



October 24, 2019

Wayne Platte Jr., Chairman
City of Kingston Planning Board
420 Broadway
Kingston, NY 12401

RE: Response to Comments, The Kingstonian, 9-21 N. Front Street, City of Kingston, Ulster County, New York; CM Project No. 118-025

Dear Mr. Platte:

Creighton Manning Engineering, LLP (CM) is in receipt of the October 7, 2019 comments from HVEA Engineers regarding the Kingstonian project in the City of Kingston. Below is a summary of the comments and our responses.

Comment #1: "The closure of Fair Street Extension is a critical component of the proposed development. It has been adequately demonstrated that this action shall have no significant adverse traffic impact on the adjacent roadway network."

Response: Acknowledged.

Comment #2: "We defer to the City's Planning Department regarding parking requirements under the existing and proposed conditions."

Response: Acknowledged.

Comment #3: "We agree that the projected overall operating conditions at the Washington Avenue/Hurley Avenue/Schwenk Drive intersections may be improved via a review and revision of prevailing timing parameters and/or phasing."

Response: Acknowledged.

Comment #4: "The reactivation of the signal at Schwenk Drive/Fair Street Extension/Kingston Plaza intersection should be made a condition of project approval. The safe and efficient passage of project related traffic is dependent upon this mitigation action."

Response: Acknowledged.

Comment #5: "We concur that the operating conditions at both the Clinton Avenue/John Street and Clinton Avenue/Westbrook Lane may be improved via signalization and we agree that any such assessment should incorporate the signal operation at Clinton Avenue/Albany Street."

Response: Acknowledged.

Comment #6: "Again, we defer to the City's planning group for an evaluation of the proposed off-street deliveries and refuse collection."

Response: Acknowledged.

Comment #7: “We agree that the DRI initiative shall result in poor operating conditions at the Clinton Avenue/Main Street intersection (LOS F on Main Street) and concur that this condition may be improved via signalization.”

Response: Acknowledged.

Comment #8: We suggest that, “The applicant be required to undertake an assessment of sight lines at the southern garage ramp on Schwenk Drive [and] demonstrate conformance with current standards.”

Response: A sight distance assessment was conducted at the proposed southern access on Schwenk Drive. The available *intersection* sight distance was measured from the perspective of a driver looking in both directions along Schwenk Drive to determine if adequate sight lines are available. The intersection sight distance looking straight ahead for vehicles traveling westbound on Schwenk Drive (i.e., those turning left into the proposed garage ramp) was also measured. The available intersection sight distance on a minor approach should provide drivers a sufficient view of the intersecting roadway to allow vehicles to enter or exit the intersection without excessively slowing vehicles traveling at or near the operating speed on the intersecting mainline.

Stopping sight distance was also measured at the existing intersection. Stopping sight distance is the length of the roadway ahead that is visible to the driver. The available stopping sight distance on a roadway should be of sufficient length to enable a vehicle traveling at or near the operating speed to stop before reaching a stationary object in its path.

The posted speed limit in the City of Kingston is 30 mph. The available sight distances compared to the guidelines presented in AASHTO’s *A Policy on Geometric Design of Highways and Streets*, 2011, and NYSDOT design guidance (EB 17-007) for the 35-mph operating speed (posted speed limit plus five mph) on Schwenk Drive are summarized in Table 1.

Table 1 – Sight Distance Evaluation (feet)

Intersection		Intersection Sight Distance ¹				Stopping Sight Distance ²	
		Right Turn from Site Driveway (D _L)	Left Turn from Site Driveway		Left Turn from Schwenk Drive (D _S)	SSD _{EB}	SSD _{WB}
			Looking Left (D _L)	Looking Right (D _R)			
Schwenk Drive/Site Driveway	Available	>550	>550	290	>550	370	
	Recommended	335	390	390	205	250	

1. Intersection sight distance is measured at 14.5 feet back from the travel way at an eye height and object height of 3.5 feet.
2. Stopping sight distance is measured at an eye height of 3.5 feet for a 2-foot object located in the path of vehicles travelling on the mainline.

The available stopping sight distance for vehicles traveling eastbound and westbound on Schwenk Drive and the distance looking straight for drivers turning left into the site exceeds AASHTO guidelines for a 35-mph operating speed. In addition, the available intersection sight distance looking left to make a right turn exiting the site also exceeds AASHTO guidelines for the 35-mph operating speed.

