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Transportation Design

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January 30, 2025

Mr. Bill McKenna, P.E.
Village Engineer
Village of Oak Park
201 South Boulevard
Oak Park, IL 60302

Re: Proposal for Transportation Engineering Services
Village-Wide Traffic Signal Study

Dear Mr. McKenna:

We are pleased to submit this proposal to furnish Transportation Engineering Services to the Village of Oak Park in accordance with the Master Agreement between Civiltech Engineering, Inc. and the Village dated July 16th, 2024. It is our understanding that Oak Park is seeking a review of all 41 of the Village-maintained traffic signals to develop signal timing, phasing, and equipment modifications that will improve pedestrian mobility and safety. This work will consist of field observations, traffic and crash data collection, traffic modeling, stakeholder coordination, and a report with prioritized signal improvement recommendations for implementation.

The following is a scope for these services, an anticipated project schedule, and listing of proposed project staff. A fee schedule is included as an attachment to this letter.

I. Scope of Services

Item 1 – Data Collection and Early Coordination

- a. Gather Record Data – Relevant information within the study area such as GIS data, CENTRACS data, pavement marking plans, aerial photography, traffic signal timing schedules, and traffic signal design plans will be gathered and reviewed. Other plans such as the Village’s Vision Zero and Bike Plan Update will be reviewed to understand recommendations relating to signalized intersection operations.
- b. Observe Traffic, Pedestrian, and Bicycle Field Conditions - Field visits will be performed at up to twelve intersections during key times to observe existing traffic operations. Key times may include morning and evening rush hours as well as school arrival and dismissal periods. Photos and videos will be taken to document existing conditions. Issues such as excessive queues, aggressive driving, and vehicle-pedestrian conflicts will be noted. Videos from traffic count cameras will be available to review conditions at intersections as well.
- c. Inventory Traffic Signal Equipment – An inspection of the signalized intersections will be completed to document components, verify equipment, and observe the amount of extra space available in the traffic signal cabinets. Traffic signal cabinets will be opened, and photos will be taken.

- d. Measure Crosswalk Lengths – In order to calculate pedestrian clearance intervals, the length of crosswalks must be documented. The distance from the pedestrian pushbuttons to the far end of each crosswalk will be measured as well. This will be completed using aerial photography.

Item 2 – Traffic Counts

- a. Conduct Intersection Turning Movement Counts – There are 41 traffic signals maintained by the Village. It is assumed that recent traffic data is available at ten of these intersections. Video will be collected at the remaining 31 intersections using Miovision cameras. Vehicular turning movement counts, pedestrian and bicycle counts, and truck classification data will be gathered during a typical weekday when school is in session.
- b. Process and Format Traffic Data – Six hours of videos will be uploaded to Miovision for processing for each of the 31 intersections. Data will include the morning peak (7 am to 9 am) and afternoon/evening (2 pm to 6 pm) peak periods, which will incorporate school arrival and dismissal. Raw traffic data will be quality checked and formatted into Excel tables and peak hour diagrams.

Item 3- Crash Analysis

- a. Obtain Crash Data – The most recent five years of GIS crash data will be obtained from Village or IDOT sources.
- b. Review Police Reports – Police crash reports will be reviewed for all crashes that resulted in a serious injury/fatality or involved people walking and biking near the 41 Village maintained signals to understand the circumstances behind these collisions.
- c. Format Crash Data – Maps, tables, and graphs will be prepared as needed to summarize the crash data and illustrate trends and potential deficiencies within the study area as a whole and at each intersection.

Item 4 – Traffic Capacity Analyses

- a. Develop Existing Conditions Synchro Model – A traffic network will be built in Synchro 11 incorporating traffic count data, roadway geometry, and existing signal timings to assess performance at the Village’s traffic signals.
- b. Calculate Pedestrian Delay – Pedestrian delays for each signalized crosswalk will be calculated using Highway Capacity Manual methodologies.
- c. Document Results –Tables will be developed to summarize various performance metrics at each intersection.

