NORTH COUNTY CORRIDOR
TRANSPORTATION EXPRESSWAY AUTHORITY

ITEM: 3b.

SUBJECT:

Amendment #5 to the Agreement for Professional Design Services with Jacobs Engineering Group, Inc.

STAFF RECOMMENDATIONS:

By motion, approve the Authority Manager to execute Amendment #5 to the Agreement for Professional Design Services with Jacobs Engineering Group, Inc. for the North County Corridor Transportation Expressway Project in the amount of $151,617 for a total contract amount not to exceed $9,550,839. This amount shall include, without limitation, the cost of any subcontractors, consultants, experts or investigators retained pursuant to the Professional Design Service Agreement.

FISCAL IMPACT:

The North County Corridor project is funded by State Transportation Improvement Program (STIP) funds in the amount of $6,200,000 and up to $4,900,000 of Regional Transportation Impact Fees (RTIF).

The requested amendment will be funded with $151,617 of the available RTIF funds for a revised total contract amount of $9,550,839.

DISCUSSION:

The NCC Board entered into an Agreement for Professional Services with Jacobs Engineering on July 21, 2008. A Task Order #1, approved on February 11, 2009, increased the Task Order apportionment and time extension, but did not involve additional compensation. The Board approved task Orders 2 and 3 on March 11, 2009.

The State Route 108 Adoption of the North County Corridor was successfully completed and accepted by the California Transportation Commission on May 20, 2010 for the portion of SR 108 between McHenry Avenue and SR 120 east of Oakdale. Due to the unanticipated complexity and overwhelming public comment on the Route Adoption environmental document, the Board approved Amendment #2 to the Jacobs contract in the amount of $1,296,592 on June 16, 2010.

Amendment #2 resulted in a revised contract scope providing a "blended" CEQA/NEPA document that will analyze specific alignments from SR 99 to a connection to existing SR 108 east of Oakdale. Within this document, the specific description of the proposed action (e.g., number of lanes, interchange locations, etc.) would be defined, a distinct range of reasonable alternatives would be identified, and the preferred alignment (location) for the route would ultimately be identified. The scope also included the environmental clearance of a constructible phase 1 segment of roadway.

Certification and Record of Decision and Notice of Decision associated with the project would pertain specifically to the funded constructible phase only for construction purposes. The combined document would also allow for right-of-way /corridor preservation for the entire corridor.

On November 16, 2011 the Board approved Amendment #3 to the Jacobs Contract in the amount of $221,382. This additional compensation was for the work and additional scope as defined in the contract amendment and Exhibit C-A3; and, as detailed in the letters from Jacobs (dated September 2, 2011) and Fehr & Peers (dated March 28, 2011) attached to Exhibit C-A3 and summarized as follows:

- Additional work required for alternative screening beyond the scope identified in Alternative 2 (analyze 12 alternatives for environmental screening). The public scoping meetings resulted in 18 alternatives to analyze for environmental screening
- Additional work required obtaining Permission to Enter access of over 1100 properties
- Additional project management
- Design scope changes (resulting in deletion and addition of scope)
- Land Net Survey scope changes
- Traffic scope changes
- Overhead and indirect costs

On May 16, 2012, the Board approved Amendment #4 to the Jacobs Contract to cover needed changes of scope in environmental studies and traffic analysis. The environmental scope changes included protocol surveys for California Tiger Salamander (CTS) Surveys, Branchiopod Surveys, and Botanical Surveys. The traffic scope change included the traffic analysis for a hybrid alternative. Amendment #4 added $330,002 to the contract.

Since May of 2012, an on-going discussion regarding the reduction of project limits has occurred between Caltrans staff, local agency staff, resource agency staff and NCC staff. With the completion of the SR 219 Phase I Widening Project, the pending construction of the SR 219 Phase II Widening Project, the Kiernan Interchange Reconstruction Project and the Claribel Widening Project, the NCC could effectively terminate at SR 108/McHenry Avenue and still maintain the objectives of the original project which are to:

- Improve regional network circulation
- Relieve existing traffic congestion
- Reduce traffic delay
- Accommodate future traffic
- Benefit commerce
- Enhance traffic safety

Reducing the limits of the NCC to begin at SR 120 east of the City of Oakdale and terminate at SR 108/McHenry Avenue will require determination of "logical termini and independent utility", an environmental requirement that assures the project will not have unmitigated affects on the surrounding system. Traffic forecasts and operational

analysis are the means to determine logical termini and independent utility. These studies will help us determine if the scope we are proposing – the NCC as an expressway/conventional highway will work during the design life of the project. It will identify impacts to adjacent transportation facilities and provide information to include mitigation projects into the Regional Transportation Plan (RTP) that StanCOG is in the process of updating. The studies will define the footprint impacts (from opening day to 20 years out) from the NCC project to roadway segments and local road connections, including levels of service, average delay and estimated queue for each intersection.

At this point, it is anticipated that impacts that require mitigation will be defined for the NCC Project; specifically to SR 219, that could result in a six lane facility from SR 99 to SR 108 at some time in the future. The Traffic Forecast and Operational Analysis would provide the appropriate information to determine the size and functionality of that future project to include into the RTP as a Tier 1 Project with proper facility identification, construction year and appropriate cost estimates.

Without the traffic studies and analysis, it is a guess as to the future needs of the SR 219 facility. More importantly, without these studies, the logical termini and independent utility of the NCC cannot be adequately verified. Conducting the traffic studies prior to adopting a complete revised scope of work is consistent with direction provided by Caltrans and presented in a letter from Carrie Bowen, District 10 Director (attached). Ms. Bowen's letter provides conditional concurrence of our recommendation to rescope the project.

Jacobs did not perform the hybrid analysis defined in Amendment #4 before new strategies were discussed, so that scope will be deleted in Amendment #5, along with the associated fee. Amendment #5 presents the new scope and fee to complete the traffic studies for the North County Corridor Project. Amendment #5 also includes necessary engineering to provide sufficient geometric details to enable accurate traffic modeling.

Amendment #5 defines the scope of work, time periods and cost to do the additional CTS survey, as well as the branchiopod wet season survey. Unfortunately, the U.S. Fish and Wildlife Service rejected the CTS survey analysis and results from the wet season 2012 due to a lack of sufficient rainfall, and this work must be repeated in March, April and May of 2013, along with branchiopod wet season surveys that will begin this fall and continue through next spring. Additional protocol surveys beyond May of 2013 will be addressed in a future amendment or new contract, once the limits of the project have been identified and agreed upon.

All other contract items are to be put on hold until the Traffic Forecasting and Operational Analysis is at a stage that logical termini and independent utility can be defined for the project, anticipated by March 2013. At that point, it is suggested that the contract be renegotiated in total to reflect an appropriate cost, scope and schedule based upon new limits and project descriptions.

ATTACHMENTS

1. October 24, 2012 Letter to Matt Machado from Carrie Bowen
2. Contract Amendment w/Exhibit "A" (Jacobs request letter)

DEPARTMENT OF TRANSPORTATION
DISTRICT 10 – DIRECTOR'S OFFICE
P.O. Box 2048, STOCKTON, CA 95201
(1976 E. DR. MARTIN LUTHER KING JR. BLVD. 95205)
PHONE (209) 948-7943
FAX (209) 948-3670
TTY 711
www.dot.ca.gov

Flex your power!
Be energy efficient!

October 24, 2012

Mr. Matt Machado
North County Corridor (NCC)
Transportation Expressway Authority (TEA) Manager
Stanislaus County Public Works
1716 Morgan Rd
Modesto, CA 95358

Dear Mr. Machado:

Thank-you for your continued interest and desire to find a solution for the State Route 120 (SR-120) and State Route 108 (SR-108) Corridors. Per your memorandum dated September 13, 2012, the Transportation Expressway Authority (TEA) is recommending that the project limits of the NCC be reduced from McHenry Avenue (SR-108) to east of Oakdale and be rescoped from a freeway to an expressway facility. This is consistent with the early project strategy to pursue the project as a State Highway between SR-108 and connect with SR-120/SR-108 east of Oakdale, as stated in your February 19, 2009, letter to Caltrans Director, Will Kempton.

We recognize the need to create a project that is fundable, constructible, and provides a benefit to the region in terms of reduced travel delay, reduced congestion, and improvement to safety. Thus, it appears reasonable to downscope the project as long as the traffic and environmental impacts are addressed with the project.

As owner-operator of the State Highway system, we have taken this request seriously and have discussed the ramifications and impacts. We agree to the proposed recommendation to rescope the project under the following conditions:

1. Developing the traffic forecasts for this critical segment is recommended before finalizing the project limits, and issuing a new Notice of Intent/Notice of Preparation; however, the project team can proceed at risk without this information.
2. The project and environmental study limits will need to be revised to address traffic impacts along Kiernan Avenue/State Route 219 (SR-219) if traffic forecasts on opening day with the NCC project showed significant impacts to the corridor.
3. A mid-year (10 year) design-life forecast with and without the project is needed for SR-219 from State Route 99 (SR-99) to McHenry Avenue. This would help establish the program year of SR-219/Kiernan capacity improvement program in the Tier 1 RTP.

4. Stanislaus Council of Government concurs and Stanislaus County commits to place an access-controlled, capacity improvement project for SR-219 from SR-99 to McHenry Avenue in the Tier 1, Regional Transportation Plan.
5. Support Caltrans and help broker the agreements to relinquish the SR-108 corridor through the Cities of Oakdale, Riverbank and Modesto.

We are willing to discuss this response in more detail. You may contact Project Manager Sam Sherman at (209) 948-7765, or me to setup a meeting or discussion.

