


RICHARDSON ISD HAMILTON PARK PACER MAGNET TRAFFIC MANAGEMENT PLAN

LJA Project No. 3941-2301

Scott Booth, PE, PTOE
LJA Engineering, Inc.

LJA Engineering, Inc. 

6060 N Central Expressway, Suite 440
Dallas, Texas 75206
Phone: 469.621.0710
www.ljaengineering.com
TBPE Firm F-3186

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I. INTRODUCTION

LJA Engineering, Inc. (LJA) was retained by Richardson ISD (Client) to review the traffic operations at the Hamilton Park Pacer Magnet (HPPM) Campus located in Dallas, Texas. The purpose of this review, and the following summary report, is to prepare a Traffic Management Plan (TMP) for the site. The facility has been open for more than 69 years, with 48 years as a magnet school. Figure 1 below is a map detailing the site location.



* Trafficware Synchro 11 screenshot reprinted with permission from Microsoft Bing Maps

Figure 1 – Site Location

The school campus is located at 8301 Towns Street in a residential neighborhood in the southeast quadrant of I-635 and US-75. At the time of the operational review, the school had approximately 650 students and 57 staff members.

1.1 Existing Area Conditions

The Hamilton Park Pacer Magnet Campus is surrounded by residential streets on all sides. To the north and east are 9-foot alleyways that run adjacent to the school campus. South of the school is Towns Street, which fronts the school campus. Towns Street is an asphalt roadway (with curb and gutter) 36 feet in width and during the hours of 7:00 AM to 9:00 AM and 2:45 PM to 4:30 PM, it is a westbound one-way roadway from Oberlin Drive to Schroeder Road. Along the west side of the campus is Schroeder Road, which is a 40-foot wide concrete roadway with curb and gutter.

Intersecting Towns Street south of the school are Bellafonte Drive, Hoblitzelle Drive, and Dandridge Drive. All these are 25-foot wide concrete roadways with curb and gutter. Further east of the school, but not adjacent to the campus is Oberlin Drive, which is a 25-foot wide asphalt roadway with curb and gutter.

II. TRAFFIC MANAGEMENT PLAN

The purpose of the Traffic Management Plan (TMP) is to establish procedures for traffic flow and circulation around the school related to student drop-off and pick-up operations. Use of a TMP helps improve traffic/student safety and helps maximize the efficiency of drop-off and pick-up operations. The analysis summarized in this report identifies critical elements of the TMP such as available queuing space that is both on and off site, circulation patterns for the school, and the projected trip generation (and estimated queuing) during the morning and afternoon peaks.

2.1 Observation Schedule

Per guidance from the City of Dallas, a series of morning and afternoon observations were scheduled at the Hamilton Park Pacer Magnet Campus. This included two (2) morning observations and two (2) afternoon observations, which were conducted on different days, over two weeks. Campus traffic observations were completed as follows:

Table 1 – Campus Observation Times

Date	Peak Hour	Time	
		Start	End
August 17, 2023	Morning	7:15 AM	8:15 AM
August 17, 2023	Afternoon	2:30 PM	3:30 PM
August 22, 2023	Midday	7:15 AM	8:15 AM
August 22, 2023	Afternoon	2:30 PM	3:30 PM

2.2 Operational Characteristics

Based on information from the client, the school currently has:

- 650 students
- 57 staff members

The school is open from 7:00 AM until 5:30 PM, but students are not allowed to enter until 7:30 AM. Classes begin at 7:50 AM and end at 3:10 PM and there are after school programs for students.

For schools, the peak times of traffic flow are concentrated around the start and end of classes and are shorter than an hour (typically 30 minutes for the AM peak hour and 45 minutes for the PM peak hour).

2.2.1 School Operations

Students enter and exit the facility through several different entrances and picked-up and dopped-off at corresponding locations. Pre-K through 1st grade use the loop (referred to as the Pre-K Loop) on the southeast corner of the campus to access the entrances adjacent to it. 2nd grade

through 4th grade students use the main entrance located adjacent to the Main Loop on the south side of the school. Lastly, 5th- and 6th graders enter the school through a back entrance using the driveway loop (referred to as the Back Loop) for pickup and drop off. It was observed when there were multiple children in a vehicle, that the older child would enter the school at the same location as the younger child.

2.2.2 Campus Trip Generation

Trip generation for the school were based on the observations conducted at the campus. The observed trip generation is summarized in Table 2 below. It should be noted that the table below includes vehicle trip generation related to parents that park on the adjacent streets to pick-up and drop off students. It is also noted that many of the vehicles had more than one student entering/exiting the vehicles resulting in an estimated average of 1.7 students per vehicle.

