



INFORMATIONAL MEMORANDUM

TO: **Transportation and Infrastructure Services Committee**
 FROM: **Hari Ponnekanti, Public Works Director/City Engineer**
 BY: **Adam Cox, Interim Traffic Engineer**
 CC: **Thomas McLeod, Mayor**
 DATE: **May 17, 2024**
 SUBJECT: **Traffic Signal Assessment and Repair Recommendation**

ISSUE

Authorization to award KPG Psomas, Inc. (KPG) with the Traffic Signal Assessment and Preventative Maintenance Program.

BACKGROUND

The City is responsible for 64 signalized intersections that require routine maintenance and occasional repairs in response to damaged infrastructure. Over the last several years, the City has lost most of its senior traffic personnel due to retirement as well as budget constraints preventing hiring of additional staff. This has resulted in a gap of experience for the maintenance and repairs of traffic signals and systems.

ANALYSIS

The assessment and inspection of the City’s traffic signals will provide a current condition of the infrastructure as well as provide future repair recommendations. The assessment then establishes a baseline condition and provides preventative maintenance recommendations to assist the life cycle of the signals and system.

FINANCIAL IMPACT

This award has been confirmed as an eligible expense and will be fully funded by American Rescue Plan Act (ARPA) funds.

	Cost		Funding
KPG Services	\$176,622.00	ARPA Funds	\$176,622.00

RECOMMENDATION

Council is being asked to approve the contract with KPG to perform a traffic signal assessment and forward this to the Consent Agenda at the June 3, 2024 Regular Meeting.

Attachments:

- Draft Budget - Signal Assessment and Preventative Maintenance Program
- Draft Scope - Signal Assessment and Preventative Maintenance Program



**EXHIBIT B1
PRIME CONSULTANT COST COMPUTATIONS**

Client:

City of Tukwila

Project Name:

Signal Assessment and Preventative Maintenance Program

KPG Psomas Inc. Project Number:

9XXX0X0X00

Date:

Mar-24

Task No.	Task Description	Labor Hour Estimate						Total Hours and Labor Cost Computations by Task		
		Principal	Engineering Manager I	Senior Engineer I	Design Engineer II	Senior CAD Technician	Senior Admin	Office Admin	Hours	Totals
		\$290.00	\$226.00	\$194.00	\$139.00	\$139.00	\$139.00	\$110.00		
Task 1 - Project Management										
1.1	Project Management and Administrative Services	4	8	8			4	8	32	\$ 5,956.00
1.2	Monthly Coordination Meetings		16	12					28	\$ 5,944.00
1.3	Internal Project Team Meetings		16	20					36	\$ 7,496.00
1.4	QA/QC Reviews		20	4					24	\$ 5,296.00
	Task Total	4	60	44	0	0	4	8	120	\$ 24,692.00
Task 2 - Existing Information and Inventory Collection										
2.1	Existing Data Collection (In Office)		16	24	40	20			100	\$ 16,612.00
2.2	Existing Data Collection (In Field - 2 hrs /Intersection)		4	8	136				148	\$ 21,360.00
2.3	TMC Inventory Collection		4	8	4				16	\$ 3,012.00
2.4	Follow up with Maintenance Department Representative		4	4	4				12	\$ 2,236.00
2.5	Information Collection from Suppliers		2	2	8				12	\$ 1,952.00
	Task Total	0	30	46	192	20	0	0	288	\$ 45,172.00
Task 3 - Existing Signal Assessment and Evaluation										
3.1	Summarize and Tabulate Information for Each Signalized Intersection		4	8	80				92	\$ 13,576.00
3.2	Evaluate Condition of Each Signalized Intersection		4	8	48				60	\$ 9,128.00
3.3	Evaluate Condition of Existing TMC		4	8	8				20	\$ 3,568.00
	Task Total	0	12	24	136	0	0	0	172	\$ 26,272.00
Task 4 - Implementation and Upgrade Plan										
4.1	Prepare Upgrade Plan		8	48	40				96	\$ 16,680.00
4.2	Prepare Implementation Plan		8	60	40				108	\$ 19,008.00
4.3	Cost Analysis		8	40	40				88	\$ 15,128.00
4.4	Coordinate Lucidity Asset Management Data Input and Resulting Schedules		24	12	8				44	\$ 8,864.00
4.4	Prepare Draft and Final Reports		40	44	20				104	\$ 20,356.00
	Task Total	0	88	204	148	0	0	0	440	\$ 80,036.00
	Total Labor Hours and Fee	4	190	318	476	20	4	8	1,020	\$ 176,172.00
Reimbursable Direct Non-Salary Costs										
								Mileage at current IRS rate	\$	250.00
								Reproduction Allowance	\$	200.00
								Total Reimbursable Expense	\$	450.00
								Total Estimated Budget	\$	176,622.00