Sincerely,

Carrie L. Bowen

CARRIE L. BOWEN
District 10 Director

cc: Dinah Bortner
Margaret Lawrence
Sam Sherman
Ken Baxter
Dennis T. Agar
Carlos Yamazon

Amendment No. 5. to the
Agreement for Professional Design Services with Jacobs Engineering Group, Inc.
for the
North County Corridor Transportation Expressway Project

This Amendment is made and entered into on _____, in the City of Modesto, State of California, by and between the North County Corridor Transportation Authority (NCCTEA) and Jacobs Engineering Group, Inc., ("CONSULTANT"), for and in consideration of the promises, and the mutual promises, covenants, terms, and conditions, hereinafter contained.

WHEREAS, the North County Corridor Project has moved forward with Task Order #3 as defined in the March 11, 2009 Board action and better defined in Amendment 2 and Amendment 3 including Exhibit C-A3; and,

WHEREAS, Amendment 4 was approved on May 16, 2012 to include work to study additional alternatives pertaining to environmental protocol surveys and Traffic Forecasting and Traffic Operational Analysis; and,

WHEREAS, it is the desire to amend the contract study limits and description of the project to:

A new State Route 108 multi-lane access-controlled expressway on new alignment from McHenry Avenue (SR 108/SR 219 Junction) east generally along Claribel Road then northeast to SR 120 east of the City of Oakdale with four build alternatives 1A, 1B, 2A, 2B and the no-build alternative, as depicted on Exhibit "B" to this Amendment, attached and made a part of hereto; and,

WHEREAS, an adjustment to the amount of compensation as originally stated in the Agreement (including amendments to date) is necessary to complete the project; and,

WHEREAS, Addendum "A" is added to the contract to ensure compliance with regulations relative to nondiscrimination in federally assisted programs of the Department of Transportation, Title 49, Code of Federal Regulations, Part 21, as they may be amended from time to time, which are herein incorporated by reference and made a part of this agreement;

Now therefore, the parties herby agree to amend the Agreement as follows:

1. Exhibit C-A3 of Amendment 3 Scope of Services Biological Assessment (WBS 165.15.20) is amended to add:

   U.S. Fish and Wildlife Service Protocol Level Surveys Wet season vernal pool branchiopod protocol surveys are required per the U.S Fish and Wildlife Service Interim Survey Guidelines dated April 19, 1996. Wet season surveys consist of sampling pools with dip nets and/or brine shrimp nets approximately every 2 weeks throughout the winter 2012 and spring 2013 (generally late November through May). A minimum of 10 days prior to the wet season surveys, approval from U. S. Fish and Wildlife Service will be obtained. Surveys will be conducted by qualified wildlife biologists permitted to conduct surveys for federally listed vernal pool branchiopods. Wet season surveys will continue until pools have experienced 120 days of continuous inundation, or until they have dried for the year. Results of the survey will be included in a report summarizing the methods and outcomes of the

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2012-2013 wet season branchiopod surveys for submission to U. S. Fish and Wildlife Service.

U. S. Fish and Wildlife Service rejected the 2012 Larval (Aquatic) California Tiger Salamander protocol survey results due to insufficient rainfall. This survey will be repeated in March, April and May of 2013 as described in Exhibit C-A3 of Amendment 3 Scope of Services Biological Assessment (WBS 165.15.20).

Delete Amendment 4 Scope of Services pertaining to Traffic Forecasting (WBS 160.10.10) as defined as:

Exhibit C-A3 of Amendment 3 Scope of Services Traffic Forecasting (WBS 160.10.10) – Prepare Traffic Forecasts (SR 99 to SR 120/108) is amended to add one additional project alternative for a total of 5 (five) alternatives. Prepare Traffic Forecasts (McHenry Ave to SR 120/108) is amended to add two additional project alternatives for a total of 5 (five) alternatives. Level of study and effort is unchanged from the scope of study of the previous alternatives.

Delete Amendment 4 Scope of Services pertaining to Traffic Operational Analysis (WBS 160.10.35) as defined as:

Exhibit C-A3 of Amendment 3 Scope of Services Traffic Operational Analysis (WBS 160.10.35) – Perform Traffic Operations Analysis (SR 99 to SR 120/108) is amended to add one additional project alternative for a total of 5 (five) alternatives. Perform Traffic Operations and Analysis (McHenry Ave to SR 120/108) is amended to add two additional project alternatives for a total of 5 (five) alternatives. Level of study and effort is unchanged from the scope of study of the previous alternatives.

Delete Amendment 4 Scope of Services pertaining to Traffic Planning Report (WBS 160.10.70) as defined as:

Exhibit C-A3 of Amendment 3 Scope of Services Traffic Planning Report (WBS 160.10.70) – Prepare Traffic Reports (SR 99 to SR 120/108) is amended to update the current Administrative Draft Transportation System Analysis Report with the additional alternative. Prepare Traffic Reports (McHenry Ave to SR 120/108) is amended to update the current Administrative Draft Transportation System Analysis Report with the 2 additional alternatives.

Exhibit C-A3 of Amendment 3 Scope of Services Identify Study Locations and Collect Traffic Data (WBS 160.05.20) is amended to read:

As part of the on-going effort for the Project Fehr & Peers collected existing AM (7-9 AM) and PM (4-6 PM) peak period intersection traffic counts at the following 17 intersections in 2010. This work scope assumes that these counts are valid for use and will not be recounted.

Kiernan Avenue/Tully Road	SR 108/1st Street
McHenry Avenue/Ladd Road	SR 108/Claus Road
SR 108/Kiernan Avenue	Claribel Road/Claus Road
SR 108/Pelandale Avenue	Patterson Road/Crane Road
Coffee Road/Claribel Road	SR 108/Oak Avenue
Coffee Road/Pelandale Avenue	SR 108/SR 120
Oakdale Road/SR 108	Patterson Road/Albers Road
Oakdale Road/Claribel Road	SR 108/Maag Avenue
Oakdale Road/Pelandale Avenue	

In order to evaluate the revised study limits and the effects of the project new turning movement counts (AM and PM peak period) will be collected and provided to Fehr & Peers by the County at the following locations:

Kiernan Avenue/Carver Road
Kiernan Avenue/Dale Road
Kiernan Avenue/Stoddard Road
Kiernan Avenue/Sisk Road
Kiernan Avenue/SR 99 Northbound Ramps
Kiernan Avenue/SR 99 Southbound Ramps
Claribel Road/Roselle Avenue
Claribel Road/Bentley Road
Claribel Road/Albers Road

Fehr & Peers will perform peak period field surveys at the nine (9) locations listed above to identify existing geometric features, queue lengths, lane configurations and traffic control devices at the intersections.

Fehr & Peers also proposes to evaluate the following roadway segments (Figure 1 presents the roadway segments and the analysis methodology that will be used to evaluate them):

Kiernan Avenue between Sisk Road and Stoddard Road
Kiernan Avenue between Stoddard Road and Dale Road
Kiernan Avenue between Dale Road and Carver Road
Kiernan Avenue between Carver Road and Tully Road
Kiernan Avenue between Tully Road and McHenry Avenue
SR 108 between Ladd Road and Kiernan Avenue
SR 108 between Kiernan Avenue and Pelandale Avenue
SR 108 between McHenry Avenue and Oakdale Road
Coffee Road between SR 108 and Claribel Road
Coffee Road between Claribel Road and Pelandale Avenue
Oakdale Road between SR 108 and Claribel Road
Oakdale Road between Claribel Road and Pelandale Avenue

Claribel Road between SR 108 and Coffee Road
Claribel Road between Coffee Road and Oakdale Road
Pelandale Avenue between McHenry Avenue and Coffee Road
Pelandale Avenue between Coffee Road and Oakdale Road.
SR 108 between Oakdale Road and 1st Street
SR 108 between 1st Street and Claus Road
Patterson Pass between SR 108 and Langworth Road
Roselle Avenue between Patterson Road and Claribel Road
Roselle Avenue between Claribel Road and Sylvan Avenue
Claus Road between Patterson Road and Claribel Road
Claus Road between Claribel Road and Sylvan Avenue
Claribel Road between Oakdale Road and Claus Road
SR 108 between Claus Road and Crane Road
Langworth Road between SR 108 and Claribel Road
Claribel Road between Claus Road and Langworth Road
SR 108 between Crane Road and Oak Avenue
Patterson Road between Crane Road and Albers
Claribel Road between Langworth Road and Oakdale Waterford Highway
SR 108 between Oak Avenue and SR 120
Yosemite Avenue between SR 108 and Patterson Road
Albers Road between Patterson Road and Claribel Road
Oakdale Waterford Highway between Patterson Road and Claribel Road
SR 120 between Yosemite Avenue and Maag Avenue
SR 120 between Maag Avenue and Wamble Road
SR 120 between Wamble Road and Lancaster Road

Exhibit C-A3 of Amendment 3 Scope of Services Review Geometrics and Project Alternatives (WBS 160.05.25) is amended to read:

Fehr & Peers will work with the Project Team to review and refine up to five Project Alternatives including the No Build. It is anticipated that the major focus of this task will involve identifying the most appropriate traffic control and intersection geometry that would be necessary at each crossing with an existing or future roadway.

Exhibit C-A3 of Amendment 3 Scope of Services Traffic Forecasts (WBS 160.10.10) is amended to read:

Fehr & Peers has been using the travel demand model developed for the 2011 StanCOG RTP for the on-going Project effort. This scope assumes that the same model will be used for this new effort. Fehr and Peers recently performed a focused daily and peak hour model validation/calibration exercise in the study area. The

model validation/calibration was approved by the local agencies and Caltrans. ***This scope assumes that a new focused daily and peak hour model validation/calibration will not be necessary.***

As part of the on-going Project effort Fehr & Peers has documented in a technical memorandum the future roadway network assumptions and land use assumptions that will be used for the Project. These assumptions were reviewed and approved by the local agencies and Caltrans in May 2011. However, in consideration of the fact that the project scope is being revised along with the opening and design year and that the City of Oakdale recently released its new general plan, Fehr & Peers will revisit the roadway network and land use assumptions and resubmit a technical memorandum summarizing a single set of roadway network and land use assumptions (Year 2022 & 2042) for review and approval before proceeding to develop future year traffic forecasts.

