State Route 91/Adams Street Interchange Reconfiguration

Project Approval/Environmental Document Services

SCOPE OF WORK

Amendment #1

February 19, 2020

Changes to the original scope of work dated May 22, 2019, are identified below.

Project Description

This amendment addresses the following changes to the project description:

- A high-level feasibility of an oval roundabout ("Ovalbout") configuration has been requested by the City of Riverside as a result of the project's Value Analysis Study conducted in November 2019.

- If the Ovalbout appears feasible, a separate amendment will be needed to fully develop the concept into a build alternative and to analyze it for the PA/ED phase.

Task 1: Project Management, Coordination & Administration

Additional project management services will be needed in order to accommodate the feasibility analysis efforts and timeline.

Deliverables

- Meeting notices, agendas, handouts, and record of action items
- Meeting exhibits
- Adjusted project schedule
- Progress reports & invoices

Task 2: Engineering Development

Additional engineering and traffic analysis effort is required for the Ovalbout feasibility analysis.

2.15 Development of "Ovalbout" Concept and Feasibility Memorandum

2.15.1 Ovalbout Engineering Feasibility

Geometrics will be created based on English design standards as defined by Caltrans Highway Design Manual and Design Information Bulletins related to roundabouts, AASHTO design standards, and FHWA roundabout guidance, as applicable.

Concept layout plans and typical sections will be developed. These developments will reflect the proposed lane and shoulder widths. Approximate right-of-way impacts will be depicted on the concept layout plans. A high-level assessment of the Ovalbout construction staging concept will be completed to verify construction feasibility. Any non-standard features associated with the concept geometrics that can be identified at this stage will be identified on the concept layout.

A preliminary summary construction cost estimate will be prepared for the Ovalbout concept. This estimate will utilize the summary page format for the Caltrans PSR-PDS-level cost estimate, since this is a feasibility analysis.

Deliverables

- Ovalbout concept layouts and typical sections
- Ovalbout summary construction cost estimate

2.15.2 Ovalbout High-Level Traffic Analysis

Based on Caltrans' input and direction, an initial feasibility analysis will be prepared for an 8-legged Oval Roundabout configuration using the SIDRA software package. The analysis would document the overall intersection LOS, individual approach movement LOS, and queuing for both the am and pm peak hours.

The analysis would utilize the 2045 am and pm peak hour volumes contained in the PSR-PDS, since updated traffic forecasts have not yet been developed for the PA/ED phase. Assumptions will be made to determine the vehicle origins and destination patters through the roundabout. Recommendations will be developed for the appropriate lane configurations.

No microsimulation analysis or travel-demand forecasting is assumed for this effort. It is expected that any microsimulation analysis/travel-demand forecasting could be completed under a separate amendment if the Ovalbout concept is feasible and the Project Development Team desires that it be included as a build alternative.

The discussion of methodology, the results of the analysis, and configuration recommendations will be documented in the draft memorandum for review by the City and Caltrans. The memorandum will include all supporting output data.

It is anticipated that one traffic-focused meeting will be attended with Caltrans and the City, to discuss the results and refinements to the analysis. Consultant will respond to up to three rounds of City/Caltrans comments. The final Ovalbout Concept Traffic Memorandum will be submitted to Caltrans and the City.

Deliverables

- Ovalbout Concept Traffic Memorandum
- Responses to comments

2.15.3 Ovalbout Feasibility Summary Memorandum

A technical memorandum will be prepared to summarize the Ovalbout engineering feasibility findings. The memorandum will include supporting items produced in subtask 2.15.1, including concept layouts, typical sections, and summary cost estimates.

A summary of the Ovalbout concept traffic feasibility analysis will be included in the memorandum, and the traffic memorandum produced in subtask 2.15.1 will be included as an attachment to the Ovalbout Feasibility Summary Memorandum.

