Parks Department.

(vi) In the event the amended permit is the subject of appeal or other legal attack, no funds may be disbursed from the escrow or reserve account until such time as all appeals are final, except as provided in part (vii), below. In the event of a final judicial determination that the amended permit is invalid with respect to the substantive provisions of this amendment, all funds placed into escrow or reserve and all interest accrued thereon, less any costs for establishing and servicing the account to that date, shall be returned immediately to the Applicants.

(vii) In the event of litigation described above, funds escrow may be disbursed to secure reservation of capacity of San Clemente wastewater treatment facility as necessary

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