



November 29, 2022 (Revised December 22, 2022)

Mr. Malcolm Ragan
Assistant Planner/GIS Administrator
Town of Stow, Massachusetts
380 Great Road
Stow, MA 01775

RE: Proposal for Engineering and Survey Services: Crescent Street Sidewalks

Dear Mr. Ragan:

We are pleased to submit our proposal for engineering and survey services for the design of sidewalks on Crescent Street from Hartley Road to Warren Road as identified in the Towns Prioritization Plan as Project #7 and #21.

SCOPE OF SERVICES

Project Goals

GCG would provide a MassDOT compliant “Complete Street” design while balancing the preservation of Stow’s rural roadways and historic Town Center. Accessible sidewalk infrastructure would be designed to the standards of the MA Architectural Access Board (AAB) standards, which will connect the Pilot Grove Apartments with more established/proposed pedestrian infrastructure in Town Center. The design would include a crosswalk location to provide additional access to Town Center Park from Crescent Street.

Limit of Work

The project will encompass:

- The north side of Crescent Street from its intersection with Hartley Road, east to its intersection with West Acton Road.
- Portions of the west side of West Acton Road from its intersection with Crescent Street, north to Warren Road.
- Areas outside of the Town’s Right-of-Way which may be reasonably assumed to contribute to design considerations of the Improvements, including areas subject to potential permanent or temporary construction/Right-of-way easements or agreements.

The following services and activities would be performed by GCG Associates in the following sequence.

A. SITE VISIT / COORDINATION

1. Initial site visit and meeting (Meeting #1) with the Town of Stow Superintendent of Streets and Planning Department Staff, as well as other related Town of Stow staff.
2. Review existing plans on file with the Planning and Highway Departments:
 - GIS data.
 - County layouts.
 - Complete Streets Prioritization Plan
3. Determine the necessity/extent of an existing conditions field survey.

B. FIELD SURVEY / EXISTING CONDITIONS PLAN

GCG will perform detailed field survey identifying all pertinent topographic features within the roadway to be utilized for the project. A drone survey will be performed, and additional ground survey will be completed to supplement the aerial mapping survey by the drone for critical elevations. An existing conditions survey would include the following.

1. Boundary Research - Research shall be based on Town of Stow, Middlesex South Registry of Deeds, MassDOT and the Massachusetts Land Court.
2. Survey Traverse – Establish random traverse(s) to locate right of way monumentation, and existing conditions within the limits of work described above and re-establish any recorded State County or Town record baselines.
3. Location of all physical features within the survey limits including, but not limited to all visible utilities, edge of roads, stone walls, tree lines, trees over 3" diameter at breast height; and topographic conditions at one-foot contours intervals with spot elevations to the nearest 1/100th of a foot at all low points and high points, or any large expanse of level land requiring spot elevation detail in the absence of reasonable contour representation. Topographic limits of work shall extend ten feet beyond the right-of-way bounds. In the event proposed Improvements requires grading or construction easements on private property outside of the Town right-of-way, the consultant shall prepare an additional services request for review and approval of the Complete Streets Committee.
4. Roadway layout lines, Town layout lines, and abutting property lines will be plotted as accurately as possible based on record information and monumentation acquired by the surveyor at state and local offices and the registry of deeds. Any necessary survey shall be based on the Massachusetts State Plane Coordinate System in compliance with the most recent edition of the MassDOT Survey Manual.
5. Owners' information taken from Assessor's records will be shown on the plans for all lots within and abutting the limit of work. The plotted information will include the owner's name(s) and Book/Page references along with the lot legal address of the property.
6. The surveyor shall prepare and provide digital files of the base survey in current AutoCAD format including a Triangular Irregular Network (TIN) file. Base survey plans will be on the Mass State Plane Coordinate system and NGVD 88. Plans shall conform to MassDOT Survey Manual and provide the appropriate detail and drafting standards for future project development as required by the MassDOT Project Development and Design Guidelines found in the latest edition of the Highway Design Manual relative to accuracy, content, and presentation.
7. Obtain plans for private and public utilities within the project limits from the various utility purveyors and plot the information on the existing condition base plans. For subsurface utilities that cannot be directly accessed, the utility layout on the existing conditions plan will be compiled from record plans, fit to the most reasonable level of evidence that can be found within the limit of work, and noted so on the base plan. For drainage systems, the surveyor shall open and record the invert and pipe sizes of all pipes visible within each structure. The surveyor will be responsible for coordinating with the Stow Highway Department to access structures that are full of debris or that have covers that cannot be removed with hand tools.
8. The Surveyor will be required to coordinate their field survey activities with the Town of Stow Police Department and make necessary arrangements for police detail support when working within existing travel ways. The surveyor will provide proper safety signing and devices.
9. Base plans shall be prepared such that they can be plotted at a scale of 1" = 20' for future construction plan preparation.
10. Presentation of a draft base plan and concept plans to the Superintendent of Streets, based upon Complete Streets project description and input from the kickoff meeting. The plan shall tie into State Plane Coordinates, North American Datum 1983 (NAD 83) for horizontal and North American Vertical

