

STAFF REPORT

SUBJECT: Professional Engineering Services for the Shared Autonomous Vehicle Mobility Hub on Central Parkway

FROM: Toan Tran, Director of Operations and Innovation

DATE: September 26, 2022

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**Action Requested**

Staff requests the Projects & Services Committee recommends the Board of Directors approve Resolution 36-2022, authorizing the Interim Executive Director to execute Task Order 1 between LAVTA and Kimley-Horn and Associates, Inc. (Kimley-Horn) for professional engineering services for the Shared Autonomous Vehicle (SAV) Mobility Hub on Central Parkway.

**Background/Discussion**

LAVTA in partnership with the City of Dublin has been pursuing a first/last mile connectivity solution in the vicinity of the East Dublin/ Pleasanton Bay Area Rapid Transit (BART) station. The proposed solution plans to use SAV transit shuttles along public streets in Dublin to connect the BART station and nearby business, residential, and commercial developments.

LAVTA is in the process of determining the best-suited location and design of an SAV Mobility Hub on the northern portion of the SAV route. This includes coordinating with the City of Dublin and the businesses and property owners given that the Hub would be located on both public and private properties. Since LAVTA already has on-call contracts with the firms from its engineering services bench, it has chosen Kimley-Horn to provide the engineering work on the Mobility Hub, due to Kimley-Horn's specialized experience with shelters and mobility hubs.

Kimley-Horn will provide a topographic survey of the proposed Mobility Hub location, coordination with utilities, and 100% of the PS&E documents for the design of the Mobility Hub, as well as coordination with LAVTA, City of Dublin, business and property owners, and LAVTA's other SAV consultants. Please refer to the Scope of Services in Task Order 1 (Attachment 2) for additional details on the proposed schedule, work, and deliverables to be provided for this project.

**Fiscal Impact**

The funding for this Task Order, for the not-to-exceed amount of \$160,816, will come primarily from Regional Measure 2 (\$150,000), with the remaining balance (\$10,816) being absorbed in our Transit Capital line item of the capital budget.

**Recommendation**

Staff recommends the Project & Services Committee refers Resolution 36-2022 to the Board of Directors, authorizing the Interim Executive Director to execute Task Order 1 between LAVTA and Kimley-Horn for professional engineering services for the Shared Autonomous Vehicle (SAV) Mobility Hub on Central Parkway, for a not-to-exceed amount of \$160,816.

**Attachment**

1. Attachment 1 – Resolution 36-2022 for Professional Engineering Services for the SAV Mobility Hub on Central Parkway
2. Attachment 2 – Contract Task Order 1 with Kimley-Horn for Professional Engineering Services for the SAV Mobility Hub on Central Parkway

**RESOLUTION NO. 36-2022**

**A RESOLUTION OF THE BOARD OF DIRECTORS  
OF THE LIVERMORE AMADOR VALLEY TRANSIT AUTHORITY  
AUTHORIZING THE INTERIM EXECUTIVE DIRECTOR TO EXECUTE  
CONTRACT TASK ORDER 1 WITH KIMLEY-HORN AND ASSOCIATES FOR  
PROFESSIONAL ENGINEERING SERVICES FOR THE SHARED  
AUTONOMOUS VEHICLE MOBILITY HUB ON CENTRAL PARKWAY**

**WHEREAS**, the Livermore Amador Valley Transit Authority (LAVTA) in partnership with the City of Dublin has been working on a Shared Autonomous Vehicle (SAV) first/last mile solution to connect East BART and the vicinity; and

**WHEREAS**, the next phase of the SAV Project include plans for a Mobility Hub on the northern portion of the SAV route; and

**WHEREAS**, Kimley-Horn and Associates, Inc. (Kimley-Horn) is on LAVTA's bench of engineering services and currently already has an on-call contract; and

**WHEREAS**, of the available firms on the bench, staff has determined that only Kimley-Horn has the necessary qualifications and experience with shelter and mobility hub engineering and design; and

**WHEREAS**, Kimley-Horn will provide a topographic survey of the proposed Mobility Hub location, coordination with utilities, and 100% of the PS&E documents for the design of the Mobility Hub, as well as coordination with LAVTA, City of Dublin, business and property owners, and LAVTA's other SAV consultants; and

**NOW, THEREFORE, BE IT RESOLVED** by the Board of Directors of the Livermore Amador Valley Transit Authority that the Interim Executive Director is authorized to execute Contract Task Order 1 with Kimley-Horn, for a not-to-exceed amount of \$160,816, for professional engineering services for the SAV Mobility Hub on Central Parkway.

**PASSED AND ADOPTED** by the governing body of the Livermore Amador Valley Transit Authority this 3<sup>rd</sup> day of October 2022.

