

Proposal for:

Citywide Traffic Signal Hardware Upgrades

HSIP Cycle 11 Project - HSIPL-5430(041)

City Project No. C08756

City of Cathedral City | May 3, 2024

Submitted By:

STC Traffic, Inc

Mailing and Business Address:

5973 Avenida Encinas, Suite 218

Carlsbad, CA 92008

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P: (760) 602-4290



Cathedral City



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A. Cover Letter

May 3, 2024



Attn: Andrew Lee
Assistant Civil Engineer
City of Cathedral City
68-700 Avenida Lalo Guerrero
Cathedral City, CA 92234

RE: Request for Proposals – Professional Engineering Design Services for HSIP Cycle 11 Project HSIPSL-5430(041) Citywide Traffic Signal Hardware Upgrades

STC Traffic, Inc. (STC) is pleased to submit our qualifications to the City of Cathedral City for Professional Engineering Design Services for HSIP Cycle 11 Project HSIPSL-5430(041) Citywide Traffic Signal Hardware Upgrades.

We love working for the City and collaborating with City staff. Not only does the City have a strong familiarity with our team, but City staff and in-house staff employed by the agency regularly rely on us for important jobs. We completed the City's Local Roadway Safety Plan (LRSP) and **prepared the grant application** for this project.

We understand the City's needs on this project—through previous studies, our staff have observed traffic operations and conducted safety evaluations and reviews at all 49 of the traffic signals in the project area. Additionally, we have prepared PS&E for traffic signal hardware upgrades, including backplates, on similar HSIP projects throughout Southern California, including for the Cities of Hemet, Jurupa Valley, and Temecula, to name a few.

Our core function is focused on delivering these types of project to the public. We do not stray from this mission. As the contact person for this RFP and authorized representative to execute an agreement with the City, we have read and complied with all terms and conditions of the RFP and acknowledge all addenda. We look forward to working with the City.

Sincerely,

A handwritten signature in blue ink that reads "Jason Stack".

Jason Stack, President
5973 Avenida Encinas, Suite 218
Carlsbad, CA 92008
(760) 602-4290, jason.stack@stctraffic.com

B. Statement of Qualifications

STC Traffic, Inc. has been providing professional traffic engineering services to municipal agencies in Southern California for over 17 years.

Our team is recognized for its ability to creatively solve problems arising from the most challenging traffic engineering projects.

We are comprised of professional engineers in traffic and civil engineering, traffic operations engineers, certified planners, certified IMSA signal technicians, ITS and systems and network engineers, and Public Works electricians/ inspectors. These are exactly the professionals that the City will need to deliver this HSIP project.

STC is structured as a full-service extension of City staff precisely so that our planners, designers, and ITS experts can address the City's immediate needs.

STC currently provides as-needed traffic engineering services to the City of Cathedral City. Our strong local and regional presence gives us the ability to deliver the range of services that the City requires on this project.

STC is a certified **Small Business Enterprise (SBE)**. The staff represented in our proposal are the staff that are going to be there for the City 100% of the time. Our staff is flexible working the hours necessary to make the deadline. We understand the critical nature of the consulting work we do. Our work is all about trust.

Guaranteed Availability

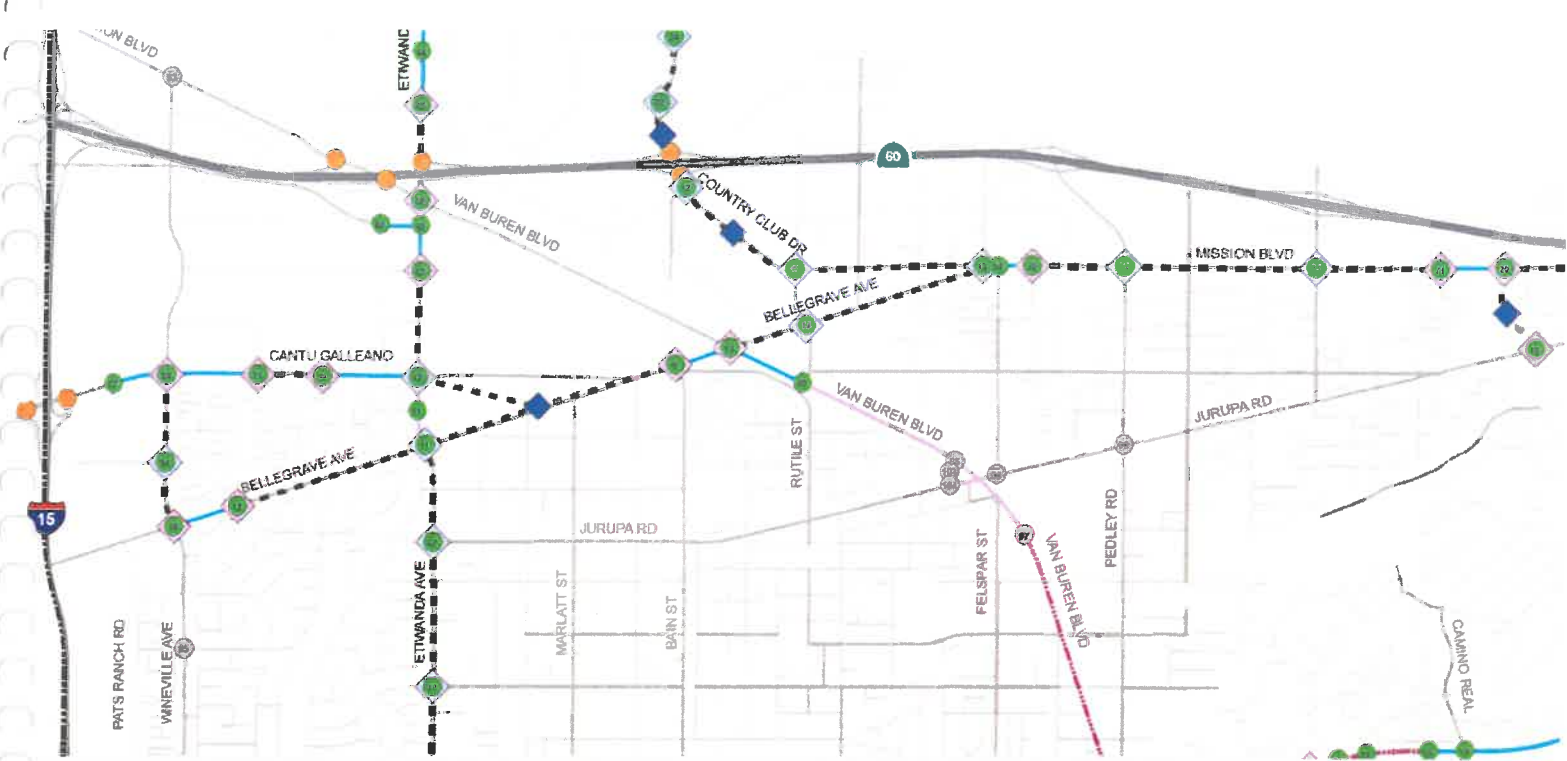


Our team currently supports the City of Cathedral City with on-call traffic engineering services and are regularly on site and/or in the vicinity. We will provide the same level of service and availability on this project. We are 100% committed to providing boots-on-the-ground and local resources whenever they are needed for this contract.

