

Memorandum

To: Daniel C Hill, Esq., Hill Law

From: David Black, C.Eng.

Date: January 21, 2022

Subject: Proposed Residential Development
School Street, Manchester-By-The-Sea, MA
Traffic and Transportation Review

As requested, I have performed an initial review of the traffic and transportation considerations regarding the proposed residential development at School Street, Manchester-By-The-Sea, MA (the Project) in the vicinity of its grade-separated interchange with Route 128 (Yankee Division Highway). The proposed Project, as revised, now comprises 136 residential rental units, with a total count of approximately 232 bedrooms. The Project would be supported by 242 parking spaces, the majority of which would be located in a parking garage below the new buildings. Single point access would be provided via a new curb cut on the west side of School Street, just north of its intersection with Atwater Street.

I have performed a preliminary review of the original Transportation Impact Assessment (TIA) for the Project and the Updated TIA prepared by Vanasse & Associates Inc. (VAI) dated September 2020 and December 2021, respectively. In addition, I have reviewed the Transportation Peer Review dated January 10, 2022 prepared by Environmental Partners (EP). The purpose of this memorandum is to summarize my initial findings regarding potential traffic and transportation impacts of the Project that need to be addressed, as follows:

1. Several changes have been made since the preparation of the September 2020 TIA, including a reduction in the number of proposed residential units and parking spaces, expansion of the study area and collection of more recent traffic data. These changes are reflected in updated analysis as presented in December 2021.
2. The Project is totally auto-dependent due to its remoteness from public transportation and the fact that there are no pedestrian or bicycle accommodations in the immediate vicinity of the site.
3. Because the MBTA Commuter Rail service available at Manchester-by-the-Sea Station is an approximately 7-minute drive from the site gateway, any transit trip would involve an auto trip between the Project and the station. Similarly, trips to schools, retail, and other day-to-day needs will dictate that auto trips are necessary to reach such destinations.
4. The site plan does not show any on-site pedestrian or bicycle facilities or direct connections to the roadway network.

5. There are no pedestrian sidewalks on School Street between the site and the closest existing sidewalk on one side of School Street in the vicinity of the Route 128 ramps.
6. The TIA suggests that there are bicycle accommodations on School Street throughout the study area. However, there is no signage or roadway striping for bicycles regardless of whether appropriate shoulder width is available.
7. The Project is supported by a single curb-cut and a long driveway which may have implications for emergency access, as well as a deterrent to walking between the building lobby and the site gateway, even if sidewalks were provided.
8. A Transportation Demand Management (TDM) plan is recommended in the TIA, and is intended to reduce the overall number of automobile trips. However, most of the recommended strategies for transit, bicycle and pedestrian access would be ineffective in light of the absence of alternative modes supporting the Project.
9. The traffic analysis examines weekday commuter peak periods. However, residential projects typically generate the same or greater peak traffic volumes on Saturday and Sunday which may result in different impacts or access needs on weekends, particularly during summer months.
10. The “Existing” 2021 traffic volumes presented in the Updated TIA show a significant increase compared to the “Existing” volumes incorporated in the original TIA. In particular, the “Existing” volumes on School Street in the vicinity of the site have increased from 388 to 610 vehicle per hour. Further, as noted in the EP Peer Review, it is unclear how the traffic volumes, as presented, were adjusted.
11. Table 6 in the TIA presents Peak Hour Traffic Volume Increases on study area roadways under Build compared to No Build conditions. However, the supporting narrative states as follows:

“As shown in Table 6, Project-related traffic-volume increases outside of the study area relative to 2029 No-Build conditions are anticipated to range from 0.0 to 6.6 percent during the peak periods, with vehicle increases shown to range from 0 to 50 vehicles. Focusing on local roadways, Project-related traffic volume increases outside of the study area range from 0 to 8 vehicles, or fewer than one (1) additional vehicle every 7 to 8 minutes during the peak hours, a level of impact that would not be readily apparent over existing conditions and that would not result in a material increase in motorist delays or vehicle queuing.”

It is unclear what the analysis is presenting.
12. The TIA traffic operations analysis identifies a number of locations where conditions for certain intersection movements are projected to fail (LOS E or F) under No-Build and Build conditions. The Route 128 Southbound Off-Ramp would decline from LOS D to E in the AM peak and LOS E to F in the PM peak under Build conditions. The Route 128 Northbound Off-Ramp would experience LOS F during both AM and PM peaks under both No-Build and Build conditions. In addition, certain movements at the School Street intersections with Pleasant Street, Lincoln Street and Route 127 currently experience failing conditions and will continue to do so under No-Build and Build conditions.
13. The TIA recommends that the Project proponent should undertake a Traffic Signal Warrants Analysis at the Route 128 ramp intersections on School Street to identify potential signalization improvements. However, there is no commitment to funding of improvements, which would

rely upon the Town pursuing funding to ensure that the improvements are actually implemented.

14. Adequate sight distances are critical for the safety of the proposed new curb-cut for the Project driveway on School Street. The TIA suggests that both Stopping Sight Distance and Intersection Sight Distance can be satisfied if “sight triangles” are cleared. However, in the absence of an engineered plan it is not clear that the sight lines can be achieved in practice within the Project site and/or Public Way. An engineered plan showing both horizontal and vertical clearances is required to demonstrate that adequate sight distances can be achieved, and should define any objects or obstructions that need to be removed.
15. The proposed parking supply of 242 spaces appears to be consistent with the ITE Parking Generation Manual which prescribes parking ratios of 1.7 spaces per dwelling unit (or 1.0 spaces per bedroom). However, the EP Peer Review suggests that the parking supply may not comply with requirements under the Zoning Bylaw.

R. David Black, CEng

Transportation Planner & Traffic Engineer

Education

MS, Transportation, Imperial College London (England), 1978
BS, Civil Engineering, University of Edinburgh (Scotland), 1975



Affiliations/Memberships

CEng, Chartered Engineer (UK) 1988
MICE, Member of the Institution of Civil Engineers (UK)

David is a seasoned professional with 45 years of experience in transportation planning and engineering. He commenced his career in the UK, where he was licensed as a Chartered Engineer (UK) in 1988, and subsequently relocated to the US where he has specialized for over 30 years in multimodal, urban projects for both public and private sector clients. He has been involved in land use and transportation planning at local, district, and regional levels with projects ranging from individual development projects and campus development to neighborhood studies and system-wide transportation needs.

Employment History

1975 – 1977	Freeman Fox & Partners <i>London, UK</i>	Graduate Engineer, Structures & Highways
1978 – 1982	W.R. Davidge & Partners <i>London, UK</i>	Project Engineer
1983 – 1987	Denis Wilson & Partners <i>London, UK</i>	Senior Engineer/Associate Partner
1988 – 2000	Tippitts Abbett McCarthy Stratton (TAMS) <i>Boston, New York, Arlington VA, Chicago</i>	Project Manager/Associate
2001 – 2020	Vanasse Hangen Brustlin Inc. (VHB) <i>Boston, Watertown</i>	Senior Project Manager/Associate