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June 27, 2018

VIA EMAIL

Mr. John A. Tegeder, R.A., Director of Planning
Town of Yorktown Planning Dept.
1974 Commerce Street
Yorktown Heights, NY 10598

Re: East Main Street
Town of Yorktown, New York
MC Project No. 17005162A

Dear Mr. Tegeder:

We have completed our work tasks and recommendations for improvements along the East Main Street corridor in the Shrub Oak section of the Town. The following is a summary of the tasks completed along with the results and our recommendations.

Phase 1: Review of Existing Conditions Information

(Figure No. 1)

All existing conditions information including traffic volume information provided by the Town and from other previous studies, including the H2M study for the Shrub Oak International School, have been compiled and reviewed. The information included speed and traffic volume information, and analyses for the East Main Street corridor (See Figure No. 1).

Relative to the intersection of East Main Street and Stoney Street, the information provided in the Shrub Oak International School indicated that traffic signal warrants would be met under future conditions. We have reviewed that information and other historical information and agree that volumes would satisfy the combined Warrants 1A/1B as well as peak hour warrants (2 and 3) under the Build conditions to warrant signalization. The attached Tables TSW-1 and TSW-2 summarize the signal warrants for Warrants 1, 2, and 3 for the Existing conditions and Tables TSW-B1 and TSW-B2 for the Build conditions.



The speed data compiled by the Town of Yorktown Police Department indicates an 85th percentile speed along this portion of the corridor of 36 MPH with an average speed of 29.88 MPH. Note that the posted speed limit is 30 MPH throughout its length. The summary of the data and warrant analysis is contained in Appendix A.

Phase 2: Field Surveys/Supplemental Traffic Data Collection

(Figures No. 2 through 5; Tables No. V-1, V-2, and V-3)

Based on the historical traffic volume information, we have summarized the traffic volume information as shown on Figure No. 2 through 5 for the AM and PM peak hours with 2017 Existing and 2018 Build volumes. Table V-1 provides an hourly summary for weekdays for East Main Street and Stoney Street. In addition, a tabular summary of general roadway description, and other characteristics are summarized in Table No. V-2. Representatives of Maser Consulting have also completed visual observations of peak hour pedestrian activity crossing East Main Street in the vicinity of Lakeland High School. A summary of the information is provided in Table V-3

Phase 3: Detailed Survey for East Main Street and Stoney Street Intersection

(Drawing No. BS-1)

We have completed a detailed survey for the intersection of East Main Street and Stoney Street intersection identifying all geometric features, utilities, Right-of-Way, etc. (A copy of that plan is attached.) As noted, there are existing Right-of-Way constraints at this intersection. **Based on this, the Town will need to obtain easements or acquire land to allow crosswalks and/or pedestrian landing areas, placement of poles, etc. See survey plan within these areas identified.**

Phase 4: Signal Design for East Main Street and Stoney Street

(Table LOS-1 and Drawing T-1)

A preliminary layout identifying possible pole locations, actuation, and other design features has been prepared. This plan will be finalized once information on land acquisition/easements is obtained. The design and installation of a traffic signal at the East Main Street and Stoney Street



intersection is in accordance with the Town of Yorktown Comprehensive Plan's recommendations for the area of Shrub Oak.

Note that as indicated Phase 1 above, consistent with the findings of the Shrub Oak International School study, we concur that under future Build conditions that signalization will be warranted at this location. Also note, that as a result of the Right-of-Way constraints, the ability to provide a separate left turn lane on East Main Street does not appear to be feasible, however the signal design would include an advanced phase as part of the design to help accommodate left turning vehicles. More detailed design will be completed after the land issue is finalized. (See Table LOS-1 for Capacity Analysis results summary.) **Advance signing and signal ahead flashing beacons are recommended on the eastbound approach to the intersection due to the vertical alignment of East Main Street.**

Phase 5: Identification of Potential Improvements for the East Main Street Corridor

(Sheet No. 1-10)

We have identified where additional signing, striping, crosswalks, and other traffic calming measures are possible. The types of improvements that have been explored include the following:

- a. Upgrades to Existing Crosswalks
- b. Identify Location of New Crosswalks
- c. Modify Existing Signing and Striping
- d. Various Options for Pedestrian Movements/Improvements
 - RRFB's (Rectangular Rapid Flashing Beacons)
 - Pavement Delineators
 - Other Signing/Beacons/Striping
 - Raised Crosswalks, etc.

