Statement of Qualifications

for

North County Corridor Project

submitted to

Stanislaus County
Striving to be the Best

Caltrans

StanCOG
Stanislaus Council of Governments

Welcome to the City of Modesto
California, USA

submitted by

T·Y·LIN INTERNATIONAL

August 2, 2013

T·Y·LIN INTERNATIONAL
engineers | planners | scientists

August 2, 2013

Mr. Colt Esenwein, P.E.
Stanislaus County Department of Public Works
1716 Morgan Road
Modesto, CA 95358

Subject: *Statement of Qualifications to provide all-inclusive PA&ED services on the North County Corridor (NCC) Project*

Dear Mr. Esenwein and Selection Panel Members:

These are challenging times for transportation in the Central Valley. Economic uncertainties, combined with an informed and active population present challenges for the County that are not easily overcome. Proposed development, additional traffic and a lack of desire for change from some residents in the communities along the proposed corridor route present an opportunity to redefine, reevaluate, and "re-message" the project to achieve consensus on the alignment and limits. Building upon the years of work that have been invested in the project, T.Y. Lin International (TYLI), in conjunction with CH2MHill, will pick up the pieces and move the project forward to completion of the PA&ED Phase by engaging the community and bringing a "fresh perspective". For this dynamic and evolving project, you will need a knowledgeable and willing partner who will help the County navigate a path to the future. This Statement of Qualifications (SOQ) will demonstrate that the TYLI Team is that partner.

The goal of the PA&ED Phase is to select an alternative and obtain approval to proceed to the design phase.

Why select the TYLI Team?

- ✓ We will *build upon Stanislaus County's prior investment* and maintain existing documentation and preliminary alternatives development to "*Keep NCC Moving Forward*"!
- ✓ We will *bring creative ideas to the project* that will save money, improve safety, enhance traffic flow, minimize needed right-of-way and otherwise improve the project without undermining the previously completed work.
- ✓ We provide the right *"built-in" experience and expertise needed to hit the ground running* by including firms with relevant and/or prior experience on this important project.
- ✓ We offer the *commitment of a proven "hands-on" project manager* who will take a pro-active, solutions-based approach to managing the project.
- ✓ Established, *strong working relationships with Stanislaus County and Caltrans.* TYLI was recently selected as the sole consultant to provide on-call services to Caltrans Districts 5, 6, 9 and 10 for the next five years - we know the Caltrans delivery and approval process very well.

The TYLI Team has been following the progress of the project since its inception, and we have carefully reviewed the available project documentation. As we develop the PA&ED documents, we anticipate that there will be technical, design and stakeholder issues that will arise. Going forward, we have a plan to identify, document and quickly resolve them. Key issues that require immediate attention include:

- ✓ Facilitate and champion discussions with irrigation districts and Hetch Hetchy Aqueduct staff to clarify requirements in and around their right-of-way
- ✓ Conduct Value Analysis concurrently with the update of the GADs to ensure effective and economical solutions
- ✓ Prepare Structure Advance Planning Studies cost matrix for early identification of structure issues
- ✓ Conduct additional public outreach to share GAD updates

"Keith Rhodes provided leadership over the T.Y. Lin International Team and its subconsultants to deliver two PS&E packages on Highway 4 on-time with constrained budgets. I would enthusiastically recommend Keith as project manager for any complex roadway or highway job."

~ Ross Chittenden, CCTA Deputy Director

There is no doubt that the technical and stakeholder coordination challenges associated with this project will require a strong, experienced project leader that is surrounded with knowledgeable task leaders. The TYLI Team provides that in our Project Manager, Mr. Keith Rhodes, P.E. As a former Caltrans employee, his 22-year career has been entirely devoted to transportation planning and design. He has managed numerous multi-disciplined project teams for major corridor and highway projects requiring Caltrans and FHWA approvals.

Mr. Rhodes is surrounded with key individuals as highlighted on our Organization Chart. Individuals such as Craig Chatelain, P.E. (engineering), Karin Lilienbecker (environmental) and Judith Buethe (public outreach) have specific, relevant experience that bring tremendous value to the project. In fact, Karin Lilienbecker (CH2MHill) is the only consultant to date to obtain approval of an Environmental Document for the California High Speed Rail (CAHSR) through Caltrans District 6.

The following table summarizes the members of the TYLI Team and their roles on the project:

TYLI Team	Work To Be Performed	Certifications
T.Y. Lin International	Project Management; Civil/Roadway Design; Structures; Railroad Coordination; Utility Coordination; Risk Assessment	-
Bender Rosenthal	ROW Data Sheets	DBE
CH2M Hill	Environmental; Public Involvement/Outreach	
Crawford & Associates	Geotechnical Engineering	
Earth Mechanics, Inc.	Supplemental Geotechnical Engineering (seismic, liquefaction, settlement, & deep foundations)	DBE
Fehr & Peers	Traffic Engineering	
HMMH	Highway Noise Analysis	
Judith Buethe Communications	Public Outreach (lead)	WBE
Live Oak Associates	Wildlife Resources	
NorthStar Engineering	Supplemental Surveying	
O'Dell Engineering	ROW Mapping	SBE
Orsee Design	Aesthetics/Landscape	DBE
VMS	Value Analysis	
WRECO	Hydraulics/Hydrology/Drainage	DBE

As shown in the table above, we have assembled a ***diverse team designed to meet the diverse demands of this corridor project.*** We selected our subconsultants because of their demonstrated success during the previous PA&ED contract effort or due to their expertise and Caltrans knowledge we felt was valuable to ***"Keep NCC Moving Forward".*** Having a comprehensive team of sub-consultants, combined with the leadership and innovation that are synonymous with TYLI, creates a recipe for success. Our previous, proven successes throughout California--and specifically within the Central Valley--are a testimony that the TYLI team will perform well on this contract.

References: Time after time we have honored our commitments and fulfilled our obligations for every client we served. To verify our past performance of our key team leaders we encourage you to contact our references listed in the table below:

Reference	Title	Company	Team Leader	Phone
Ross Chittenden	Deputy Executive Director, Projects	CCTA	K. Rhodes - PM	(925) 256-4735
Dan Bolster	Senior Transportation Planner	EDCTC	K. Rhodes - PM	(530) 642-5262
Dan McElhinney	Chief Deputy District Director	Caltrans/D04	K. Rhodes - PM C. Chatelain – Eng Mgr	(510) 286-5906
John Fujimoto	Senior Bridge Engineer / Liaison	Caltrans/OSFP	C. Chatelain – Eng Mgr	(916) 227-8757
Mark McLoughlin	Director of Environmental Services	CAHSR	K. Lilienbecker – Env Mgr	(916) 403-6934

In reading though our Statement of Qualifications, we are confident that you will see that we have thoroughly studied the project requirements and assembled a truly outstanding team to partner with you in completing the PA&ED phase of the project. We believe that the TYLI Team offers Stanislaus County the right combination of project leadership and transportation planning experience needed to deliver outstanding results.

Should you have any questions, please do not hesitate to contact Mr. Rhodes.

Keith Rhodes, PE
3301 C Street | Building 100-M | Sacramento, CA 95816
Ph: 916.366.6331 | Keith.Rhodes@tylin.com

Sincerely,
T.Y. Lin International

Keith Rhodes, PE
Project Manager

Elizabeth Wiecha, PE
Vice President

PROJECT UNDERSTANDING

On behalf of the North County Corridor (NCC) Joint Powers Authority (JPA), Stanislaus County is seeking a highly qualified and focused consulting team to expeditiously, efficiently, and effectively provide the professional services required to successfully complete Project Approval and Environmental Document (PA&ED) for the NCC from Tully Road to State Route (SR) 120.

Since 2008, the JPA has been actively engaged in pursuing the successful delivery of PA&ED for the NCC. The JPA has taken a phased approach in completing the PA&ED phase for the NCC by first obtaining an approved Route Adoption to secure funding (and the project footprint) by means of a program level Environmental Impact Report (EIR) for the realigned SR 108. The JPA has successfully executed a communication plan between the stakeholders and the public that narrowed down multiple alternatives to four build alternatives (1A, 1B, 2A, and 2B) plus the No-Build. The project limits of these alternatives originated at SR 99 and terminated at SR 120. In 2013, the JPA supported a reduction in the project limits based on the Traffic Demand Forecasts Report (May 2013) for the NCC that confirmed a logical termini and the independent utility of the realigned SR 108. The report also supported rescoping the project from a freeway to an expressway. With the project limits refined and project studies underway, the project encountered unforeseen circumstances that introduced set-backs that have hindered completion of the PA&ED. The T.Y. Lin International (TYLI) Team recognizes that further delays are not acceptable, so time is of the essence! TYLI's objective is to conduct necessary engineering and analysis, complete the environmental technical studies, prepare the project level NEPA/CEQA document, and obtain the project Record of Decision (ROD) and Notice of Determination (NOD.

We have assembled a diverse team designed to meet the diverse demands of this corridor project. We selected our subconsultants because of their demonstrated success during the previous PA&ED contract effort or due to their expertise and Caltrans knowledge we felt was valuable to "Keep NCC Moving Forward". Having a comprehensive team of subconsultants, combined with the leadership and innovation that are synonymous with TYLI, creates a recipe for success. Our previous, proven successes throughout California--and specifically within the Central Valley--are a testimony that the TYLI team will perform well on this project.

We know Stanislaus County, the NCC Board, and JPA, expect rapid mobilization for this contract, so we have brought forward a team of key leaders and staff that are "Available Now" and who have the qualifications to successfully perform their respective work assignments. Our excellent track record in project delivery, within budget and in a timely manner, indicates the seriousness with which we approach this assignment. The deep bench of skilled professionals on our TYLI team, under the leadership of our Project Manager, Keith Rhodes, will ensure we have the right staff to handle completion of the PA&ED phase effort and beyond for this 18-mile long North County Corridor.

PROJECT APPROACH

The TYLI Team has done its homework and has formulated a sound approach in building on the progress already made and getting this important project through the PA&ED phase as efficiently and expeditiously as possible. Our approach is predicated on rapid mobilization, optimized scheduling, maintaining pace and momentum, and providing compelling solutions that lead to favorable decisions and approvals. Executing a sound and comprehensive work plan, the TYLI team will work seamlessly with maximum efficiency. The results of this approach are accelerated project delivery and reduced "throw-away" costs.

This approach is based on our understanding of this project gained through distillation of the contents of the Request for Qualifications, review of the previous contract information, including Board and Technical Advisory Committee meeting minutes, NCC website information, available engineering and environmental documents included on the six disks furnished by the County, and our past experience with similar projects. If selected for the project, we look forward to the County's feedback and will work closely with staff to further optimize our work plan.