AM and PM peak hour turning movement forecasts will be provided by Fehr & Peers at the 26 intersections listed in WBS 160.05.20 and at each new project intersection with an existing roadway. Daily, AM and PM peak hour roadway link forecasts will also be provided for the roadway segments listed in WBS 160.05.20 and along the Project corridor.

Opening year (Year 2022) and design year (Year 2042) traffic forecasts (intersection and roadway) will be developed for up to five alternatives including No Build conditions. Fehr & Peers will submit a technical memorandum summarizing the draft traffic forecasts for one round of written comments by JPA. Fehr & Peers will update the draft traffic forecasts to reflect JPA input and submit traffic forecasts to Caltrans for one round of written comments. Fehr & Peers will prepare the final traffic forecasts based on Caltrans input. Once approved, Fehr & Peers will proceed with the technical evaluation of the alternatives and as requested by the JPA we will also prepare mid-year (Year 2032) traffic forecasts based on linear interpolation of the Year 2022 and 2042 traffic forecasts.

Deliverables:

Draft Roadway Network and Land Use Assumptions Memorandum
Final Roadway Network and Land Use Assumptions Memorandum
Draft Traffic Forecasts Memorandum
Final Traffic Forecasts Memorandum

Exhibit C-A3 of Amendment 3 Scope of Services Perform Traffic Operations Analysis (WBS 160.10.35) is amended to read:

The intersection traffic counts, lane configurations, signal timings, and other information collected under WBS 160.05.20 will be used to develop existing AM and PM peak hour Synchro 7.0 models for the 26 existing study intersections. Synchro 7.0 provides results consistent with the Transportation Research Board's 2000 Highway Capacity Manual (HCM) methodology. The Synchro analysis will be

converted to micro-simulation (using the SimTraffic software) to determine existing intersection delay and level of service. The roadway segments identified in WBS 160.05.20 will be evaluated under existing conditions using the methodology identified in Figure 1.

As part of the on-going Project effort Fehr & Peers has prepared a Final Existing Conditions Report (March 2011) that did not include analysis of Kiernan Avenue west of Tully Road. This report has been reviewed and approved by the local agencies and Caltrans. As part of the Existing Conditions analysis the Synchro/SimTraffic simulation models were calibrated and validated. This work scope assumes that no new calibration/validation will be necessary. However, given that the study limits have been revised to include the Kiernan Avenue corridor from SR 99 to Tully Road, the existing conditions analysis will need to be updated to reflect the LOS, delay, and queue lengths for the additional study intersections. The analysis results will be presented in the Draft and Final Traffic Operations Report (WBS 160.10.70).

The traffic forecasts developed under WBS 160.10.10 will be used to develop Synchro models (AM and PM peak hour) for up to five alternatives including No Build conditions for the opening year (2022) and design year (2042). *Note: Mid-year (Year 2032) traffic operations analysis is not included in this scope.* This scope assumes that each alternative has only one proposed configuration at each intersection (e.g. a traffic signal, side-street stop, roundabout, or grade separated) except at the NCC/Oakdale Road interchange, where two interchange concepts may be evaluated. The Synchro models will include the same intersections evaluated under existing conditions plus the new intersections created by the Project. Similar to existing conditions analysis the Synchro models will be converted to micro-simulation (SimTraffic) to determine intersection delay and level of service. Peak hour analysis will be performed for the opening year and design year for each alternative. Results will include average delay, level of service, and estimated queue lengths for each intersection.

The roadway segments identified in WBS 160.05.20 will be evaluated under opening year and design year conditions using the methodology identified in Figure 1 for up to five alternatives including No Build conditions. The design of the facility has not yet been established. It can potentially be a two-lane highway or a multi-lane highway. Depending on the final design of the project Fehr & Peers may perform the following:

AM and PM peak hour two-lane highway analysis and/or
AM and PM peak hour multi-lane highway analysis

The mainline analysis will be consistent with the methodologies presented in the 2000 HCM. Weaving analysis, if necessary, will be consistent with the methodologies presented in Chapter 500 (Leisch Method) of the Caltrans Highway Design Manual (HDM). In addition to peak hour level of service analysis, Fehr & Peers will utilize the modified StanCOG 2011 RTP Model to project daily and peak hour volume

changes on study roadway segments as a result of the Project. Furthermore, the regional implications of the corridor will also be evaluated by examining additional measures of effectiveness (MOEs) such as vehicle miles of travel (VMT) and vehicle hours of delay (VHD) with and without the Project. The VMT information will be provided in 5 mph speed bins.

Deliverables:

None (Note: Information obtained from the analysis will be used for the deliverable in the following section WBS 160.10.70)

Exhibit C-A3 of Amendment 3 Scope of Services Prepare Traffic Reports (WBS 160.10.70) is amended to read:

Fehr & Peers will prepare the Traffic Operations Report summarizing the results and findings. We will submit an Administrative Draft Traffic Operations Report to JPA for one round of review and written comments. We have budgeted up to 8 hours to respond to JPA written comments and prepare the Draft Traffic Operations Report to submit to Caltrans and other PDT members for one round of review and written comments. We have budgeted up to 20 hours to respond to comments on the Draft Traffic Operations Report and prepare the Final Traffic Operations Report. We will submit the final report in both hard copy and electronic format.

This work scope assumes that Jacobs will prepare the transportation chapter of the Environmental Document. Fehr & Peers has budgeted up to 8 hours to assist Jacobs in preparing the transportation chapter of the Environmental Document. The chapter will build on previous work and will document the proposed project's impact on the transportation and circulation system. The report will also include a qualitative assessment of the impacts of each alternative on bicycle, pedestrian, and transit facilities within the study corridor. Mitigation measures for significant transportation impacts will be identified. Fehr & Peers has also budgeted up to 12 hours to respond to comments on the public draft environmental document. Assuming that it takes ½ hour to respond to one comment translates to responding up to 24 comments.

Deliverables:

Draft Traffic Operations Report
Final Traffic Operations Report

Assumptions:

All deliverables will be subject to one review cycle by Caltrans and the JPA.

Exhibit C-A3 of Amendment 3 Scope of Services Geometric Plans for Project Alternatives (WBS 160.10.15) is amended to include:

Additional design effort to produce sufficient detail to enable accurate traffic forecasting and operational analysis is necessary and will include the following effort:

- **Revise Project Description, limits, local road access locations, and location maps for the build Alternatives for use by project team in all study documents.**
- **Provide updated design NCC map for each Alternative showing all local road connections. These maps need to include all public frontage roads, private driveway access locations, and all intersection locations. This work will include a meeting with local agencies to confirm the update NCC maps with proposed local road and private access locations. The updated NCC maps will be used to base all Traffic Studies.**
- **One meeting with local agencies to confirm the update NCC maps with proposed local road and private access locations.**
- **One meeting with Caltrans to present the NCC maps with proposed local road and private access locations.**

Deliverables:

- **Revised Project Description, limits, local road access locations, and location maps.**
- **NCC map for each project alternative to reflect the revised project for use in Traffic Studies.**

Assumptions:

- **The updated NCC maps will be used to base all Traffic Studies.**
- **Does not include: Revised Geometric plans for four build alignment alternatives, layout plans (300 scale), typical sections, and profiles for the NCC mainline and local road crossings.**
- **Does not include revised ESL Maps.**
- **MOUs between Caltrans and local agencies to define the access-control details will be developed by JPA staff.**

2. Paragraph 2.1 Compensation is amended to read as follows:

2.1. Compensation. Consultant shall be paid in accordance with the fee in Exhibit "A" and made a part of the Agreement. Consultant's compensation under this Amendment shall in no case exceed a total of One Hundred Fifty One Thousand Six Hundred Seventeen dollars ($151,617) for a total contract amount not to exceed Nine Million Five Hundred Fifty Thousand Eight Hundred Thirty Nine dollars ($9,550,839). Said compensation shall include, but not be limited to the approved scope of work and schedule as amended.

3. Paragraph 3.1 Commencement and Completion of Work is amended to read as follows:

Amendment No. 5. to the
Agreement for Professional Design Services with Jacobs Engineering Group, Inc.
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The professional services to be performed pursuant to the Agreement shall commence within five (5) days after NCCTEA delivers a Notice to Proceed. Said services shall be performed in strict compliance with the Project Schedule approved by NCCTEA as set forth in Exhibit "A" of Amendment 5. The Project Schedule may be amended by mutual agreement of the parties. Failure to commence work in a timely manner and/or diligently pursue work to completion may be grounds for termination of this Agreement.

All other terms and conditions of said Agreement shall remain in full force and effect.

In witness whereof, the parties have executed this Amendment effective on the date written above.

COUNTY OF STANISLAUS

By:_____
Matt Machado, Director
Department of Public Works

JACOBS ENGINEERING GROUP, INC.

_____
Kevin J. McMahon
Group Vice President, NAI
Jacobs Engineering

APPROVED AS TO FORM
John P. Doering,
County Counsel

By:_____
Thomas E. Boze
Deputy County Counsel

Amendment No. 5. to the
Agreement for Professional Design Services with Jacobs Engineering Group, Inc.
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ADDENDUM "A"

During the performance of this contract, the contractor, for itself, its assignees and successors in interest (hereinafter referred to as the "contractor") agrees as follows:

1. Compliance with Regulations: The contractor shall comply with the Regulation relative to nondiscrimination in Federally-assisted programs of the Department of Transportation (hereinafter, "DOT") Title 49, Code of Federal Regulations, Part 21, and the Federal Highway Administration (hereinafter "FHWA") Title 23, Code of Federal Regulations, Part 200 as they may be amended from time to time, (hereinafter referred to as the Regulations), which are herein incorporated by reference and made a part of this contract.