Datum 1988 (NAVD 88) for vertical. Proposer will coordinate with Mass DOT District #3 Survey Section to provide GPS coordinates to establish the survey.

11. Identify all environmental issues and assessment of the need for preparation of permits including NPDES, Notice of Intent with DEP and Town of Stow Conservation Commission and others as may be applicable.

C. CONCEPTUAL PLANS

Prepare and submit conceptual plans for review and feedback by the Project Team based upon assessment of existing data, existing conditions survey, any additional traffic analyses performed, as well as analysis of potential right-of-way acquisitions that would be necessary to implement the preferred concepts. An ortho mosaic image would be generated from the survey and used in developing conceptual plans and used as an important image for presenting the project. The Conceptual Plans shall include but not be limited to:

1. Conceptual sidewalk location and specifications corresponding to field survey.
2. Any potential alternative designs as needed to provide the Project Team with options to manage site constraints, and associated construction costs, such as utility locations, right-of-way encroachments, etc.
3. Submission of preliminary construction cost estimates reflecting the latest MassDOT Weighted Average Fee Proposal Unit Prices.
4. Attendance at Meeting #2 to finalize feedback and advance to 100% design.

100% DESIGN PLANS

GCG will prepare 100% Design and Construction Plans and Specifications in MassDOT format in compliance with DEP Stormwater Management and National Pollution Discharge Elimination System Permit (NPDES) guidelines. The following items shall be included in the 100% Plans and Specifications at a minimum.

1. Typical Sections.
2. Profiles.
3. Right-of-way plans showing temporary and/or permanent easement locations.
4. Curb Tie and Grading Plans.
5. Drainage and Stormwater Pollution Prevention/Management Plan.
6. Utility Plans.
7. Pavement Marking and Signage Plans.
8. Traffic Management Plans.
9. Identification of all environmental permitting requirements, including but not limited to approvals under the National Pollution Discharge and Elimination System.
10. Wetland/Riverfront resource area delineations in accordance with the Wetlands Protection Act and Stow Wetlands Bylaw.
11. Attendance at Meeting #3 with the Project Team to finalize the 100% Design Plans.
12. Any other items required to accomplish the task

GCG will prepare design plans at a scale of 1"=20'. Included on these plans shall be the following information.

- Cross sections of sidewalks as necessary to allow for construction of the proposed sidewalk and curbing improvements.
- Final grades and elevations.
- Drainage improvements if deemed necessary.
- Retaining wall design which may include architectural block walls to address grading issues and impacts on abutting property.
- Develop plans for trees to be removed.
- Details regarding sidewalk construction.

GCG will prepare a cost estimate for the project including construction cost and contingencies. GCG will prepare contract documents and special provisions for bidding.

GCG will attend two meetings with the Complete Streets. The first meeting shall be at 75% completion. The second meeting shall be at 95% completion of the design and shall include the submittal of three review copies of the contract documents.