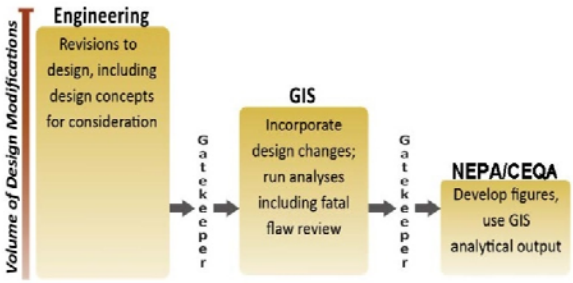
OUR VISION

Our vision for the NCC project is to build upon past progress, reach consensus on a preferred alternative with the JPA, Caltrans, and the local communities, and to complete the environmental process efficiently and expeditiously based on a design that provides the best overall value and performance without compromising the purpose and need of the project. Our key objectives include:

- ✓ ***Employ thorough and "all-inclusive" management and coordination:***
  The JPA wants (and needs) a consultant that is fully focused on this project and has an "owner's mentality." TYLI's PM, Keith Rhodes, has the reputation of being an advocate for his clients while balancing the various project stakeholder demands. He has the energy, availability, experience and support to successfully deliver this project. He will take ownership and accountability with the JPA's interests in mind, and plan ahead to anticipate and avoid obstacles that impede progress.

- ***Build upon past progress:***
  Based on the background information provided by the County, a considerable amount of valuable (and still applicable) work has already been completed. TYLI has reviewed the previous work and will incorporate it to the maximum extent feasible. Our approach builds on past progress, avoids unnecessary duplication of effort and minimizes time and cost.

- *Develop constructible designs that avoid or minimize environmental impacts and lead to project approval and environmental clearance.*
  We propose to conduct the environmental analysis concurrent with preliminary engineering. To effectively and efficiently achieve this, the TYLI Environmental Task Leader will function as a "gatekeeper" to review the engineering data and then determine what filters into the environmental analysis through GIS. The gatekeeper will help guide and balance the level of engineering, facilitate the decision-making with the JPA and applicable stakeholders, and then ensure that stakeholder's future needs are not precluded This process ensures quality and efficient production of environmental studies, thus leading to successful NEPA/CEQA clearances without undue delay.



- ***Help the JPA forge agency and community consensus:***
  It is critical to build upon the current support and momentum for the project straight out of the blocks. Since the NCC crosses several local communities, yet is independent from these communities' general plans, it is essential to obtain local consensus for the project. These stakeholders' concerns will include the effect of the NCC on future development, consistency with local general plans, access to private properties and other issues related to land use and planned development. Failing to obtain consensus can often pose a risk to the project in the form of delays.

PROJECT STATUS

We have compiled a summary list of deliverables based on the JPA's previous contract and have estimated a level of effort to perform the necessary professional services that should be the basis for re-starting and successfully completing the PA&ED phase. Our estimate for level of effort to complete the remaining tasks for PA&ED is based on a three tiered rating system of a low, medium, and high level of effort. Low effort simply requires updates of existing reports for revised project footprint. Medium effort is the preparation of studies yet to commence. High effort is significant work that is required to complete the task. Figure 1, "Project Status Table", located on page 7, summarizes our understanding of the tasks completed and the estimated level of effort required to complete the tasks not yet completed, as well as our assessment of the risk level associated with each outstanding task.

We have also identified the key challenges, including those identified as "high risk" in Figure 1, that we believe will require innovative approaches to address, as well as to avoid or minimize risks. Addressing these challenges will ensure a successfully delivery of PA&ED for the NCC. The following is a summary of the key challenges and risks, and TYLI's keys to success, that will help ensure deliver of this project successfully for the JPA. Figure 2, "WBS Work Plan Flow Chart", ON page 8, depicts our work plan necessary to successfully complete PA&ED for the NCC and Figure 3, "Key Issues Map", on page 9, highlights some of additional key issues related to this project.

KEY CHALLENGES

Public Outreach

Without community acceptance (and preferably support), it will be difficult, if not impossible, to advance the project beyond the conceptual level. Residents are concerned about changes to the character of their community and how their daily lives will be affected both during and after construction.

Potential Risks:

- Residents and/or local businesses object to aspects of the project and actively work to delay or stop it.

Keys to Success:

- ✓ TYLI recommends conducting additional public outreach meetings prior to the required Public Hearing for the Draft EIS/EIR to share with and obtain

feedback from the public on the project's progress which includes the revised project limits. The TYLI team will then support the JPA's efforts and work toward creative solutions that address the community concerns to the extent feasible. Following the value analysis and updates to the GADs, we recommend conducting a second meeting to show the public how comments have been incorporated.

- ✓ Understanding that the JPA will require the consultant to prepare and implement a public outreach program, the TYLI Environmental Team will coordinate with the Public Outreach team to provide support for any meetings that might be required.

Update Geometric Approval Drawings (GAD)

The JPA recently approved revised project limits for the NCC for Alternatives 1A, 1B, 2A, & 2B that extend from Tully Road to SR 120. A modification to the "B" alignment at the eastern conform to SR120 has also been made. GADs for the preferred alternative will be prepared and incorporated into the Final PR.

Based on our review of the current GADs, additional updates should be investigated as follows:

For Alternatives 1A, 1B, 2A, 2B

- Profiles over BNSF and Sierra Railroads could be lowered
- Profiles over most irrigation canal crossings appear to be too low if maintenance road access is required
- Irrigation canal basins east of Warnerville Road appear to require bridges
- Profile over Hetch Hetchy Aqueduct crossings could exceed allowable fill heights
- Structures shown on the GADs with highly skewed supports should be modified to reduce skews (< 30 degrees) by using longer spans and staggering supports between parallel right & left structures

For Alternative 1A & 1B only

- Profile east of Sierra Railroad may not provide adequate clearance under the Hetch Hetchy high voltage line
- Alignment east of Stearns Road should consider a slight shift south to avoid impacting an irrigation canal
- Alignment east of Eleanor Avenue could shift slightly south to avoid canals
- Profile 1B between Stearns and Fogarty Roads appears too high

Potential Risks:

- Not have a clearing defined project scope leads to "scope creep" that often results in redo work and/or additional work, which ultimately impacts the budget and schedule.

Keys to Success:

- ✓ TYLI recommends conducting a Value Analysis concurrently with the update of the GADs for the revised project limits. This will ensure that the most cost effective alternative is developed that meets the purpose and need of the project. Our approach will help minimize redo work while maximizing schedule and budget.

Environmental Approval

The JPA was successful in obtaining a program level EIR for the NCC Route Adoption (April 2010) and to secure additional project funding for construction. As the next step, the TYLI Environmental Team will prepare and pursue the approval of an EIS/EIR that would evaluate the revised NCC project scope on a project-level.

The JPA requires expeditious completion of environmental documents to advance the NCC project to final design and construction. Our approach is to prepare a joint NEPA/CEQA document for which Caltrans is the federal and state lead agency (FHWA delegated NEPA authority to Caltrans). TYLI has assembled a team that will successfully deliver a Final EIS/EIR for the JPA.

Potential Risks:

Risk 1. Expansion of the scope of the environmental process will increase project development costs and potentially lead to delays.

Risk 2. The time and number of cycles required for agency reviews of studies and documents may delay the schedule and lead to increased costs.

Risk 3. Resource agency demands for excessive mitigation may be impractical, increase project costs and lead to protracted negotiations.

Risk 4. Lack of effective communication between the engineering and environmental teams.

Risk 5. Not keeping the stakeholders and public adequately informed about the project activities.

Risk 6. Inadequate coordination with cooperating, participating, and resource agencies.

Keys to Success:

Key 1. The TYLI team will develop a project specific scope of services for the environmental process and clarify any risks with the County during contract negotiations.

Key 2. Rigorous quality control and assurance measures will be implemented to streamline the agency review process. Agency review periods will be closely monitored and steps taken to keep them on schedule.

Key 3. The TYLI team will utilize its ongoing experience with mitigation requirements on other similar projects along with its relationships with resource agency staff to avoid surprises on mitigation.

Key 4. EIS/EIR, Concurrent Engineering and Environmental Work:

- The TYLI Environmental Team proposes to conduct the environmental analysis concurrent with preliminary engineering. The engineering and environmental teams will determine the level of engineering needed to prepare the EIS/EIR, coordinate production schedules, interface with the JPA and Caltrans and key stakeholders, and meet regularly to assess project risks and schedule for corrective actions. At this point, the project limits are sufficiently defined to begin preparation of the Administrative Draft and technical reports in accordance with the SER. With concurrence from Caltrans, some requirements could be modified to complete the technical reports expeditiously and they could be prepared simultaneously with the Administrative Draft EIS/EIR. We can start developing the affected environment sections and conduct field work for resources not dependent on seasonal constraints immediately. Field work would be limited to the area of the alternatives and potentially disturbed areas. The project footprint needs to be updated with the most current designs prior to issuance of the Draft EIS/EIR. The EIS/EIR will follow the Central Region style guide.

Key 5. Karin Lilienbecker and other TYLI team environmental key staff are experienced in preparing and leading public meetings. Each of them has presented on a wide range of environmental topics and our expert team members can support a variety of special topics. For example, Lyna Black and Matt Franck, respectively, are our experts for community resources and agricultural resources and irrigation facilities. We have prepared, published, and distributed meeting notices, made logistics arrangements, prepared materials appropriate for the meeting format (e.g., handouts, display boards), given presentations, and collected comments. Upon publication of the Draft EIS/EIR, we will arrange for two public meetings to obtain public and agency comments.

Key 6. We will utilize the existing 2011 coordination plan, which describes the agencies the project will coordinate with to obtain the Record of Decision (ROD) and Notice of Determination (NOD). We will coordinate with the U.S. Army Corps of Engineers (COE), to facilitate their review of the Draft and Final EIS/EIR before publication so that the agency can issue its ROD for the 404 permit based on the EIS led by Caltrans. We will also coordinate with other agencies, including the State Historic Preservation Office, U.S. Fish and Wildlife Service, Central Valley Regional Water Quality Control Board (RWQCB), San Joaquin Valley Air Pollution Control District, California Department of Fish and Wildlife (CDFW), Department of Conservation, Stanislaus County Farm Bureau, and Modesto Irrigation District, and Oakdale Irrigation District. Coordination will facilitate the agencies' project understanding and vet potential issues early in the process, thereby reducing the number of agency comments on the Draft EIS/EIR and preparing for regulatory approvals (i.e., Section 106 MOA with SHPO, Section 404(b)(1) concurrence on the least environmentally damaging practicable alternative from COE, Biological Opinion from USFWS) before or after the ROD/NOD (i.e., permits from COE, RWQCB, and CDFW).

