Sam Schwartz Engineering, DPC One North Broadway – Suite 403 White Plains, NY 10601 phone: (201) 805-8819 samschwartz.com



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Maureen Caraballo
District Treasurer
Hastings-on-Hudson UFSD
Business Office
27 Farragut Avenue
Hastings-on-Hudson, NY 10706
CaraballoM@hohschools.org

RE: Drop-Off/Pick-Up Area Evaluation
Farragut Middle School and Hastings High School
Technical Memorandum (DRAFT)

Dear Maureen,

Sam S chwartz E ngineering, D .P.C. (Sam Schwartz) is pl eased to pr ovide this Technical Memorandum conveying the Drop-Off/Pick-Up Area E valuation in the Village of Hastings-on-Hudson, NY. Members of the Board raised concerns to Sam Schwartz about student safety at school drop-off/pick-up areas. Sam Schwartz performed observations on drop-off/pick-up activity, traffic congestion, and pedestrian I evels around Far ragut Middle S chool and Hastings High School. Three alternatives were developed based on these observations to improve accessibility and safety. Existing conditions observations were performed around Farragut Middle School and Hastings High School for a typical school weekday during the morning and evening peak drop-off/pick-up hours. Observations on d rop-off/pick-up ac tivity, traffic c ongestion I evels, and pedestrian levels are detailed below.

Drop-Off/Pick Up Activity

As shown on **Figure 1**, areas of high drop-off/pick-up activity were observed on Olinda Avenue just west of Farragut Avenue and on Mount Hope Boulevard between School Street and Farragut Avenue. Minimal activity was observed at the dedicated drop-off/pick-up area in front of the middle school. It is believed that since there is only one lane dedicated for through and drop-off/pick-up traffic, drivers chose other areas with better maneuverability. There were instances observed where drivers who entered the drop-off/pick-up area in front of the middle school waited behind idling vehicles to exit.



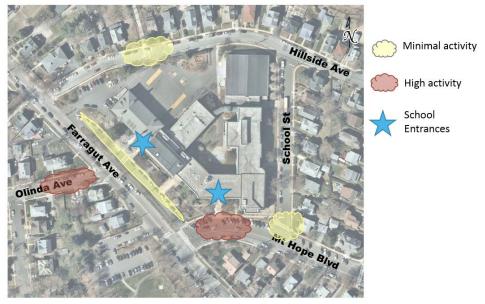


Figure 1: Observed Drop-Off/Pick-Up Activity Levels

Traffic Congestion Levels

As shown on **Figure 2**, most traffic congestion was observed on Farragut Avenue between Mount Hope Boulevard and Hillside Avenue. Vehicle queues formed in this area when the crossing guard stopped traffic to allow pedestrians to cross the street.



Figure 2: Observed Traffic Congestion Levels



Pedestrian Levels

As shown on **Figure 3**, observed pedestrian activity was greatest at the intersections closest to the middle and high school entrances. These consist of Farragut Avenue at Hillside Avenue, Olinda Avenue, and Mount Hope Boulevard, and the high school entrance at Mount Hope Boulevard.



Figure 3: Observed Pedestrian Activity



RECOMMENDATIONS

Based on the findings of the observations, three different alternatives were developed to improve pedestrian safety and drop-off/pick-up patterns at Farragut Middle S chool and H astings High School. The first alternative consists of reconfiguring the middle school and formalizing high school drop-off/pick-up areas. The second a Iternative c ombines the middle school and high school drop-off/pick-up areas. The final alternative would create a new drop-off/pick-up area along Farragut Avenue. These alternatives are described in detail below.

Alternative 1

Reconfiguration of Middle School Drop-Off/Pick-Up Area

This alternative consists of reconfiguring the middle school drop-off/pick-up area along Farragut Avenue to i mprove the flow of traffic along this street and along Olinda Avenue. This recommendation would provide a designated drop-off/pick-up area with a bypass lane and restrict parking during school hours on Farragut Avenue. Prohibit left-turns and U-turns at the intersection of Farragut Avenue and Mount Hope Boulevard for southbound and westbound traffic during school hours. Prohibit left-turns from the drop-off/pick-up area onto Farragut Avenue and restrict southbound left-turns from Mount Hope Boulevard onto Farragut Avenue during school hours. Also, drop-off/pick-up activity would be prohibited along Olinda Avenue.

There are several benefits to this design as a drop-off/pick-up area dedicated to the middle school would be provided. In addition, students being dropped off or picked up would not have to cross any streets and traffic flow would be improved. The disadvantage with this configuration is that approximately 17 parking s paces along Farragut A venue would be unavailable during s chool hours. The recommendation is shown on **Figure 4**.

