April 4, 2018

Mr. Jose Saye  
Synalovski Romanik Saye  
1800 Eller Drive, Suite 500  
Fort Lauderdale, FL 33316

Re: David Posnack Jewish Day School  
c/o SW 11th Street School – Traffic Statement  
Hallandale Beach, Florida

Dear Jose:

The David Posnack Jewish Day School at SW 11th Street is a proposed Kindergarten through 5th Grade (K-5) school to be located in the northwest quadrant of the intersection at SW 11th Street and SW 4th Terrace in the City of Hallandale Beach, Broward County, Florida. More specifically, the site is located approximately 1,500 feet to the west of S. Dixie Highway at 412 SW 11th Street. A similar elementary school development scenario was proposed for this site in 2016/2017. Recently, this new project team has revisited the previously proposed development scenario and has proposed several revisions. The purpose of this traffic statement is to document the comparative trip generation and queuing characteristics of the currently proposed development scenario with those of the previously proposed development scenario.

Previous Traffic Analysis

In December 2016, a traffic impact study was prepared for the proposed SW 11th Street School. This study compared the trip generation characteristics of the proposed school with those of the previous commercial development on the site. At that time, the development program consisted of a proposed Pre-Kindergarten through 5th Grade school with a maximum enrollment of 420 students with 60 students per grade in three (3) classes of 20 students each. The results of this analysis are presented in Table 1 below.

<table>
<thead>
<tr>
<th>Land Use</th>
<th>Daily Trips</th>
<th>AM Peak Hour Trips</th>
<th>PM Peak Hour Trips</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Size</td>
<td>In</td>
<td>Out</td>
</tr>
<tr>
<td>Previous Use</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Commercial</td>
<td>13,100 SF</td>
<td>28</td>
<td>17</td>
</tr>
<tr>
<td>Proposed Use</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Elementary School</td>
<td>420 Students</td>
<td>104</td>
<td>85</td>
</tr>
<tr>
<td>Difference (Proposed - Previous)</td>
<td>(1,270)</td>
<td>76</td>
<td>68</td>
</tr>
</tbody>
</table>

Institute of Transportation Engineers (ITE) Trip Generation Manual (9th Edition).

As indicated in Table 1 above, the new external vehicle trips anticipated to be generated by the proposed SW 11th Street School project consisted of approximately 542 vehicle trips during a typical weekday, 189 vehicle trips during the school’s entering / drop-off (AM) peak (104 inbound and 85 outbound), and approximately 118 vehicle trips during the school’s exiting / pick-up (PM) peak (53 inbound and 65 outbound). When compared with the previous use on this site, this represented a decrease of 1,270 trips on a daily basis and a reduction of 35 trips in the PM peak hour. During the AM peak hour, the previously proposed school would have resulted in an increase of approximately 144 trips.
Currently Proposed Development

The currently proposed development scenario for the David Posnack Jewish Day School at SW 11th Street consists of a proposed K-5 school with a maximum enrollment of 288 students with 18 classrooms and an average of 16 students per classroom. (The latest site plan for this project is presented in Attachment A to this memorandum.)

A trip generation comparison analysis between the two (2) enrollment scenarios (i.e. 420 students and 288 students) utilizing the recently updated trip generation information published by the Institute of Transportation Engineers (ITE) in their publication entitled *Trip Generation Manual (10th Edition)* has been conducted. The applicable land use and associated trip generation rates / equations are presented below.

ITE Land Use #520 – Elementary School

- Weekday: \[ T = 2.13 (X) - 184.07 \]
  where \( T \) = number of trips and \( X \) = number of students
- AM Peak (7 AM – 9 AM): \[ T = 0.67 (X) \] (54% in / 46% out)
- PM Peak (of the Generator): \[ T = 0.34 (X) \] (45% in / 55% out)

The results of this comparative trip generation analysis are summarized in Table 2 below.

<table>
<thead>
<tr>
<th>Development Scenario</th>
<th># of Students</th>
<th>Daily Trips</th>
<th>AM Peak Hour Trips</th>
<th>PM Peak Hour Trips</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>In</td>
<td>Out</td>
</tr>
<tr>
<td>Previously Proposed (2016)</td>
<td>420</td>
<td>711</td>
<td>152</td>
<td>129</td>
</tr>
<tr>
<td>Currently Proposed (2018)</td>
<td>288</td>
<td>429</td>
<td>104</td>
<td>89</td>
</tr>
<tr>
<td>Difference (Current - Previous)</td>
<td>(132)</td>
<td>(282)</td>
<td>(48)</td>
<td>(40)</td>
</tr>
</tbody>
</table>

Institute of Transportation Engineers (ITE) Trip Generation Manual (10th Edition).

As indicated in Table 2 above, the reduction in the proposed student enrollment (i.e. 132 fewer students) will result in 282 fewer daily vehicle trips, 88 fewer AM peak hour vehicle trips, and 45 fewer PM peak hour vehicle trips.

Queuing Analyses

As mentioned previously, the maximum enrollment will be 288 students with 48 students per grade in three (3) classrooms and an average of 16 students in each classroom. There will also be a before-care (“Early Drop-Off”) and an aftercare program available to all students. It is estimated that approximately 25% of the students will be dropped off early beginning at 7:15 AM. The remaining students will be dropped off according to their grade. Grades 3 – 5 (38%) will be dropped off between 7:45 AM and 8:00 AM while the grades K – 2 (37%) will be dropped off between 8:00 AM and 8:15 AM.