Advanced Planning Studies (APS)

This project includes up to 70 new structures along the four remaining alternatives. These structures include seven different types of bridge crossings as identified in the geometric drawings and the Structures Preliminary Geotechnical Report:

1. Interchanges at McHenry Avenue and Oakdale Road
2. Railroad Overheads for UPRR, BNSF, and Sierra Railroad (one each)
3. Local grade separated overcrossings - total 7 max (Alt 1) & 4 max (Alt 2)
4. Local grade separated undercrossings - total 6 max (Alt 1) & 4 max (Alt 2)
5. Irrigational canal crossings - total 10 max (Alt 1) & 14 max (Alt 2)
6. Hetch Hetchy Aqueduct crossings - total 3 max (Alt 1) & 2 max (Alt 2)
7. Connector structures to SR 120 - total 1 each for Alt 1 & Alt 2

An APS is required for Project Reports to document the scope of work for each proposed structure. An APS consists of one bridge sheet that identifies the basic structure plan, typical section with structure type noted, cost estimate summary, and an elevation view showing all supports and assumed foundation types. Included with each APS is a Preliminary Foundation Report, Preliminary Hydraulics Report (if crossing a waterway), an APS checklist, Design Memorandum, and an Itemized Cost Estimate. Included in each Memorandum is a summary of preliminary irrigation district and railroad design requirements for each location.

Potential Risks:

- Due to the large number of proposed structures, preparing an APS for each alternative can adversely affect the budget and schedule.

Keys to Success:

- ✓ To eliminate wasted effort on unnecessary analysis and details during the remaining screening process to select the preferred alternative, TYLI has already consulted Caltrans Office of Special Funded Projects (OSFP) Structures Liaison regarding obtaining a waiver for this large corridor project. John Fujimoto, Caltrans D10 Structure Liaison, has agreed to waive the requirement for APS documents during the remaining screening phase when multiple alignment alternatives are still being considered. John has agreed to accept a structure cost matrix that identifies bridge type, length, number of supports, and a structure cost based on typical square foot cost factors associated with each structure type, number of spans, skew, stage construction requirements, or other unusual construction techniques that are identified.
- ✓ For the Final Project Report when the preferred alternative has been identified, a complete APS submittal will be required along with a more detailed cost estimate similar to a General Plan Estimate that is completed during Type Selection.

Hydraulic/Hydrology Studies

A Preliminary Hydraulics Report (PHR) will be required for each APS. The PHR needs to identify hydrologic factors and parameters that affect the selection of the structure over waterways including irrigation canals. It is anticipated that these parameters can be obtained through discussions with each of the applicable Irrigation Districts.

Potential Risks:

- Lack of adequate input from the various Irrigation Districts affected by the project regarding impacts to their facilities and mitigated solutions could result in incomplete geometric design and structure needs, which can inevitably lead to redo work, budget overruns, and schedule delays.

Keys to Success:

- ✓ To facilitate and champion discussions with the various irrigation districts, the TYLI team has retained NorthStar, a local subconsultant specializing in Irrigation District coordination and engineering, who will clarify requirements at each structure and/or setup additional meetings for our Structure Lead to attend. The key is that we identify the parameters and district

requirements that could affect the structure type and cost at each location.

Relinquishment

Upon the completion of construction of the NCC, it is anticipated that Caltrans will relinquish old SR 108 to either the County and/or neighboring cities. The County and/or neighboring cities would then be responsible for the maintenance and liability of old SR 108 upon relinquishment. Before Caltrans will relinquish old SR 108, an agreement will need to be established between the appropriate parties outlining the improvements that Caltrans will be responsible to make in order to bring old SR 108 to an acceptable "state of good repair" prior to transferring ownership. The relinquishment is accomplished by a CTC resolution by means of a Controlled Access Highway Agreement and initiated following the construction of the new SR 108.

Potential Risks:

- Without an agreement established during the PA&ED phase between the County and/or neighboring cities and Caltrans that outlines expectations (i.e. cost, maintenance, ownership, etc.) prior to the transferring of ownership of the old SR 108 can cause costly impacts to all parties involved and delay relinquishment upon construction completion.

Keys to Success:

- ✓ TYLI can facilitate and champion the development of this agreement which should commence during PA&ED and include the results in the Project Report.

Other Key Issues

- Railroad Study – TYLI recommends early coordination with the affected railroads. Early coordination is needed to identify the geometric constraints at all identified railroad crossings. While railroads and the California Public Utilities Commission support the separation of grades when transportation modes cross, we should not presume concurrence on the preliminary design is a straight forward conclusion. We propose a proactive approach to ensure timely railroad input to clarify the railroad requirements and their affect on the structure type, span configuration, and structure cost at each location.

- Corridor Aesthetics – While aesthetic features are usually a small portion of the overall project cost (3% or less), they can make up a good portion of the regional transportation planning meeting discussions if left up to each local agency along the corridor. Not only can corridor aesthetic costs become disproportional among local agencies leading to public complaints, but inconsistent corridor aesthetics can distract from the overall benefits of a regional transportation. TYLI recommends early preparation of all preliminary aesthetic concepts with guidance from the JPA and other applicable stakeholders. Once a small pallet of choices are deemed acceptable, then the public meeting process can be utilized to achieve consensus on the corridor aesthetics and acceptable options that each local agency may want to consider.
- Value Analysis – A Value Analysis will be conducted concurrently with the update of the GADs for the revised project limits. This will ensure that the most cost effective alternative is discovered that meets the purpose and need of the project. Our approach will help minimize redo work while maximizing schedule and budget.
- Utility Impact Study – Coordination with the owners of the high voltage overhead utilities (Hetch Hetchy) within the project limits is crucial to ensure the design is compatible with the owner's requirements. Any necessary relocation costs must be captured in the project cost estimates. In addition, it is Caltrans policy not to allow utilities within the access controlled rights of way of an expressway, to the extent practicable. TYLI will pursue obtaining an exception(s) to this policy from Caltrans to ensure approval of a constructible project.

Multi-modal Study and Park & Ride Study – Although identified as a deliverable in the previous contract, it is not likely that these studies will be required. The original scope of the project was based on a freeway designation which would justify such studies. Due to its revised designation as an expressway, such studies may not be applicable.

Figure 1: Project Status Table

TASK	COMPLETED	NOT COMPLETED LEVEL OF EFFORT			RISK LEVEL	DELIVERABLE / COMMENT
		LOW	MEDIUM	HIGH		
Public Outreach	✓					Public outreach for NCC Route Adoption
	✓					Public Project scoping Meetings
				●	●	Prepare new NCC project logo for consideration
				●	●	Update the Public Outreach Communication Plan considering additional Public Meeting(s) for the revised project limits and to refine alternatives
				●	●	Public Hearing for the Draft EIR/EIS
Aerial Mapping & Field Survey	✓					Aerial and Topographic base mapping
		●			●	Supplemental field surveying may be need for minor adjustments to include recent changes to the project limits and alignments near the western and eastern end terminus; creek and river crossings for hydraulic studies; and in areas of dense tree cover to avoid sensitive environmental resources.
Traffic Studies	✓					Collect Existing Traffic Data
	✓					Traffic Forecasting Model
	✓					Draft Year 2022 and 2042 Traffic Demand Forecasts for NCC PA/ED Technical Memorandum
		●			●	Final Technical Memorandum for Traffic Forecasting
				●	●	Traffic Operations Report (Draft and Final)
Geotechnical Reports	✓					Draft Preliminary Geotechnical Design & Materials Report
	✓					Draft Structures Preliminary Geotechnical Report
	✓					Geotechnical/Geologic Summary Report
		●			●	Respond to Caltrans review comments and finalize Geotechnical reports
Alternatives Analysis	✓					Preliminary Alternatives developed from the Feasibility Study and Project Design Report have been screened
	✓					Alternative Agency Workshops
	✓					Alternatives Screening Methodology Report - Matrix
	✓					Alternative Screening Work Plan
			●		●	Review alternative screening methodology and revise if necessary for the screening of the remaining two alternatives.
			●		●	Prepare Technical Memorandum with final screening matrix
Preliminary Engineering Studies	✓					Draft Geometric Approval Drawings for the alternatives (July 2012)
			●		●	**Update the Geometric Approval Drawings (GADs)** – GADs to be updated for the revised project limits. (Alternatives 1A, 1B, 2A, & 2B) including the new modified "B" alignment at the easter SR 120 conform.
			●		●	**Permits To Enter (PTE)** – PTE Letters have been sent to property owners. Over 90% have been obtained. For the remaining 10%, the our plan is to conduct surveys from adjacent lands, use aerial photography and topographic maps, and conduct literature reviews to get the most up-to-date information possible for the environmental document.
				●	●	**Structures Advance Planning Studies (APS)** – This project includes up to 70 new structures along the 4 remaining alternatives. APSs are required for Project Reports to document the scope of work for each proposed structure. These structures include seven different types of bridge crossings as identified in the geometric drawings and the Structures Preliminary Geotechnical Report: 1. Interchanges at McHenry Avenue and Oakdale Road 2. Railroad Overheads 3. Local grade separated overcrossings 4. Local grade separated undercrossings 5. Irrigational canal crossings 6. Hetch Hetchy Aqueduct crossings 7. Connector structures to SR 120
				●	●	**Hydraulic/Hydrology Studies** – The key issue is identify the parameters and irrigation district requirements that could affect the structure type and cost at each proposed district facility crossing.
				●	●	**Relinquishment** – Before Caltrans will relinquishes the old SR 108, an agreement will need to be established between the appropriate parties outlining the improvements that Caltrans will be responsible to make to the bring old SR 108 in order to bring it to an acceptable "state of good repair".
				●	●	Railroad Study
				●	●	Corridor Aesthetics
				●	●	Value Analysis
				●	●	Right of Way Data Sheets
				●	●	Transportation Management Plan
				●	●	Storm Water Data Report
				●	●	Utilities Impact Report
				●	●	Design Exception Fact Sheets
				●	●	Project Cost Estimates
				●	●	Preliminary Drainage Report
				●	●	Constructability Review
				●	●	**Multi-Modal Study** - Further discussion is needed to determine if this study is needed. The large proposed median within SR 108 can be considered for transit and must be considered during PA&ED.
					●	**Park & Ride Study** - *May no longer be applicable*
Environmental Document	✓					Program level EIR for Route Adoption
	✓					Notice of Intent (NOI) (Federal Register, Vol 75, No. 166, August 27, 2010)
	✓					Notice of Preparation (NOP)
	✓					Public scoping meetings
		●			●	Initial Site Assessment
		●			●	Area of Potential Effects
		●			●	Finalize alternatives analysis
		●			●	Paleontological Study
		●			●	Archaeological Survey Report
		●			●	Review and finalize Chapter 1 Purpose and Need and Chapter 2 Project Alternatives
			●		●	Farmland Evaluation
			●		●	Visual Impact Assessment
			●		●	Noise Study
			●		●	Location Hydraulic and Floodplain Study Report
			●		●	Air Quality Study, including General Conformity
			●		●	Water Quality Study
			●		●	Energy Study
			●		●	Section 4(f) analysis
				●	●	**Biological Resources Activities** (including field surveys, completing the Natural Environmental Study, Biological Assessment, and Wetlands Study) - Coordination with USFWS and COE.
				●	●	**Cultural Resources Activities** - While a built environment survey was completed, it does not appear to have been assembled into a report. Reports and tasks to be completed include the Historic Property Survey Report, Historic Resources Evaluation Report, Finding of Effects, Memorandum of Agreement. We will support coordination with tribes and SHPO.
				●	●	Draft Relocation Impact Report and Community Impact Assessment. These efforts do not appear to have been started.
				●	●	Prepare the Administrative Draft, Draft, and Final EIS/EIR to achieve the ROD/NOD.