A risk assessment will be performed to determine any risks specific to the Ovalbout concept in addition to those already identified on the project risk register. These will be listed in the memorandum. If the Ovalbout is later added to the project as a build alternative, the project risk register will be updated at that time with the risks associated with the Ovalbout.

The draft Ovalbout Feasibility Summary Memorandum will be submitted to the City and Caltrans for review. One round of comments is expected. Responses to comments will be developed and incorporated into the final Ovalbout Feasibilty Summary Memorandum.

Deliverables

- Ovalbout Feasibility Summary Memorandum
- Responses to comments

ATTACHMENT 4

Date: 2/19/2020
Prime Consultant: T.Y. Lin International
Project Title: State Route 91/Adams Street Project Approval/Environmental Document (PA/ED)
Client Reference: RFP No. 1871
Fee Proposal for: Amendment 1

FEE PROPOSAL SUMMARY

Name/Classification	2019		2020		2021		2022		TOTAL PROJECT	
	Hours	Raw Labor	Hours	Raw Labor	Hours	Raw Labor	Hours	Raw Labor	Hours	Raw Labor
Fernon, Clark/Principal-in-Charge	0	$0	0	$0	0	$0	0	$0	0	$0
Chapman, Karen/Project Manager	0	$0	30	$3,316	0	$0	0	$0	30	$3,316
Glen, Alan/Team Advisor	0	$0	0	$0	0	$0	0	$0	0	$0
Gonzalez, Rodrigo/Team Advisor	0	$0	0	$0	0	$0	0	$0	0	$0
Ollo, Steve/QA/QC	0	$0	0	$0	0	$0	0	$0	0	$0
Lemke, Alicia/QA/QC-Environmental	0	$0	0	$0	0	$0	0	$0	0	$0
Johnson, Eric/Engineering Lead	0	$0	36	$2,686	0	$0	0	$0	36	$2,686
Diaz, Christina/PR/Roadway/Estimates/DSDD	0	$0	40	$1,966	0	$0	0	$0	40	$1,966
Boctor, Patrick/SWDR/Signing/Striping/Staging/TH	0	$0	0	$0	0	$0	0	$0	0	$0
Pan, Albert/Utilities	0	$0	0	$0	0	$0	0	$0	0	$0
Kaya, Stephanie/Utilities	0	$0	0	$0	0	$0	0	$0	0	$0
Shamble, Noel/Structure Aesthetics	0	$0	0	$0	0	$0	0	$0	0	$0
Dulor, Stephane/Structures Manager	0	$0	0	$0	0	$0	0	$0	0	$0
Sr. Bridge Engineer	0	$0	0	$0	0	$0	0	$0	0	$0
Baek, Seunghoon/Bridge Engineer	0	$0	0	$0	0	$0	0	$0	0	$0
Engineer I	0	$0	80	$2,701	0	$0	0	$0	80	$2,701
CADD Technician	0	$0	40	$1,802	0	$0	0	$0	40	$1,802
TOTALS	**0**	**$0**	**226**	**$12,471**	**0**	**$0**	**0**	**$0**	**226**	**$12,471**

		RAW LABOR:	$12,471
		OVERHEAD:	$20,066
		RAW LABOR + OVERHEAD:	**$32,537**
		10% FIXED FEE:	$3,254
		SUBTOTAL:	**$35,791**
		SUBCONSULTANT/VENDOR SERVICES:	**$16,835**
	Civil Works (DBE)	$0	
	CPSI	$0	
	David Evans & Associates	$0	
	Earth Mechanics, Inc. (DBE)	$0	
	ICF	$0	
	Iteris	$16,835	
	Laurel Civil & Environmental Consultants (DBE)	$0	
	Optitrans (DBE)	$0	
	Procura360 (DBE)	$0	
DBE %age	Psomas	$0	
0.0%	WRECO (DBE)	$0	
		0.298% FCCM:	**$37**
		OTHER DIRECT COSTS:	**$232**
		TOTAL BUDGET:	**$52,895**