The proposed pick-up times will be between 3:15 PM and 3:30 PM for grades 3 – 5 (25%) and between 3:30 PM and 3:45 PM for grades K – 2 (25%). It is estimated that the remaining student enrollment (50%) will participate in the aftercare program. These students may be picked-up anytime between 3:30 PM and 6:00 PM.
Vehicle queuing at schools is typically more critical during the afternoon pick-up time period as opposed to the morning drop-off period. During the mornings, students simply exit their vehicle upon arrival (which is a quick process). In addition, it is common for the drivers of these vehicles to be on their way to work which further quickens the pace of the drop-off procedure.

The pick-up procedure, on the other hand, is generally more complicated and more time consuming. Students must be matched to their vehicle and this does not typically occur in the order of the vehicle arrivals. The result of this condition is delays and extended vehicle queues.

Our research in this area has revealed that the maximum number of vehicles in the queue during the afternoon pick-up period is roughly equivalent to 10% to 15% of the number of students being released. In other words, if 100 students are being released at one time, a maximum queue of 10 to 15 vehicles would be expected. The proposed staggered drop-off and pick-up times are intended to help manage the traffic impacts to the surrounding roadway network and residential community and to minimize the resulting vehicle queues on-site.

A key characteristic of this school, as with most elementary schools, will be the aftercare program. As mentioned previously, it is estimated that 50% of the students will participate in the aftercare program. This yields 144 students that will be released at various times between 3:30 PM and 6:00 PM. Because these releases are random throughout the two and one-half hour time period, vehicle queuing is not anticipated to be a concern for this program.

Table 3 below presents a preliminary afternoon release schedule for the David Posnack Jewish Day School that incorporates the aforementioned operational characteristics. This schedule contemplates two (2) primary release times. Additionally, this analysis takes into consideration that it is common for approximately 25% of the students at a school to have at least one sibling in another release time period. The result of this is that all siblings are picked up once at the later release time.

<table>
<thead>
<tr>
<th>Grade</th>
<th>Release Time</th>
<th>Number of Students</th>
</tr>
</thead>
<tbody>
<tr>
<td>3rd Grade - 5th Grade</td>
<td>3:15 PM</td>
<td>72</td>
</tr>
<tr>
<td>(+/- 25% Deferral to Later Pick-Up)</td>
<td></td>
<td>18</td>
</tr>
<tr>
<td>Kindergarten - 2nd Grade</td>
<td>3:30 PM</td>
<td>72</td>
</tr>
<tr>
<td>Deferral from Previous Release</td>
<td></td>
<td>18</td>
</tr>
<tr>
<td>Aftercare Program</td>
<td>3:30 PM - 6:00 PM</td>
<td>144</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>288</strong></td>
<td></td>
</tr>
</tbody>
</table>

Note: All times are preliminary and subject to change.

As indicated in Table 3, the maximum number of students likely to be released at one time will be 90. Based upon the referenced experience and research at similar schools in south Florida, a maximum queue of approximately 9 to 14 vehicles during this time period is expected. As such, a staggered school schedule and a vehicle circulation plan should be implemented to accommodate this projected demand. And, although vehicle accumulation is typically less during the morning drop-off period, a similar staggered start time and a similar vehicle circulation plan should also be implemented in the mornings to process the anticipated vehicular demand.
In order to optimize the traffic circulation plan and maximize the on-site vehicle storage, the vehicular entry and exit point to the school will be the driveway on SW 11th Street. Vehicles entering the site will immediately turn right to travel eastbound, then turn left and the end of the aisle to travel northbound. At the end of this aisle, vehicles will turn left again and proceed west along the front of the building. The first drop-off / pick-up position will be at the southeast corner of the cafeteria. Students will enter and exit their vehicles along the sidewalk that will be located to the east of the cafeteria and south of the administrative offices and classrooms 2, 4, 6, and 8.

The drop-off / pick-up process will be facilitated by staff members and traffic control personnel that will monitor / oversee these operations. The proposed traffic circulation plan will provide for a queuing area that will accommodate 17 vehicles between the entry point and the first drop-off / pick-up point near the cafeteria.

Based upon the anticipated school release times and the maximum number of students to be released at one time, the vehicle storage capacity of 17 vehicles is expected to be adequate. The drop-off and pick-up circulation plan is presented in Attachment B.

Conclusions

Given that the proposed enrollment and corresponding daily, AM peak hour, and PM peak hour trips associated with the proposed David Posnack Jewish Day School at SW 11th Street are substantially lower than the previously proposed values, it is apparent that no further traffic analyses for this project are warranted at this time. Furthermore, it is apparent that the reduction in enrollment will have a positive impact on the drop-off and pick-up process. Based upon the queuing analysis presented herein, the vehicle queuing area will be more than adequate to accommodate the likely peak demand.

Sincerely,

KBP CONSULTING, INC.

Karl B. Peterson, P.E.
Florida Registration Number 49897
Engineering Business Number 29939
Attachment A

David Posnack Jewish Day School at SW 11th Street

Proposed Site Plan
Attachment B

David Posnack Jewish Day School at SW 11th Street

Traffic Circulation Plan
Traffic Circulation Plan

David Posnack Jewish Day School
Hallandale Beach, Florida