Legend: ● low ● med ● high

Figure 2: WBS Work Plan Flow Chart

(WBS 1xx.xx Caltrans Work Breakdown Structure Code)

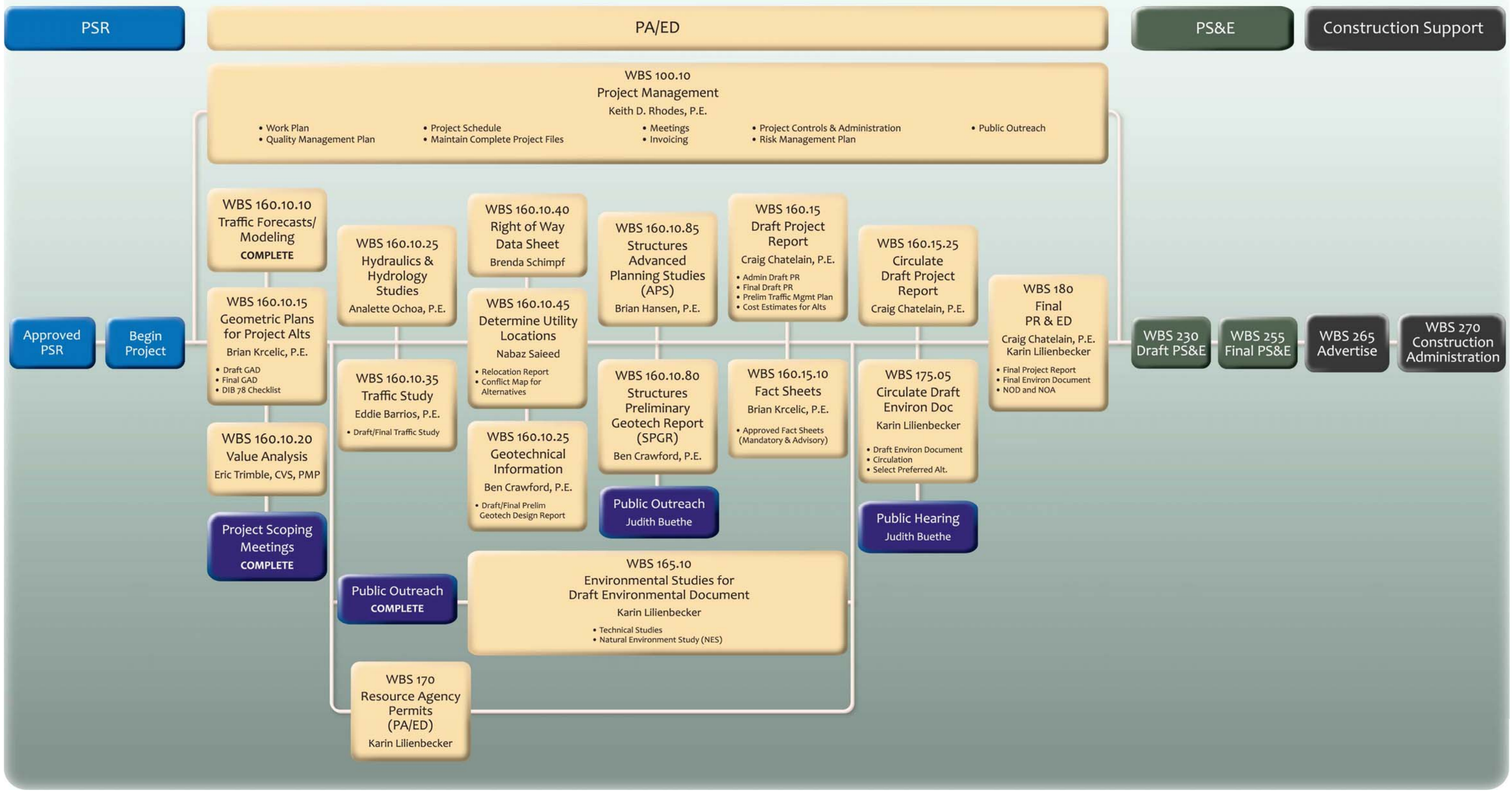
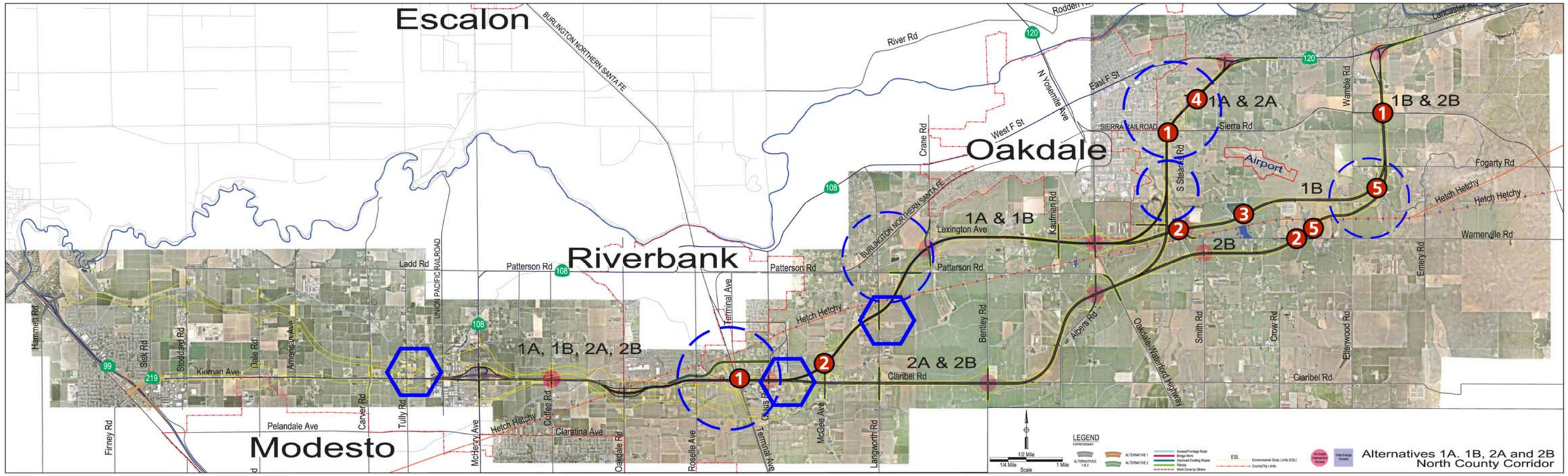


Figure 3: Key Issues Map



High-Risk Hazardous Waste Sites

California Tiger Salamander / Wetlands

PROJECT CHALLENGES & SOLUTIONS
1 Opportunity to lower profile
2 Reduce high skew at structures w/ longer spans
3 Consider slight shift in alignment to avoid canals
4 Overhead power clearance needed
5 Irrigation canals & basin require bridge

PROJECT SCHEDULE

We believe that strategies such as development of an EIS/EIR and concurrent engineering and environmental work will serve to expedite conclusion of the NEPA/CEQA process. Estimated target dates for completion of key milestones are presented below, with a ROD/NOD resulting in August 2015.

Activity	Target Date for Completion[1]
Prepare Draft Project Report, Administrative Draft EIS/EIR, and technical reports, including 4(f) and General Conformity	April 2014
Biological Resources Surveys	Spring/Summer 2014
Address comments on Draft Project Report, Administrative Draft EIS/EIR, and incorporate field survey results	May/June 2014
COE reviews Administrative Draft EIS/EIR	July 2014
Caltrans reviews Draft Project Report	July 2014
Address COE comments, incorporate final biological resources survey results, and Circulate Draft EIS/EIR	September 2014
Address CT comments and Circulate Draft PR	September 2014
Public comment period and public meetings	October/November 2014
Select preferred alternative	February 2015
COE and EPA preliminarily identify the least environmentally damaging practicable alternative Prepare draft Final EIS/EIR and draft Final PR	March 2015
COE reviews draft Final EIS/EIR	May 2015
CT reviews draft Final PR	May 2015
Publish Final EIS/EIR	July 2015
CT approves Final PR	July 2015
ROD/NOD	August 2015

Notes:
[1] Assumes Notice to Proceed to be issued in September 2013

PROJECT MANAGEMENT

TYLI's management approach is founded on communication and accountability facilitated through rigorous coordination. In recognition that communication and planning skills are essential in minimizing "project challenges", the TYLI Team, under the direction of Keith Rhodes, will work closely with the JPA, TYLI's project team, and PDT members to successfully navigate through project challenges that may be encountered during the development of PA&ED for the NCC.

PROJECT DEVELOPMENT TEAM (PDT)

The TYLI Project Manager, Keith Rhodes, will actively participate as a member of the PDT. The PDT will consist of representatives from the Cities of Oakdale, Modesto, and Riverbank as well as representatives from StanCOG, Stanislaus County, Caltrans, and other stakeholders as deemed necessary. The primary means of coordination will be through regularly scheduled meetings of the PDT on a monthly basis. The TYLI Project Manager will preside over the PDT meetings.

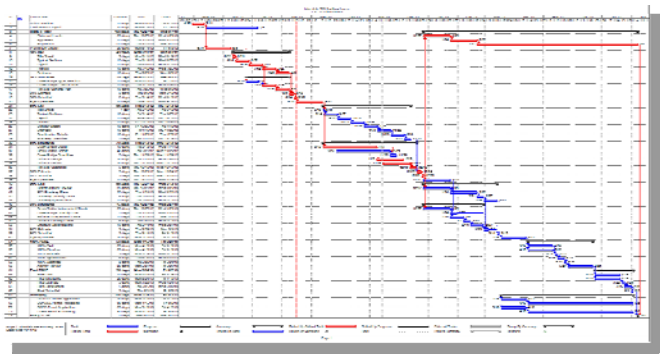
The agenda for the PDT meetings includes review of the Action Item Log,project status and issues, Risk Management Items, and the CPM schedule. Meeting notes will be prepared and emailed to the PDT immediately following the meeting. TYLI has found this process to be very effective in maintaining project momentum, staying on schedule and upholding accountability.

