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November 1, 2019

Georgia Lindahl Lopez and Morgen Fleisig Village of Hastings Board of Trustees 7 Maple Avenue Hastings-on-Hudson, NY 10706 trusteelopez@hastingsgov.org

RE: Additional Traffic Engineering Services Hastings-on-Hudson, NY SSC Project No. 17-01-2680

Dear Georgia and Morgen,

It has been a pleasure working with the Village of Hastings-on-Hudson to complete services for the "On-Call Traffic Engineering Services TOC #1" scope dated October 25, 2017, the "Request for Additional Work Completed" scope dated February 7, 2019, and the "Origin and Destination Study" scope dated May 16, 2019. It is understood that the Village wishes to explore additional traffic calming, and traffic reduction measures to improve safety and attempt to reduce the number of drivers who pass through Hastings-on-Hudson to and from Yonkers via Tompkins Avenue, James Street, Farragut Parkway, and other local roads. At your request, Sam Schwartz Engineering, DPC (Sam Schwartz) has prepared the following scope of work to perform a U-turn closure impact study, provide data analysis/implementation support for the long term turning movement restriction plan, provide Streetlight data analysis for before and during the plan, coordinate with Waze and Google Maps to update their maps and present findings at meetings. Additional funds in the amount of \$49,322.00 (Note: This cost does not include the approximately \$15,000 for the StreetLight Data subscription) are requested for the work to be completed. Details of each task are explained below.

### Task 1: U-turn Closure Impact Study (To be completed at no cost)

In the previous trial run study, westbound left turns were restricted from High Street to James Street, on Hudson Street and Warren Street during the weekday hours of 7 AM to 9 AM for a period of several weeks. Data collected during the trial run showed a decrease in vehicles on James Street and an increase in vehicles on High Street. Based on feedback from the Village, it was learned that some of the vehicles which continued onto High Street utilized the Broadway U-turn (between Windsor Road and Devon Way) towards Broadway southbound. In an attempt to reduce the cut through traffic through the Village, a "No U-turn" (except emergency vehicles) restriction on Broadway is proposed during the weekday hours of 7 AM to 9 AM. Before the restriction could be implemented, an impact study is required to assess current vehicle volume usage of the U-turn, assess potential detours, and assess potential impacts on Broadway intersections south of Farragut Avenue, including:

- 1. Windsor Road
- 2. Devon Way
- 3. Burnside Drive
- 4. Washington Avenue
- 5. Olinda Avenue
- 6. Farragut Avenue/Chauncey Lane/Main Street/Baker Lane

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Sam Schwartz is proposing to use Streetlight to collect the existing morning peak hourly vehicle volumes at the Broadway U-turn and the above intersections over six months – April through September 2019. Synchro would be used to determine existing LOS at these intersections as well as determine the LOS at these intersections for up to three detour conditions. Based on the impact results, it would be recommended to close (during weekday 7 AM to 9 AM hours) or keep the U-turn open. Sam Schwartz would submit a memo to NYSDOT for approval.

### Task 2 (A + B): Long Term Implementation of Turning Movement Restriction Plan (\$10,000)

Assuming NYSDOT approval, *Sam Schwartz* will work with the Village to implement the morning turning movement restriction study for four months (one month of baseline – no restrictions and three months of restrictions). This includes implementing the following restrictions from 7 AM to 9 AM (weekdays):

- 1. No left turns from High Street to:
- 2. James Street
- 3. Hudson Street
- 4. Warren Street
- 5. No U-turns (except emergency vehicles) on Broadway between Windsor Road and Devon Way (Subject to NYSDOT approval)
- 6. No left turns from Windsor Road to Derry Lane and Stratford Lane

It is assumed that the U-turn restriction plan will consist of signs at the entrance. This is intended to dissuade non-emergency vehicles from using the U-Turn, but still allows emergency vehicle access. Subject to NYSDOT approval, additional flexible delineators may be installed at the gore area on Broadway at Devon Way to further discourage U-turns at this location. We will coordinate the procurement of signs for the U-Turn restriction, however these expenses will be billed separately and are not included in this scope. Up to two field visits over four months is assumed to perform field observations, verify signage placements, and verify traffic recorder placements.