BY \_\_\_\_\_  
David Haubert, Chair

ATTEST \_\_\_\_\_  
Tamara Edwards, Interim Executive Director



September 20, 2022

Toan Tran  
Director of Operations and Innovation  
Livermore Amador Valley Transit Authority  
1362 Rutan Drive, Suite 100  
Livermore, CA 94551

**Subject: Proposal to Provide Professional Engineering Services for the Shared Autonomous Vehicle (SAV) Mobility Hub on Central Parkway**

Dear Toan:

Kimley-Horn and Associates, Inc. (Kimley-Horn), is pleased to submit this proposal to provide professional engineering services for the Shared Autonomous Vehicle Mobility Hub on Central Parkway in Dublin. Attached is our detailed Scope of Service and Fee for this work.

We have approached this scope and fee with the understanding that the project will coincide with a parallel systems engineering effort. We have availability and are ready to begin work immediately upon receiving a notice to proceed from LAVTA.

Thank you for the opportunity to submit our proposal for this exciting project. If you have any questions, please do not hesitate to contact me at (510) 350-0217 (office), (510) 393-6232 (cell) or via email at [kevin.aguigui@kimley-horn.com](mailto:kevin.aguigui@kimley-horn.com).

Sincerely,  
**KIMLEY-HORN AND ASSOCIATES, INC.**

A handwritten signature in blue ink, appearing to read "Kevin Aguigui".

Kevin Aguigui, P.E., CSEP  
Senior Project Manager

Attachments

- Scope of Services
- Schedule
- Fee

## PROJECT UNDERSTANDING

LAVTA in partnership with the City of Dublin has been pursuing a first / last mile connectivity solution in the vicinity of the East Dublin/ Pleasanton Bay Area Rapid Transit (BART) station. The proposed solution plans to use Shared Autonomous Vehicle (SAV) transit shuttles along public streets in Dublin to connect the BART station and nearby business, residential, and commercial developments.

The primary goal for this project is to determine the best suited location and to design the new SAV Mobility Hub on the northern portion of the SAV route. This includes coordinating with the City of Dublin and the businesses and property owners given that the Hub would be located on both public and private properties.

LAVTA has developed an initial concept of the Mobility Hub that will be located at the BART station. It is our understanding that the hub on Central Parkway will be a scaled down version of the BART hub, but would also be modular and expandable as future services are added to the hub.

Separately, LAVTA is engaging a related Systems Engineering (SE) services for the SAV vehicle portion of the project. The SE planning services will support the deployment of technology and provisions of SAV services. Our team will work in collaboration with the systems engineering team directed by LAVTA to integrate any components or system requirements during the SE phase into our Mobility Hub design.

## SCOPE OF SERVICES

Kimley-Horn proposes the scope of services listed below for completing design services for the SAV Mobility Hub on Central Parkway in Dublin. We understand that LAVTA would like to advertise this project for construction to be completed in 2023. We assume Kimley-Horn will create preliminary engineering designs and detailed plans, technical specifications, and an estimate (PS&E) for this project. We assume that LAVTA will provide the front-end specifications (“boiler plate”) in a format that can be edited by Kimley-Horn.

### Task 1 - Project Management and Coordination

This task consists of the development and maintenance of the project schedule, work plan, document filing system, and monthly invoices. We anticipate one initial kick-off meeting with LAVTA to review the project goals, discuss the proposed project approach, potential design challenges, schedule, and deadlines. Up to three (3) meetings with LAVTA, LAVTA’s consultants and/or City of Dublin staff are included. Kimley-Horn will prepare meeting agendas for meetings and submit summarized meeting minutes to LAVTA within one week of each meeting.

It is assumed that LAVTA would coordinate directly with the private property owners for any outreach activities. Kimley-Horn would provide technical support for those activities.

Kimley-Horn will submit invoices LAVTA every month, which will include total time by staff, itemized expenses, and progress against total budget.

#### *Deliverables:*

- Monthly Invoices
- Project Schedule and Updates
- Meeting Agenda and Notes

## **Task 2 - Data Gathering**

The Kimley-Horn team will perform a detailed field reconnaissance at the proposed mobility hub location on Central Parkway gathering detailed information on-site.

The Kimley-Horn team will conduct a topographic survey of the site. Right of way will be resolved at this location, including any easements that the City may currently have.