NORTH COUNTY CORRIDOR TECHNICAL ADVISORY COMMITTEE (NCC TAC)

The TYLI Project Manager, Keith Rhodes, will actively participate as a member of the NCC TAC. The TAC consists of representatives from the Cities of Oakdale, Modesto, and Riverbank, as well as representatives from StanCOG, County, and Caltrans. The primary means of coordination will be through regularly scheduled meetings of the TAC on a monthly or bi-monthly basis.

PROJECT CONTROLS

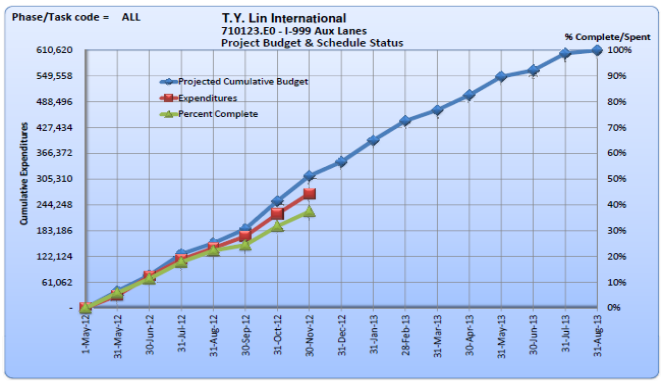
Schedule



TYLI will prepare a Critical Path Method (CPM) schedule for the project in Microsoft Project, which contains all the significant

activities, durations and relationship logic necessary to provide a comprehensive roadmap for executing the project. The schedule will be updated monthly in preparation for the PDT meetings where current and approaching activities are reviewed and discussed.

Design Budget



TYLI utilizes an Earned Value Analysis to monitor and maintain its design budget with a program called PlanTrax. The design budget is loaded into PlanTrax by the work breakdown structure (WBS) task. Job-to-date costs are obtained from TYLI's financial management system, Deltek Vision. By entering the percentage complete by task, the Earned Value is calculated along with the Estimate to Complete and Estimate at Completion. These metrics give the TYLI Project Manager a running forecast of project financial performance.

Quality Assurance and Quality Control (QA/QC)

TYLI is extremely committed to QA/QC and is proud of its track record for an absence of design-related change orders or claims during construction. TYLI assigns to every project a QA/QC manager whose responsibility it is to ensure that proper quality control procedures are in place with TYLI and its subconsultants and to perform quarterly audits. TYLI is in the process of instituting an ISO 9001 Quality Management System throughout its organization. Key opportunities for quality control procedures to be implemented on this project include:

- ✓ Review and Checklist Standards of Environmental, Technical Reports and Documents, Geotechnical and Hydraulic Reports
- ✓ Independent Check of Geometric Approval Drawings: The design and plans will be independently checked and back-checked by a qualified engineer not involved in the design.

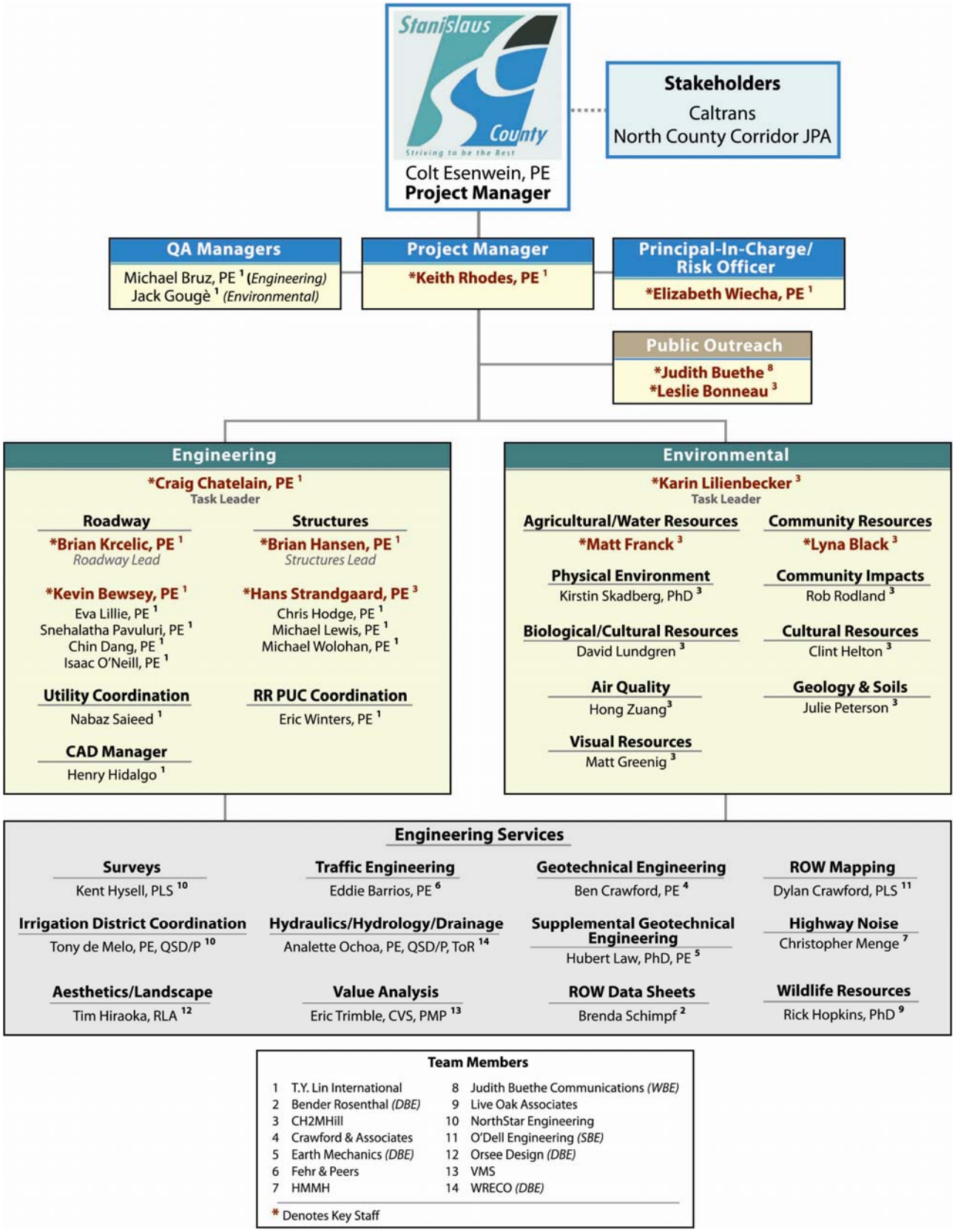
PROGRESS REPORTING

While the progress of the project is documented in essentially real time via the PDT meeting notes, TYLI will prepare monthly progress reports summarizing work completed in the previous month, work anticipated in the next month, the status of all deliverables and any critical "red flag" issues.

RISK ASSESSMENT

Inherent in any design project are uncertainties which, if they were to occur, could have a positive or negative effect on the project objectives. Risk assessment is a tool which can be used to identify these uncertainties and allows for the planning of an appropriate response to mitigate the risk or to exploit a possible opportunity. The TYLI Team will identified potential risks and opportunities for the NCC Project and compiled them using the Caltrans Risk Register to show their likelihood of occurring, relative impact to the project, potential triggers and response strategies. The risk register will be developed with the guidance provided in the Caltrans Project Risk Management Handbook.

ORGANIZATION CHART



PROJECT MANAGER EXPERIENCE

Keith Rhodes, PE – T.Y. Lin International

Education: *B.S., Civil Engineering, University of California, Davis*
Registration: *PE (CA 53587)*
Location: *Sacramento*

Mr. Keith Rhodes will serve as the Project Manager. Mr. Rhodes brings 22 years of California transportation experience, including unparalleled Caltrans engineering experience. He has managed, directed, and developed a variety of professional engineering roadway and structure design projects that resulted in the successful production of many Project Scope Summary Reports, Project Study Reports, Project Reports, and PS&E during his career. Mr. Rhodes possesses exceptional project management, design, leadership, and communication skills and the ability to develop high-performance teams.

Mr. Rhodes spent the first 11 years of his career with Caltrans, where he honed his skills for successful management and design experience in transportation, structures, and roadway design. Mr. Rhodes served as Project Manager, Design Branch Chief, Project Engineer, and Bridge Engineer for District 3 and Headquarters, ensuring the delivery of a variety of projects within scope, cost, schedule, and resources. Some of Mr. Rhodes' key project experience includes:

State Route 49 Realignment Study, El Dorado County Transportation Commission (EDCTC), Placerville, CA -- Project Manager responsible for the preparation of a feasibility study to identify potential alternative alignments of a 14-mile segment of SR 49 between the communities of Coloma and El Dorado. The study addressed the inadequacies of the current alignment from Coloma to El Dorado. TYLI effectively and efficiently developed a three-tiered screening criteria and screening process used to select three feasible alternatives from among 52 potential alternatives ranging from 9 miles to over 20 miles. The study addressed the existing roadway deficiencies, impacts to traffic operations and mobility, as well environmental constraints for all three feasible alternatives.

Public involvement and outreach were major components of the Study. In an effort to involve a broad range of potentially affected interests, a Stakeholder Advisory Committee (SAC) was formulated consisting of 22 interest groups. The study involved extensive coordination with Caltrans District 3, EDCTC, El Dorado County DOT, City of Placerville, and the public. In addition, TYLI prepared and delivered several effective presentations of the results of the Study to EDCTC Board and Placerville City Council that led to the Study's approval.

State Route 4 Widening Project–Segment 3A & 3B, Contra Costa County, CA -- Project Manager/Project Engineer responsible for preparing the PS&E for this $125 million roadway widening and interchange reconstruction project on SR 4. This project proposes to widen 3.2 miles of SR 4 from four lanes to eight lanes beginning at A Street/Lone Tree Way Interchange and terminating at SR 4/160 Interchange. Segment 3 involved 10 bridges, 24 retaining walls, and 15 sound walls. Interchange improvements at the "A" Street Interchange consist of reconstructing the existing tight-diamond interchange with a new interchange of the same configuration. Improvements at the Hillcrest Avenue Interchange consist of reconstructing the existing tight-diamond interchange with a new modified tight-diamond with hook ramps at the northeast quadrant. The project involved extensive coordination with Caltrans District 4, Caltrans Headquarters, Contra Costa Transportation Authority, City of Antioch, public utilities, local businesses, and the general public. Project was delivered within schedule and budget.

State Route 50-High Occupancy Vehicle (HOV) Lanes, El Dorado County, CA -- Project Manager responsible for the delivery of the Project Approval and Environmental Document (PA&ED) phase for an 8-mile HOV lane project on U.S. 50 from El Dorado Hills Boulevard to the South Shingle Springs/Ponderosa Road Interchange in El Dorado County. The project involved extensive coordination with Caltrans, El Dorado County Transportation Commission, El Dorado County Department of Transportation, and the general public.

