

Proposal to Furnish Professional Engineering Services Downtown Streetscape – **DRAFT** Amendment #2

City of Naperville
July 5, 2023

Civiltech Engineering, Inc. (Civiltech) is under contract with the City of Naperville (City) to provide design engineering services for the Washington Street and Main Street streetscape project. As part of the Preliminary Design phase, there have been various items of work that have been required to advance the project that were not included in the original scope of services.

The following project understanding and supplemental scope of services is based upon coordination with City staff.

I. Project Understanding and Approach

As the project proceeded through the concept phase and into the design phase, a few additional and/or expanded scope items have been identified. The following items will be explained in further detail below:

- Additional / 4th Streetscape Option
- Traffic Signals
- Watermain Alignment Revisions
- Maintenance of Traffic Revisions
- Chicago Avenue Intersection Addition

II. Anticipated Scope of Services

The following scope of services is based on the above project understanding.

Item 1 – Additional / 4th Streetscape Option

Based on feedback from the City Council and Staff, an option to provide trees through the corridor was investigated. The original scope included 3 concepts that had already been developed, making the tree option an additional/4th option.

- A. Concept Development 4th Option - Reviewed project corridor and adjusted previously developed concepts to accommodate trees. This item also includes coordination and meetings with the City.
- B. Landscape Design - Developed and provided information regarding how to incorporate healthy trees into an urban environment and specifically into this project for purposes of assisting the City in making decisions about alternatives to move forward.
- C. Deliverables
 - a. Concept layout plans for fourth alternative
 - b. Prepared cost estimates with options for soil cells based on fourth alternative
 - c. Establish and provide urban tree species planting list

Item 2 – Traffic Signals

City Staff conducted a field walk of the site and provided Civiltech with a summary of traffic signal modifications that should be incorporated into the project scope. Based on preliminary streetscape concept design recommendations and further coordination with Staff, the signal cabinet at NW Washington/Jefferson will be replaced to better accommodate the streetscape improvements. Where possible, record plan sheets will be used on plan sheets to reduce drafting time necessary.

- A. Minor traffic signal improvements at 4 intersections along Washington Street (Chicago, Jefferson, Van Buren, Benton)
 - a. Replacing signal heads, illuminated street name signs and inductor loops.
- B. Replacing NE MA pole at Washington/Chicago.
 - a. Scope developed based on mast arm being placed in a new, adjacent location, and new ped push button post provided.
 - b. Temporary signal and temporary interconnect plans are not included based on the assumptions in the above item.
- C. Replace and relocate traffic signal cabinet at NW Washington/Jefferson.
 - a. Work will include re-cabling the intersection and require a temporary traffic signal.
 - b. Work will include replacing the interconnect cable from Washington to Van Buren and require temporary interconnect.
- D. Deliverables
 - a. 60% submittal
 - i. Traffic signal layout at 4 intersections
 - b. 90% submittal
 - i. Temporary Traffic Signal Installation and Removal Plan (Washington/Jefferson)
 - ii. Temporary Cable Plan and Sequences (Washington/Jefferson)
 - iii. Traffic Signal Modification Plan
 - iv. Cable Plan and Sequences
 - v. Schedule of Quantities and Mast Arm Mounted Street Name Signs
 - vi. Temporary Interconnect Plan

- vii. Temporary Interconnect Schematic
- viii. Interconnect Plan
- ix. Interconnect Schematic
- x. Details
- xi. Quantities/Cost Estimate
- xii. Specs
- c. Final submittal
 - i. Temporary Traffic Signal Plan Revisions
 - ii. Traffic Signal Plan Revisions
 - iii. Cable Plan Revisions
 - iv. Interconnect Plan Revisions
 - v. Quantity Revisions
 - vi. Spec Revisions

Item 3 – Watermain Alignment Revisions

In order to meet the City's schedule requirements up front in presenting information to the public, Civiltech needed to advance the water main design. It should be noted that the watermain alignment has a direct influence on the staging and MOT design. Based on initial coordination with the City, the initial concept design utilized the west side of Washington for the new main and lined up with the watermain connection that would be completed by the Bridge project. Upon further review of old and new field paint marks and record plans for AT&T facilities, and extensive coordination of the preferred watermain alignment with AT&T, it was determined that AT&T was indeed in the roadway for a majority of the project and a new watermain alignment needed to be developed.