The approximate limits of the topographic survey area will include Central Parkway to the south, the existing edge of the parking lot to the west, Park Place to the east and up to the furthest parking spaces to the north. Within this area, the survey will capture all surface features including, but not limited to the:

- Curb (face, back, beginning and end of curves, points of compound curvature, etc.)
- Sidewalk and curb ramps
- Gutter lip and flow line
- Top of pavement
- Above ground utilities (boxes, valves, irrigation facilities, street lights, manholes, etc.)
- Grade breaks
- Pavement striping
- Signs and structures
- Driveways
- Vegetation and trees (including trunk diameter)
- Fences (height and type)
- Invert elevations of all accessible storm drain manholes, sanitary sewer manholes, and curb inlets within survey limits.
- Valley Gutter including flow line

The survey limits will begin 20 feet beyond the curb return limits, and will be taken in minimum 10-ft increments along curb at the curb returns.

The following are additional assumptions for the survey.

- At no time shall traffic lanes be closed, unless approved by the City of Dublin
- Right of way will need to be resolved and clearly defined.
- Survey control information will be provided including locations and descriptions of existing survey monument(s) and/or local control(s) used.
- Acquiring additional right-of-way is not included in the scope

### *Deliverables:*

- Field photos
- Topographic survey
- Compiled assessor map information

## **Task 3 – Utility Coordination**

Kimley-Horn will submit utility information request letters to private and public utility companies including, but not limited to, Dublin San Ramon Services District (DSRSD), Pacific Gas & Electric (PG&E), various telecommunications companies, and other privately-owned utility companies with facilities located in the public right-of-way that may be affected by the project. The utility letters will be

used to obtain utility mapping from utility companies to develop a utility base map. A utility matrix will be created to track discussions and data received from the various utility agencies.

If needed, utility letters noting any utility conflicts that will require utilities to be relocated will be prepared at the 75% design stage and sent to LAVTA for review and approval. Once approved, Kimley-Horn will send the letters and two copies of the 75% plans to the utility companies for review and to indicate where there are conflicts with their utilities (existing and future).

Kimley-Horn will coordinate with PG&E for the electrical service required at the mobility hub. We will start this coordination process at the 75% design stage given this will likely be a long-lead coordination item. It is assumed that all PG&E application and engineering fees will be paid directly by LAVTA.

*Deliverables:*

- Utility Matrix
- Copies of Utility Letters

**Task 4 - Detailed Designs**

**Task 4.1 – Preliminary Engineering Design**

This task includes preparation of preliminary engineering and architectural design drawings as a layout and concept exhibit. We assume this is necessary to engage stakeholders and provide guidance leading into the basis of design. There will be no topography identified for this stage of the engineering drawings, but up to two layouts will be prepared for the mobility hub area. A preliminary estimate of construction costs will be prepared for the preliminary engineering designs.

*Deliverables:*

- Summary memorandum – Basis of Design
- Preliminary Engineering drawings

**Task 4.2 – Prepare 75% PS&E Documents**

Once comments are received on the preliminary engineering designs, we will prepare the 75% design documents. This includes the preparation of the plans, technical specifications, and opinions of probable construction cost. The design will incorporate any comments and changes from the preliminary engineering designs, and will include additional details including the hub shelter, new bus platform and bus pad, structural and foundation designs for amenities, sidewalk conforms to public and private sidewalks, electrical design, and minor drainage modifications.

For each design stage submittal, two (2) hard copy half-size sets (11"x17") of PS&E will be provided to LAVTA and the City of Dublin for review and comment. Documents will also be provided in electronic format (Microsoft Word and PDF).

Our scope of services and fee includes the following assumptions of sheet types and numbers.

- |                                   |         |
|-----------------------------------|---------|
| ● Cover sheet with Location Map   | 1 sheet |
| ● General Notes and Abbreviations | 1 sheet |
| ● Horizontal Control              | 1 sheet |
| ● Demo sheets                     | 1 sheet |
| ● Layout sheets                   | 1 sheet |

- Construction details (curb ramps, foundation details) 3 sheets
- Drainage and Utility Plan 1 sheet
- Signing and Striping 1 sheet
- Electrical, Lighting and Communications 3 sheets
- Architectural Sheets 4 sheets
- Architectural Details 2 sheets

Kimley-Horn will develop the standalone technical specifications, based on recent construction projects procured by LAVTA. Kimley-Horn will also prepare an opinion of probable construction cost.

We anticipate that LAVTA will provide one set of non-conflicting comments, including comments from the City of Dublin. If necessary, we will meet with LAVTA and the City of Dublin to resolve any crucial comments prior to completing the 95% design. We will also prepare a comments response table listing the comments and their responses.

*Deliverables:*

- 75% Design Plans, Technical Specifications and Estimate
- Comments response table

**Task 4.3 – Prepare 95% PS&E Documents**

Once comments are received on the 75% PS&E documents, we will prepare the 95% design documents. This includes the preparation of the plans, technical specifications, and opinions of probable construction cost. The design will incorporate any comments and changes from the preliminary engineering designs, and revise any of the details including the hub shelter, new bus platform and bus pad, structural and foundation designs for amenities, sidewalk conforms to public and private sidewalks, electrical/lighting/communications design, and minor drainage modifications.