2. Nondiscrimination: The contractor, with regard to the work performed by it during the contract, shall not discriminate on the grounds of race, color, or national origin, sex, age, and disability/handicap and low income in the selection and retention of subcontractors, including procurements of materials and leases of equipment. The contractor shall not participate either directly or indirectly in the discrimination prohibited by 49 CFR, Section 21.5 of the Regulations, including employment practices when the contract covers a program set forth in Appendix B of the Regulations.

3. Solicitations for Subcontractors, Including Procurements of Materials and Equipment: In all solicitations either by competitive bidding or negotiation made by the contract for work to be performed under a subcontract, including procurements of materials or leases of equipment, each potential subcontractor or supplier shall be notified by the contractor of the contractor's obligations under this contract and the Regulations relative to nondiscrimination on the grounds of race, color, or national origin, sex, age, and disability/handicap and low income.

4. Information and Reports: The contractor shall provide all information and reports required by the Regulations or directives issued pursuant thereto, and shall permit access to its books, records, accounts, other sources of information and its facilities as may be determined by the County or the FHWA to be pertinent to ascertain compliance with such Regulations, orders and instructions. Where any information required of a contractor is in the exclusive possession of another who fails or refuses to furnish this information the contractor shall so certify to the County, or the FHWA as appropriate, and shall set forth what efforts it has made to obtain the information.

5. Sanctions for Noncompliance: In the event of the contractor's noncompliance with the nondiscrimination provisions of this contract, the County shall impose such contract sanctions as it or the FHWA may determine to be appropriate, including, but not limited to:
    a. Withholding of payments to the contractor under the contract until the contractor complies, and/or
    b. Cancellation, termination or suspension of the contract, in whole or in part.

6. Incorporation of Provisions: The contractor shall include the provisions of paragraphs 1 through 6 in every subcontract, including procurements of materials and leases of equipment, unless exempt by the Regulations, or directives issued pursuant thereto. The contractor shall take such action with respect to any subcontract or procurement as the County or the FHWA may direct as a means of enforcing such provisions including sanctions for non-compliance: Provided, however, that , in the event a contractor becomes involved in, or is threatened with,

litigation with a subcontractor or supplier as a result of such direction, the contractor may request the County to enter into such litigation to protect the interests of the County, and, in addition, the contractor may request the United States to enter into such litigation to protect the interests of the United States.

EXHIBIT A

JACOBS

180 Promenade Circle, Suite 300
Sacramento, CA 95834 U.S.A.
(916) 929-3323 Fax: (916) 929-1772

December 04, 2012

Stanislaus County Department of Public Works
Attn: Ms. Laurie Barton, PE
Deputy Director of Engineering and Operations
1716 Morgan Road
Modesto, CA 95354

Subject: **North County Corridor – Contract Amendment # 5**

Dear Ms. Barton:

The North County Corridor Transportation Expressway Authority's (NCCTEA) approval is requested for Contract Amendment # 5 as outlined below. This amendment incorporates additional project work for 1) environmental technical study related to wet season vernal pool branchiopod survey and the California tiger salamander spring survey, 2) Traffic analyses for the recently defined NCC project, 3) preparation of engineering details to support traffic study, and 4) coordination of environmental studies. Project management and meetings needed to execute these additional tasks will be covered using the current NCC budget. These scope changes will require an increase to the project budget. This letter provides our scope for the amended contract work with the revised budget for each work task that will be merged with our original scope of services. All work proposed in this amendment will occur within the newly defined project limits (between McHenry Avenue and SR 120).

It is assumed that the traffic forecasting work needed to obtain Caltrans approval on the logical termini could be finished by March 2013. It is anticipated that there will be an amendment presented to the JPA Board in March 2013, that would amend the scope relative to the redefined project. Until that amendment is approved, Jacobs team will provide necessary project management services to have one (1) meeting each with member JPA agencies and Caltrans to discuss access locations, conduct two teleconferences related to the traffic forecasting, and have weekly teleconferences with the internal team to coordinate the tasks.

The following sections briefly summarize the above four items. The first two items are being performed by the sub consultants previously approved by the NCCTEA for the type of work being proposed. A more detailed scope of work for these two items can be found in the attached scope of work document provided by these sub consultants. The last two items are being performed by Jacobs, and a detailed scope for those items are provided in the following sections.

1. Additional Environmental Work (WBS 165.15.20)

The original contract did not include the protocol level field survey work. Among the protocol surveys needed for this project, this amendment adds two surveys as described below.

a. Wet Season Vernal Pool Branchiopod Survey:

The NCCTEA approved Amendment #4 in May 2012 that authorized the Jacobs team to perform, among other tasks, the dry season Vernal Pool Branchiopod Surveys. That survey was completed, and needs to be followed by a wet season survey. This amendment adds the wet season survey work. A Notice to Proceed (NTP) letter was issued for this work by the JPA staff on November 16, 2012 so as to not delay the survey, should conditions (such as sufficient rainfall) allow the work to begin. The detailed scope of work provided by the environmental sub-consultant is shown in the attachment. This work has resulted in a cost **increase of $44,012**.

b. Larval (Aquatic) California Tiger Salamander Surveys:

This survey was conducted last spring, but the report and its findings were rejected by the U.S. Fish and Wildlife Service citing a lack of sufficient rainfall in the Central Valley. The study will be conducted again in the spring of 2013 (March, April and May). Additional surveys will be conducted in the winter of 2013 and again in the spring of 2014 per the U.S Fish and Wildlife protocol; however, those surveys are not included in this scope of work. The detailed scope of work provided by the environmental sub-consultant is shown in the attachment. This work has resulted in a cost **increase of $24,427**.

2. Modifications to Traffic Work (WBS 160.10)

The NCC project is now being revised to a new State Route 108 multi-lane access-controlled expressway on new alignment from McHenry Avenue (SR108/SR219 Junction) east generally along Claribel Road then north-east to SR120 east of Oakdale. The attached Project Map dated October 17, 2012 provides the project location, general limits, and Alternative Alignments. The four build alternatives 1A, 1B, 2A, and 2B shown in the map were approved by the NCC Technical Advisory Committee at its October 2, 2012 meeting and the Project Development Team at its October 17, 2012 meeting. The NCCTEA staff is in negotiations with Caltrans to seek approval to define McHenry Avenue as the logical termini on the West end of the project. Caltrans has indicated that this approval is contingent on the traffic forecast showing an acceptable level of traffic on the SR219 corridor west of McHenry Avenue. The following revisions

to the traffic scope of work is necessary to obtain Caltrans approval on the re-defined project limits.

a. In Amendment #4, the NCCTEA authorized performing additional traffic analysis related to a planning level analysis for one Hybrid Alternative from SR99 to SR120, and Traffic Analysis for two additional first phase Alternatives (originally referred to as "ICP") approximately from McHenry Avenue to SR 120 termini. Due to the change in the project scope, this work is no longer necessary. This amendment will delete that previously approved scope and the cost, and also deletes all remaining traffic work in the current contract. This results in a cost **reduction of $197,002**.

b. As a result of the NCCTEA's desire to rescope the project from a Freeway/Expressway facility to an Expressway facility, a new set of traffic forecasting and operations analyses need to be performed. The traffic scope is based on the discussions held by the PDT at its October meeting, and conversations with the JPA staff in November 2012. The changes have resulted in a cost **increase of $223,875**.

The detailed scope of traffic work is provided by the traffic sub consultant is shown in the attachment.

3. Geometric Plans for Project Alternatives (WBS 160.10.15)

In order for the traffic forecasting work defined in the above section to proceed, the engineering drawings need to be revised to provide sufficient details that would enable accurate traffic modeling. The design work will only involve the efforts needed to support the traffic modeling work. On Caltrans approval of the logical termini, the remaining design scope to support the environmental work and complete the Draft Project Report and the Project Report will be provided as a separate amendment. Scope contained in this amendment is limited to the following:

- Revise Project Description, limits, local road access locations, and location maps for the build Alternatives for use by project team in all study documents.
- Provide updated design NCC map for each Alternative showing all local road connections. These maps need to include all public frontage roads, private driveway access locations, and all intersection locations. This work will include a meeting with local agencies to confirm the updated NCC maps with proposed local road and private access locations. The updated NCC maps will be used to base all Traffic Studies.
- One meeting with local agencies to confirm the updated NCC maps with proposed local road and private access locations.

- One meeting with Caltrans to present the NCC maps with proposed local road and private access locations.

Deliverables:

- Revised Project Description, limits, local road access locations, and location maps.
- NCC map for each project alternative to reflect the revised project for use in Traffic Studies.

Assumptions:

- The updated NCC maps will be used to base all Traffic Studies.
- Does not include: Revised Geometric plans for four alignment build alternatives, layout plans (300 scale), typical sections, and profiles for the NCC mainline and local road crossings.
- Does not include revised ESL Maps.
- MOUs between Caltrans and local agencies to define the access-control details will be developed by JPA staff.

The changes have resulted in a cost **increase of $41,220**.

4. Coordination of the additional Environmental scope of work (WBS 165.15.05)

The additional work scope in the environmental analysis being performed by the sub-consultants will be coordinated with Caltrans, and their work products reviewed by the Jacobs team, as envisioned in the original contract. The coordination efforts will result in a cost **increase of $10,320.**

The request is summarized in the following page.

Summary and Approval Request:

The NCCTEA approval is requested for Contract Amendment # 5 to incorporate the changes to the work as described in this request, bringing the total increase of the requested amendment #5 to **$151,617**. The following table provides a summary of the costs.