ATTACHMENT 4

Date: 2/19/2020
Prime Consultant: T.Y. Lin International
Project Title: State Route 91/Adams Street Project Approval/Environmental Document (PA/ED)
Client Reference: RFP No. 1871

Task/Subtask	Description	Estimated Labor Hours--2020																		Hours	Raw Labor Amount
		Fernon, Clark Principal-in-Charge	Chapman, Karen Project Manager	Glen, Alan Team Advisor	Gonzalez, Rodrigo Team Advisor	Ollo, Steve QA/QC	Lemke, Alicia QA/QC-Environmental	Johnson, Eric Engineering Lead	Diaz, Christina PR/Roadway/ Estimates/DSDD	Boctor, Patrick SWDR/Signing/ Striping/Staging/TH	Pan, Albert Utilities	Kaya, Stephanie Utilities	Shamble, Noel Structure Aesthetics	Dulor, Stephane Structures Manager	Sr. Bridge Engineer	Baek, Seunghoon Bridge Engineer	Engineer I	CADD Technician			
1.0	**Project Management**																				
1.1	Coordination & Administration		8					12												20	$1,780
1.2	Schedules		4																	4	$442
1.3	Progress Reports		2																	2	$221
1.4	Project Work Plan																			0	$0
	TASK SUBTOTAL:	0	14	0	0	0	0	12	0	0	0	0	0	0	0	0	0	0	0	26	$2,443
2.0	**Engineering Development**																				
2.1	Data Collection/Permit Applications																			0	$0
2.2	Aerial Topographic Mapping																			0	$0
2.3	Geometric Development																			0	$0
2.4	Value Analysis																			0	$0
2.5	Construction Staging/Traffic Handling																			0	$0
2.6	Structures Advance Planning Studies	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**$0**
2.7	Preliminary Geotechnical/Materials/Foundations Reports																			0	$0
2.8	Utilities																			0	$0
2.9	Right-of-Way Data Sheets																			0	$0
2.10	Drainage Report																			0	$0
2.11	Storm Water Data Report																			0	$0
2.12	Life Cycle Cost Analysis																			0	$0
2.13	Cost Estimates																			0	$0
2.14	Pump Station Evaluations																			0	$0
2.15	Development of "Ovalbout" Concept and Feasbility Memorandum		16					24	40								80	40		200	$10,028
	TASK SUBTOTAL:	0	16	0	0	0	0	24	40	0	0	0	0	0	0	0	80	40	0	200	$10,028
	Total Hours:	0	30	0	0	0	0	36	40	0	0	0	0	0	0	0	80	40	0	226	$12,471
	Raw Labor Rate:	$131.15	$110.54	$132.60	$97.14	$78.51	$69.57	$74.62	$49.15	$58.77	$74.64	$43.20	$71.54	$104.75	$62.23	$45.91	$33.76	$45.04	$36.77	$22.84	
	Raw Labor Subtotal:	$0.00	$3,316.25	$0.00	$0.00	$0.00	$0.00	$2,686.32	$1,966.02	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$2,700.67	$1,801.70	$0.00	$0.00	$12,471

RAW LABOR:	**$12,471**
Audited Overhead Rate: 160.90%	**OVERHEAD:** **$20,066**
RAW LABOR + OVERHEAD:	**$32,537**
10% FIXED FEE:	**$3,254**
SUBCONSULTANT/VENDOR SERVICES:	**$16,835**
FCCM: 0.298%	**FCCM:** **$37**
OTHER DIRECT COSTS:	**$232**
TOTAL BUDGET:	**$52,895**

SUBCONSULTANT/VENDOR SERVICES	Amount	%	DBE?
Civil Works		0.0%	Y
CPSI		0.0%	Y
David Evans & Associates		0.0%	N
Earth Mechanics, Inc.		0.0%	Y
ICF		0.0%	N
Iteris	$16,835	31.8%	N
Laurel Civil & Environmental Consultants		0.0%	Y
Optitrans		0.0%	Y
Procura360		0.0%	Y
Psomas		0.0%	N
WRECO		0.0%	Y
		0.0%	N
Subtotal - SUBCONSULTANT SERVICES:	**$16,835**	**31.8%**	
DBE Participation:	**$0**	**0.0%**	