Seasoned Project Management



The STC Team will be led by Rob Blough, P.E., T.E., and supported by in-house technical staff in STC's planning, engineering, and systems and operations divisions. Rob has 25 years of experience as the City Traffic Engineer for the City of Encinitas and 5 years for the City of Menifee.



Citywide HSIP Traffic Signal Safety Upgrades | Jurupa Valley, CA

2023-Present

Project Role

Prime

Contract Value

NTE \$412,000

Key Staff

Myles Baidy, TE

Brett Hansen, IMSA I

Ashley Adamos, EIT

Client Reference

Octavio Duran Jr.

Assistant City Engineer

oduran@jurupavalley.org, (951) 332-6464 Ext. 242

This comprehensive project includes full evaluation of the City's existing traffic signals and traffic communications network, assessment of strategies to upgrade the City's existing traffic signals and communications infrastructure, recommendations for infrastructure upgrades, and PS&E for the traffic signal equipment/ construction phase. The project is a significant investment on the part of the City of Jurupa Valley in traffic signal systems and ITS infrastructure.

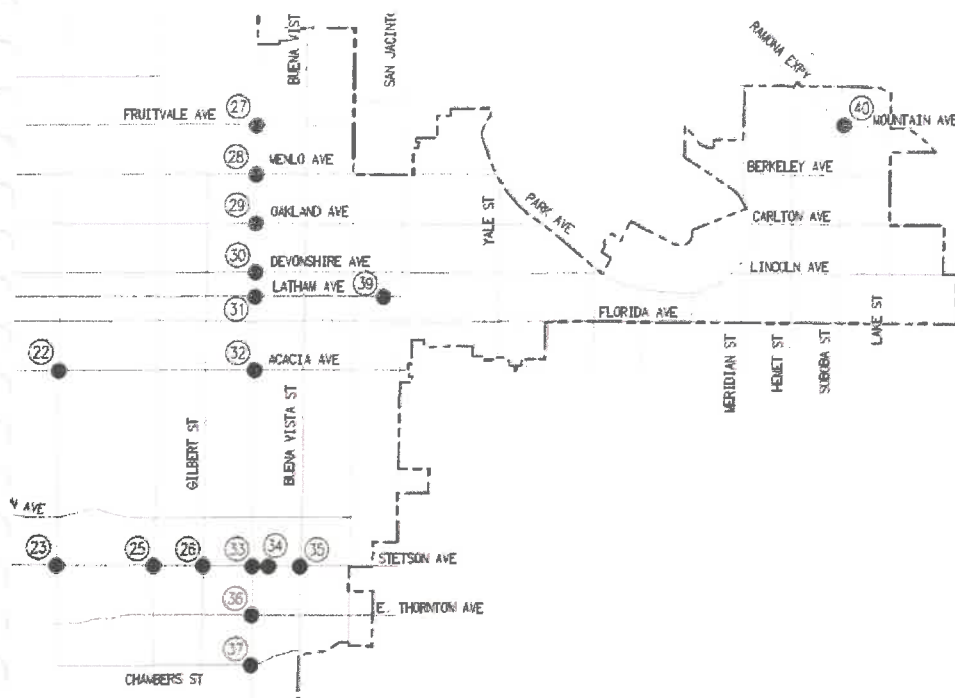
The City championed this initiative with a successful pursuit of HSIP Cycle 10 grant funding to improve citywide traffic signal system safety through improved traffic signal interconnect and signal timing, coordination, and operation; and upgraded **traffic signal heads with retroreflective back plates**.

This project was specifically identified as one of four high priority CIP projects in the City's Local Road Safety Plan (LRSP).

STC was selected for the project and has been providing key areas of technical delivery including a traffic signal communication and ITS master plan and design and engineering plans, specifications, and estimate, among other services.

Key Service Areas

HSIP Project Delivery
Retroreflective
Backplates
Traffic Signal Upgrades



No.	Intersection Crossing
1	Cawston Ave and Menlo Ave
2	Cawston Ave and Devonshire Ave
3	Cawston Ave and Stetson Ave
4	Cawston Ave and Mustang Way
5	Mustang Way and Warren Road
6	Sanderson Ave and Eaton Ave
7	Sanderson Ave and Fruitvale Ave
8	Sanderson Ave and Menlo Ave
9	Sanderson Ave and Devonshire Ave
10	Sanderson Ave and Acacia Ave
11	Sanderson Ave and Wentworth Ave
12	Sanderson Ave and Johnston Ave/Tanya Ave
13	Paige Plaza Way and Stetson Ave
14	Sanderson Ave and Stetson Ave
15	Sanderson Ave and Paige Plaza Way
16	Sanderson Ave and Thornton Ave
17	Sanderson Ave and Mustang Way
18	Sanderson Ave and Domenigoni Pkwy
19	Kirby St and Devonshire Ave

Citywide HSIP Traffic Signal Visibility Upgrades | Hemet, CA 2023-2024

Project Role

Prime

Contract Value

NTE \$50,000

Key Staff

Ivan Gonzalez

Brett Hansen, IMSA I

Client Reference

Jileen Ferris, P.E.

Deputy Public Works Director

JFerris@hemetca.gov, (951) 765-2360

The City of Hemet was recently awarded an HSIP grant to upgrade existing backplates with retroreflective backplates at 40 signalized intersections throughout the City's major arterials. A citywide systemic analysis identified a high incidence rate within the influence area of signalized intersections, and the City sought to reduce collision incidence at signalized intersections and improve safety for all motorists by replacing existing backplates with retroreflective backplates. STC prepared the plans, specifications, and estimates (PS&E) for the Highway Safety Improvement Program funded project.

Tasks consisted of field investigations, preliminary engineering, environmental documentation, final plan preparation, LAPM Construction Funding Allocation Request, and bid and construction support, nearly identical to the scope of services requested by the City of Cathedral City for this project.

Key Service Areas

HSIP Project Delivery
Retroreflective
Backplates
Grant Processing

Citywide HSIP Traffic Signal Upgrades | Temecula, CA

2023-Present

Project Role	Key Staff	Client Reference
Prime	Rob Blough, PE, TE	Nick Minicilli
Contract Value	Brett Hansen, IMSA I	Senior Traffic Engineer
NTE \$317,730	Kevin Stone, IMSA II	nick.minicilli@temeculaca.gov , (951) 693-3917

The City championed this initiative with the successful pursuit of HSIP Cycle 11 grant funding to improve citywide traffic signal system safety.

Our team authored the HSIP Cycle 11 grant for this project on behalf of the City and is currently delivering the project. The project expands the footprint of the City’s traffic systems and infrastructure improvements to bring these safety and operation benefits to additional roadways and intersections. The HSIP Cycle 11 grant funds a range of improvements including fiber and wireless traffic signal interconnect, state-of-the-art ATC control technology, new traffic signal coordination, safety lighting upgrades, **traffic signal and pedestrian head visibility and upgrades**, and signal rewiring.