Sam Schwartz will also implement a data collection program to monitor volumes at selected Village intersections during implementation of the plan. Our team will utilize the Village's traffic counters to collect the traffic volumes. As shown in **Figure 1** and below, the following locations are anticipated:

- 1. High Street westbound between Rose Street and James Street
- 2. High Street westbound just east of Broadway
- 3. High Street eastbound just west of Warren Street (Brandt Street)
- 4. James Street southbound just north of Tompkins Avenue

These volumes will primarily be used to compare with the Streetlight data. It is assumed no comparison deliverables will be completed as part of this task.

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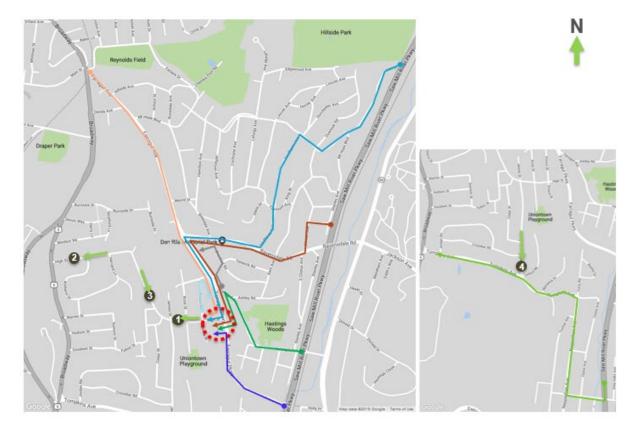


Figure 1: Traffic Volume Count Locations

# Key:

- Inbound Vehicle Routes
- Traffic Counters Required •



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### Task 3: Streetlight Data Analysis (\$28,322)

To develop a better understanding of the travel patterns in Hastings-on-Hudson, *Sam Schwartz* will work with Streetlight data to develop up to 50 origin and destination zones from the Saw Mill River Parkway to Broadway. *Sam Schwartz* will utilize this information to perform an existing conditions baseline analyses. It is assumed Hastings-on-Hudson will purchase an "Advanced" one-year subscription from StreetLight Data and grant *Sam Schwartz* with access to the web-based utility. The cost of the subscription is approximately \$15,000 and is not included as part of this proposal. *Sam Schwartz* then will perform data analysis each month (four months total) of the turning movement restriction trial run. This includes the first month, which will be baseline-no restrictions, and for the remaining three months when the restrictions are implemented. It takes three months for real time data to be analyzed by StreetLight and added to their platform. Therefore, the monthly analyses performed for the trial runs will be completed three months after the completion of each month. For instance, November 2019's analysis would be completed in March 2020, December's will be completed in April 2020, etc. The following information can be included for each of the analyses in tables and figures:

- Data for the origin and destination routes:
  - o Driver demographics (i.e. Hastings or out of town resident)
  - o Travel times
  - o Speeds
- Volume/turning movement count estimates at specific intersections (note: if included, this may reduce the number of zones available for origin and destination analyses)

This information may be used to adjust the long-term implementation of the turning movement restriction plan.