Table 2 – Observed Trip Generation Summary for Vehicle Trips

Location	AM-Peak Hour			PM-Peak Hour		
	In	Out	Total	In	Out	Total
Main Loop pick-up/drop-off	130	92	222	47	37	84
Pre-K Loop pick-up/drop-off	37	30	67	35	41	76
Back Loop pick-up/drop-off	25	2	27	31	58	89
Towns Street park and walk	161	161	322	144	144	288
Schroder Road park and walk	16	16	32	18	18	36
Bellafonte Drive park and walk	25	25	50	15	15	30
Vehicle Trip Totals	394	326	720	290	313	603

In the morning peak hour, there is more inbound traffic to the campus, which is due to staff arriving for the day. Overall average trip generation for the AM peak hour was 720 trips (394 in and 326 out). Thus, there were approximately 325 vehicles dropping off students in the morning, with approximately 125 vehicles using drop-off loops and 200 vehicles parking to drop-off students.

There was less vehicular traffic during the afternoon peak hour with a total of 603 trips (285 in and 302 out) and approximately 290 vehicles actively picking up students. Approximately 115 vehicles picked up students in the loop driveways, and the remaining 175 vehicles parked on the adjacent streets with parents walking up to the school to pick up students. It was observed that the arrival traffic was concentrated into a peak 30-minute period between 3:00 PM and 3:30 PM. Additionally, there were slightly more outbound trips during the PM peak, which is consistent with some staff leaving the campus.

2.3 Vehicle Circulation and Pedestrian Activity

With entrances at both the front and rear of the school, there is vehicular activity all around the school during the morning and afternoon peaks. A discussion of the circulation around the school is broken down into morning drop-off, afternoon pick-up and bus operations. There is also a discussion of pedestrian activity around the school. A summary of traffic circulation and site operations is shown in Exhibit 1 of the Appendix.

2.3.1 Morning Drop-Off

With most students (pre-K thru 4th grade) entering the front of school, most of the drop-off activity occurred in the Pre-K and Main Loop and along Towns Street. Drop-off operations in the Back Loop flowed smoothly with minimal queuing on the site and no disruption to the roadways or queuing off-site. The drop-off operations in the front (Pre-K and Main Loops) had queuing both on and off site but vehicles would generally keep moving at a steady pace.

For Pre-K – 1st drop off, many parents would either park on Towns and walk their child to the correct door or pull into one of the parking spaces provided within the Pre-K Loop and drop off from there. Several parents did still use the loop itself to drop off, but often parked in the loop then walked their child to the correct door. For 2nd – 4th grade students, the majority of parents would park on Towns Street or Bellafonte Drive and walk their child to the main entrance or use the Main Loop for drop off where teachers were there to assist getting the students out of the vehicles. For 5th – 6th the Back Loop was the main source of drop off. A few parents used the parking located adjacent to the Back Loop to park and drop off students.

During the morning drop-off many parents would park on the streets adjacent to the school and walk students to their respective entrance. This resulted in congestion along Towns Street, which lasted for about 20 minutes before the school bell and then for 5 minutes after. Parking was prevalent along Towns Street, Schroeder Road, and Bellafonte Drive.

2.3.2 Afternoon Pick-Up

Pickup followed much the same patterns and morning drop-off, however the queues and number of cars parked on the street were larger during the afternoon peak period as parents arrive earlier to wait for students to be released from school. With some cars queuing from pick-up loops, (Pre-K and Main Loops), there was confusion between parked vehicles and active queues, which led to congestion and periods of stopped traffic flow. This was prevalent with buses, which is discussed below. The Back Loop also had queuing, but it did not impact operations along Schroeder Road since the queue was contained on-site.

2.3.3 Bus Operations

Buses serving the school appeared to drop off within the main loop but pick up students at the southeast corner of the campus (northeast corner of Towns Street and Schroeder Road). In the afternoon, buses would travel along Towns Street, which is one-way to the west, to reach the bus loading area. With parents parking and queuing along Towns Street, there were frequent conflicts between buses and parent vehicles, resulting in additional delays and congestion. It is also noted that the southeast corner of the campus was a staging area where buses would pick up older students for other schools in the area during the morning. As mentioned, the northeast corner of

Schroeder Road and Towns Street was the bus loading area. When these parking spots are available, there is little disruption to the circulation of traffic. When there are parent vehicles parked, the disruption can last for several minutes.

2.3.4 Pedestrian Movements

Because HPPM is a magnet school, more parents drop-off and pick-up students from the school, versus walking. Based on the observations, it is estimated that there about 20 students that regularly walk to school. The remaining pedestrians are from parents that park along the adjacent streets and walk their students to school. This results in significant pedestrian traffic at Schroder Road, Bellafonte Drive, Hoblitzelle Drive and Towns Street as shown in Table 3 below..