Kimley-Horn will revise the technical specifications and will also update the opinion of probable construction cost.

We anticipate that LAVTA will provide one set of non-conflicting comments, including comments from the City of Dublin. If necessary, we will meet with LAVTA and the City of Dublin to resolve any crucial comments prior to moving forward with the 100% design. We will also prepare a comments response table listing the comments and their responses.

*Deliverables:*

- 95% Design Plans, Technical Specifications and Estimate
- Comments response table

**Task 4.4 – Prepare 100% (Final) PS&E Documents**

Once comments are received on the 95% PS&E documents, we will prepare the 100% design documents. The design documents will incorporate any comments and changes from the 95% designs, and will finalize the details of the hub shelter, the bus platform and pad, the structural and foundation designs, and sidewalk conforms to public and private sidewalks, electrical/lighting/communications design, and the drainage modifications.

Kimley-Horn will revise the technical specifications and include the front end (boilerplate). We will also update the opinion of probable construction cost.



*Deliverables:*

- 100% (Final, bid ready) Design Plans, Technical Specifications (including boilerplate) and Estimate
- Comments response table

**SCHEDULE**

The following sequence of tasks are proposed, to be performed in series, and beginning upon receiving a Notice to Proceed. We anticipate that we will be able to complete the final (bid ready) PS&E documents ready for advertise in approximately five months (22 weeks).

Activity	Timeline
Conduct field reconnaissance and topographic surveys	Within three weeks of NTP
Preliminary Engineering drawings	Within two weeks of completing topographic surveys
Stakeholder review (LAVTA, City of Dublin, property owners)	Two weeks
75% PS&E	Three weeks from receipt of comments on the preliminary engineering drawings
Stakeholder review (LAVTA, City of Dublin, property owners)	Three weeks
95% PS&E	Three weeks from receipt of comments on the 75% design
Stakeholder review (LAVTA, City of Dublin, property owners)	Three weeks
100% (Final) PS&E	Two weeks from receipt of comments on the 95% design

**FEE PROPOSAL**

We propose to perform the Scope of Services outlined above for a firm fixed price not to exceed \$160,816. The attached spreadsheet provides a detailed breakout of our fee.

The fee includes direct expenses for the project such as in-house duplicating, telephone, postage, and in-house plan printing. Other direct expenses including subconsultants, mileage, meals, and plan production are included as a direct expense line item.

Services other than those set forth in the Scope of Services shall constitute extra services. Extra services, shall be performed only with LAVTA's authorization.

	Kevin Aguigui PM	Antonino Genoese QA/QC	Sr. Professional I	John Pulliam Sr. Professional II	Professional Engineer II	Professional Engineer I	Analyst I	Project Support	Admin	Total Task Hours	Estimated Cost
	\$350.00	\$245.00	\$215.00	\$300.00	\$200.00	\$180.00	\$155.00	\$180.00	\$130.00		
TASK 1: PROJECT MANAGEMENT AND COORDINATION	20			16			4	4	4	48	\$13,660
1.1 Meetings	10			8			2	2	2	24	\$6,830
1.2 Project Coordination and Administration	10			8			2	2	2	24	\$6,830
TASK 2: DATA GATHERING					10	22	32	1	3	68	\$11,490
2.1 Field Reconnaissance					6	6	8		1	21	\$3,650
2.2 Base Mapping					4	8	16		1	29	\$4,850
2.3 PG&E Coordination						8	8	1	1	18	\$2,990
TASK 3: Utility Coordination					4		8			12	\$2,040
3.1 Utility Coordination					4		8			12	\$2,040
TASK 4: Design and Engineering	5	24	40	8	72	88	124		4	365	\$68,610
4.1 Prepare Preliminary Engineering Plans	2	6		2	8	16	32		1	67	\$12,340
4.2 Prepare 75% PS&E Documents	2	8	16	2	24	32	36		1	121	\$22,970
4.3 Prepare 95% PS&E Documents	1	8	16	2	32	24	48		1	132	\$24,640
4.4 Prepare 100% (Final) PS&E Documents		2	8	2	8	16	8		1	45	\$8,660
TOTAL HOURS	25	24	40	24	86	110	168	5	11	493	
SUBTOTAL (Kimley-Horn Labor)	\$8,750	\$5,880	\$8,600	\$7,200	\$17,200	\$19,800	\$26,040	\$900	\$1,430		\$95,800
	Subconsultant (Survey)										\$15,652
	Subconsultant (Shelter Design)										\$49,164
	Direct expenses (mileage, plan production )										\$200
	<b>TOTALCOST</b>										<b>\$160,816</b>