Traffic Congestion Relief Project, Stanislaus County, CA Project Manager and Project Engineer for this $4.9 million project that improved four at-grade county road intersections along Geer Road and Albers Road , east of the City of Modesto. Keith managed the successful delivery of this project that involved widening signalization, safety lighting, utility relocation, irrigation district coordination, right-of-way acquisitions, and drainage improvements. Scope of services included the delivery of PA&ED and PS&E in one year. Project construction was completed in 2007.

State Route 50/Missouri Flat Road Interchange Project, Placerville, CA
Project Engineer for the PS&E on this $35 million interchange reconstruction project, that reduced traffic congestion, improved operational efficiency, and accommodated planned growth in the communities of El Dorado County at the Missouri Flat Road/U.S. 50 interchange. The project increased capacity of the on and off ramps, reconstructed several roads and intersections affected by the interchange improvements, widened Missouri Flat Road from two lanes to four lanes, and replaced the existing Missouri Flat Road Overcrossing bridge. Performed a comprehensive drainage analysis that incorporated storm water Best Management Practices (BMPs) identified in the Caltrans approved Storm Water Data Report (SWDR).

KEY PERSONNEL

Craig Chatelain, PE – T.Y. Lin International

Education: *B.S., Civil Engineering, University of California, Davis*
Registration: *PE (CA 34440)*
Location: *Sacramento*

Mr. Chatelain has 34 years of experience in design, construction and oversight of transportation structures. For the past 11 years as a consultant, Mr. Chatelain has served as a Project Manager and Engineering Manager for roadway, bridge and corridor improvement projects. During his previous Caltrans career, he served as a Caltrans Structures Liaison Engineer and Branch Chief, and has been responsible for the design approval and oversight of over $500 million in completed structures on major corridor projects in San Bernardino, Riverside, and Los Angeles Counties. Working closely with SANBAG, RCTC, and CVAG regional transportation agencies, Mr. Chatelain approved planning studies and corridor aesthetics during the PA&ED phase, and provided design, scheduling and constructability oversight for the final PS&E of the following projects:

- SR-210 (22 miles)
- SR-71 (eight miles)
- I-10 (five miles)

As Caltrans State-wide Underground Structures Engineer, he was considered a technical expert for culverts, aqueducts, tunnels, and storm drain pipes, and has previously been involved with the development of standard plans, design specifications, and fill height tables for all Caltrans culverts. Some of Mr. Chatelain's relevant experience includes:

Yerba Buena Island Ramps Improvement, San Francisco County Transportation Authority, San Francisco, CA -- Project manager during the final PA/ED phase and the structural lead for the design and development of the final PS&E for the $65-million safety improvement project. He was responsible for the draft project report, preparation of the draft EIR, modified access report, risk management log, project management meetings and HBP funding assistance.

Cosumnes River Boulevard Extension, Sacramento, CA -- Project manager and structure lead responsible for development of the final PS&E for both the three-span Cosumnes River Boulevard Overcrossing at Interstate 5 and the seven-span Cosumnes River Boulevard Overhead at Morrison Creek.

I-210 HOV Widening, San Bernardino/Los Angeles County, CA -- Caltrans liaison engineer for the final design and construction support of 12 consultant design contracts associated with the 22-mile freeway corridor through San Bernardino and Los Angeles Counties.

Karin Lilienbecker – CH2MHill

Education: *M.S., Biology, University of San Francisco, B.S., Environmental Science, University of San Francisco*
Location: *Sacramento*

Ms. Lilienbecker is a project manager with more than 19 years of environmental planning experience, specializing in the preparation of environmental planning documents for federally funded projects. She is a solutions-oriented leader of multidisciplinary, fast-track projects involving natural resources planning and management. Karin is experienced in implementing the National Environmental Policy Act (NEPA) and California Environmental Quality Act (CEQA) processes, including preparation of environmental assessments and environmental impact statements, public involvement, development and analysis of project alternatives, and preparation of responses to public and agency comments. Ms. Lilienbecker's relevant experience includes:

California High-Speed Rail Project, Merced to Fresno Section, Final Environmental Impact Report/Environmental Impact Statement, Sacramento,CA
Ms. Lilienbecker led the environmental documentation process, permit application development, and mitigation planning for the Merced to Fresno Section of the California High-Speed Rail Program. She led preparation of the Draft EIR/EIS and Final EIR/EIS pursuant to CEQA and NEPA. The Merced to Fresno Section will be the first true HST system in the United States. For the EIR/EIS, Karin managed a team of approximately 100 staff and teaming partners across the U.S. to evaluate impacts to all environmental resources, according to methodologies modeled after Caltrans' Standard Environmental Reference. She led coordination with the lead agencies, program management team, the Attorney General's office, engineers, and regulatory agencies, as well as other stakeholders along the 65-mile project corridor. Coordination also included Caltrans for impacts on existing and planned Caltrans facilities. Preparation of the EIR/EIS was fast-tracked to meet federal funding deadlines and required coordination with local stakeholders (municipalities, irrigation districts, farm bureaus), multiple state and federal agencies, including the FRA, the California High-Speed Rail Authority, the COE, Bureau of Reclamation, EPA, and Caltrans. The aggressive schedule required concurrent preparation of deliverables, with continuous input and review by lead and review agencies and their legal counsel.

Karin's other relevant experience includes:

- *Pinon Canyon Maneuver Site EIS; Colorado; U.S. Army Corps of Engineers; Mobile District, CO*
- *EIS for Stationing and Training of Increased Aviation Assets Within U.S. Army, Fairbanks/Anchorage, AK*

Judith Buethe – Judith Buethe Communications

Education: *M.P.A., Public Administration, University of San Francisco; B.S., Applied Behavioral Sciences, University of California, Davis*
Location: *Modesto*

Judith Buethe has more than 32 years of private and public sector experience in public relations, event coordination, and consensus building. She designs and implements effective strategic public outreach and education programs, project team communication plans, public meetings and open houses, newsletters, direct mail campaigns, cross-cultural communications, social marketing, stakeholder identification; media relations;; focus groups, consensus development programs, large-scale meetings and hearings; coordinates websites and social media; and staffs hotlines. She has served as hearing officer and worked closely with Caltrans District 10 staff. She has designed and managed regional surveys, as well as programs to satisfy environmental justice requirements and CEQA/NEPA requirements. Some of her experience includes:

- *North County Corridor Route Adoption, CA*
- *I-5/Sperry Road Extension, Stanislaus County, CA*
- *SR-99 Hammett-Kiernan, Stanislaus County, CA*

Brian Krcelic, PE – T.Y. Lin International

Education: *B.S., Civil Engineering, Cal Poly Pomona*
Registration: *PE (CA 33203)*
Location: *Sacramento*

Mr. Krcelic has over 32 years of experience in the planning, design, and construction of major transportation improvement projects. He has been responsible for the design of new highways and streets, freeway interchanges, HOV lanes, sound barriers, drainage improvements, and various types of structures. He has also managed numerous roadway widening and rehabilitation projects including full reconstruction and various types of pavement overlays and treatments. Mr. Krcelic is well-versed in Caltrans project development procedures, including PSRs, PRs and PS&E. He has completed preliminary and final design for more than 100 projects. Some of his relevant experience includes:

- *I-580/Foothill Boulevard Interchange*
- *Mitchell Road Interchange at SR 99, Ceres, CA*
- *Route 238 Corridor Improvements, Hayward, CA*

Kevin Bewsey, PE – T.Y. Lin International

Education: *B.S., Mechanical Engineering, California State University, Sacramento*
Registration: *PE (CA 71485)*
Location: *Sacramento*

Mr. Bewsey has 10 years of experience in the transportation industry including design and construction of bridge replacements, roadway widenings, interchange modifications, and pedestrian overcrossing projects. He serves as project engineer and lead transportation engineer with responsibilities for client management, environmental coordination, and final design. He prepares geometric studies, preliminary design, PS&E and quality control reviews of bridge and transportation projects. Some of Mr. Bewsey's recent experience includes:

- *Norwood Avenue Bridge, Sacramento, CA*
- *O'Byrnes Ferry PSR, Calaveras County, CA*
- *South Bonnyview Road Widening, Redding, CA*

Lyna Black – CH2MHill

Education: *M.S., Geosciences, California State University, Chico; B.S., Biology, CSU, Chico*
Location: *Redding*

Lyna Black has more than 15 years of experience as a project manager, task manager, environmental planner, biologist, and environmental scientist. She is accomplished in preparing environmental impact statements and environmental impact reports, providing public involvement and outreach support, supporting the permitting process, including regulatory agency coordination and negotiation, responding to public and agency comments, and implementing quality control between engineering, GIS, and environmental products. Areas of technical and regulatory experience CEQA, NEPA, California Endangered Species Act, ASTM 1527 and 1528, and sections of the Clean Water Act. Some of her relevant experience includes:

California High-Speed Rail Project, Merced to Fresno Section Final Environmental Impact Report/Environmental Impact Statement, Sacramento, CA - Assisted with preparation of a project-specific EIR/EIS in compliance with both NEPA and CEQA.

U.S.A.F. NEPA Projects; Kirtland Air Force Base; Albuquerque, NM - Prepared EAs for construction of heavy weapons range and demolition and construction of military support facilities.

Matt Franck – CH2MHill

Education: *B.S., Environmental Policy Analysis and Planning, University of California, Davis*
Location: *Sacramento*

Matt is an environmental planner with expertise in Sacramento Valley and San Joaquin Valley rural environments. Matt has 23 years of experience with recent focus on linear transportation and water conveyance facilities. Matt has specific expertise in water resources, including the application of CEQA and NEPA analysis principles to technical resources such as hydrology and water

quality. Matt also has developed innovative approaches to evaluating environmental impacts to farmland. Some of his experience includes:

- *California High-Speed Rail Project, Merced to Fresno Section Final Environmental Impact Report/Environmental Impact Statement, Sacramento, CA*
- *7th Street Bridge Replacement, Modesto, CA*
- *Proponent's Environmental Assessment; Golden State Water Co.; Sutter County, CA*

Leslie Bonneau – CH2MHill

Education: *B.S., Public Administration, University of Southern California*
Location: *Sacramento*

Ms. Bonneau develops and manages project development and decision analysis processes to support planning, design, and construction of infrastructure and environmental protection projects. She develops public and agency coordination strategies during the environmental approval process to supplement CEQANEPA requirements, builds consensus on projects with multiple stakeholders, and facilitates multi-agency coordination on local, state, and federal projects. She has a distinguished record for bringing projects out of a stall and building advocacy for the project in the community.