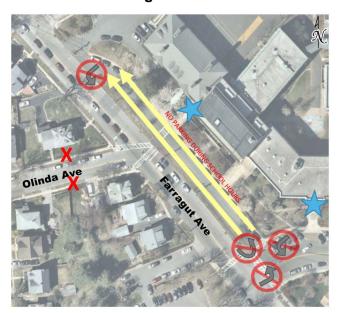


Figure 4: Reconfiguration of Middle School Drop-Off/Pick-Up Area



Formalization of High School Drop-Off/Pick-Up Area

In addition to reconfiguring the middle school drop-off/pick-up area, formalization of the high school drop-off/pick-up area is also necessary. This recommendation consists of providing a designated drop-off/pick-up area on Mount Hope Boulevard and a bypass lane, which would be separated from traffic with a median. Vehicles exiting the drop-off/pick-up area would be forced to use the bypass lane adjacent to the middle school entrance. Restricting drop-off/pick-up activity along the south side of Mount Hope Boulevard would be necessary as well as prohibiting parking along the north side of the street during school hours.

This design has several benefits which includes having a designated drop-off/pick-up area for the high school, students not needing to cross the street to reach the school entrance and improving the traffic flow along Farragut Avenue and Mount Hope Boulevard. With this design, on-street parking would be reduced by approximately 19 spaces along the north side of Mount Hope Boulevard during school hours. The recommendation is shown on **Figure 5**.



Figure 5: Formalization of High School Drop-Off/Pick-Up Area

Alternative 2

Combination of Middle and High School Drop-Off/Pick-Up Areas

An alternative option to reconfiguring the middle school and high school drop-off/pick-up areas is to combine the middle and high school drop-off/pick-up areas on School Street. This includes the restriction of parking during school hours on the west side of School Street, increasing parking along the east side of School Street, and changing School Street from two-way to one-way southbound vehicle traffic. Drop-off/pick-up activity would be prohibited at all other locations.

This drop-off/pick-up configuration has several benefits as it provides a designated drop-off/pick-up location for both the middle and high schools. Students would not need to cross any streets to get to the school entrance from the drop-off/pick-up area. Traffic flow along Farragut Avenue,



Olinda Avenue, Mount Hope Boulevard, and Hillside Avenue would be improved. Additionally, onstreet parking would be increased by two spaces during school hours and by 18 spaces at all other times. The disadvantage with this design is that vehicle volumes along School Street would increase during drop-off/pick-up periods. The recommendation is shown on **Figure 6**.



Figure 6: Combination of Middle and High School Drop-Off/Pick-Up Areas

Alternative 3

New Drop-Off/Pick-Up Area on Farragut Avenue

An alternative option to the reconfigured drop-off/pick-up areas for the middle school and high school is to develop a new drop-off/pick-up area on the west side of Farragut Avenue just south of Mount Hope Boulevard. Parking would be prohibited along this section of Farragut Avenue during school hours and drop-off/pick-up activity would be restricted along Olinda Avenue. This recommendation would designate a specific drop-off/pick-up area for the schools and alleviate traffic directly in front of the schools. However, it is not as safe for students since they would have to cross Farragut Avenue to reach the schools and the drop-off/pick-up area is offset from the entrances. A crossing guard would likely be needed to assist students crossing Farragut Avenue and Mount Hope Boulevard. Also, traffic congestion along Farragut Avenue may increase due to the school related droop-off/pick-up activities. The recommendation is illustrated on **Figure 7**.





Figure 7: Drop-Off/Pick-Up Area on Farragut Avenue

TOOLS FOR SUCCESS

As shown on **Figure 8**, it is important to take a moment and explain the Tools for Success for these recommendations: engineering, education, and enforcement.

Engineering

- Develop recommendations to improve traffic flow and safety (see Alternatives 1, 2, and 3 above). Select Alternative 1, 2, or 3 to implement.

Education

For the selected alternative to be successful, residents and parents must be educated on the recommendations. Public outreach should be performed to educate parents on the new areas which are dedicated for drop-off/pick-up, and the areas for which drop-off/pickup is prohibited.

Enforcement

For the recommendation to work, police must enforce the newly adopted drop-off/pick-up rules. For instance, drivers should be ticketed if they are dropping-off/picking-up students in prohibited areas. During the first week of implementation, drivers should be directed to the area dedicated for student drop-off/pick-up.



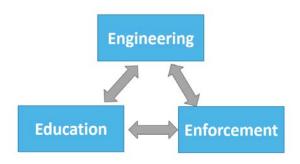


Figure 8: Tools for Success

If you have any questions, please do not hesitate to email or call. We look forward to continuing working with you and the school district on this exciting project.

Regards,

DRAFT

Lou Luglio, P.E. Vice President (973) 639-9629 ext. 213 <u>lluglio@samschwartz.com</u>

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