Extensive HSIP Experience

Over the past 10 years, STC has completed dozens of contracts for HSIP grant-funded projects, which required coordination with DLA for project delivery. Our staff is versed in the LAPM, and we recognize the City needs STC to self-deliver our expertise and drive the agenda for this project.

We will execute deadlines, required reporting, and coordinate with internal and external parties. We will keep the City in the loop with regular communication and be conscious of the City’s time and our efficiency. We have done this time and time again on representative projects, and our track record in Riverside County, along with our intimate knowledge of the City of Cathedral City’s LRSP and underlying grant application, puts our team in a strong position to successfully deliver this project.

STC has delivered HSIP funded projects since HSIP Cycle 1 and has direct experience on HSIP funded projects for traffic signal upgrades and improvements.

For all of these projects, STC was intimately involved in the coordination and administrative efforts with Caltrans, Caltrans Local Assistance, and the representative local agencies. STC has recent experience producing HSIP grant applications applying the S2 (Improve Signal Hardware) countermeasure and has keen insight to the associated construction methods and costs. Additionally, STC has extensive experience delivering HSIP grant funded projects with state-only and federal funding sources.

C. Project Understanding and Approach

The City of Cathedral City was recently awarded an HSIP Cycle 11 Grant to upgrade existing traffic signal hardware at 49 signalized intersections throughout the City.

STC is very familiar with this project, **having prepared the City's Local Road Safety Plan in June 2021 and the HSIP Cycle 11 funding application in September 2022.** We understand the City's needs. During the previous studies, our staff observed traffic operations and conducted safety evaluations and reviews at all 49 traffic signals in the project area.

Local Road Safety Plans were established by Caltrans in 2019 to provide funding to local agencies for developing a framework for identifying, analyzing, and prioritizing roadway safety improvements.

In the City's LRSP, STC was able to identify this citywide traffic signal hardware upgrade (retroreflective backplates, LED safety lighting, IISNS) as a worthy project to receive an HSIP grant based on our analysis of crash data using the countermeasure toolbox and documenting a high benefit cost ratio (BCR).

In September 2022, STC further assisted the City by preparing the HSIP Cycle 11 citywide traffic signal hardware upgrades project application and the City was successfully awarded the grant for this project.

STC models our company structure after a municipal Public Works/Engineering Division. We are former City Traffic Engineers and extensions of staff in our role as consultants; we operate and maintain TMCs and systems; we have been foreman for electrical contractors in traffic signal construction and maintenance; we have managed the municipal Public Works Electrical Division; and, we have worked for traffic signal system suppliers and manufacturers.

We are unique when compared to other consultants in that our staff have extensive experience in projects that involve traffic signal hardware and equipment, installation methods and procedures, and maintenance considerations. We only recommend products that provide the best benefit to the City.

Various case studies have proven that signal heads with retroreflective borders are a cost-effective strategy to reduce crashes within the influence of signalized intersections. Signal heads with retroreflective borders increase visibility during daytime and nighttime conditions as well as during nighttime power outages, and aid drivers' advance perception of the upcoming intersections.

STC has prepared several PS&E traffic signal hardware upgrades, including backplates, on similar HSIP projects throughout Southern California (**See Section B**).

STC typically recommends replacement of older faded or non-standard backplates with new yellow retroreflective backplates. Other methods that will be considered include retroreflective tape on existing backplates, special manufactured yellow retroreflective metal strips riveted to the existing backplates, or replacement of the non-standard signal head.

These options are typically reserved for locations with an older signal head where the size and shape of the signal head is not compatible. STC also recommends using louvered backplates for all new replacements due to the extreme wind conditions in this area.

STC has prepared several PS&E traffic signal hardware upgrades, including backplates, on similar HSIP projects throughout Southern California. During field reviews, STC will document the brand, quantity, and type of signal head. Shown below is a sample table from a field review documenting signal head type for each quadrant of the intersection.

STC will also prepare PS&E to replace the traffic signal safety lighting with LED safety lighting and replace the existing street name signs with new IISNS that are mounted on a straight arm bar. It is our understanding that the City has been using the IISNS standard from the City of Rancho Mirage Standard Detail 601B and LED luminaires by Leotek LED E-Cobra EC3-10M2-MV-NW-3-GY-700-WL (9350 Lumens).

Feature Project

Citywide HSIP Traffic Signal Visibility Upgrades | Hemet, CA

During field reviews, STC will document the brand, quantity, and type of signal head. Shown below is a sample table from a field review in the City of Hemet documenting signal head type for each quadrant of the intersection.

No.	Intersection Crossing	Intersection Signal Head Summary Table																			
		Northwest				Northeast				Southwest				Southeast				Totals			
		3	4	5	SD	3	4	5	SD	3	4	5	SD	3	4	5	SD	3	4	5	SD
1	Cawston Ave and Menlo Ave	5	0	0	0	5	0	0	0	5	0	0	0	5	0	0	0	20	0	0	0
2	Cawston Ave and Devonshire Ave	3	0	0	0	3	0	0	0	3	0	0	0	3	0	0	0	12	0	0	0
3	Cawston Ave and Stetson Ave	4	0	0	0	4	0	0	0	5	0	0	0	4	0	0	0	17	0	0	0
4	Cawston Ave and Mustang Way	5	0	0	0	5	0	0	0	5	0	0	0	5	0	0	0	20	0	0	0
5	Mustang Way and Warren Road	3	0	0	0	3	0	0	0	4	0	0	0	2	0	0	0	12	0	0	0
6	Sanderson Ave and Eaton Ave	4	0	0	0	4	0	0	0	4	0	0	0	4	0	0	0	16	0	0	0
7	Sanderson Ave and Fruitvale Ave	4	0	0	0	5	0	0	0	5	0	0	0	4	0	0	0	18	0	0	0
8	Sanderson Ave and Menlo Ave	4	0	0	0	4	0	0	0	4	0	0	0	4	0	0	0	16	0	0	0
9	Sanderson Ave and Devonshire Ave	4	0	0	0	4	0	0	0	4	0	0	0	4	0	0	0	16	0	0	0
10	Sanderson Ave and Acacia Ave	4	0	0	0	4	0	0	0	4	0	0	0	4	0	0	0	16	0	0	0
11	Sanderson Ave and Wentworth Ave	3	0	0	0	5	0	0	0	3	0	0	0	0	0	0	0	12	0	0	0
12	Sanderson Ave and Johnston Ave/Tanya #	3	0	0	1	4	0	1	0	4	0	1	0	2	0	0	1	13	0	2	2
13	Paige Plaza Way and Stetson Ave	2	0	0	1	1	1	1	0	1	0	1	0	2	0	1	0	6	1	3	1
14	Sanderson Ave and Stetson Ave	5	0	0	0	4	0	1	0	5	0	0	0	4	0	1	0	18	0	2	0
15	Sanderson Ave and Paige Plaza Way	1	0	1	0	2	0	0	1	2	0	1	0	1	1	1	0	6	1	3	1

A sample of how the IISNS could look is shown in the photo below of Bob Hope in the City of Rancho Mirage.

STC will work with the City to develop its own IISNS standard with its own City logo if desired. The IISNS that are mounted on the straight arm should be more durable in the high wind desert conditions and provide better visibility of the intersection.