OTHER DIRECT COSTS	Quant	Unit	Price	Amount
Reprographics		LS	$2,500.00	$0
Mileage	400	Miles	$0.58	$232
Shipping & Delivery		Each	$50.00	$0
				$0
				$0
				$0
				$0
OTHER DIRECT COSTS:				**$232**

Date: 2/18/2020
Prime Consultant: T.Y. Lin International
Subconsultant: Iteris
Project Title: AMENDMENT 1 State Route 91/Adams Street Project Approval/Environmental Document (PA/ED)
Client Reference: RFP No. 1871

Task/Subtask	Description	Estimated Labor Hours: Davidian, Viggen Vice President	Kaushik, Deepak Associate Vice President	Son, Ashley Associate Transportation Engineer	Chandrasekhar, Sowmya Engineer	Lindberg, Tyler Asst. Engineer	Eo, Jin Asst. Engineer	Last, First Classification Name	Last, First Classification Name	Last, First Classification Name	Last, First Classification Name	Last, First Classification Name	Last, First Classification Name	Last, First Classification Name	Last, First Classification Name	Last, First Classification Name	Hours	Raw Labor Amount
3.0	**Environmental Studies**																	
3.16	Traffic Study Feasibility for Ovalbout Concept																0	$0
3.16.1	Traffic Data Collection		2				2										4	$201
3.16.2	Year 2045 Traffic Analysis		8				16										24	$1,061
3.16.3	Documentation and Response to Comments	4	24				24										52	$2,844
3.16.4	Meetings		8														8	$549
	TASK SUBTOTAL:	4	42	0	0	0	42	0	0	0	0	0	0	0	0	0	88	$4,656
	Total Hours:	4	42	0	0	0	42	0	0	0	0	0	0	0	0	0	88	$4,656
	Raw Labor Rate:	$106.83	$68.68	$48.21	$47.61	$33.85	$32.00	$25.00	$25.00	$25.00	$25.00	$25.00	$25.00	$25.00	$25.00	$25.00		
	Raw Labor Subtotal:	$427.32	$2,884.63	$0.00	$0.00	$0.00	$1,344.03	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00		$4,656

SUBCONSULTANT/VENDOR SERVICES	Amount	%	DBE?
IDAX (O/D drone counts)	$1,200	7.1%	N
Sub 2	$0	0.0%	N
Sub 3	$0	0.0%	N
Sub 4	$0	0.0%	N
Sub 5	$0	0.0%	N
Sub 6	$0	0.0%	N
Sub 7	$0	0.0%	N
Sub 8	$0	0.0%	N
Sub 9	$0	0.0%	N
Sub 10	$0	0.0%	N
Sub 11	$0	0.0%	N
Sub 12	$0	0.0%	N
Subtotal - SUBCONSULTANT SERVICES:	**$1,200**	**7.1%**	
DBE Participation:	**$0**	**0.0%**	

OTHER DIRECT COSTS	Quant	Unit	Price	Amount
Reprographics	1	LS	$0.00	$0
Mileage	120	Miles	$0.58	$70
Shipping & Delivery		Each	$0.00	$0
				$0
				$0
				$0
				$0
		OTHER DIRECT COSTS:		**$70**

Audited Overhead Rate:	**203.91%**
RAW LABOR:	**$4,656**
OVERHEAD:	**$9,494**
RAW LABOR + OVERHEAD:	**$14,150**
10% FIXED FEE:	**$1,415**
SUBCONSULTANT/VENDOR SERVICES:	**$1,200**
OTHER DIRECT COSTS:	**$70**
TOTAL BUDGET	**$16,835**