- A. Additional coordination and meetings with AT&T to determine existing AT&T location
- B. Additional coordination with Bridge contract for revised alignment at projects' interface
- C. Deliverables
 - a. Developed additional alternative layout plans for the watermain alignment
 - b. Update design plans completed to date to reflect revised watermain alignment
 - c. Revisions to layout at south end to coordinate with Bridge project to be incorporated into plan sheets (to be provided with 60% submittal)
 - d. Revisions to service and hydrant locations and side street main connections based on new alignment to be incorporated into current plan sheets(to be provided with 60% submittal)

Item 4 – Maintenance of Traffic Revisions

Based upon the schedule delays in obtaining accurate locations of the AT&T facilities, as well as the delay in the relocation of the existing AT&T facilities due to the Bridge project, Staff and Civiltech agreed that moving project from 2023 construction to 2024 was preferable so that the

streetscape project was constructed in one season. This change results in revisions to the MOT concepts that were began in order to meet the previous construction schedule and that matched into the Bridge 2023 staging plan. The watermain alignment revision required modifications to the original design including an additional stage and substages to complete the work, as it will not be possible to complete the work within the 3 stages currently anticipated for the streetscape and roadway construction.

- A. Additional staging concept for watermain work that will be constructed prior to streetscape/roadway due to new alignment
- B. Additional coordination with Bridge contract and revisions to current concept plan for revised construction year and watermain alignment
- C. Deliverables
 - a. Additional stage with substages for concept layout plan due to watermain alignment revision (to be provided with 60% submittal)
 - b. Revisions to concept layout plan due to revised construction year (to be provided with 60% submittal)

Item 5 – Chicago Avenue Intersection Addition

The City requested adding the Chicago Avenue intersection to the streetscape project due to its poor condition and the extensive patching anticipated as a result of the adjacent Bridge contract utility installations.

- A. Temporary Traffic Signal Design – An exhibit sheet will be provided for the stages/substages of the intersection during construction. This sheet will be provided as a reference for the RE on the Bridge contract to coordinate the temporary signal timing with the electrical contractor on the Bridge contract.
- B. Maintenance of Traffic Concept Development – The current 3 stages of construction will need to be evaluated for reconstruction through the intersection. An additional 3 substages are anticipated in order for the reconstruction of the intersection to accommodate the Bridge contract staging.
- C. Coordination with Bridge Contract – Reconstruction limits, staging, and maintenance of traffic will be coordinated with this adjacent project.
- D. Deliverables (Plan Sheets)
 - a. Summary of Quantities (includes quantity calculations)
 - b. Maintenance of Traffic Sheets
 - c. Removal Plan
 - d. Erosion Control Plan
 - e. Plan and Profile
 - f. Drainage and Utility (structure adjustments only)
 - g. Pavement Marking and Signing Plan
 - h. Intersection Grading Plan
 - i. ADA Grading Plan (2 corners)
 - j. Cross Sections

Contract Fee Summary

Original Contract Amount	\$ 229,744.50
Amendment #1 (Renderings)	\$ 5,643.10
Amendment #2	\$ 84,209.89
Revised Contract Amount	\$ 319,597.49

**Cost Estimate of
Consultant Services**
(COST PLUS FIXED FEE)

Firm:	Civiltech Engineering, Inc.	Date:	07/05/23
Route:	Washington Street		
Section:		Complexity Factor:	0
Municipality:	City of Naperville		
Job:	Downtown Streetscape - Amendment #2	Overhead and fringe rate:	120.0000
		Profit:	0.145 *[(1+CF)DL + 1.4(DL)]

Item		Hours	Average Hourly Rate	Total Direct Labor	Overhead and fringes	Direct Costs	Fixed Fee	Services by others	Total	% of Grand Total
1	Additional/4th Streetscape Option	75.0	\$41.94	\$3,145.50	\$3,774.60	\$0.00	\$1,094.63		\$8,014.73	9.52%
2	Traffic Signals	358.0	\$37.94	\$13,582.52	\$16,299.02	\$37.50	\$4,726.72		\$34,645.76	41.14%
3	Watermain Revisions	68.0	\$46.77	\$3,180.36	\$3,816.43	\$0.00	\$1,106.77		\$8,103.56	9.62%
4	MOT Revisions	95.0	\$41.49	\$3,941.55	\$4,729.86	\$0.00	\$1,371.66		\$10,043.07	11.93%
5	Chicago Avenue Intersection Addition	221.0	\$41.56	\$9,184.76	\$11,021.71	\$0.00	\$3,196.30		\$23,402.77	27.79%
	Total	817.0	\$40.43	\$33,034.69	\$39,641.63	\$37.50	\$11,496.07	\$0.00	\$84,209.89	100.00%

*You will be paid up to, not to exceed, the Total amount listed above for each line item based upon actual hours of work and associated direct costs, as approved by the City. In the event that you exceed, or anticipate exceeding, the Total in any one line item, please contact your Project Manager to inquire if authorization may be obtained to shift costs from another, underutilized, line item.