Item Description	Item #	Sub Total	Total
Sub Consultants			
Branchiopod Surveys - ICF	1a	$ 44,012	$ 68,439
CTS Surveys - ICF	1b	$ 24,427	
Traffic Analysis – Fehr & Peers (Credit)	2a	($ 197,002)	$ 26,873
Traffic Analysis – Fehr & Peers	2b	$ 223,875	
Jacobs Engineering			
Geometric Plans to support traffic study	3	$ 41,220	$ 51,540
Coordination of Environmental Study	4	$10,320	
Project Management		*$ 30,810*[1]	
Markup @5% on items 1a, 1b, 2a & 2b		$ 4,765	$ 4,765
		Grand Total	$ 151,617

[1]**Note: This amount is shown for information only, and is not part of the amendment total, as the additional tasks needed for this amendment will be performed using existing contract budget.**

Should you have any questions, please contact me at 916-799-6779 or at kris.balaji@jacobs.com.

Sincerely,

Kris Balaji, P.E., PMP
Project Manager

Attachments
1. ICF Scope & Fee dated November 30, 2012
2. Fehr & Peers Scope and Fee dated November 20, 2012
3. Jacobs spreadsheet with back up data dated December 4, 2012
4. Project Map dated October 17, 2012 showing assumed project limits, and alternatives approved by the PDT

Memorandum

Date:	November 30, 2012
To:	Kris Balaji and Trin Campos Jacobs Engineering Group, Inc.
Cc:	Mike Davis and Maggie Townsley, ICF Lauren Abom, Jacobs Engineering Group, Inc.
From:	Claire Bromund Project Manager
Subject:	**Request for Contract Amendment for Vernal Pool Branchiopod Surveys (Wet Season 2012) and California Tiger Salamander Survey (2013 Larval)** **North County Corridor: Technical Studies and EIR/EIS Editing [Subconsultant Agreement W6-X609-01-S09-005]**

ICF International (ICF) is currently assisting with the EIR/EIS effort on the North County Corridor Project for the North County Corridor Transportation Expressway Authority (Authority) under a subconsultant agreement to Jacobs Engineering Group, Inc.

We request an amendment to our agreement and a notice to proceed with surveys for vernal pool branchiopods and California tiger salamander. These efforts are driven by seasonal and lifecycle constraints and will start in the coming winter and spring months. The scope of these efforts is described below.

Vernal Pool Branchiopod Surveys, Wet Season 2012

Biologists will conduct wet-season surveys for listed vernal pool branchiopods. Wet-season surveys consist of sampling pools with dip nets and/or brine shrimp nets approximately every 2 weeks throughout winter 2012 and spring 2013 (generally late November through May). A minimum of 10 days prior to the wet-season surveys, we will prepare a letter requesting approval from USFWS to begin surveys for listed vernal pool branchiopods. Surveys will be conducted by qualified wildlife biologists permitted to conduct surveys for federally listed vernal pool branchiopods and will be in accordance with USFWS' guidelines. Wet-season surveys will continue until pools have experienced 20 days of continuous inundation, or until they have dried for the year. We will prepare a report that includes survey dates and times, names of biologists, survey methods and results, map(s) showing the locations of surveyed and occupied habitats, and representative photographs.

2013 Larval (Aquatic) California Tiger Salamander Surveys

Wildlife biologists will conduct a larval survey for California tiger salamander that follows guidance from USFWS and CDFG. Prior to the survey, a request to conduct survey/survey plan will be submitted to USFWS and CDFG for approval. Surveys will not begin until after receipt of approval from the agencies to conduct the surveys. Following the USFWS and CDFG guidance, larval surveys will be conducted one time each in March, April, and May of 2013. The complete survey sequence required by the USFWS/CDFG guidance consists of a set of larval surveys (in this scope), followed by a set of upland surveys, then a second set of larval surveys. The upland and second larval surveys are not part of this amendment request.

All surveyors will have a valid 10(a)(1)(A) permit for conducting larval California tiger salamander surveys or will be working directly with a permitted biologist.

A report will be prepared that include survey dates and times, names of biologists, survey methods and results, map(s) showing the locations of surveyed and occupied habitats, and representative photographs. Other amphibian species observed during the survey will be included in the report. The report will be prepared at the conclusion of the 2013 larval survey for submission to USFWS/CDFG.

Deliverables

- Report summarizing the methods and results of the 2012-2013 wet-season branchiopod surveys.
- 2013 larval California tiger salamander survey report.

Assumptions

- All properties currently accessible will be accessible at the time of the surveys; calls to property owners will be conducted prior to accessing properties.
- The efficiency and timeliness of biological surveys are dependent upon the availability of access to the study area.
- Up to 25 pools will be surveyed for branchiopods.
- Seasonal pools will be surveyed up to 12 times during the branchiopod wet season survey.
- Based on the results of the California tiger salamander site assessment, biologists will survey up to 15 aquatic habitats for the presence of California tiger salamanders.
- All access arrangements will be secured 30 days prior to the start of each set of California tiger salamander surveys.
- All larval California tiger salamander surveys can be completed using dipnets and seines, and surveys using minnow traps (which requires three surveys per month rather than one survey per month) will not be needed.

- USFWS and CDFG will not require any California tiger salamander surveys outside of the designated study area (i.e., no surveys within the 1.24 mile buffer area).
- USFWS will not require additional field studies to support analysis of potential growth-inducing effects on listed species.
- Direct and indirect impacts can be assessed using the current project footprint.

Schedule

Vernal pool branchiopod surveys will be initiated within two weeks after the initial inundation of habitat. The duration of the survey is driven by USFWS protocol. The surveys could continue through May 2013.

The spring larval California tiger salamander survey will occur in March, April and May 2013.

Estimated Cost

We have estimated the cost of these efforts to be $68,439. A detailed cost estimate is attached.

If you have any questions about this information and request, please feel free to contact me at (916) 737-3000 or claire.bromund@icfi.com. We look forward to continuing to assist Jacobs with this project.

Table 1. Cost Estimate for Request for Amendment to Subconsultant Agreement W6-X609-01-S09-005: NCC Wet Season Branchiopod and 2013 Larval California Tiger Salamander Biological Surveys

	Consulting Staff														
Employee Name	Townsley M	Davis M	Bromund C	Sorvari T	Hill S	Link E	Haire J	Howe J	Barnard A	Shigley P	Job J	Labor	Direct Expense	Task	Task Total with
Task / *ICF J&S Labor Classification*	Proj Dir	Sr Proj Dir	Sr Consult III	Assoc Consult II	Assoc Consult I	Assoc Consult III	Sr Consult II	Assoc Consult III	Sr Consult I	Asst Consult	Asst Consult	Total	Total with 10% Markup on all Non-Labor Costs and Subcontractors	Total	20% Discount on Labor
Biological Studies (WBS 165.15)															
Protocol Surveys for Endangered Species Act Compliance (WBS 165.15.99)															
California Tiger Salamander (1st Aquatic Survey Sequence: March, April, May 2013)	2	4	10	10		5	110	90	2	2	2	$30,080	$363	$30,443	**$24,427**
Vernal Pool Branchiopod (1 Wet Season)	5	18	40	10	5	6	174	144		2	2	$53,200	$1,452	$54,652	**$44,012**
Total hours	7	22	50	20	5	11	284	234	2	4	4				
ICF Jones & Stokes (Year 2008) billing rates	$220	$220	$140	$110	$100	$120	$130	$120	$120	$80	$80				
Labor subtotals	$1,540	$4,840	$7,000	$2,200	$500	$1,320	$36,920	$28,080	$240	$320	$320	$83,280			
Direct expense subtotal													$1,815		
SUBTOTAL														$85,095	
20% Discount on Labor														($16,656)	
TOTAL PRICE														$68,439	**$68,439**

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November 21, 2012

Kris Balaji
Jacobs Engineering
180 Promenade Circle, Suite 300
Sacramento, CA 95834

Re: Scope and Fee for the New Project Description of North County Corridor Project

Dear Mr. Balaji:

This letter presents the scope and fee for the revised project description of the North County Corridor Project (Project). It is our understanding that the revised limits of the Project will be from about the Kiernan Avenue/McHenry Avenue intersection to SR 120/108 just east of Oakdale. While the design of the project has not been completed it is our understanding that the Project will be an access-controlled expressway facility with at-grade crossings except at McHenry Avenue and Oakdale Road (note that Albers Road and SR 120 may also potentially be grade separated). This work scope is based on information presented to and approved by the PDT at the October 17, 2012 meeting.

WORK SCOPE

WBS 100 – Project Management & Meetings

Fehr & Peers will provide project management for the transportation engineering team. Specific duties include the following:

- Supervise, coordinate, and monitor traffic study for conformance with Caltrans standards and policies
- Prepare invoices
- Prepare, circulate, and file correspondence, memos, and reports as appropriate
- Prepare minutes for all focused traffic operations meetings with Fehr & Peers in attendance
- Perform scheduling and coordination
- Prepare monthly progress reports
- Participate in 12 face to face team meetings (includes PDT, focused, and public) and 20 conference call team meetings (note: for budgeting purposes 1 face to face meeting = 2 conference call team meetings)

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WBS 160.05.20 - Identify Study Locations and Collect Traffic Data

As part of the on-going effort for the Project Fehr & Peers collected existing AM (7-9 AM) and PM (4-6 PM) peak period intersection traffic counts at the following 17 intersections in 2010. This work scope assumes that these counts are valid for use and will not be recounted.