- *I-580 Freeway Extension Project, Reno, NV*
- *TRAction Project, Reno, NV*
- *Context Sensitive Solutions, FHWA National Training Program, Caltrans Training Program, Berkeley, CA*

Brian Hansen, PE – T.Y. Lin International

Education: *B.S., Structural Engineering, University of California, San Diego*
Registration: *PE (CA 58976)*
Location: *Sacramento*

Mr. Hansen has more than 17 years of civil engineering experience, and has been involved in the structural design, analysis and task management for all types of bridge and structures projects. He is experienced in all phases of bridge project development and PS&E deliverables. Recently, Mr. Hansen has been working on design build contracts, responsible for all aspects of project development, planning and management. His recent project experience includes:

- *Presidio Parkway P3 Project, San Francisco,CA*
- *I-405 Sepulveda Pass Improvements Project, Santa Monica, CA*
- *6th Street Viaduct Seismic Improvement Project, Los Angeles, CA*

Hans Strandgaard – CH2MHill

Education: *M.S., Structural Engineering, University of California, Davis; B.S., Civil Engineering, University of California, Davis*
Registration: *PE (CA 46248)*

Mr. Strandgaard is a principal bridge technologist with a thorough understanding of all structure types and construction methods with expertise in design of river crossings across wide floodplains. He has prepared special provisions for over 100 California bridges ($1 billion in construction costs), and is the designer of record for more than 50 bridges. He received a Quality Award for work performed on the Eastern Transportation Corridor project master specifications/bridge specifications. His recent experience includes:

- *Scour Repair/Seismic Retrofit Strategy for Replacement of the Hickman Road Bridge, Stanislaus County, CA*
- *7th Street Bridge Replacement, Modesto, CA*
- *Sperry Road Bridge Replacement Construction Management, Stanislaus County, CA*

Elizabeth Wiecha, PE – T.Y. Lin International

Education: *B.S., Civil Engineering, Rutgers University*
Registration: *PE (CA 44264)*
Location: *Oakland*

Ms. Wiecha has more than 30 years of transportation engineering and management experience in the San Francisco Bay Area. She has served at an executive level for transportation agencies and as program and project manager on a variety of major highway and rail transit projects. She was Deputy Director and Chief Engineer for the Transbay Joint Powers Authority and Director of Capital Project Management for SamTrans/Caltrain. She is well-versed with Caltrans project development process and with P3 and Design Build projects. She has held various positions with Caltrans as a Supervising Transportation Engineer and Construction Engineer, and has participated and facilitated risk assessments on major projects and program such as Benicia – Martinez I-680 Bridge, Caltrain Central Equipment Maintenance and Operations Facility, Transbay Transit Center and SFOBB Toll Operations Building. Ms. Wiecha also acted as Principle-In-Charge on the following projects:

- *State Route 4 Improvements, Contra Costa County, CA*
- *East – West Connector Project, Union City & Fremont, CA*
- *Bay Road Reconstruction Project, East Palo Alto, CA*

PROJECT TEAM

T·Y·LIN INTERNATIONAL

T.Y. Lin International (TYLI) is a California-based corporation founded in 1954 and headquartered in San Francisco. TYLI is a multidisciplinary transportation planning and engineering firm that has provided the global infrastructure market with innovative, cost-effective and constructible designs for over 50 years. From offices in both the U.S. and abroad, the firm employs over 1,400 dedicated engineers, technicians, and support staff offering a wide range of professional capabilities in the areas of transportation and bridge project delivery. In partnership with transportation officials and community leaders, TYLI creates and helps build unique transportation infrastructure for every landscape while emphasizing constructability, value, and schedule. Opening in 2001, our Sacramento office has developed transportation projects for the Sacramento area and Northern California. Our managers and staff have extensive experience in the preparation of PSRs, PRs, and PS&E to local agency, AASHTO, and Caltrans standards. Many of our key personnel are former Caltrans and local agency design engineers with experience in the design and construction of bridges, highways, and interchanges, knowledge and skills critical for navigating Federal and State processes necessary for approval.

CH2M HILL is the only engineer-procure-construct company that offers this wide spectrum of expertise, knowledge, and services across varied industries and government agencies. The firm, dating back to 1946, is built on honesty, ethics, and morals; a global presence of 28,000 employees in regional offices worldwide. CH2M HILL's team of experts brings the knowledge gained from a wide range of projects around the world, rigorous attention to detail, and a capability to create innovative solutions that are also models for the industry. The firm's solutions keep sustainability always in mind, along with government regulations, environmental concerns, maintenance requirements, and public perceptions. CH2MHill most recently teamed up with TYLI on the Hoover Dam Bypass Project for FHWA.

Fehr & Peers specializes in providing transportation planning and traffic engineering services to public and private sector clients. They emphasize the development of creative, cost-effective, and results-oriented solutions to planning and design problems associated with all modes of transportation.

Established in 1989, Judith Buethe Communications, specializes in consensus-building and public participation programs in Central and Northern California. Their proactive programs are carefully tailored to each project and creatively designed and implemented to identify communities of interest, satisfy the public's need for information, provide opportunities for meaningful involvement, and nurture a sense of community partnership, as well as promote a positive image for each client.

Founded in 1994, O'Dell Engineering is headquartered in Modesto. The combination of bright staff, outstanding internal and external communication skills, team collaboration and input, and applications of current technology and tools allow the firm to provide creative yet feasible solutions to unique and complex design projects.

WRECO is a small business and minority-owned engineering consulting firm providing specialty services in civil engineering, water resources, environmental compliance, and geotechnical and coastal engineering. WRECO resolves sophisticated engineering and environmental problems in local communities, watersheds, streams, wetlands, estuaries and coastal areas.

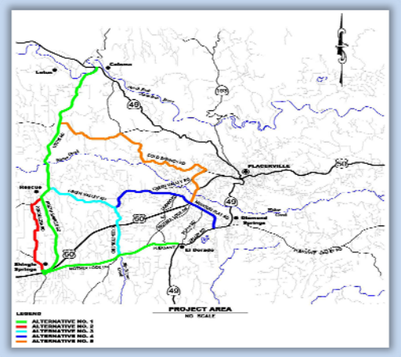
VMS provides Value Engineering studies to plan, coordinate, facilitate, manage, and document projects. VMS has ten Certified Value Specialists on staff. VMS also has the support staff capable of assisting team leaders in documenting the results of the study. Today Highway and transportation projects account for over half of the 200 studies per year performed by VMS team leaders.

Crawford & Associates, Inc. was founded by Benjamin and Sarah Crawford to provide creative solutions and responsive service while providing growth opportunities for our employees. The firm's principals bring significant experience in Geotechnical Engineering, Design and Construction Services on projects ranging from transportation, bridges, water/wastewater facilities, pipelines, tanks and pump stations, schools, hospitals, residential, and commercial projects.

Earth Mechanics, Inc. is a geotechnical and earthquake engineering consulting company founded as a California Corporation in 1989. The firm specializes in major geotechnical site investigations and testing, seismic hazard and earthquake retrofit evaluations, and foundation design for projects related to transportation infrastructure

Bender Rosenthal, Inc. is a California-based firm specializing in real estate appraisal, Right of Way acquisition, relocation, ROW management and planning services.

NorthStar Engineering has been providing professional land surveying services since its inception. Our team members include California registered land surveyors and technicians who are experienced at performing boundary, topographic, and construction surveys.

Project Information		Reference	Project Highlights
	SR 4 Widening "A" Street to SR 160 | Antioch, CA The Contra Costa Transportation Authority, in cooperation with Caltrans and the cities of Antioch and Pittsburg, is widening SR 4 – Loveridge Road to SR 160 from four lanes to eight lanes. TYLI widened and reconstructed existing lanes on SR 4 from 2000 feet west of "A" Street to 5500 feet east of Hillcrest Avenue and reconfiguring the "A" Street and Hillcrest Avenue interchanges within the project limits. Local street improvements were also included. The first segment of the project included mainline and interchange work from the western project limit to just west of Hillcrest Avenue. The second segment extended from Hillcrest Avenue Interchange to the eastern project limit. TYLI developed final PS&E, provided for the replacement of SR4 undercrossings at "A" Street and Cavallo Road, the overcrossing at Hillcrest Avenue and the Roosevelt Lane pedestrian undercrossing. The underpasses for eBART were designed at "A" Street and Cavallo Road. Fourteen retaining walls and twelve sound walls were also designed for this project. TYLI's work also included new signals, signal modifications, temporary signals, emergency vehicle preemption, changeable message signs, traffic operation system, street and safety lighting, and pedestrian undercrossing lighting.	Contra Costa Transportation Authority 2999 Oak Road, Suite 100 Walnut Creek, CA 94597 Ms. Susan Miller Director of Projects (925)407-0121	Year of completion: 2012 Construction Cost: $125M Key Personnel: Keith Rhodes, *Project Manager/Project Engineer*; Elizabeth Wiecha, *Principal-In-Charge*; Chin Dang, *Civil Engineer*
	**SR 49 Feasibility Study | Placer County, CA** TYLI was the prime engineer for the State Route 49 Realignment Study to explore alternative alignments of a 14-mile stretch of SR 49 between Coloma and El Dorado. The Study was to demonstrate feasible transportation solutions that fulfill the project goals and objectives of all parties involved. It addressed the inadequacies of the current alignment of SR 49 that contains a number of physical constraints such as sharp curves, steep grades, and little to no shoulders for safe passage of pedestrians and bicyclists. The Study also addressed impacts to traffic operations and mobility resulting from increased traffic demands from county growth and recreational use. The alternatives studied were evaluated on their ability to improve interregional and regional conditions on the state and regional transportation system by improving traffic operations, which will reduce travel times and the total vehicle-hours traveled in the corridor during peak commute times. The Study involved extensive coordination with Caltrans, El Dorado County Transportation Commission, El Dorado County Department of Transportation, City of Placerville, and the public. TYLI effectively and efficiently developed a three-tiered screening criteria and screening process used to select three feasible alternatives from among 52 potential alternatives. In an effort to involve a broad range of potentially affected interests, a Stakeholder Advisory Committee (SAC) was formulated consisting of 22 interest groups and entities to function as representatives of the affected communities, businesses, and other special interests groups.	El Dorado County Transportation Commission 2828 Easy Street, Suite 1 Placerville, CA 95667-3907 Mr. Dan Bolster Project Manager (530) 642-5262	Year of completion: 2010 Key Personnel: Keith Rhodes, *Project Manager*; Kevin Bewsey, Roadway *Engineer;* Isaac O'Neill, *Roadway Engineer;* Jack Gougé, *Environmental Coordinator*
	I-880 to State Route 238 East West Connector | Fremont and Union City, CA TYLI was the prime consultant for preliminary engineering, planning studies, Environmental Document, and final PS&E for the controversial East West Connector project, which will provide an improved link between I-880 and State Route 238. TYLI was also responsible for evaluating comprehensive land-use and development potential for excess right-of-way and other publicly owned properties in and around the project area. This multi-faceted project included a combination of new roadways, improvements to existing roadways, flood relief facilities, and wetlands enhancements. The project also included a combination of new roadway along the preserved right-of-way, and widening of existing roadways and intersections. It also included three railroad underpasses to grade separate BART and UPRR from the new roadway, two crossings of Old Alameda Creek and a new bridge over the Alameda County Flood Control District channel, a new flood relief diversion large diameter drainage pipe, mitigation for impacts identified and approved in the environmental studies phase, land use and development planning. The project included context sensitive design, extensive risk management, and environmental and public involvement components. Responsible for inter-agency coordination with key stakeholders including Alameda County Flood Control District, Alameda County Water District, BART, Caltrans, cities of Fremont and Union City, UPRR, and resource agencies. Despite major unforeseen environmental issues, the environmental document was completed on schedule and within budget.	Alameda County Transportation Authority 1333 Broadway, Suite 300 Oakland, CA 94612 Mr. Art Dao Deputy Director (510) 267-6104	Year of completion: 2011 Construction Cost: $125M Key Personnel: Mike Bruz, *Project Manager;* Eva Lillie, *Deputy Project Manager*; Nabaz Saieed, *Project Engineer*; Chin Dang, *Design Engineer*
	I-580/Foothill Boulevard Interchange | Alameda County, CA TYLI is provided the City of Pleasanton environmental services, engineering design services, and preparation of construction bid documents for modification to the south side of the I-580/Foothill Road Interchange and, in particular, for improvements to the intersection of Foothill Road/Eastbound I-580 Ramps for safer pedestrian and bicyclist circulation. The project converted the existing cloverleaf interchange (Type L-10) to a partial cloverleaf (Type L-9). The project approval documents was prepared under the Caltrans Project approval process and include preparation of a Permit Engineering Evaluation Report (PEER) and a revalidation of the previous approved CEQA/NEPA environmental documents. The project provided needed improvements for traffic circulation and access in the area. The project will also improve circulation and safety for the large numbers of bicyclists and pedestrians using the San Ramon Road / Foothill Road corridor to access the mall and other business and recreational attractions in the surrounding areas.	City of Pleasanton 200 Old Bernal Avenue Pleasanton, CA 94566 Mr. Huy Ho Project Manager (925) 931-5663	Year of completion: 2011 Construction Cost: $1.9M Key Personnel: Brian Krcelic, *Project Manager;* Nabaz Saieed, *Project Engineer*; Snehalatha Pavuluri, *Design Engineer*