The following O-D pairs are anticipated; however, these are subject to change upon utilization of Streetlight's platform:

### Zones for Broadway U-turn Impact Study (22 zones)

- 1. Windsor Road/Broadway (2 zones)
- 2. Devon Way/Broadway (3 zones)
- 3. Burnside Drive/Broadway (3 zones)
- 4. Washington Avenue/Broadway (3 zones)
- 5. Olinda/Broadway (3 zones)
- 6. Farragut Avenue/Chauncey/Main (6 zones)
- 7. Broadway U-turn (2 zones)

Starting zones for routes via High Street/James Street/Tompkins Avenue to Broadway south of Tompkins Avenue (8 zones total):

- 1. Cliff Street at Saw Mill River Parkway
- 2. Clarence Avenue at Saw Mill River Parkway
- 3. Farragut Avenue at Saw Mill River Parkway
- 4. Farragut Parkway at Saw Mill River Parkway
- 5. Ravensdale Road at Saw Mill River Parkway

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- 6. Tompkins Avenue at Saw Mill River Parkway (NB)
- 7. Farragut Avenue at Mount Hope Boulevard

Starting zones for routes via Broadway U-Turn to Broadway south of Tompkins Avenue (2 new zones)

- 1. High Street at Farragut Parkway
- 2. High Street at Broadway

Starting zones for routes via Windsor Road and Stratford Lane to Broadway south of Tompkins Avenue (1 new zone)

1. High Street at Farragut Parkway

Starting zones for routes via Windsor Road and Derry Lane to Broadway south of Tompkins Avenue (1 new zone)

1. High Street at Farragut Parkway

Starting zones for routes via Burnside Drive/Stratford Lane to Broadway south of Tompkins Avenue (0 new zones)

1. High Street at Farragut Parkway

Starting zones for routes via Olinda Avenue to Broadway south of Tompkins Avenue (3 new zones):

- 1. Farragut Avenue at Saw Mill River Parkway
- 2. Farragut Parkway at Saw Mill River Parkway
- 3. Ravensdale Road at Saw Mill River Parkway
- 4. Tompkins Avenue at Saw Mill River Parkway (NB)
- 5. Farragut Avenue at Mount Hope Boulevard

Starting zones for routes via Executive Boulevard to Broadway south of Tompkins Avenue (2 new zones):

1. Saw Mill River Parkway north of Cliff Street

### Additional Routes (11 new zones):

- 1. Ravensdale Road at Kent Avenue to Farragut Parkway via Farragut Avenue (3 new zones)
- 2. Ravensdale Road at Kent Avenue to Farragut Parkway via Fenwick Road (1 new zone)
- 3. Ravensdale Road at Kent Avenue to Farragut Parkway via Branford Road/The Fenway (from the north) (1 new zone)
- 4. Ravensdale Road at Kent Avenue to Farragut Parkway via Branford Road/The Fenway (from the south) (1 new zone)
- 5. High Street at Farragut Parkway to Tomkins Avenue at Broadway (2 new zones)
- 6. Broadway at High Street to Hastings Landing via Broadway U-turn (2 new zone)
- 7. Broadway at High Street to Pinecrest Drive via Broadway U-turn (1 new zone)

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### Task 4: Google Maps and Waze Coordination for Trial Run (\$1,000)

Sam Schwartz will work with Waze to implement the turning movement restrictions during the trial run. Our team will also work with Google Maps to implement the restrictions; however, based on our experience, it is unlikely that the temporary restriction will be implemented. The coordination of permanent restrictions is not included as part of this scope.

### Task 5: Team Meetings and Public Meetings (\$10,000)

Sam Schwartz has budgeted for two public meetings, and four call-in meetings with the Village. Our team of engineers and planners will develop two PowerPoint presentations for the public meetings to summarize and illustrate the results of Tasks 1 to 4.

#### **Fee Estimate**

Sam Schwartz is requesting a not to exceed \$49,322.00 for completion of the tasks detailed above. Tasks 2 through 4 will only be completed if Sam Schwartz and NYSDOT recommends closing (except emergency vehicles) the Broadway U-turn during the weekday hours of 7 AM to 9 AM. We will bill for the actual work performed with a detailed invoice showing hourly billing and direct expenses. If you approve this fee for additional work completed, please return a signed copy of this agreement. If you have any questions, please do not hesitate to email or call. We look forward to continuing working with you on this exciting project.

Sincerely,

Lou Luglio, P.E. Vice President (201) 805-8819

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