STC is very familiar with these standards as they are used by the County of Riverside. The plans for these hardware devices will be in tabular form and identify the existing and proposed hardware with locations, types, and quantities.

New yellow retroreflective backplates will replace faded backplates and help drivers better see the signal heads.



Missing street name sign in Cathedral City compared with internally illuminated street name sign on straight mast arm in Rancho Mirage.

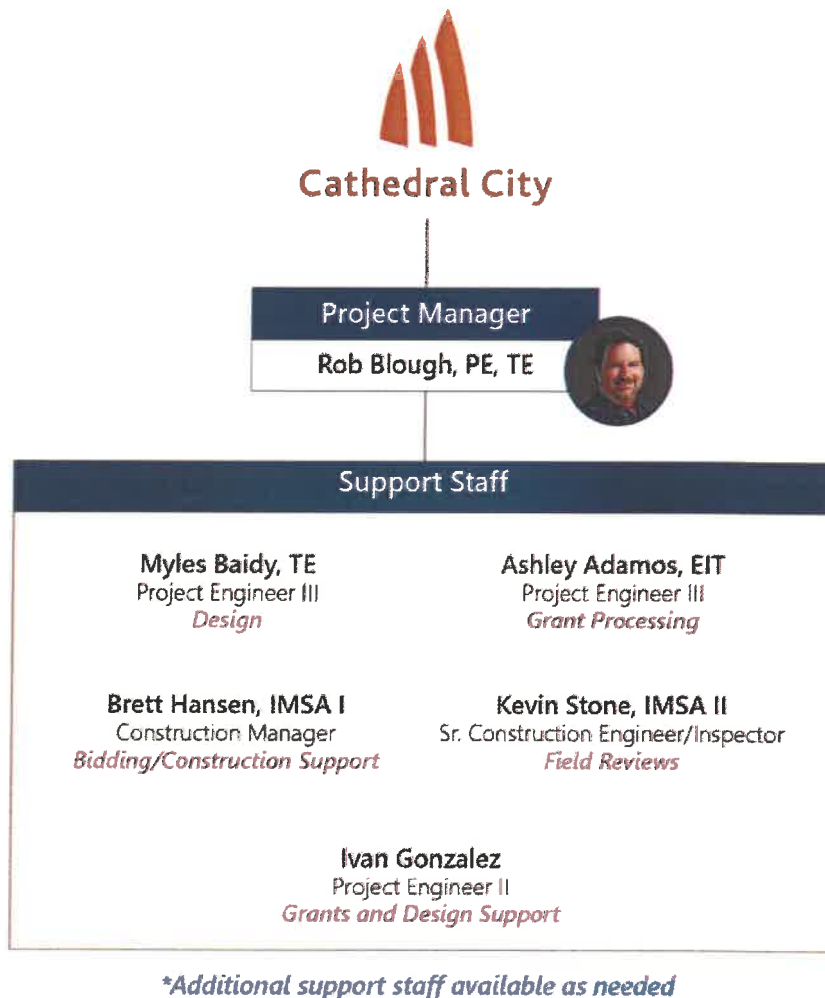


Blue internally illuminated street name sign in Cathedral City with low visibility and high weathering. Older high pressure sodium safety lighting will also be changed out.

Project Management and Org Chart

STC's Organizational Chart for the Project is shown below—resumes for key staff are included in Appendix 1.

Our foremost approach to meeting the City's needs for this project is to provide the highest-quality staff. STC is modeled in the image of the municipal public works traffic division. We are comprised of professional engineers (traffic/civil), professional traffic operations engineers, certified signal technicians (up to IMSA Level III), ITS systems and network engineers, and public works electricians and inspectors—the team proposed for this Project is the same team that has delivered traffic signal hardware upgrades, including backplates, on similar HSIP projects in the Cities of Jurupa Valley and Hemet. This will give the City confidence in our ability to deliver.





Rob Blough, PE, TE

PROJECT MANAGER

Rob has 25 years of experience as the City Traffic Engineer for the City of Encinitas and five years for the City of Menifee. He often functions as the City Traffic Engineer in many of STC's on-call contracts throughout Southern California. During his 30+ year government career as City Traffic Engineer for two unique cities, Rob gained the knowledge of how local governments operate, both in a high-growth developing City like Menifee (No. 1 fastest growth City in California 2017-2022), and in a City with heavy public participation like Encinitas that prioritized maintaining its community character through addressing neighborhood traffic issues.

Rob is a hands-on traffic engineer that understands how to work with the public, elected officials, citizen groups, and other public agencies. He has both the technical knowledge and insight to address complex traffic issues, identify problems, develop solutions and alternatives, and present results both in writing and orally to citizens, traffic commissions, planning commissions, and City Councils.

While City Traffic Engineer with the City of Encinitas, he prepared over 1,000 technical reports and presented these reports in public meetings at over 300 Traffic Commission, Planning Commission, and City Council meetings and workshops. He understands what the City of Cathedral City needs in a traffic engineer and will provide the City with all traffic engineering functions due to his wealth of experience with any issue the City will typically experience. He has extensive experience in traffic signal design, signal timing, traffic operations, and trouble-shooting problems in the field, design of traffic calming, roundabouts, parking issues, streetscape projects, interchange projects, school traffic safety issues, striping plan design and field implementation, traffic control plan review, creating work orders, and working with contractors, public works inspectors, and street maintenance.



Ashley Adamos, EIT

GRANT PROCESSING

Ashley has over 10 years of specialized experience developing HSIP grants and LRSPs, including the LRSP for the City of Cathedral City. She is STC's resident "grant guru" and has prepared grant applications for the HSIP, ATP, Safe Routes to School (SRTS), and Smart Growth programs. She has prepared over 50 grant applications for nine different agencies and has achieved \$30M+ in grant funding for roadway safety projects. She has extensive experience in all project phases including production of evaluations, studies, grant applications, PS&E, and record drawings for various HSIP projects and will be able to support the City with all areas of project delivery.

D. Scope of Work Program

The detailed Scope of Work presented below summarizes our knowledge of conditions in the project area, details of the work scope required and our approach to the design effort to ensure quality, accuracy, and ultimate compliance with the project objectives.

Task 1.0. Project Management/ Administration

STC's Project Manager, Rob Blough, PE, TE, will coordinate the day-to-day activities for the duration of the project and serve as the primary point of contact. Following the Notice to Proceed (NTP), Mr. Blough will schedule a project kick-off meeting with City staff and the project team to discuss the project objectives, schedule, scope, and City policies and procedures.

STC will develop and maintain a project schedule to achieve Caltrans approval prior to the construction funding approval deadline. Mr. Blough will also coordinate progress meetings to discuss design issues, any potential modifications to the scope, action items, and next steps.

STC will prepare and email meeting agendas to City staff in advance of the meetings and email meeting minutes within five (5) days after each meeting. STC will submit a progress report with invoices to the City in an organized format and with sufficient detail and backup documentation to clearly identify personnel, hours worked, and tasks completed. STC will control all project documents and provide deliverables and final files to the City in electronic format and hard copy as requested.

STC will maintain project files and data in an organized, logical fashion, and will be able to promptly retrieve and distribute project information to the City in the event of an audit or Public Records Act (PRA) request for information.