1. Kiernan Avenue/Tully Road	10. SR 108/1st Street
2. McHenry Avenue/Ladd Road	11. SR 108/Claus Road
3. SR 108/Kiernan Avenue	12. Claribel Road/Claus Road
4. SR 108/Pelandale Avenue	13. Patterson Road/Crane Road
5. Coffee Road/Claribel Road	14. SR 108/Oak Avenue
6. Coffee Road/Pelandale Avenue	15. SR 108/SR 120
7. Oakdale Road/SR 108	16. Patterson Road/Albers Road
8. Oakdale Road/Claribel Road	17. SR 108/Maag Avenue
9. Oakdale Road/Pelandale Avenue	

In order to evaluate the revised study limits and the effects of the project new turning movement counts (AM and PM peak period) will be collected and provided to Fehr & Peers by the County at the following locations:

1. Kiernan Avenue/Carver Road
2. Kiernan Avenue/Dale Road
3. Kiernan Avenue/Stoddard Road
4. Kiernan Avenue/Sisk Road
5. Kiernan Avenue/SR 99 Northbound Ramps
6. Kiernan Avenue/SR 99 Southbound Ramps
7. Claribel Road/Roselle Avenue
8. Claribel Road/Bentley Road
9. Claribel Road/Albers Road

Fehr & Peers will perform peak period field surveys at the nine (9) locations listed above to identify existing geometric features, queue lengths, lane configurations and traffic control devices at the intersections.

Fehr & Peers also proposes to evaluate the following roadway segments (Figure 1 presents the roadway segments and the analysis methodology that will be used to evaluate them):

- Kiernan Avenue between Sisk Road and Stoddard Road
- Kiernan Avenue between Stoddard Road and Dale Road
- Kiernan Avenue between Dale Road and Carver Road
- Kiernan Avenue between Carver Road and Tully Road
- Kiernan Avenue between Tully Road and McHenry Avenue
- SR 108 between Ladd Road and Kiernan Avenue
- SR 108 between Kiernan Avenue and Pelandale Avenue
- SR 108 between McHenry Avenue and Oakdale Road
- Coffee Road between SR 108 and Claribel Road
- Coffee Road between Claribel Road and Pelandale Avenue
- Oakdale Road between SR 108 and Claribel Road
- Oakdale Road between Claribel Road and Pelandale Avenue
- Claribel Road between SR 108 and Coffee Road
- Claribel Road between Coffee Road and Oakdale Road
- Pelandale Avenue between McHenry Avenue and Coffee Road
- Pelandale Avenue between Coffee Road and Oakdale Road.

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- SR 108 between Oakdale Road and 1st Street
- SR 108 between 1st Street and Claus Road
- Patterson Pass between SR 108 and Langworth Road
- Roselle Avenue between Patterson Road and Claribel Road
- Roselle Avenue between Claribel Road and Sylvan Avenue
- Claus Road between Patterson Road and Claribel Road
- Claus Road between Claribel Road and Sylvan Avenue
- Claribel Road between Oakdale Road and Claus Road
- SR 108 between Claus Road and Crane Road
- Langworth Road between SR 108 and Claribel Road
- Claribel Road between Claus Road and Langworth Road
- SR 108 between Crane Road and Oak Avenue
- Patterson Road between Crane Road and Albers
- Claribel Road between Langworth Road and Oakdale Waterford Highway
- SR 108 between Oak Avenue and SR 120
- Yosemite Avenue between SR 108 and Patterson Road
- Albers Road between Patterson Road and Claribel Road
- Oakdale Waterford Highway between Patterson Road and Claribel Road
- SR 120 between Yosemite Avenue and Maag Avenue
- SR 120 between Maag Avenue and Wamble Road
- SR 120 between Wamble Road and Lancaster Road

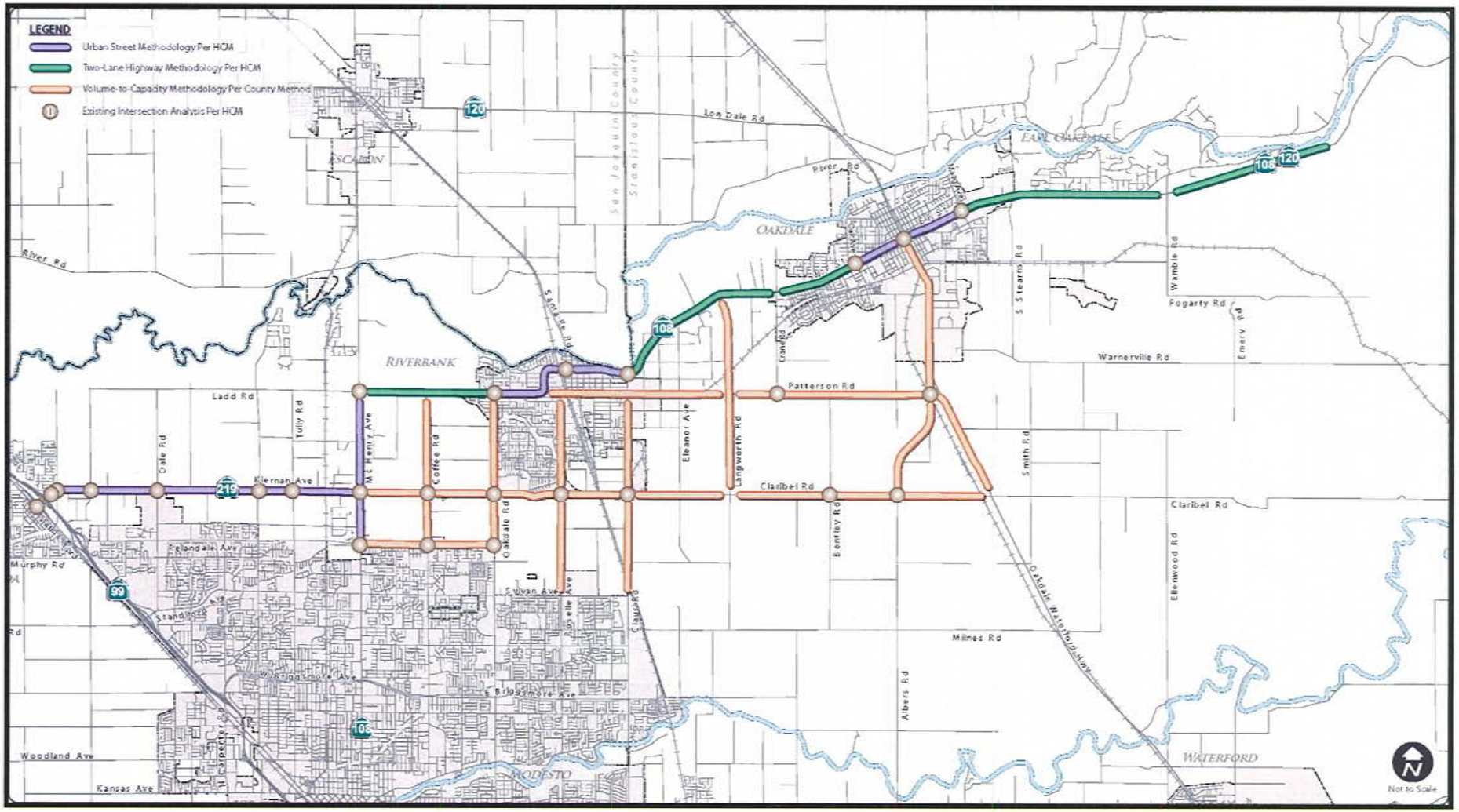

Figure 1: Proposed Study Locations and Analysis Methodology

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WBS 160.05.25 - Review Geometrics and Project Alternatives

Fehr & Peers will work with the Project Team to review and refine up to five Project Alternatives including the No Build. It is anticipated that the major focus of this task will involve identifying the most appropriate traffic control and intersection geometry that would be necessary at each crossing with an existing or future roadway.

WBS 160.10.10 – Traffic Forecasts

Fehr & Peers has been using the travel demand model developed for the 2011 StanCOG RTP for the on-going Project effort. This scope assumes that the same model will be used for this new effort. Fehr and Peers recently performed a focused daily and peak hour model validation/calibration exercise in the study area. The model validation/calibration was approved by the local agencies and Caltrans. **This scope assumes that a new focused daily and peak hour model validation/calibration will not be necessary.**

As part of the on-going Project effort Fehr & Peers has documented in a technical memorandum the future roadway network assumptions and land use assumptions that will be used for the Project. These assumptions were reviewed and approved by the local agencies and Caltrans in May 2011. However, in consideration of the fact that the project scope is being revised along with the opening and design year and that the City of Oakdale recently released its new general plan, Fehr & Peers will revisit the roadway network and land use assumptions and resubmit a technical memorandum summarizing a single set of roadway network and land use assumptions (Year 2022 & 2042) for review and approval before proceeding to develop future year traffic forecasts.

AM and PM peak hour turning movement forecasts will be provided by Fehr & Peers at the 26 intersections listed in WBS 160.05.20 and at each new project intersection with an existing roadway. Daily, AM and PM peak hour roadway link forecasts will also be provided for the roadway segments listed in WBS 160.05.20 and along the Project corridor.

Opening year (Year 2022) and design year (Year 2042) traffic forecasts (intersection and roadway) will be developed for up to five alternatives including No Build conditions. Fehr & Peers will submit a technical memorandum summarizing the draft traffic forecasts for one round of written comments by JPA. Fehr & Peers will update the draft traffic forecasts to reflect JPA input and submit traffic forecasts to Caltrans for one round of written comments. Fehr & Peers will prepare the final traffic forecasts based on Caltrans input. Once approved, Fehr & Peers will proceed with the technical evaluation of the alternatives and as requested by the JPA we will also prepare mid-year (Year 2032) traffic forecasts based on linear interpolation of the Year 2022 and 2042 traffic forecasts.