There are currently two crossing guards serving the school. One at the intersection of Schroder Road and Towns Street, and one at Bellafonte Drive and Towns Street. This pedestrian traffic results in some impact on the circulation of the traffic along Towns Street, but this is normal for any school. It should be noted that there is no crossing guard at Hoblitzelle Drive and Towns Street, but there is significant pedestrian crossing activity at that intersection. It is recommended that an additional crossing guard be requested for this location.

Table 3 – Observed Pedestrian Activity

Location	AM Peak Pedestrians	PM Peak Pedestrians
Schroder Road and Towns Street	36	37
Bellafonte Drive and Towns Street	122	135
Hoblitzelle Drive and Towns Street	23	64
Pedestrian Totals	181	236

2.4 Queue Lengths

As was discussed above, observations showed significant queuing on the site. When properly utilized, the Pre-K Loop has a maximum capacity of about 10 vehicles in line before the queue is in the street. The queue from this loop would often extend onto Towns Street up to 200 feet (8 vehicles), at times blocking the exit for the Main Loop. One of the main issues is that parents do not pull up to the west end of the loop to pick-up or drop students off. This reduces the effective available queue space and results in more spill back onto Towns Street. Parents should always be encouraged to pull forward as far as possible to maximize queue space.

The Main Loop also had a significant queue throughout most of the peak periods that would extend onto Towns Street down to Dandridge Drive, which is approximately 300 feet to the east (12 vehicles). The Back Loop had a queue of up to 400 feet (16 vehicles), but it was all maintained within school property.

III. SUMMARY AND RECOMENDATIONS

Based upon information collected during the observations of the school, there is room for some improvement to the traffic management plan as described above. The first place to improve the TMP is through communication to the parents. For example, the first observation was conducted toward the end of the first week of school and it was noted that parents were asking observers where students should be dropped off or picked up. This lead to confusion, longer pick-up/drop-off times and more congestion. By the second observation on the second week of school, parents had learned where to meet students and the overall flow, while still congested, was improved significantly.

Based on our observations and experience with other schools, the following recommendations are provided.

- Have younger siblings exit with older siblings at the drop-off/pick-up areas for the older sibling. This may boost the number of students being picked up in the Back Loop, which has spare capacity for on-site queueing.
- Have staff members at each of the loops to encourage parents to pull forward. Some parents will not comply with the request, but every little bit helps to keep the queue on-site.
- Eliminate parking between the exit of the Main Loop and the entraince of the Pre-K Loop. It was observed that some parents wanting to queue for the Pre-K Loop would get behind a vehicle parked in between the exit and entrance thinking it was the back of queue. This led to confusion and significant blockage of the Main Loop exit.
- Ensure that there is a one-way signage with the time zones on the southeast corner of the streets that intersection with Towns Street adjacent to the school. Most of the signage is in place, but there is no one-way signage at Bellafonte Drive and Towns. This is a discussion/request to the City of Dallas.
- Close the curb openings along the Main Loop to create one solid median/curb area between the entrance and exit. Currently, there are cones that block the openings. A full median, would improve parking along Towns Street and also provide an area for students to enter/exit vehicles.
- In conjunction with the above recommendation, stripe a parking lane on Towns Street adjacent to the Main Loop. It was noted during observations that parents would not pull fully to curb and would then restrict the flow of traffic on Towns Street. By striping a parking lane, drivers would be more likely to pull to curb.
- Restrict parking on Towns Street from the Pre-K Loop exit to Schroeder Road. This would allow the following options:
 - make a designated bus loading/unloading zone along Towns Street, or
 - stripe a dedicated left/thru and right-turn only lane at the westbound approach of the intersection. It was noted that much of the congestion on Towns Street was due to backup from the intersection at Schroder Road with left-turning traffic blocking right-turning traffic. This option would require all buses to load/unload on

Schroeder Road. Moving buses to Schroeder Road would eliminate the need for buses to travel along Towns Street, improving vehicle flow on Towns Street.