City of Tukwila
Signal Assessment and Preventative Maintenance Program
KPG Psomas, Inc.
Scope of Work
March 2024

PROJECT UNDERSTANDING:

The purpose of this contract is to assess state of existing signal systems and provide guidelines for performance of operations and maintenance. Also, document presented in the final submittal, will be able to assist city personnel in detecting and correcting problems using a comprehensive, systematic approach and establish planning level costs for capital program budgeting purposes.

A. ASSUMPTIONS:

The following assumptions were made to establish a scope and budget for this project:

- All work will take place within City of Tukwila Right-of-Way or dedicated easements.
- Inventory and evaluation shall exclude signal operations, signal timing and coordination, RRFBs, flasher systems, junction boxes, wiring, conduit, landing areas adjacent to push buttons and the City maintenance equipment.
- Assessment of signal and signal equipment might not necessarily be in presence of City staff - access to cabinets shall be coordinated with the Consultant.
- The City will assist with all necessary coordination efforts with WSDOT and King County. The Consultant shall support the City with preparation of required materials.
- No traffic analysis is included.
- No signal operational analysis is included.
- This project is not federally funded nor does the City plan on acquiring federal funds for this project.
- King County is currently providing emergency on-call maintenance services on signal issues as they arise. This contract is providing the City with information required as an addition to maintain their existing system.

B. INFORMATION PROVIDED BY THE CITY:

The City of Tukwila will provide the following in aid of design:

- Existing City utility record drawings or GIS.
- Preferred product vendors/suppliers/material in a table format.
- City shall provide access to controller cabinets and TMC.

The following Scope of Work describes the effort required to complete the above-described project:

SCOPE OF WORK

Task 1 - Project Management

The Consultant shall provide continuous project management and administration for the duration of the Project. (Estimate 10 months).

- Hold project coordination meeting with the City to update progress. Assume five (5) meetings.
- The Consultant shall provide monthly status reports and billings.

Task 2 – Existing Information and Inventory Collection

The Consultant shall collect baseline assessment on the condition of traffic signal equipment (estimated 68 signalized intersections), including baseline inventory of equipment for each intersection through meetings with the City staff, and

visual observations via Google Maps, identify non-functional and non-ADA compliant equipment, TMC (Traffic Management Center) system, including basic communication network and review past maintenance practices.

Task 3 – Existing Signal Assessment and Evaluation

The Consultant shall summarize findings and shall prepare "must do" list of equipment that needs updates and repairs. Associated costs for each category shall be estimated based on coordination with the local electrical equipment suppliers and provided in tabulated format.

Task 4 – Implementation and Upgrade Plan

The Consultant shall develop baseline Traffic Signal Maintenance Plan, including signal TMC operations, signal operational and on-street equipment, develop preventive and responsive maintenance programs and checklists and associated budgets for personnel and equipment. Coordination with city staff regarding Lucidity Access Management system shall be developed as required.

The Traffic Maintenance Plan maintenance costs shall also include other miscellaneous electrical equipment, such as illumination, RRFBs, flashers and fiber optic network, as lump sums only, to provide more accurate budget estimate.

Deliverables:

- Memorandum describing baseline existing signal inventory, existing maintenance operations, and description of past maintenance practices.
- Memorandum describing the signal assessment and evaluation with the one evaluation categories for implementation as noted above.
- Memorandum outlining guidelines and a preventative maintenance plan for City to implement over the next several years to preserve their signal operations, maintenance and TMC functionality. Included in this memorandum will be planning level costs for capital program budgeting purposes.