



February 4th, 2022

To: Steve Bohl, BohLand Development

From: Katie Schmidt, PE

Re: Trip Generation Memorandum – Highcroft Enclave, Wayzata, MN

Per your request, S² Traffic Solutions, LLC has conducted a trip generation study for the proposed Highcroft Enclave Development (termed “Proposed Project” in this memo) in Wayzata, Hennepin County, MN. The Proposed Project consists of the redevelopment of Blake’s Highcroft School Campus into a residential development with 15 single family homes. The Proposed Project is located on the south side of Shoreline Dr (CSAH 15), on the north side on Peavey Ln, and on the west side of Peavey Rd. Access to the Proposed Project will be provided via one access roadway, Peavey Pl. **Figure 1**, Vicinity Map, and **Figure 2**, Site Plan, depict the project location, site layout and access roadway.

This memo provides a trip generation comparison of existing school traffic versus proposed traffic related to the 15-home residential development. Additionally, intersection sight distance for turning maneuvers at the proposed residential access (Peavey Pl) on Shoreline Dr is reviewed.

Trip Generation – Existing School

The volume of vehicle trips generated by the existing Blake Highcroft School has been estimated for the weekday AM and PM peak hours and on a daily basis using the following data provided by the school:

- The school has 240 Students and 40 employees and school hours are from 8:30 AM to 3:30 PM.
- Pick-up and Drop-off traffic includes 6 busses and 150 vehicle drop-offs coming in and out of the school.
- The AM peak of school traffic occurs between 8:00 AM and 8:30 AM with 6 busses and 150 vehicle drop-offs. It is assumed that employees arrive before the peak.
- The PM peak of school traffic is more spread out as there is after school care and activities. At school dismissal there are 6 busses and approximately half the vehicle pick-ups (75 vehicles.)
- The parent car drop-off and pick-up line often extends from the school parking lot along Peavey Lane and sometimes as far back as Peavey Road.
- The school often hosts a number of community events that draw as many as 200 cars to the campus and surrounding neighborhood streets.

Based on the provided student, bus and drop-off data, the existing trip generation for the school is summarized in Table 1.

Table 1 - Trip Generation for Existing School

Land Use	ITE Land Use Code	Size		Trips Generated:				Weekday ADT
				AM Peak		PM Peak		
				Enter	Exit	Enter	Exit	
Existing School	**	240	Students	156	156	81	81	704
				312		162		

- AM peak includes 6 buses and 150 drop-offs both entering and exiting.
- PM peak includes 6 buses and 75 pick-ups both entering and exiting.
- Daily traffic includes all employee, bus, and drop-off/pick-up traffic.

The existing school generates 312 trips (156 entering and 156 exiting) during the morning traffic peak hour, 162 trips (81 entering and 81 exiting) during the afternoon traffic peak hour and 740 daily trips.

Trip Generation – Proposed Project

The volume of vehicle trips generated by the Proposed Project has been estimated for the weekday AM and PM peak hours and on a daily basis using the data methodology described in the *Trip Generation Manual*¹. Table 2 summarizes the trip generation estimates for the proposed residential land use.

Table 2 - Trip Generation for Proposed Project

Land Use	ITE Land Use Code	Size		Trips Generated:				Weekday ADT
				AM Peak		PM Peak		
				Enter	Exit	Enter	Exit	
Single Family Homes	210	15	Units	3	8	9	5	141
				11		14		

- Per ITE’s Trip Generation Manual, 11th Edition.

The Proposed Project is estimated to generate 11 trips (3 entering and 8 exiting) during the morning traffic peak hour, 14 trips (9 entering and 5 exiting) during the evening traffic peak hour and 141 daily trips. The intensity of estimated trips for the Proposed Project is significantly less than the existing traffic being generated by the school. Table 3 notes the difference in trip generation estimates.

Table 3 - Trip Generation Difference

Land Use	ITE Land Use Code	Size		Trips Generated:				Weekday ADT
				AM Peak		PM Peak		
				Enter	Exit	Enter	Exit	
Existing Land Use								
School	**	240	Students	156	156	50	50	704
				312		100		
Proposed Land Use								
Single Family Homes	210	15	Units	3	8	9	5	141
				11		14		
Difference								
				-302		-86		-563

¹ Trip Generation Manual, Institute of Transportation Engineers (ITE), 11th Edition

Access Sight Distance Review

The available sight distance on Shoreline Dr at the proposed access roadway (Peavey PI) was reviewed to determine if there is adequate distance to safely maneuver left and right turns from the minor road stop condition. The measured sight distance should be equal to or greater than the recommended stopping sight distance and, ideally, equal to or greater than the intersection sight distance from data in *AASHTO's - A Policy on Geometric Design of Highways and Streets* for a 45-mph roadway. The following notes AASHTO's recommended stopping and intersection sight distance:

- Stopping Sight Distance for a 45-mph Roadway – 360'
- Case B1, Left Turn from Stop – 500'. This would be the distance required looking to the right.
- Case B2, Right Turn from Stop – 430'. This would be the distance required looking to the left.