Firm: Civiltech Engineering, Inc.
 Route: Washington Street
 Section: 0
 Municipality: City of Naperville
 Job: Downtown Streetscape - Amendment #2

Phase II Engineering Manhour Calculations

Task No.	Task	Personnel & Hours						Total Hours	% of Hours
		Principal	Project Manager	Engineer IV	Engineer II	Landscape Architect	Landscape Designer		
1	Additional/4th Streetscape Option								
A.	Concept Development 4th Option	1	2	2	2	4	8	19	25.3%
B.	Landscape Design		1	1	1	2	4	9	12.0%
C.	Deliverables								
	a. Concept and Layout Plans		1	6	6	12	16	41	54.7%
	b. Cost Estimate		1			1	2	4	5.3%
	c. Tree Species					1	1	2	2.7%
	Sub-total Item 1	1	5	9	9	20	31	75	100.0%
2	Traffic Signals								
	Deliverables								
a.	60% Submittal								
	Layout (4 intersections)		3	5	16			24	6.7%
b.	90% Submittal								
	Temporary Traffic Signal Installation and Removal Plan (Washington/Jefferson)		2	4	18			24	6.7%
	Temporary Cable Plan and Sequences (Washington/Jefferson)		1	1	6			8	2.2%
	Traffic Signal Modification Plan (4 intersections)		2	16	60			78	21.8%
	Cable Plan and Sequences (4 intersections)		2	4	16			22	6.1%
	Schedule of Quantities and Mast Arm Mounted Street Name Signs (4 intersections)		1	3	12			16	4.5%
	Temporary Interconnect Plan		1	1	6			8	2.2%
	Temporary Interconnect Schematic		1	1	4			6	1.7%
	Interconnect Plan		2	2	12			16	4.5%
	Interconnect Schematic		2	4	18			24	6.7%
	Details			1	1			2	0.6%
	Quantities/Cost Estimate		2	4	18			24	6.7%
	Specs			3	1			4	1.1%
c.	Final Submittal								
	Temporary Traffic Signal Plan Revisions		2	4	16			22	6.1%
	Traffic Signal Plan Revisions		2	8	32			42	11.7%
	Cable Plan Revisions		2	2	12			16	4.5%
	Interconnect Plan Revisions		1	1	6			8	2.2%
	Quantity Revisions		1	3	8			12	3.4%
	Spec Revisions			1	1			2	0.6%
	Sub-total Item 2	0	27	68	263	0	0	358	100.0%

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Phase II Engineering Manhour Calculations

Task No.	Task	Personnel & Hours						Total Hours	% of Hours
		Principal	Project Manager	Engineer IV	Engineer II	Landscape Architect	Landscape Designer		
3	Watermain Alignment Revisions								
A.	AT&T Meetings and Coordination	1	8	6				15	22.1%
B.	Washington Street Bridge Coordination		4	2				6	8.8%
C.	Deliverables								
a.	Watermain alignment revisions concept design	1	6	8	8			23	33.8%
b.	Update design plans to reflect revised watermain alignment		1	4	4			9	13.2%
c.	Revised southern layout plan revisions		2	4	4			10	14.7%
d.	Revisions to service/hydrants/side mains		1	2	2			5	7.4%
	Sub-total Item 3	2	22	26	18	0	0	68	69.1%
4	Maintenance of Traffic revisions								
A.	Construction Staging / MOT updates to accommodate revised watermain alignment	1	3	6	8			18	18.9%
B.	Construction Staging / MOT coordination with Washington Street bridge contract		3	6	8			17	17.9%
C.	Deliverables								
a.	Revise Construction Staging / MOT plans		4	4	10			18	18.9%
b.	Revisions to staging / MOT concept and plans for revised construction year		6	12	24			42	44.2%
	Sub-total Item 4	1	16	28	50	0	0	95	100.0%
5	Chicago Avenue Intersection Addition								
A.	Temporary Traffic Signal Design (exhibit sheet format)		4	12	8			24	10.9%
B.	MOT Concept Development	1	8	12	12			33	14.9%
C.	Coordination with Bridge Contract		8	4				12	5.4%
D.	Deliverables (Plan Sheets)								
	Summary of Quantities (includes quantity calculations)		1	2	4			7	3.2%
	Maintenance of Traffic Sheets		4	24	24			52	23.5%
	Removal Plan			1	2			3	1.4%
	Erosion Control Plan		1	2	2			5	2.3%
	Plan and Profile		3	8	8			19	8.6%
	Drainage and Utility (structure adjustments only)		1	2	4			7	3.2%
	Pavement Marking and Signing Plan		1	4	6			11	5.0%
	Intersection Grading Plan		1	4	8			13	5.9%
	ADA Grading Plan		1	4	16			21	9.5%
	Streetscape Plan					1	4	5	2.3%
	Cross Sections		1	4	4			9	4.1%
	Sub-total Item 5	1	34	83	98	1	4	221	100.0%
Total Hours:		5	104	214	438	21	35	817	
% of Hours:		0.6%	12.7%	26.2%	53.6%	2.6%	4.3%	100.0%	