Item 5 – Technology Review

- a. For this work item, a review will be undertaken of the state of the art and state of the practice of traffic signal technologies with respect to achieving pedestrian safety and accessibility goals in the Village’s Vision Zero plan. Technologies to be reviewed may include but are not limited to video detection, active and passive pedestrian and bicycle detection, permanent/real time traffic monitoring, and adaptive signal timing. A comprehensive evaluation will ascertain the benefits and costs of these technologies and discuss their suitability for incorporation into Oak Park traffic signals. An interim technical memorandum will document these findings and will be submitted to the Village.

Item 6 – Intersection Studies

- a. Review Signal Phasings and Timings – Each intersection will be reviewed to recommend modifications that are feasible and would improve mobility and safety for people walking and biking while balancing the needs of vehicular traffic. These modifications may include but are not limited to leading pedestrian intervals, left turn arrows, pedestrian clearance intervals, pedestrian recall, rest in walk and modified timing splits or offset.

- b. Document Future Conditions Metrics – The Synchro model will be updated, and future conditions metrics, including pedestrian delay, will be calculated and recorded and compared to the existing metrics for all modes.
- c. Review ADA/PROWAG Compliance – Push-button locations and types will be reviewed to determine the status of ADA and PROWAG compliance, including the need for Accessible Pedestrian Signals (APS). Modifications to achieve compliance will be recommended.
- d. Develop Bike Detection Recommendations – Traffic signals along key bike routes will be evaluated to determine the feasibility of installing bicycle detection. This may include bicycle-friendly pushbuttons, loop detectors, or video technologies.
- e. Evaluate Signal Equipment and Recommend Upgrades – Traffic signal hardware will be assessed and recommended for upgrades needed to accommodate the signal timing/phasing, ADA, and detection recommendations.
- f. Prepare Traffic Signal Timing Plans – Proposed traffic signal timing plans will be developed so that the timing modifications can be implemented.
- g. Develop Cost Estimates – Programming level cost estimates to upgrade the traffic signals will be prepared.
- h. Prioritize Traffic Signal Upgrades – Proposed traffic signal improvements will be categorized into near, mid, and long-term priority tiers.

Item 7 – Stakeholder Coordination

- a. Coordinate with IDOT – Time is included for coordination and up to two meetings with the Illinois Department of Transportation regarding recommendations to improve traffic signals along routes under State jurisdiction but Village maintenance.
- b. Internal Village Coordination – Time is included for internal coordination and up to five meetings with Village stakeholders such as police, schools, and the streets division.

Item 8 – Technical Report

- a. Prepare Draft Report – A draft technical memorandum summarizing the analysis and recommendations will be written and submitted to the Village. The report will incorporate the findings of the traffic signal condition inventory, capacity analysis results, recommended signal timing/phasing improvements, and recommended hardware upgrades, cost estimates, and a prioritization table. The report will be submitted electronically in PDF format. It is assumed that up to three revisions of the draft report will be required to address comments from Village staff and the Transportation Commission.
- b. Prepare Final Report – The memo will be revised and submitted to address Village comments. The final report will be submitted electronically in PDF format.

Item 9 – Meetings

- a. Kick-Off Meeting - Civiltech will meet with Village staff to initiate the project and refine the study parameters. This is assumed to be an in-person meeting.
- b. Progress Meetings – This item consists of monthly meetings coordination meetings with the Village to discuss the progress of the study. These meetings are assumed to occur virtually.
- c. Review Meeting - Attend a meeting with Village staff to discuss comments on the draft report. This meeting is assumed to occur virtually.
- d. Transportation Commission Meetings – A representative from Civiltech will be present at up to two Transportation Commission meetings to present the findings of the report and answer questions as needed. This item includes time for meeting preparation.

- e. Village Board Meeting - A representative from Civiltech will be present at one Village Board meeting to present the findings of the report and answer questions as needed. This item includes time for meeting preparation.

Item 10 – Supervision, Administration & Project Coordination

- a. This item includes project setup, monthly invoicing, and internal coordination meetings for the duration of the project, which is assumed to be about nine months.