The proposed access roadway is in the same location as the existing school access driveway on Shoreline Dr and a site visit was conducted in February 2022 to document existing available sight distance at the access point. Figure 3 illustrates observed available distance. For a left turn from stop the available sight distance looking to the right is 500'. For a right turn from stop the available sight distance looking to the left is 460'. Stopping site distance and intersection sight distance recommendations for Cases B1 and B2 are satisfied and adequate distance will be provided at proposed access roadway.

Conclusions

The anticipated trip generation for the Proposed Project is significantly lower than the existing school trip generation. Specifically, there will likely be a reduction of approximately 302 AM trips, 86 PM trips and 563 daily trips with the redevelopment of the school site and no adverse traffic operations are anticipated. Additionally, a field review of available sight distance on Shoreline Dr at the proposed access roadway (Peavey PI) indicates that there is adequate distance per AASHTO standards for both stopping sight distance and intersection sight distance.

Please contact Katie Schmidt at katie@s2traffic.com or 952-212-7625 with any questions.

Attachments: Figures 1-3



Figure 1 - Vicinity Map

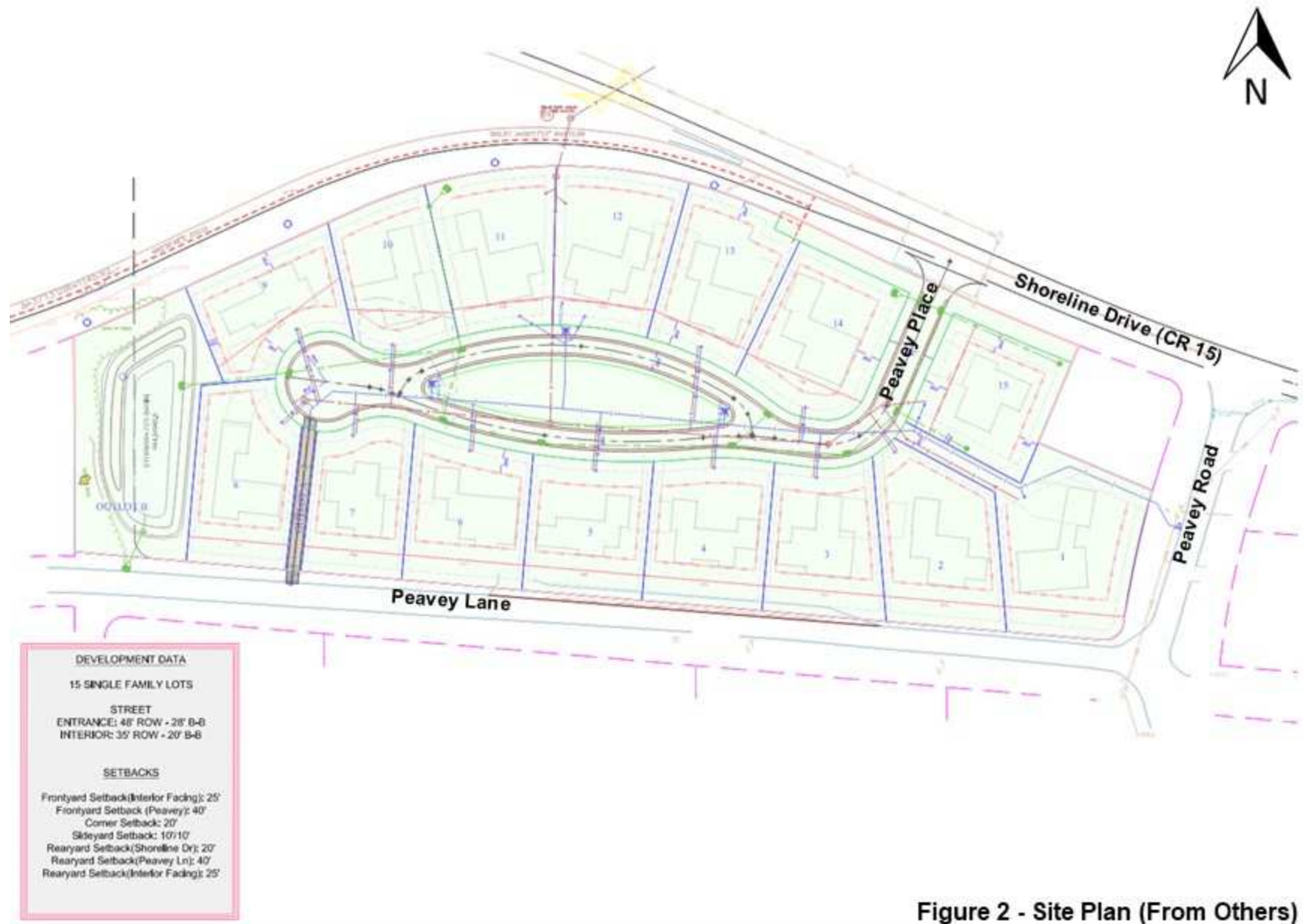


Figure 2 - Site Plan (From Others)



DISTANCE LOOKING LEFT - 460'



DISTANCE LOOKING RIGHT - 500'



Figure 3 - Sight Distance Evaluation