GCG will assist the town in filing an application for Complete Streets Funding

PROJECT MANUAL -CONSTRUCTION DOCUMENTS

GCG will prepare a project manual for bidding the project using MassDOT Standard items and incorporate the Stow Highway Department's "front end" bid documentation for the purpose of advertising the project for construction. The consultant shall provide:

1. 100% Design Construction Cost Estimates reflecting the latest MassDOT Weighted Average Fee Proposal Unit Prices.
2. Construction specifications and bid documents.
3. Prepare a special provisions sections based upon the project design.

FEE SCHEDULE

For the services as outlined above, GCG proposes the following fee in two phases based upon Project #7 and #21. A combined fee is shown below should the town choose to perform all the design at this point.

Project #7	\$19,410.00
Project #21	\$19,410.00
Project #7 & #21 (one project design)	\$28,220.00

Attached is an estimated fee detailing hourly rates and estimated person-hours.

We appreciated the opportunity to submit the proposal for this work and look forward to working with you on this project. Should you have any further questions please do not hesitate to contact our office at (978) 657-9714. We look forward to hearing from you.

Respectfully submitted,
GCG ASSOCIATES, INC.

Michael J. Carter

Michael J. Carter PE, PLS
President

GCG Associates, Inc.
84 Main Street
Wilmington, MA 01887
(978) 657-9714

Estimated Fee

11/29/2022

Client: Town of Stowe

Project: Project #7 (Hartley to 43 Crescent) or Project #21 (#43 to Warren)

	Project Manager	Senior Project Engineer	Project Engineer	Survey Tech	Robotic - Drone	Surveyor- PLS	Total
	\$165.00	\$125.00	\$115.00	\$110.00	\$110.00	\$135.00	
Site Visit/Coordination							
Task 1 Meeting and review documents	2	2	0	0	0	1	\$715.00
						Subtotal	\$715.00
Survey/Existing Conditions Plan							
Task 1 Recon and Field Survey	0	1	0	0	12	4	\$1,985.00
Task 2 Develop Existing Conditions Plan/Layout	1	1	0	28	0	4	\$3,910.00
						Subtotal	\$5,895.00
Design							
Task 1 - Conceptual Design	2	4	20	0	0		\$3,130.00
Task 2 - 100% Design	1	8	24	0	0		\$3,925.00
Task 3 Estimate	1	1	8	0	0		\$1,210.00
Task 4 Meetings	2	2	0	0	0		\$580.00
						Subtotal	\$8,845.00
Contract Documents							
Task 1 - Project Manual/Special Provisions	1	4	20	0	0		\$2,965.00
Task 2 - Estimate	1	1	4	0	0		\$750.00
Task 3 Submittal	0	1	1	0	0		\$240.00
						Subtotal	\$3,955.00
					Total Fee		\$19,410.00

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	Project Manager	Senior Project Engineer	Project Engineer	Survey Tech	Robotic - Drone	Surveyor- PLS	Total
	\$165.00	\$125.00	\$115.00	\$110.00	\$110.00	\$135.00	
Phase I							
Site Visit/Coordination							
Task 1 Meeting and review documents	2	2	0	0	0	1	\$715.00
						Subtotal	\$715.00
Survey/Existing Conditions Plan							
Task 1 Recon and Field Survey	0	1	0	0	24	4	\$3,305.00
Task 2 Develop Existing Conditions Plan/Layout	1	1	0	48	0	4	\$6,110.00
						Subtotal	\$9,415.00
Design							
Task 1 - Conceptual Design	2	4	32	0	0		\$4,510.00
Task 2 - 100% Design	1	8	40	0	0		\$5,765.00
Task 3 Estimate	1	1	12	0	0		\$1,670.00
Task 4 Meetings	2	2	0	0	0		\$580.00
						Subtotal	\$12,525.00
Contract Documents							
Task 1 - Project Manual/Special Provisions	1	4	30	0	0		\$4,115.00
Task 2 - Estimate	1	1	8	0	0		\$1,210.00
Task 3 Submittal	0	1	1	0	0		\$240.00
						Subtotal	\$5,565.00
					Total Fee		\$28,220.00