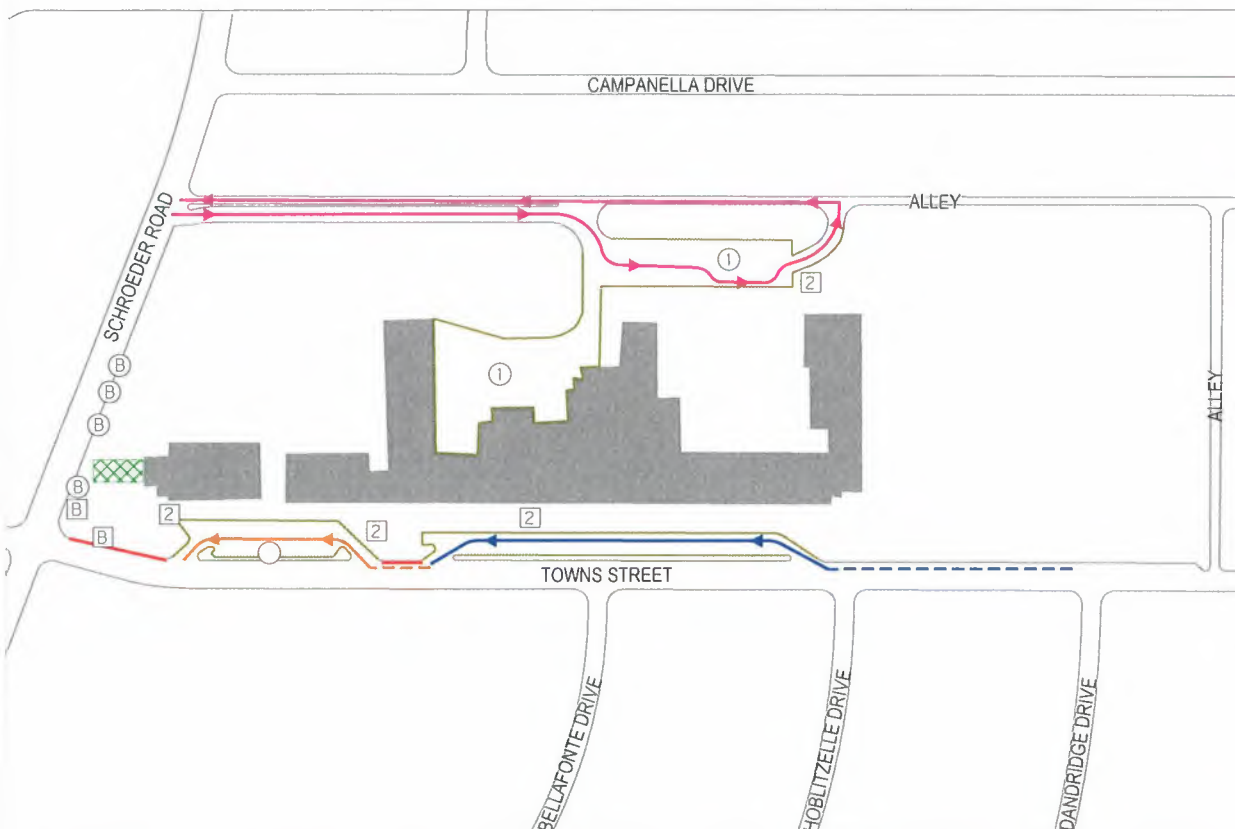
- Revise the pickup system by using numbered hanging tags for parents. This system has been successfully used at other schools and improves the pick-up operations. It works by each family being assigned a number. As long as that family has students at HPPM, they keep the same number each year. This improves recognition for both students and staff. The LJA team can provide more details on the system if desired.
- Request an additional crossing guard for the intersection of Towns Street at Hoblitzelle Drive.

3.1 Funding Options

Many of the above recommendations will require some form of funding for implementation. Options include:

- Request for improvements to the City of Dallas. This would be for striping and signage along Towns Street.
- Funding partnership between City of Dallas and RISD to close Main Loop openings and add sidewalks in existing leave-out areas to connect existing sidewalks.
- Request for grant funding from NCTCOG in bi-annual Safe Routes to School program. There will be a call for projects in 2024 based on past program funding opportunities. This would include funding for all of the recommendations above.

Appendix – Traffic Management Plan



Legend - Existing

- 5th - 6th Grade Pick-up/Drop-off Path
- 2nd - 4th Grade Pick-up/Drop-off Path
- Pre-K - 1st Grade Pick-up/Drop-off Path
- On Street Queuing
- ▨ Student Waiting Area for Bus
- 1 Pick-up Queue/Travel Path
- 2 Drop-off/Pick-up Area
- B Bus Pick-up Area
- 1 Staff Parking

Legend - Proposed

- Proposed No Parking Zone
- B Proposed Bus Parking

Campus Information

Current Enrollment: 650 students
 Pre-K Enrollment: ## Students
 Academic : Pre-K - 6th
 Class Hours: 7:50 - 3:10

Queuing (Passenger Vehicles)

Observed Demand: 1,460 ft (56 Veh)
 Available Capacity:
 On-site - 1,500 ft (60 Veh)
 Off-site - 330 ft (14 Veh)
 Net Surplus: 450 ft (18 Veh)

Note:

This Traffic Management Plan was developed to minimize the queuing of drop-off/pick-up related vehicles within the City right-of-way. The school administration should adhere to the TMP and any deficiency due to spill over of queuing into undesignated areas of the City right-of-way, including roadway travel lanes, should be corrected by the school immediately.

08-30-2023

TRAFFIC MANAGEMENT PLAN

Hamilton Park Pacesetter Magnet
 8301 Towns Street, Dallas, Texas

Not to Scale

LJA Engineering, Inc. 

EXHIBIT 1