II. Project Staff

The staff members who we will assign to this project have experience in all the elements which will be encountered on this project. We propose to employ the following staff:

Project Manager:	Steven A. Pautsch, P.E., PTOE
Senior Traffic Engineer:	Brian R. DeSalle, P.E, PTOE
Traffic Engineer:	Anmol Shrivastava, P.E., PTOE, RSP2I
Director & QC/QA:	Michael J. Folkening, P.E., PTOE
Traffic Technicians:	King Diaz and Omar Tobon

III. Project Schedule

Civiltech will collect traffic data during Spring 2025 when the weather is warm and school is in session. A draft report will be submitted to the Village for review by October 31st, 2025 and it is anticipated that all work will be completed by December 31st, 2025.

IV. Fee Estimate

This work will be billed per the terms of the Master Agreement between Civiltech Engineering, Inc. and the Village dated July 16th, 2024. Please see the attached tables for a Cost Estimate of Consultant Services, a Work Hour Summary, and a Summary of Direct Costs.

We thank you for the opportunity to submit this proposal, and we look forward to continuing our work with the Village of Oak Park. If you have any questions or require additional information, please contact me at (312) 564-2491.

Very truly yours,



Michael J. Folkening, P.E., PTOE
Director of Urban Design and Traffic

CIVILTECH ENGINEERING, INC.

**Village-Wide Traffic Signal Study
Village of Oak Park**

Cost Estimate of Consultant Services

Civiltech Engineering, Inc.

Work Item	Staff Classifications, Billing Rate and Workhours					Total Workhours	% of Workhours	Loaded Labor Cost
	Director & QC/QA	Project Manager	Senior Traffic Engineer	Traffic Engineer	Traffic Technician			
<i>Billing Rate</i>	\$247.00	\$178.00	\$170.00	\$134.00	\$122.50			
Item 1 - Data Collection and Early Coordination	0	9	37	104	0	150	9%	\$21,828.00
Item 2 - Traffic Counts	2	4	24	80	110	220	14%	\$29,481.00
Item 3 - Crash Analysis	1	5	18	38	0	62	4%	\$9,289.00
Item 4 - Traffic Capacity Analysis	3	11	38	128	0	180	11%	\$26,311.00
Item 5 - Technology Review	2	16	46	16	0	80	5%	\$13,306.00
Item 6 - Intersection Studies	6	32	134	362	0	534	33%	\$78,466.00
Item 7 - Stakeholder Coordination	0	40	40	0	0	80	5%	\$13,920.00
Item 8 - Technical Report	3	14	36	139	0	192	12%	\$27,979.00
Item 9 - Meetings	4	48	24	24	0	100	6%	\$16,828.00
Item 10 - Supervision, Administration & Project Coordination	0	24	0	0	0	24	1%	\$4,272.00
Total Workhours by Staff Classification:	21	203	397	891	110	1,622		
Percentage of Total Workhours:	1%	13%	24%	55%	7%	100%		
Direct Labor Cost by Staff Classification:	\$5,187.00	\$36,134.00	\$67,490.00	\$119,394.00	\$13,475.00			
							Total Labor Cost:	\$241,680.00
							Total In-House Direct & Subconsultant Costs (see separate calculation):	\$5,447.50
						1,622	100%	\$247,127.50

**Village-Wide Traffic Signal Study
Village of Oak Park**

Workhour Summary

Civiltech Engineering, Inc.