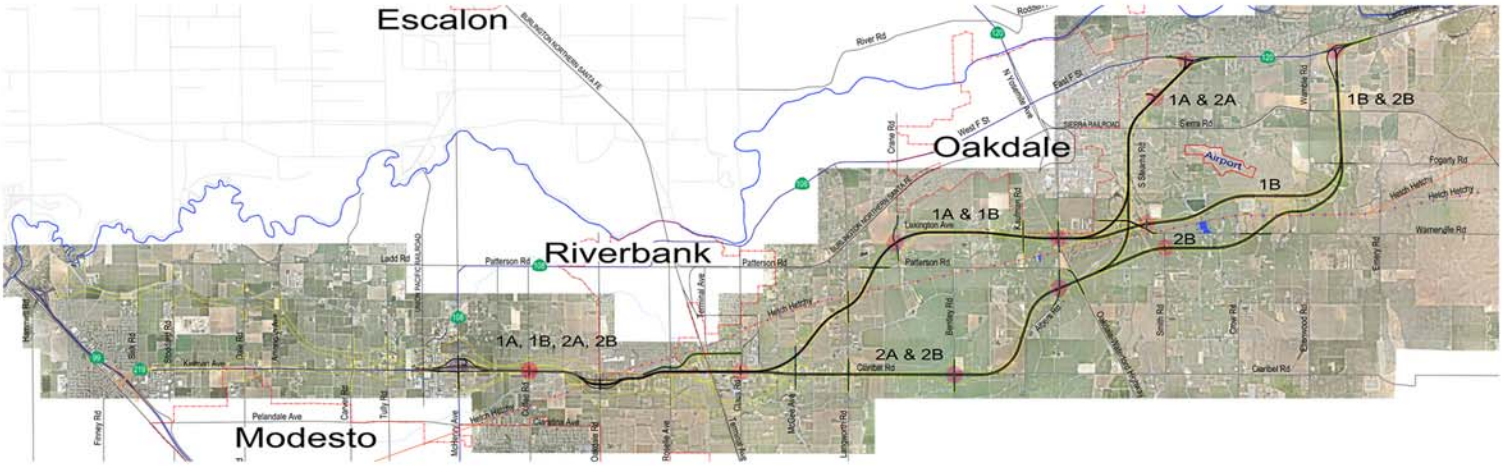
Staff Availability Chart

Personnel	Project Role	3rd Qtr 2013	4th Qtr 2013	1st Qtr 2014	2014 & on
T.Y. Lin International					
Elizabeth Wiecha	Principal-In-Charge/Risk Officer	50%	50%	50%	50%
Keith Rhodes	Project Manager	80%	100%	100%	100%
Craig Chatelain	Engineering Task Leader	100%	100%	100%	100%
Michael Bruz	Engineering QA Manager	50%	70%	80%	80%
Jack Gougé	Environmental QA Manager	100%	100%	100%	100%
Brian Krcelic	Lead Roadway Engineer	80%	80%	90%	90%
Brian Hansen	Lead Structures Engineer	80%	80%	80%	90%
Kevin Bewsey	Geometrician/Roadway Engineer	60%	80%	90%	90%
Eva Lillie	Roadway Engineer	50%	60%	80%	80%
Snehalatha Pavuluri	Roadway Engineer	40%	60%	60%	80%
Chin Dang	Roadway Engineer	50%	50%	60%	70%
Isaac O'Neill	Roadway Engineer	80%	90%	90%	90%
Chris Hodge	Structures Engineer	20%	30%	30%	30%
Michael Lewis	Structures Engineer	80%	80%	90%	90%
Michael Wolohan	Structures Engineer	35%	40%	50%	50%
Eric Winters	Railroad/PUC Coordination	30%	40%	50%	50%
Nabaz Saieed	Utility Coordination	35%	40%	50%	50%
Henry Hidalgo	CAD Manager	40%	60%	70%	70%
CH2M Hill					
Karin Lilienbecker	Environmental Task Leader4	40%	80%	80%	80%
Hans Strandgaard	Structures Engineer	35%	35%	35%	45%
Leslie Bonneau	Environmental Outreach	25%	35%	40%	50%
Lyna Black	Community Resources Manager	30%	60%	80%	80%
Matt Franck	Agriculture/Water Resources Manager	10%	50%	50%	80%
Kirstin Skadberg	Physical Environment Manager	30%	60%	80%	80%
Rob Rodland	Community Impacts	30%	50%	70%	70%
David Lundgren	Biological/Cultural Resources	30%	60%	80%	80%
Clint Helton	Cultural Resources	25%	40%	70%	80%
Hong Zuang	Air Quality	30%	50%	50%	80%
Julie Petersen	Geology & Soils	40%	60%	80%	80%
Matt Greenig	Visual Resources	40%	50%	80%	80%
Bender Rosenthal, Inc.					
Brenda Schimpf	Task Manager	40%	50%	50%	50%
Crawford & Associates					
Ben Crawford	Support Staff	70%	70%	70%	70%
Earth Mechanics, Inc.					
Hubert Law	Task Manager	50%	50%	50%	75%
Fehr & Peers					
Eddie Barrios	Task Manager	35%	35%	50%	75%
Harris Miller Miller & Hanson					
Christopher Menge	Task Manager	30%	40%	70%	80%
Judith Buethe Communications					
Judith Buethe	Task Manager	50%	50%	50%	50%
Live Oak Associates					
Rick Hopkins	Support Staff	35%	35%	35%	35%
North Star Engineering					
Kent Hysell	Task Manager	30%	40%	40%	40%
Tony De Melo	Task Manager	30%	30%	40%	40%
O'Dell Engineering					
Dylan Crawford	Support Staff	20%	20%	20%	20%
Orsee Design					
Tim Hiraoka	Task Manager	40%	50%	80%	80%
Value Management Strategies					
Eric Trimble	Task Manager	50%	50%	50%	50%
WRECO					
Analette Ochoa	Task Manager	40%	40%	40%	50%

T.Y. Lin International Team 2013 Hourly Rate Schedule

Key Staff	Classification	Hourly Rate
Elizabeth Wiecha	Principal Engineer	$295
Craig Chatelain	Supervising Senior Engineer	$270
Keith Rhodes	Transportation Services Manager	$250
Karin Lilienbecker	Principal Environmental Planner	$214
Brian Krcelic	Senior Civil Engineer	$250
Kevin Bewsey	Senior Civil Engineer	$190
Brian Hansen	Senior Bridge Engineer	$190
Hans Strandgaard	Principal Bridge Engineer	$214
Matt Frank	Senior Environmental Planner	$180
Lyna Black	Senior Environmental Planner	$123
Judith Buethe	Principal	$126.50
Leslie Bonneau	Communications Manager	$214

Hourly Billing Rates by Classification		
Firm	Classification	Hourly Rate
T. Y. Lin International	Supervising Senior Engineer	$235 - $270
T. Y. Lin International	Environmental Services Manager	$210
T. Y. Lin International	Senior Project Engineer	$165 - $195
T. Y. Lin International	Transportation/Bridge Engineer	$135 - $160
T. Y. Lin International	Senior CAD Technician	$101 - $135
Bender Rosenthal	Senior Project Manager	$175
CH2MHill	Principal Engineer/Scientist/Planner/Consultant	$214
CH2MHill	Senior Engineer/Scientist/Planner/Consultant 2	$180
CH2MHill	Senior Engineer/Scientist/Planner/Consultant 1	$152
CH2MHill	Engineer/Scientist/Planner/Consultant	$123
Crawford & Associates	Principal Geotechnical Engineer	$145
Earth Mechanics, Inc.	Principal Geotechnical Engineer	$170
Fehr & Peers	Senior Associate	$175 - $230
HMMH	Principal Consultant/Engineer/Scientist	$165-$250
Live Oaks Associates	Senior Conservation Biologist/Ecologist	$195
North Star Engineering	Senior Project Engineer	$150
O'Dell Engineering	Principal	$170
Orsee Design Associates	Senior Landscape Architect	$150
Value Management Strategies	CVS Team Leader	$229.12
WRECO	Supervising Engineer	$165 - $190
All Other Outside Direct Costs:	Photo/Film Processing/Messenger/ Delivery/Other Project Related Expenses	Actual Cost + 10%



T·Y·LIN INTERNATIONAL
3301 C Street, Building 100-M, Sacramento, CA 95112
916.366.6331 www.tylin.com