STC will attend one City Council meeting to present the project for approval if desired by the City.

Task 1.0 Deliverables:

- Project Schedule and Updates
- Monthly Progress Reports
- Meeting Agendas and Minutes
- Attend City Council Meeting (x1)

Task 2.0 Field Work/Preliminary Plans/ Inventory/Standards

Task 2.1 Field Investigations

STC will conduct field investigation of all 49 traffic signals to verify existing conditions. STC will evaluate the condition and type of each traffic signal head, safety lighting, and street name signs at all project intersections. STC will keep detailed notes and take photos of all equipment to keep as a record. If any defective or deficient signal heads, safety lighting, street name signs, or other traffic signal equipment are witnessed during field investigations the City will be notified immediately.

The field documentation will also be utilized for PS&E development. Importantly, personnel performing this task must have a detailed understanding of traffic signal hardware and the various manufacturers and equipment models and features to properly evaluate and identify and inventory equipment and conditions.

Our staff are former **public works electricians and IMSA certified technicians** and are qualified in all aspects of traffic signal systems.

Task 2.1 Deliverables:

- On-Site Photos
- Inventory

Task 2.2 Preliminary Engineering

STC will prepare a preliminary engineering table summarizing signal head backplate, LED safety lighting, and Internally Illuminated Street Name Sign (IISNS) improvements, at each project intersection along with a detailed engineers cost estimate of replacing these devices.

It has been STC's experience on similar HSIP signal hardware replacement projects that there are older traffic signal heads that are not compatible with the new yellow backplates and may require an alternate method of replacement. For these conditions, STC will develop alternate methods for replacement, such using yellow reflective tape, riveted metal reflective strips, or replacement of the old signal head to current industry standards.

Due to the high wind conditions in the City of Cathedral City, STC will also evaluate the need for using louvered backplates to reduce the structural load on the signal poles with mast arms. In addition to the backplates, STC will coordinate with the City to develop a City standard for wattage and fixture type for LED safety lighting.

STC will also coordinate with the City and develop standards for the IISNS. The IISNS can be mounted on a straight arm on the vertical signal pole and it will provide improved visibility of the intersection and is consistent with the County of Riverside standards.

STC has worked closely with contractors who perform this exact work during recent HSIP application preparations to understand the effort and cost associated with signal head back plate replacement, LED safety lighting, and IISNS. This stage of the project will identify any potential shortcomings in the available HSIP grant funding for this project and allow for initiation of proactive solutions if desired.

Task 2.2 Deliverables:

- Table Summary of Back Plate Replacements
- Table Summary of Safety Lighting Replacements
- Table Summary of IISNS Replacements
- Recommended Standards for Back Plates, LED Safety Lighting, and IISNS
- Engineers Cost Estimate

Task 3.0 Environmental Documentation

STC will prepare the required environmental documentation in compliance with Caltrans LAPM. State funded HSIP projects must meet the requirements of the California Environmental Quality Act (CEQA). The implementing agency is the lead agency under CEQA and is responsible for self-certifying CEQA compliance.

This project is anticipated to be categorically exempt from CEQA compliance. STC will prepare a Notice of Exemption (NOE) form provided by the State of California Governor's Office of Planning and Research (OPR). In addition, STC will assist in preparing the State of California Department of Fish and Wildlife (CDFW) Environmental Document Filing form. It is anticipated that the City will submit both forms to Riverside County Clerk for filing.

Task 3.0 Deliverables:

- CEQA NOE Form
- CDFW Environmental Document Filing Form

Task 4.0. Plans, Specifications, and Estimate (PS&E)

Task 4.1. Final Plan Preparation

STC will prepare plans sufficient for a contractor to bid and complete the replacement of traffic signal backplates, LED safety lighting, and Internally Illuminated Street Name Signs (IISNS) for the 49 project intersections.

The plans will include a project area map with each intersection location identified and a table summarizing the improvements at each intersection. We have found that plans developed in this approach are easily understood by the contractors.

The design will be developed in conformance with the latest City of Cathedral City requirements, Green Book and Caltrans Specifications and Standard Plans, AASHTO, California Manual on Uniform Traffic Control Devices (CA-MUTCD), and Riverside County Regional Standard Drawings.

Plans will be prepared utilizing AutoCAD software. All work identified on the plans will be approved and signed by a professional Civil Engineer registered in the State of California. Plans will be submitted at the 90%, and 100% design levels.

Task 4.1 Deliverables:

- Electronic Submittal (PDF) of 1-Title Sheet, 1-General Note and Area Map Sheet, 1-Signal Head Improvement Summary Sheet, 1-LED Safety Lighting Improvement Summary Sheet, and 1-Internally Illuminated Street Name Sign Summary Sheet
- Mylar Submittal of 1-Title Sheet, 1-General Note and Area Map Sheet, 1-Signal Head Improvement Summary Sheet, 1-LED Safety Lighting Improvement Summary Sheet, and 1-Internally Illuminated Street Name Sign Summary Sheet (if desired by the City)
- Final AutoCAD files

Task 4.2 Project Specifications and Bid Documents

STC will prepare project specifications utilizing the City's most current boilerplate bid package for state funded projects, special provisions, and the latest edition of the Greenbook for Public Works Construction. The bid package will be prepared via Microsoft Word and remain in the City's boilerplate font and format. Project specifications and bid documents will include the bid item descriptions, preparation of bid schedule, applicable special provisions, and references to technical specifications.

Task 4.2 Deliverables:

- Project Specifications and Bid Documents at the 90% and 100% Design Levels

Task 4.3 Engineer's Estimate of Probable Construction Cost

The STC Team will provide an itemized engineer's estimate of probable cost at 90% and 100% levels of design for all proposed improvements carried through to the final design stage of the project. The estimates will be detailed with unit prices and quantities for individual line items of work and specified equipment based on the historical cost index. Cost estimate details (items and descriptions) will be consistent with bid items and specification sections.

Task 4.3 Deliverables:

- Engineers Estimate and Backup Calculations at the 90% and 100% Design Levels

Task 5.0 Bidding Assistance

STC will provide support during advertisement including answering pre-bid questions and interpretations of the plans and specification either by email or phone. STC will provide responses to bidder's Requests for Information (RFIs), and prepare up to two addenda, if necessary.

STC will be available to answer questions by City staff and/or the bidders. STC will attend the pre-bid and pre-construction conferences, as requested.

Task 5.0 Deliverables:

- Responses to Bidder's Questions/RFIs and Addenda in PDF Format
- Attend Pre-Bid and Pre-Construction Meetings

Task 6.0 Construction Support

STC will provide design support during construction. This work will include responding to the contractor's RFIs, conferring with the City's construction manager or inspector regarding RFIs as appropriate, and reviewing shop drawings and material submittals. All bidding communication will be directed through the City for issuance to the contractor. STC will prepare design changes during construction as authorized, attend the pre-construction meeting, and be available to answer questions from City staff or the contractor.