Work Item and Sub-items	Staff Classifications & Workhours					Total Workhours	% of Workhours
	Director & QC/QA	Project Manager	Senior Traffic Engineer	Traffic Engineer	Traffic Technician		
Item 1 - Data Collection and Early Coordination							
a. Gather Record Data		4	8	16		28	18.7%
b. Observe Traffic, Pedestrian, and Bicycle Field Conditions		2	4	56		62	41.3%
c. Inventory Traffic Signal Equipment		2	24	24		50	33.3%
d. Measure Crosswalk Lengths		1	1	8		10	6.7%
Subtotal:	0	9	37	104	0	150	100%
Item 2 - Traffic Counts							
a. Conduct Intersection Turning Movement Counts		2	8		90	100	45.5%
b. Process and Format Traffic Data	2	2	16	80	20	120	54.5%
Subtotal:	2	4	24	80	110	220	100.0%
Item 3 - Crash Analysis							
a. Obtain Crash Data			2	2		4	6.5%
b. Review Police Reports		2	4	12		18	29.0%
c. Format Crash Data	1	3	12	24		40	64.5%
Subtotal:	1	5	18	38	0	62	100.0%
Item 4 - Traffic Capacity Analysis							
a. Develop Existing Conditions Synchro Model	1	7	24	80		112	62.2%
b. Calculate Pedestrian Delay	1	2	8	24		35	19.4%
c. Document Results	1	2	6	24		33	18.3%
Subtotal:	3	11	38	128	0	180	100.0%
Item 5 - Technology Review							
a. Technology Review	2	16	46	16		80	100.0%
Subtotal:	2	16	46	16	0	80	100.0%
Item 6 - Intersection Studies							
a. Review Signal Phasings and Timings	1	8	20	120		149	27.9%
b. Document Future Conditions Metrics		2	4	40		46	8.6%
c. Review ADA/PROWAG Compliance	1	2	24	40		67	12.5%
d. Develop Bike Detection Recommendations		2	16	4		22	4.1%
e. Evaluate Signal Equipment and Recommend Upgrades	1	2	40	16		59	11.0%
f. Prepare Traffic Signal Timing Plans	1	4	12	80		97	18.2%
g. Develop Cost Estimates	1	2	8	60		71	13.3%
h. Prioritize Signal Upgrades	1	10	10	2		23	4.3%
Subtotal:	6	32	134	362	0	534	100.0%
Item 7 - Stakeholder Coordination							
a. Coordinate with IDOT		12	12			24	30.0%
b. Internal Village Coordination		28	28			56	70.0%
Subtotal:	0	40	40	0	0	80	100.0%
Item 8 - Technical Report							
a. Prepare Draft Report	2	12	32	120		166	86.5%
b. Prepare Final Report	1	2	4	19		26	13.5%
Subtotal:	3	14	36	139	0	192	100.0%

**Village-Wide Traffic Signal Study
Village of Oak Park**

Workhour Summary

Civiltech Engineering, Inc.

Work Item and Sub-items	Staff Classifications & Workhours					Total Workhours	% of Workhours
	Director & QC/QA	Project Manager	Senior Traffic Engineer	Traffic Engineer	Traffic Technician		

Item 9 - Meetings							
a. Kick-Off Meeting	4	4	4	4		16	16.0%
b. Progress Meetings		16	16	16		48	48.0%
c. Review Meeting		4	4	4		12	12.0%
d. Transportation Commission Meetings		16				16	16.0%
e. Village Board Meeting		8				8	8.0%
Subtotal:	4	48	24	24	0	100	100.0%

Item 10 - Supervision, Administration & Project Coordination							
a. Supervision, Administration & Project Coordination		24				24	100.0%
Subtotal:	0	24	0	0	0	24	100.0%

Total:	21	203	397	891	110	1,622	
% of Workours:	1.29%	12.52%	24.48%	54.93%	6.78%		

**Village-Wide Traffic Signal Study
Village of Oak Park**

Summary of Direct Costs

Item No.	Work Item	Direct Cost
Item 1 - Data Collection and Early Coordination		
	Mileage Estimate	
	Assume six 25 mile round trips @ \$0.70 per mile	\$105.00
	Item 1 Subtotal	\$105.00
Item 2 - Traffic Counts		
	Mileage Estimate	
	Assume nine 25 mile round trips @ \$0.70 per mile	\$157.50
	Miovision Processing	
	6 hours x 31 intersections @ \$165/intersection	\$5,115.00
	Item 2 Subtotal	\$5,272.50
Item 9 - Meetings		
	Mileage Estimate	
	Assume four 25 mile round trips @ \$0.70 per mile	\$70.00
	Item 9 Subtotal	\$70.00
	Total In-House Direct Costs:	\$5,447.50