Deliverables:

- Draft Roadway Network and Land Use Assumptions Memorandum
- Final Roadway Network and Land Use Assumptions Memorandum
- Draft Traffic Forecasts Memorandum
- Final Traffic Forecasts Memorandum

WBS 160.10.35 – Perform Traffic Operations Analysis

The intersection traffic counts, lane configurations, signal timings, and other information collected under WBS 160.05.20 will be used to develop existing AM and PM peak hour Synchro 7.0 models for the 26 existing study intersections. Synchro 7.0 provides results consistent with the Transportation Research Board's 2000 Highway Capacity Manual (HCM) methodology. The Synchro analysis will be converted to micro-simulation (using the SimTraffic software) to determine existing intersection delay and level of service. The roadway segments identified in WBS 160.05.20 will be evaluated under existing conditions using the methodology identified in Figure 1.

As part of the on-going Project effort Fehr & Peers has prepared a Final Existing Conditions Report (March 2011) that did not include analysis of Kiernan Avenue west of Tully Road. This report has been reviewed and approved by the local agencies and Caltrans. As part of the Existing Conditions analysis the Synchro/SimTraffic simulation models were calibrated and validated. This work scope assumes that no new calibration/validation will be necessary. However, given that the study limits have been revised to include the Kiernan Avenue corridor from SR 99 to Tully Road, the existing conditions analysis will need to be updated to reflect the LOS, delay, and queue lengths for the additional study intersections. The analysis results will be presented in the Draft and Final Traffic Operations Report (WBS 160.10.70).

The traffic forecasts developed under WBS 160.10.10 will be used to develop Synchro models (AM and PM peak hour) for up to five alternatives including No Build conditions for the opening year (2022) and design year (2042). **Note: Mid-year (Year 2032) traffic operations analysis is not included in this scope.** This scope assumes that each alternative has only one proposed configuration at each intersection (e.g. a traffic signal, side-street stop, roundabout, or grade separated) except at the NCC/Oakdale Road interchange, where two interchange concepts may be evaluated. The Synchro models will include the same intersections evaluated under existing conditions plus the new intersections created by the Project. Similar to existing conditions analysis the Synchro models will be converted to micro-simulation (SimTraffic) to determine intersection delay and level of service. Peak hour analysis will be performed for the opening year and design year for each alternative. Results will include average delay, level of service, and estimated queue lengths for each intersection.

The roadway segments identified in WBS 160.05.20 will be evaluated under opening year and design year conditions using the methodology identified in Figure 1 for up to five alternatives including No Build conditions.

The design of the facility has not yet been established. It can potentially be a two-lane highway or a multi-lane highway. Depending on the final design of the project Fehr & Peers may perform the following:

- AM and PM peak hour two-lane highway analysis and/or
- AM and PM peak hour multi-lane highway analysis

The mainline analysis will be consistent with the methodologies presented in the 2000 HCM. Weaving analysis, if necessary, will be consistent with the methodologies presented in Chapter 500 (Leisch Method) of the Caltrans Highway Design Manual (HDM).

In addition to peak hour level of service analysis, Fehr & Peers will utilize the modified StanCOG

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2011 RTP Model to project daily and peak hour volume changes on study roadway segments as a result of the Project. Furthermore, the regional implications of the corridor will also be evaluated by examining additional measures of effectiveness (MOEs) such as vehicle miles of travel (VMT) and vehicle hours of delay (VHD) with and without the Project. The VMT information will be provided in 5 mph speed bins.

Deliverables:

- None (Note: Information obtained from the analysis will be used for the deliverable in the following section WBS 160.10.70)

WBS 160.10.70 – Prepare Traffic Reports

Fehr & Peers will prepare the Traffic Operations Report summarizing the results and findings. We will submit an Administrative Draft Traffic Operations Report to JPA for one round of review and written comments. We have budgeted up to 8 hours to respond to JPA written comments and prepare the Draft Traffic Operations Report to submit to Caltrans and other PDT members for one round of review and written comments. We have budgeted up to 20 hours to respond to comments on the Draft Traffic Operations Report and prepare the Final Traffic Operations Report. We will submit the final report in both hard copy and electronic format.

This work scope assumes that Jacobs will prepare the transportation chapter of the Environmental Document. Fehr & Peers has budgeted up to 8 hours to assist Jacobs in preparing the transportation chapter of the Environmental Document. The chapter will build on previous work and will document the proposed project's impact on the transportation and circulation system. The report will also include a qualitative assessment of the impacts of each alternative on bicycle, pedestrian, and transit facilities within the study corridor. Mitigation measures for significant transportation impacts will be identified. Fehr & Peers has also budgeted up to 12 hours to respond to comments on the public draft environmental document. Assuming that it takes ½ hour to respond to one comment translates to responding up to 24 comments.

Deliverables:

- Draft Traffic Operations Report
- Final Traffic Operations Report

Assumptions:

- All deliverables will be subject to one review cycle by Caltrans and the JPA.

Sincerely,

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Eddie Barrios

Eddie Barrios, P.E.
Senior Associate

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FEE

Fehr & Peers Hours By Person						
	Principal	Senior Associate	Senior Engineer	Engineer	Engineering Tech. / Support	Cost
Billing Rates	$ 230	$ 205	$ 150	$ 125	$ 110	
Direct Labor Costs						
WBS 100 - Project Management & Meetings	24	148	18	6	30	$ 42,610
WBS 160.05.20 - Collect Traffic Data	0	0	4	20	0	$ 3,100
WBS 160.05.25 - Review Geometrics and Project Alternatives	0	8	0	0	0	$ 1,640
WBS 160.10.10 - Prepare Traffic Forecasts	12	44	80	190	26	$ 50,390
WBS 160.10.35 - Perform Traffic Operations Analysis (No Traffic Operations Analysis on Kiernan West of Carver Road)	10	30	180	280	26	$ 73,310
WBS 160.10.35 - Perform Traffic Operations Analysis (Includes Traffic Operations Analysis on Kiernan West of Carver Road)	3	8	43	63	7	$ 17,425
WBS 160.10.70 - Prepare Traffic Reports	10	60	50	44	40	$ 32,000
Sub-Total Direct Labor Costs	59	298	375	603	129	$ 220,475
Other Direct Costs						
Mileage						$ 2,600
Printing/Reproduction/Communications						$ 700
Postage and Express Mail						$ 100
Traffic Counts						$ -
Sub-Total Other Direct Costs						$ 3,400
Total Cost						$ 223,875

ATTACHMENT A NCC PA/ED - WORKING TRAFFIC SCHEDULE (November 2012)					% Complete
ID	Task Name	Duration	Start	Finish	
1	**Task 4 - Traffic Studies**	270	1/2/2013	1/14/2014	0%
2	**Collect Traffic Data**	15	2/11/2013	3/1/2013	0%
3	**Review Geometrics and Project Alternatives**	140	1/2/2013	7/16/2013	0%
4	**Traffic Forecasting**	140	1/2/2013	7/16/2013	0%
5	1. Fehr & Peers - Develop and submit Roadway Network and Land Use Assumptions that reflect new project description and new analysis years (i.e. 2022 and 2042)	10	1/2/2013	1/15/2013	0%
6	2. Jacobs/JPA - Review of Roadway Network and Land Use Assumptions	5	1/16/2013	1/22/2013	0%
7	3. Fehr & Peers – Respond to comments from Jacobs/JPA and Update Roadway Network and Land Use Assumptions and Submit to Caltrans for review and comment	5	1/23/2013	1/29/2013	0%
8	4. Caltrans – Review and comment on roadway network and land use assumptions	15	1/30/2013	2/19/2013	0%
9	5. Fehr & Peers – Respond to Caltrans comments on roadway network and land use assumptions and submit final assumptions	5	2/20/2013	2/26/2013	0%
10	6. Caltrans – Approve final roadway network and land use assumptions	5	2/27/2013	3/5/2013	0%
11	7. Fehr & Peers – Prepare first draft of traffic forecasts including technical memorandum summarizing results to Jacobs/JPA	40	3/6/2013	4/30/2013	0%
12	8. Jacobs/JPA – Review and comment on first draft of traffic forecasts	10	5/1/2013	5/14/2013	0%
13	9. Fehr & Peers – Respond to comments from Jacobs/JPA and submit second draft of traffic forecasts to Caltrans	5	5/15/2013	5/21/2013	0%
14	10. Caltrans – Review and comment on draft traffic forecasts	20	5/22/2013	6/18/2013	0%
15	11. Fehr & Peers – Respond to Caltrans comments and prepare final traffic forecasts	10	6/19/2013	7/2/2013	0%
16	12. Caltrans – Approve final forecasts	10	7/3/2013	7/16/2013	0%
17	**Traffic Operational Analysis**	130	7/17/2013	1/14/2014	0%
18	Future Year Traffic Operations Analysis	50	7/17/2013	9/24/2013	0%
19	Draft Traffic Operations Report to JPA	10	9/25/2013	10/8/2013	0%
20	JPA Review and Discussions	10	10/9/2013	10/22/2013	0%
21	Draft Traffic Operations Report to Caltrans	10	10/23/2013	11/5/2013	0%
22	Caltrans Review Period	20	11/6/2013	12/3/2013	0%
23	Focused Meeting with Caltrans to Discuss Draft Report	3	11/21/2013	11/25/2013	0%
24	Respond to Caltrans Comments on Draft Traffic Report and Submit Final Report	20	12/4/2013	12/31/2013	0%
25	Caltrans Approval of Final Traffic Operations Report	10	1/1/2014	1/14/2014	0%

Note: All days are weekdays.

Task 5 and subsequent tasks can not get started until the analysis years and alternatives have been clearly defined.