In addition to the signalization of Stoney Street and East Main Street, the areas of other recommended improvements, include the following:



Upgrade to Existing Crosswalks

There are currently two (2) striped crosswalks along East Main Street. One in the vicinity of the access to the Shrub Oak Shopping Center and another in the vicinity of the Lakeland School District Administration building between Dane Street and Frost Road. The crosswalk near the access to the Shrub Oak Shopping Center will require an advance warning sign to be installed 250 feet east of the cross walk (See Sheet No. 2 of 10) to conform to current MUTCD standards. **The signing at the existing crosswalk near the Lakeland School District Administration building should be upgraded to meet current standards (see Sheet No. 6 of 10).**

Recommended New Crosswalks

In addition to the existing crossings, based on observations, two new crossings should be considered for installation. One west of the Lakeland School west access drive/Elizabeth Seton driveway crossing to the westerly portion of the Shrub Oak Shopping Center (See Sheet No. 2 of 10) and one in the vicinity of the John C. Hart Library (west of Dane Street) (See Sheet No. 5 of 10).

The proposed crosswalk shown on Sheet No. 2 will also require sight distance improvements with clearing along the Shrub Oak Shopping Center Right-of-Way and the construction of a landing area on that side. The crosswalk will require the installation of the RRFB's and advance warning signs. In addition, the advanced warning markings shown on Sheet No. 8 of 10 should also be installed. **Note that an easement may be required on the Shrub Oak Shopping Center side to create the adequate landing pad consistent with ADA compliance.**

This particular location, in the vicinity of the Elizabeth Seton driveway and high school west access drive, is in an area where students were observed crossing from the school to park in the shopping center and access the high school. Near the library, i.e. west of Dane Street, similar RRFB's, advance warning markings and advance warning signing should be installed with the crosswalk as indicated on Sheet No. 5 of 10.



Other Improvements

Other areas recommended for striping, signing, and other related improvements include the following:

1. The sight distances exiting from the high school driveways are currently restricted due to vegetation either within the Right-of-Way and/or on adjacent properties. Appropriate sight distance easements as per the Town requirements should be implemented at both locations. The clearing/pruning areas are identified on Sheet No. 2 of 10.
2. The accidents throughout the corridor were summarized in tabular form by location. In the vicinity of the New Road intersection (Lakeland Deli) there have been several “run-off the road” type accidents. Due to the location of the horizontal curve, additional speed warning signs and speed limit flashing signs should be considered in advance of the curve. In addition to help with speed reductions, the installation of the striping pattern shown on Sheet No. 8 of 10 and/or the centerline audible roadway delineators (CARDS) shown on Sheet No. 10 of 10, should be implemented. This will help advise motorists of the condition and should help reduce speeds along this roadway segment. An additional street luminaire on the eastbound approach to this curve may also be beneficial for nighttime conditions.
3. The East Main Street intersection with Route 132 with Old Yorktown Road Route 132 Extension, near the Lakeland Liquor Store, should be restriped in accordance with previous striping pattern, which partially channelizes and “T’s Up” the approach. (See Sheet No. 7 of 10 for this location.)
4. Install solar speed limit warning signs on East Main Street west of the Elizabeth Seton Church and also east of the Lakeland Administration Building (see Sheets No. 2 and 6).



Phase 6: Preparation of Conceptual Improvement Plans

The Drawing Nos. 1-10 were prepared utilizing available aerial photography, together with the field observations, to identify particular signing, striping, and other measures which could be completed to improve the safety of pedestrians and assist in traffic calming in the corridor.

Note, that based on a Town Board Resolution, the installation of speed tables are not appropriate for this corridor due to the traffic volumes and other criteria.

The potential improvements identified previously on various drawings also include appropriate details relative to MUTCD requirements, ADA requirements for the curb ramps, and other recommended improvements.

We trust the above sufficiently outlines the measures that can be employed to help mitigate various corridor operational concerns, therefore providing a safer environment for pedestrians and the traveling public.

Very truly yours,

MASER CONSULTING P.A.

A handwritten signature in blue ink, appearing to read 'Philip J. Grealy', written in a cursive style.

Philip J. Grealy, Ph.D., P.E.
Principal/Department Manager

A handwritten signature in blue ink, appearing to read 'A. Peter Russillo', written in a cursive style.

A. Peter Russillo, P.E., PTOE
Associate/Sr. Project Manager

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Enclosures