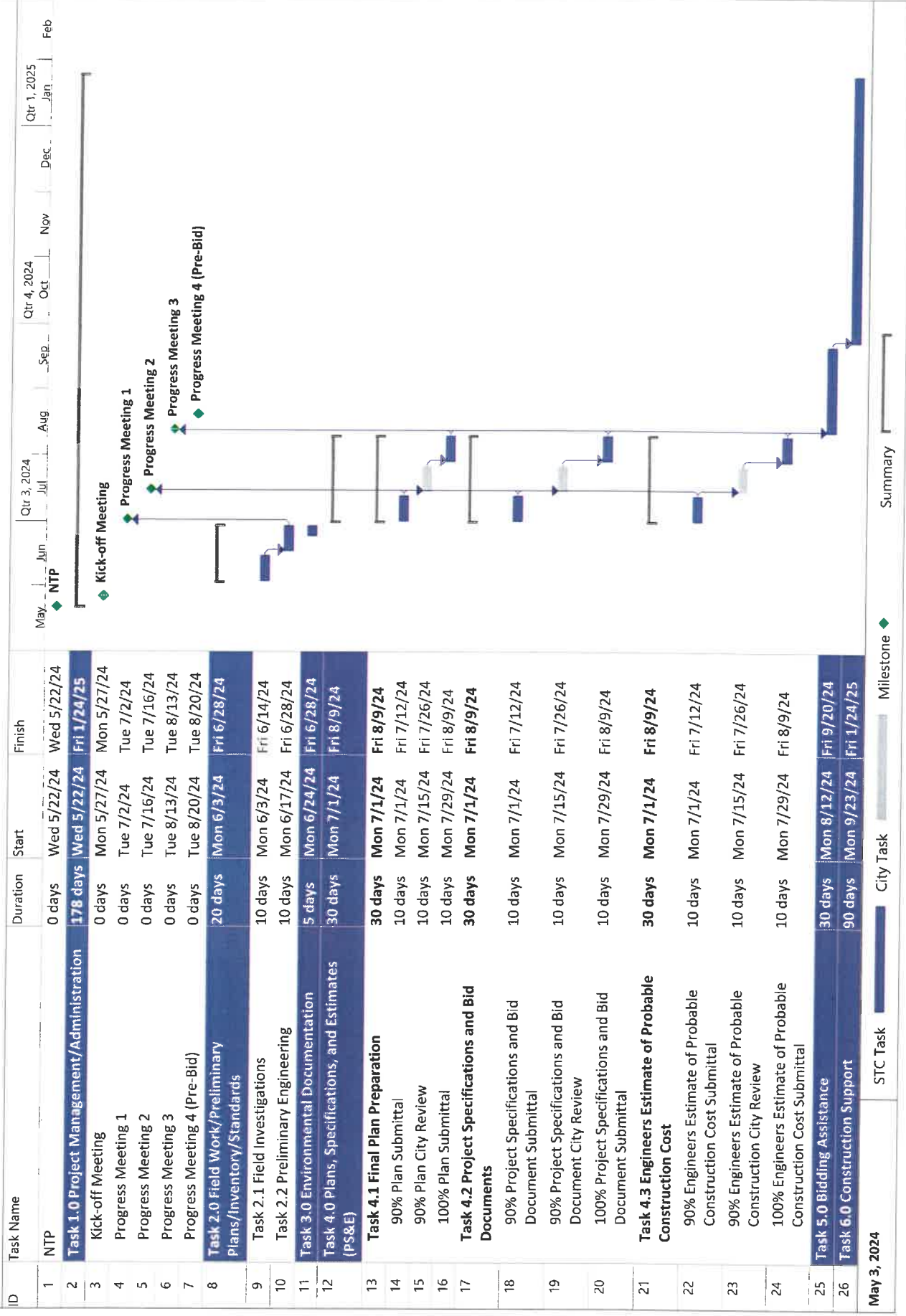
Task 6.0 Deliverables:

- Responses to Contractor's Submittals, Shop Drawings and RFIs in PDF Format

E. Project Schedule

The Project Schedule has been included on the following page.

City of Cathedral City
Citywide Traffic Signal Hardware Upgrades (City Project No. C08756)
Federal Project No. 5430(041)



Appendix 1

Resumes of Key Personnel



PROJECT MANAGER

Rob Blough^{PE, TE}

Relevant Experience

City of Menifee | City Traffic Engineer | 2018 - 2023

Responsible for all Traffic Engineering functions of one of the fastest developing cities in Southern California with over 100,000 citizens and consisting of 50 square miles. The City's rapid development has caused congestion issues, which he addressed directly by changing or fine-tuning the existing signal timing at all signals, converting all 100 traffic signal controllers from type 170 to 2070-ATC, implementing the timing changes in the field, and coordinating with school districts to implement special timing and coordination near schools to increase safety. He was also responsible for the design, operation, and signal timing of 25 new traffic signals constructed and modified during his tenure. Rob continues to support the City under a current on-call contract.

City of Cathedral City | On-Call Traffic Engineering Services | 2023-Present

Project Manager. Responsible for managing task orders issued by the City. The scope includes speed data analysis, intersection control studies, safety studies, plan review, traffic signal design, grant support, and other services. Tasks completed include development of grant applications for HSIP Cycle 11 and RCTC TDA Article 3 (SB 821) Bicycle and Pedestrian Facilities Grant Program.

City of Temecula | Streetlight & Traffic Signal Communications Upgrade | 2023-Present

Project Manager. Project improvements including fiber and wireless traffic signal interconnect, state-of-the-art ATC control technology, new traffic signal coordination, safety lighting upgrades, traffic signal and pedestrian head visibility and upgrades, and signal rewiring. Mr. Blough is overseeing all project elements.

City of Beaumont | On-Call Traffic Engineering Services | 2023-Present

Project Manager. Leading task orders for on-call contract to support Capital Improvement Projects, traffic operation and analysis, traffic safety improvements, and extension of staff services. Rob is currently managing the upgrade of the existing traffic signal at the intersection of Cougar Way and Beaumont Avenue. Scope of work includes coordination with the city and their traffic signal maintenance contractor, developing a Basis of Design, and traffic signal programming.

Additional Regional Experience

- ◆ City of Fontana, On-Call Traffic Engineering Services
- ◆ City of Hemet, On-Call Traffic Engineering Services
- ◆ City of Jurupa Valley, On-Call Traffic Engineering Services

Rob's professional experience includes serving 20 years as the City Traffic Engineer for the City of Encinitas and 5 years for the City of Menifee, where he managed all aspects of City transportation tasks, including working directly with maintenance staff in the field to troubleshoot signal issues and working with elected and appointed officials, citizens, community groups, Caltrans, and school districts. He currently manages on-call tasks for cities of Cathedral City, Beaumont, Menifee, and Jurupa Valley.

Years of Experience:

34

Education

B.S. Civil Engineering,
University of California,
Irvine

Professional Registrations

Professional Engineer
(Civil) CA, #60204

Professional Engineer
(Traffic) CA, #1829



PROJECT ENGINEER III

Myles Baidy^{TE}

Myles has seven years of experience in transportation planning and intersection operation analysis. His prior experience in Boston provides a fresh perspective on transportation solutions and innovation. His transportation planning experience includes detailed analysis of transportation impacts analysis, LOS, roadway safety audits, and complete street policies and programs. He also has experience in traffic signal design, intersection modeling, and community outreach. He supported the development of Cathedral City's Local Road Safety Plan, HSIP Cycle 11 grant applications, and provides on-call traffic engineering design services.