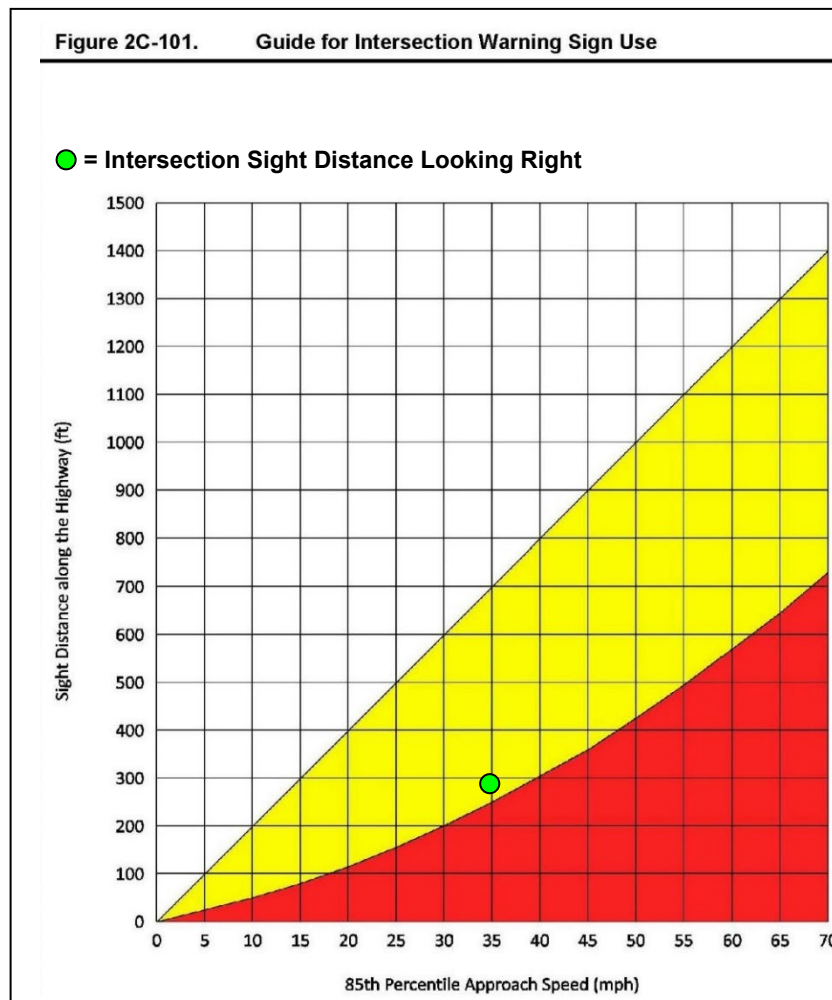


Photograph #1 – Sight Distance Looking Left



Photograph #2 – Sight Distance Looking Right

Drivers turning left out of the driveway also need to look right along Schwenk Drive. The available sight distance looking right is less than desirable at 35 mph. Figure 2C-101 found in the New York State Supplement (NYS Supplement) to the National Manual for Uniform Traffic Control Devices (NMUTCD) provides guidance for the installation of “Intersection Warning” signs as mitigation for sight distance. A review of Figure 2C-101 (see figure below) indicates that the available sight distance looking to the right at the Site Driveway is less than desirable, but not critically limited for a 35-mph operating speed and therefore an “Intersection Warning” sign is not recommended. It is recommended that any proposed vegetation and/or signage related to the site be placed a minimum of 15 feet back from the edge of the travel lane to maximize sight lines along the site frontage and provide clear lines of sight for vehicles exiting the site.



Reference: NYS Supplement to the Manual on Uniform Traffic Control Devices for Streets and Highways (2009 Edition), page 119

Comment #10: We suggest that, "In lieu of the 'relocation' of the flashing beacon at N/ Front Street/Wall Street consideration should be given to a 3-Color signal to better facilitate the safe and efficient flow of traffic at the proposed ingress to the development."

Response: A level of service (LOS) evaluation was conducted at the N. Front Street/Wall Street/Site Driveway intersection to assess the operational characteristics of modifying the flashing beacon, which provides for all-way stop control, to a three-color traffic signal. It is noted that the analysis is based on the current (Non-DRI) traffic patterns and that under the DRI scenario a signal would provide little value to vehicular traffic as both the site driveway and Wall Street would provide one-way travel away from N. Front Street. The results of the LOS analysis are summarized in table 2.

Table 2 – LOS Summary

Intersection	PM Peak Hour			
	2019 Existing	2025 No-Build	2025 Build	2025 Build w/ Signal
N. Front Street/Wall Street/Site Driveway				
N. Front Street EB [L]TR	A (9.7)	B (10.4)	A (9.4)	A (7.4)
N. Front Street WB LT[R]	B (10.2)	B (11.1)	B (10.1)	A (8.4)
Wall Street NB L[T]R	B (11.9)	B (13.9)	B (12.0)	A (6.4)
Overall	B (10.9)	B (12.3)	B (10.9)	A (7.2)

EB, WB, NB, SB = Eastbound, Westbound, Northbound, and Southbound intersection approaches
 L, T, R = Left-turn, Through, and/or Right-turn movements
 X (Y.Y) = Level of service (Average delay in seconds per vehicle)
 -- = Not Applicable

The analysis shows that construction of a full traffic signal at the N. Front Street/Wall Street/Site Driveway intersection will result in an approximate four-second reduction in overall delay. Although there is a theoretical benefit to the change in intersection operation, the degree of improvement is marginal and may not be commensurate with the associated construction cost. It is noted that should the City wish to pursue signalization at this intersection, a complete signal warrants analysis as outlined in the national Manual on Uniform Traffic Control Devices (MUTCD) should be conducted.

If you have any questions regarding above, please don't hesitate to contact our office.

Respectfully submitted,
Creighton Manning Engineering, LLP



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 Branch Manager



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 Project Planner

Attachments

Cc: Joe Bonura
 Dennis Larios, PE