AVERAGE HOURLY RATES

Firm: Civiltech Engineering, Inc.
Route: Washington Street
Section: 0
Municipality: City of Naperville
Job: Downtown Streetscape - Amendment #2

DATE: 7/5/2023

SHEET 1 OF 1

PAYROLL CLASSIFICATION	HOURLY RATE	Additional/4th Streetscape Option			Traffic Signals			Watermain Revisions			MOT Revisions		
		HOURS	% PART	WGTD RATE	HOURS	% PART	WGTD RATE	HOURS	% PART	WGTD RATE	HOURS	% PART	WGTD RATE
PRINCIPAL	\$78.00	1	1.3%	\$1.04	0	0.0%	\$0.00	2	2.9%	\$2.29	1	1.1%	\$0.82
PROJECT MANAGER	\$58.75	5	6.7%	\$3.92	27	7.5%	\$4.43	22	32.4%	\$19.01	16	16.8%	\$9.89
ENGINEER IV	\$42.67	9	12.0%	\$5.12	68	19.0%	\$8.10	26	38.2%	\$16.32	28	29.5%	\$12.58
ENGINEER II	\$34.58	9	12.0%	\$4.15	263	73.5%	\$25.40	18	26.5%	\$9.15	50	52.6%	\$18.20
LANDSCAPE ARCHITECT	\$56.25	20	26.7%	\$15.00	0	0.0%	\$0.00	0	0.0%	\$0.00	0	0.0%	\$0.00
LANDSCAPE DESIGNER	\$30.75	31	41.3%	\$12.71	0	0.0%	\$0.00	0	0.0%	\$0.00	0	0.0%	\$0.00
TOTALS		75	100.0%	\$41.94	358	100.0%	\$37.94	68	100.0%	\$46.77	95	100.0%	\$41.49

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SHEET 1 OF 1

PAYROLL CLASSIFICATION	HOURLY RATE	Chicago Avenue Intersection Addition											
		HOURS	% PART	WGTD RATE	HOURS	% PART	WGTD RATE	HOURS	% PART	WGTD RATE	HOURS	% PART	WGTD RATE
PRINCIPAL	\$78.00	1	0.5%	\$0.35									
PROJECT MANAGER	\$58.75	34	15.4%	\$9.04									
ENGINEER IV	\$42.67	83	37.6%	\$16.03									
ENGINEER II	\$34.58	98	44.3%	\$15.33									
LANDSCAPE ARCHITECT	\$56.25	1	0.5%	\$0.25									
LANDSCAPE DESIGNER	\$30.75	4	1.8%	\$0.56									
TOTALS		221	100.0%	\$41.56	0	0.0%	\$0.00	0	0.0%	\$0.00	0	0.0%	\$0.00

DIRECT COSTS

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SHEET 1 OF 1

PAYROLL CLASSIFICATION	TRAVEL				TRAVEL (ALTERNATE METHOD)			SURVEY SUPPLIES	IN-HOUSE PRINTING BLUEPRINTS			
	# TRIPS	# MILES/ TRIP	MILEAGE RATE	COSTS	# DAYS	MILEAGE RATE PER DAY	COSTS	COSTS	# SETS	PRINTS PER SET	RATE	COSTS
ADDITIONAL/4TH STREETSCAPE OPTION				\$0.00			\$0.00					\$0.00
TRAFFIC SIGNALS	1.00	60.00	\$0.63	\$37.50			\$0.00					
WATERMAIN REVISIONS				\$0.00			\$0.00					
MOT REVISIONS				\$0.00			\$0.00					
TOTALS				\$37.50			\$0.00	\$0.00				\$0.00