Years of Experience: 7

Education

B.S. Civil Engineering,
University of Massachusetts
Amherst

Professional Registrations

Professional Engineer
(Traffic) CA, #3094

Relevant Experience

City of Cathedral City | On-Call Traffic Engineering Services | 2022-Present

Project Engineer III. Responsible for on-call task orders issued by the city. The scope includes speed data analysis, intersection control studies, safety studies, plan review, traffic signal design, grant support, and other services. He supported the development of grant applications for HSIP Cycle 11 and RCTC TDA Article 3 (SB 821) Bicycle and Pedestrian Facilities Grant Program, providing feasibility analysis, cost estimates, and exhibits.

City of Jurupa Valley | HSIP Citywide Traffic Signal Coordination and Safety Upgrades | 2023-Present

Project Engineer III. Supported HSIP grant development for citywide traffic signal system safety improvements through improved traffic signal interconnect and signal timing, coordination, and operation and upgraded traffic signal heads with retroreflective back plates. Myles helped develop the traffic communications network report, which mapped out the City's existing traffic communications system, supported development of the implementation strategy, and is currently developing PS&E.

City of Menifee | On-Call Traffic Engineering Services | 2020-Present

Project Engineer III. Myles conducts a variety of planning and preliminary engineering studies to support City initiatives under the on-call services contract. Recent projects he has completed include developing a spreadsheet to track Riverside County projects that border the City and provide mitigation recommendations for projects that impact Menifee roadways, a signal/all-way stop warrant analysis for Menifee Road at Mapes Rd & Menifee Road, and conducting speed counts to determine speed limit thresholds citywide.

City of Jurupa Valley | On-Call Traffic Engineering Services | 2020-Present

Project Engineer III. Myles provides planning and engineering support for task orders issued by the City. Recent work includes preparation of various signing and striping plans, including traffic calming on Skyview Road. He supported development of the conceptual plan set that illustrated several alternatives for the intersection realignment treatments and the final plan set.

Additional Regional Experience

- ◆ City of Cathedral City, On-Call Traffic Engineering Services
- ◆ City of Jurupa Valley, On-Call Traffic Engineering Services
- ◆ City of Menifee, On-Call Traffic Engineering Services
- ◆ Riverside County Agencies, Local Roadway Safety Plans



PROJECT ENGINEER III

Ashley Adamos^{EIT}

Ashley is an engineer with 10 years of versatile experience in traffic engineering and transportation planning. With a strong understanding of local standards and federal funding requirements, she is a proven expert at aligning municipal goals with grant funding opportunities. She is STC's resident "grant guru" and has prepared grant applications for the HSIP, ATP, Safe Routes to School, and Smart Growth programs, achieving upwards of \$40M in grant funding for roadway safety projects. Ashley has been extensively involved in Cathedral City's grant programs.

Years of Experience:

10

Education

B.S. Civil Engineering, Cal Poly Pomona, 2011

UC Berkeley Institute of Transportation Studies, 2019

Professional Registrations

Engineer-In-Training (EIT), CA #144928

Relevant Experience

City of Cathedral City | On-Call Traffic Engineering Services | 2020-Present

Project Engineer III. Responsible for on-call task orders issued by the city. The scope includes speed data analysis, intersection control studies, safety studies, plan review, traffic signal design, grant support, and other services. Ashley led development of the City's Local Roadway Safety Plan, grant applications for HSIP Cycle 11, and RCTC TDA Article 3 (SB 821) Bicycle and Pedestrian Facilities Grant Program, which required extensive coordination with the City to identify priority projects.

City of Jurupa Valley | HSIP Citywide Traffic Signal Coordination and Safety Upgrades | 2023-Present

Project Engineer III. The project aims to implement citywide traffic signal system safety improvements through improved traffic signal interconnect and signal timing, coordination, and operation and upgraded traffic signal heads with retroreflective back plates. Ashley manages grant processing and led efforts for traffic communications network analysis, which includes documenting the existing system's functionality and deficiencies, assessment of bandwidth needs, implementation and prioritization strategies, and mapping of current, near-term, and future network architecture. She is currently supporting development of PS&E.

Various Agencies | HSIP Grant Applications | 2015-Present

Project Engineer III. Ashley has prepared 18 HSIP applications for 8 public agencies in San Diego and Riverside Counties resulting in over \$10.8 million in successful awards since HSIP Cycle 7 (2015). She is an expert in creating the most complete crash database possible by cross-referencing and combining data from the SWITRS and TIMS state databases, local Crossroads crash databases, and local collision reports by coordinating with police departments and local agency safety officers. She oversees data analysis, production of collision diagrams and crash summaries, application of LRSM countermeasures, benefit-cost ratio calculations, and responses to narrative grant application questions. 100% of the HSIP applications she has prepared were selected for approval.

Additional Regional Experience

- ◆ City of Eastvale, On-Call Traffic Engineering Services
- ◆ City of Moreno Valley, On-Call Traffic Engineering Services
- ◆ City of Temecula, On-Call Traffic Engineering Services
- ◆ Various Riverside County Agencies, Local Roadway Safety Plan & SSAR
- ◆ City of Eastvale, Limonite Traffic Signal Synchronization



CONSTRUCTION MANAGER

Brett Hansen ^{IMSA I}

Brett leads STC's construction engineering and construction management support services. He is well-versed in standard specifications and plans required by government agencies, skilled in field analysis, and has expertise in electrical and communications systems. He supports HSIP projects by providing construction support, developing technical specifications and cost estimates for bid packages, and onsite integration support. Brett has supported Cathedral City providing construction support for the Ramon Road signalized pedestrian crossing project.

Years of Experience:

13

Education

B.S. Civil Engineering
(mathematics minor),
California State University,
Chico

Certifications

IMSA Level 1 - Traffic Signal
Field Technician

Corning Fiber Installation
Certified

Relevant Experience

City of Hemet | HSIP Citywide Traffic Signal Visibility Upgrades | 2023-Present

Construction Manager. The City was awarded an HSIP grant to upgrade existing backplates with retroreflective backplates at 40 signalized intersections throughout the City's major arterials. Brett has overseen field investigations, field inventory, and is providing bid and construction support.

City of Jurupa Valley | HSIP Citywide Traffic Signal Coordination and Safety Upgrades | 2023-Present

Construction Manager. The project aims to implement citywide traffic signal system safety improvements through improved traffic signal interconnect and signal timing, coordination, and operation and upgraded traffic signal heads with retroreflective back plates. Brett developed preliminary cost estimates and will lead construction support services.

City of San Marcos | HSIP Citywide LED Safety Lighting Conversion | 2018-2019

Construction Manager. STC provided engineering services for the conversion of the City's safety lighting from low-pressure sodium to LED lighting technology. Because this was a federally funded project, STC performed market-based and field analysis to create a list of qualified product solutions. STC obtained the Citywide GIS inventory of safety lights and mapped all lights throughout the City with attributes and developed highly detailed technical specifications. Brett led construction support services and processing of as-built drawings.