1. Fehr & Peers - Develop and submit Roadway Network and Land Use Assumptions that reflect new project description and new analysis years (i.e. 2022 and 2042)
2. Jacobs/JPA - Review of Roadway Network and Land Use Assumptions
3. Fehr & Peers – Respond to comments from Jacobs/JPA and Update Roadway Network and Land Use Assumptions and Submit to Caltrans for review and comment
4. Caltrans – Review and comment on roadway network and land use assumptions
5. Fehr & Peers – Respond to Caltrans comments on roadway network and land use assumptions and submit final assumptions
6. Caltrans – Approve final roadway network and land use assumptions
7. Fehr & Peers – Prepare first draft of traffic forecasts including technical memorandum summarizing results to Jacobs/JPA
8. Jacobs/JPA – Review and comment on first draft of traffic forecasts
9. Fehr & Peers – Respond to comments from Jacobs/JPA and submit second draft of traffic forecasts to Caltrans
10. Caltrans – Review and comment on draft traffic forecasts
11. Fehr & Peers – Respond to Caltrans comments and prepare final traffic forecasts
12. Caltrans – Approve final forecasts

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Amendment #5 December 4, 2012

North County Corridor Joint Powers Authority

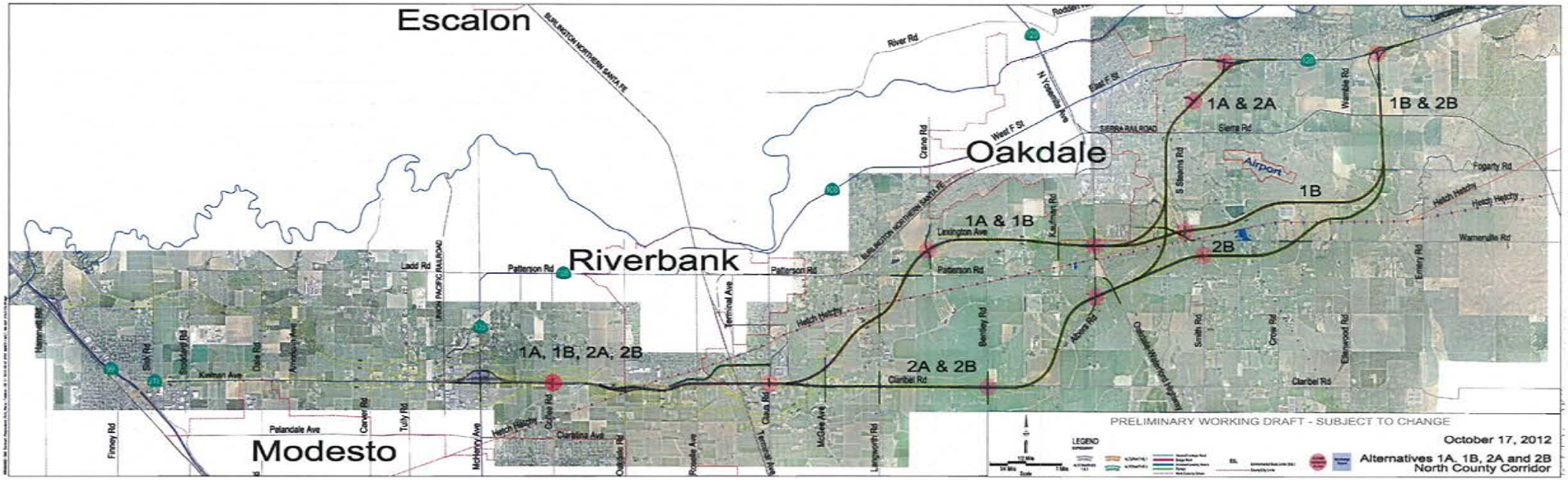
WBS Code	Description		Project Manager $235.00	Dep PM/Engineering Lead $225.00	Senior Engineer $185.00	Project Engineer I $150.00	Project Engineer II $130.00	CADD Designer $105.00	Project Admin $60.00	Environmental Lead $290.00	Sr. Planner $160.00	Project Controls $150.00	Total Hours by Task (Jacobs)	Subconsultant's Cost*	Total $ by Task (Doeer)1 Include Sub costs & WBS 100.100)
100.100[1]	**Project Management - (until March 2013)**		45		43				20	18	31	6	163	$ -	$ 30,810
100.10.10	**Execution and Control**		11		11					2	7	6	37	$ -	$ 7,220
	Scope, Schedule, Budget Oversight (Up to end of March 2013)		8		8					2	4		22		$ 4,580
	Monthly Invoices (3)		3		3						3	6	15		$ 2,640
100.10.15	**Coordination and Meetings**		34		32				20	16	24		126	$ -	$ 23,590
	Traffic Focus Conference Calls (2)		2		2				8				12		$ 1,320
	Weekly Team Leader Coordination Meetings/Calls (Up to end of March 2013 - 16 calls)		8		8					8	8		32		$ 6,960
	Meeting with Local Agencies to describe the access locations (One face to face @ Modesto)		8		8				4				20		$ 3,600
	Meeting with Caltrans to describe the access locations (One face to face @ Modesto)		8		8				4				20		$ 3,600
	Meeting with 6002 Agencies to discuss project progress (One face to face @ Modesto)		8		6				4	8	16		42		$ 8,110
160.000	**Perform Preliminary Engineering Studies And Draft Project Report - EIR/EIS**		18	38	92	28	20	44					240	$ 26,873	$ 41,220
160.050	**Updated Project Information (ONLY TO THE EXTENT TO SUPPORT TRAFFIC FORECASTING)**			2	8	8		4					22	$ -	$ 3,550
160.050	Revise Project description, limits, and local road access locations, location maps, for four build Alternatives (1A, 1B, 2A,2B) for team use in all project study documents			2	8	8		4					22		$ 3,550
160.100	**Engineering Studies (ONLY TO THE EXTENT TO SUPPORT TRAFFIC FORECASTING)**		18	36	84	20	20	40					218	26,873	37,670
160.05.20	Review additional Traffic Count Data collected by County	Subconsultant - F&P	2	2	2								6		$ 1,290
160.10.10	Traffic Forecasting	Subconsultant - F&P	4	8	10								22	$ 26,873	$ 4,590
160.10.35	Traffic Operational Analysis	Subconsultant - F&P	4	8	16								28		$ 5,700
160.10.70	Traffic Study Reports	Subconsultant - F&P	4	8	16								28		$ 5,700
160.10.15	Geometric Plans For Project Alternatives (1A, 1B, 2A, 2B) to support traffic forecasting		4	10	40	20	20	40					134		$ 20,390
165.000	**Perform Environmental Studies And Prepare Draft Environmental Document -EIR/EIS**		8						16	4	32	8	68	$ 68,439	$ 10,320
165.15	**Biological Studies**		8						16	4	32	8	68	$ 68,439	$ 10,320
165.15.99	CTS First Aquatic Survey Sequence (March, April, May 2013)	Subconsultant - ICF	4						8	2	16	4	34	$ 68,439	$ 5,160
165.15.99	Vernal Branchiopod (One wet season)	Subconsultant - ICF	4						8	2	16	4	34		$ 5,160
		Total[1]	71	38	135	28	20	44	36	22	63	14	471	$ 95,312	$ 51,540

[1] **NOTE:** The Project Management hours and costs shown under WBS 100.100 is for information only, and is not represented in the total cost. This task will be performed by using the budget remaining in the existing contract.

Sub consultant cost	$ 95,312
Sub consultant Markup @5%	$ 4,765.58
Total	**$ 151,617.26**

DRAFT (November 21, 2012)

	CURRENT APPROVED BUDGET AND COSTS					PROPOSED BUDGET AND COSTS				
WBS TASK	Budget	$ Spent thru 10/31/12	% $ Spent	Budget Remaining	Deliverables Provided	Budget	$ Spent thru 10/31/12	% $ Spent	Budget Remaining	Deliverables To Be Provided
WBS 100 – Project Management	$89,568.00	$72,542.00	81%	$17,026.00		$42,610.00	$0.00	0%	$42,610.00	
WBS 160.05.20 – Collect Traffic Data	$12,060.00	$12,060.00	100%	$0.00		$3,100.00	$0.00	0%	$3,100.00	
WBS 160.05.25 – Review Geometrics and Alts	$23,651.00	$22,398	95%	$1,252.63		$1,640.00	$0	0%	$1,640.00	
WBS 160.10.10 - Prepare Traffic Forecasts	$142,418.50	$105,908.78	74%	$36,509.72	Draft and Final Base Year Model Calibration/Validation Report Draft and Final Roadway and Land Use Assumptions (Year 2030 and 2050) Draft and Final Year 2030 and 2050 Daily Traffic Forecasts	$50,390.00	$0.00	0%	$50,390.00	Draft and Final Roadway and Land Use Assumptions (Year 2022 and 2042) Draft and Final Year 2022, 2032, and 2042 Daily and Peak Hour Traffic Forecasts
WBS 160.10.35 - Perform Traffic Ops Analysis	$127,417.50	$52,740.29	41%	$74,677.21		$90,735.00	$0.00	0%	$90,735.00	
WBS 160.10.70 - Prepare Traffic Reports	$87,914.00	$41,215.82	47%	$46,698.18	Draft and Final Existing Conditions Report for PA/ED Draft Transportation System Analysis Report	$32,000.00	$0.00	0%	$32,000.00	Draft and Final Traffic Operations Report for PA/ED
Other Direct Costs	$38,020.02	$17,181.44	45%	$20,838.58		$3,400.00	$0.00	0%	$3,400.00	
Totals:	$521,049.02	$324,046.70	62%	$197,002.32		$223,875.00	$0.00	0%	$223,875.00	


Escalon
Riverbank
Oakdale
Modesto
1A & 2A
1B & 2B
1B
2B
1A & 1B
1A, 1B, 2A, 2B
2A & 2B
Airport
PRELIMINARY WORKING DRAFT - SUBJECT TO CHANGE
October 17, 2012
Alternatives 1A, 1B, 2A and 2B
North County Corridor