City of National City | HSIP Citywide Safety Lighting Enhancements | 2019-2020

Construction Manager. STC provided engineering services for proposed lighting improvements after successfully securing HSIP funding for the project. The project aims to upgrade safety lighting to LED luminaries at 32 signalized intersections along nine major traffic corridors in National City. Brett oversaw field investigations to document and inventory existing safety lighting fixtures.

Additional Regional Experience

- ◆ City of Jurupa Valley, On-Call Traffic Engineering Services
- ◆ City of Temecula, On-Call Traffic Engineering Services
- ◆ City of Menifee, On-Call Traffic Engineering Services
- ◆ City of Lake Elsinore, On-Call Traffic Signal Operations
- ◆ RCTD, I-215/Scott Road Interchange Project



SR. CONSTRUCTION ENGINEER/INSPECTOR

Kevin Stone ^{IMSA II}

Relevant Experience

City of Jurupa Valley | HSIP Citywide Traffic Signal Coordination and Safety Upgrades | 2023-Present

Sr. Construction Engineer/Inspector. The project aims to implement citywide traffic signal system safety improvements through improved traffic signal interconnect and signal timing, coordination, and operation and upgraded traffic signal heads with retroreflective back plates. Kevin performed extensive field review and reviewed existing as-builts.

City of Temecula | Streetlight & Traffic Signal Communications Upgrade | 2023-Present

Sr. Construction Engineer/Inspector. Project improvements including fiber and wireless traffic signal interconnect, state-of-the-art ATC control technology, new traffic signal coordination, safety lighting upgrades, traffic signal and pedestrian head visibility and upgrades, and signal rewiring. Kevin performed extensive field review to verify existing conditions and equipment and revise as-builts.

City of San Bernardino | HSIP Signal Hardware Upgrades at 224 Signalized Intersections | 2022-2024

Sr. Construction Engineer/Inspector. Project will replace or install new equipment to the City's existing traffic signal system. Hardware upgrades include traffic signal heads, pedestrian signal heads, and pedestrian pushbuttons. Kevin was responsible for verifying contractor installed facilities and keeping a daily record of contractor activities.

Riverside County | On-Call Traffic Signal Services | 2000-2015

Signal Contractor. Prior to joining STC, Kevin serviced traffic signals throughout Riverside County, including Lake Elsinore, Murrieta, Perris, and Moreno Valley. The work he performed includes: Modifications of existing signals, communications, and inventory; supervising the removal of old equipment and the installation of new equipment; conducting interconnect runs; coordination with municipalities, contractors, and utilities; final inspections and punch list review.

Additional Regional Experience

- ◆ City of Fontana, On-Call Traffic Engineering Services
- ◆ City of Menifee, On-Call Traffic Engineering Services
- ◆ RCTD, Scott Road Interchange at I-215
- ◆ RCTD, Jurupa Road Grade Separation
- ◆ City of Eastvale, Limonite Avenue Corridor Synchronization Project

Kevin is a construction engineer/inspector with over 30 years of experience in constructing, installing, troubleshooting, repairing, and maintaining traffic signal systems and electrical systems. Prior to joining STC, Kevin served as the general foreman of maintenance for over 350 traffic signals and four traffic signal technicians in the Cities of Santee, El Cajon, La Mesa, Lemon Grove, Imperial Valley, and Camp Pendleton; served as an electrical foreman for 20 years; and served as lead traffic signal technician for the City of Oceanside with responsibility for on-call service 24/7 for over 160 traffic signals.

Years of Experience:

30

Certifications

IMSA Level 2 - Traffic Signal Field Technician

IMSA Work Zone Safety



PROJECT ENGINEER II

Ivan Gonzalez

Ivan is a Project Engineer with seven years of experience in traffic engineering design and traffic signal operations. He served as a traffic engineering intern with STC for three years while earning his degree. He is an expert in traffic counts and corridor travel time data collection and analysis, document control, and graphics production.

Years of Experience: 7

Education

B.S. Civil Engineering, San Diego State University, 2018

Affiliations

Institute of Transportation Engineers (ITE), Member

Relevant Experience

City of Cathedral City | On-Call Traffic Engineering Services | 2020-Present

Project Engineer II. Ivan has provided extensive support for the City's grant programs, including the Local Roadway Safety Plan, grant applications for HSIP Cycle 11, and RCTC TDA Article 3 (SB 821) Bicycle and Pedestrian Facilities Grant Program. The City was recently awarded a HSIP Grant to construct a HAWK signal to address pedestrian and bicyclist safety issues. Ivan supported the HSIP scope change to a standard pedestrian signal operations with 3-section signal heads at an alternative location. He was responsible for coordination with Caltrans, CEQA Notice of Exemption, HSIP Analyzer and BCR recalculation, and collision diagram revisions for grant resubmittal. He continues to support follow-on phases of the project.

City of Hemet | Citywide Traffic Signal Visibility Upgrades | 2023-Present

Project Engineer II. The City was awarded an HSIP grant to upgrade existing backplates with retroreflective backplates at 40 signalized intersections throughout the City's major arterials. Ivan managed Caltrans forms processing.

City of Jurupa Valley | HSIP Citywide Traffic Signal Coordination and Safety Upgrades | 2023-Present

Project Engineer II. Project improvements including fiber and wireless traffic signal interconnect, state-of-the-art ATC control technology, new traffic signal coordination, safety lighting upgrades, traffic signal and pedestrian head visibility and upgrades, and signal rewiring. Ivan has been highly involved in every stage of the project from field reviews, traffic signal equipment analysis and documentation, and PS&E development.

City of Lake Elsinore | HSIP Cycle 8 Traffic Signals Improvement Project | 2019-2020

Project Engineer II. Ivan processed Caltrans forms in support of the project, consisting of installation of Iteris vantage vector hybrid units and APS push buttons. His work included completing PES forms and RFA forms for construction. When the location changed, he performed extensive field investigations.

Additional Regional Experience

- City of Menifee, On-Call Traffic Engineering Services
- City of Temecula, On-Call Traffic Engineering Services
- City of Lake Elsinore, On-Call Traffic Engineering Services
- City of Temecula, HSIP Fiber Optic Communications System Upgrade
- City of Temecula, Grants Administration Support

Appendix 2

Addendum No. 1



Cathedral City

DATE: April 26, 2024
TO: All Prospective Companies
RE: BID NO: B24-46E (C08756)– Response to Questions

ADDENDUM NUMBER 1

The following shall be considered as incorporated into the Request for Proposals for the above referenced project. Portions of the RFP Documents not specifically mentioned in this Addendum remain in force.

Prospective Companies are directed to make the following changes:

- **RESPONSE TO QUESTIONS**

Refer to Response to Questions (Addendum #1, Attachment 1).

The Consultant is hereby notified; Addendum No.1 must be acknowledged in the Work Proposal of the submitted Proposal Package. Failure to do so may result in the City designating said proposal as "Non-Responsive."

APPROVED:

Armando J. Garcia Baldizzone, P. E.
City Engineer

Attachments:

1. Response to Questions
2. HSIP Cycle 11 Grant Application

END OF ADDENDUM NUMBER 1

Jason Stack, President
STC Traffic, Inc.

5/1/2024

