

MEMORANDUM

To: David Nevarez, P.E., City of Dallas

From: Beth Ostrowski, P.E., P.T.O.E. (Tennessee), KCI Technologies, Inc.
Kyle Jones, P.E., KCI Technologies, Inc. (TBPE Firm #10573)

Re: **Golden Rule School – Illinois Campus – Traffic Management Plan**

Date: June 29, 2020

Introduction

This purpose of this memo is to provide a traffic management plan (TMP) for the Golden Rule School – Illinois campus. The school is located on West Illinois Avenue, west of Chalmers Street in Dallas, Texas. Specifically, the school is located at 2602 West Illinois Avenue, Dallas, TX 75233, and the phone number is 214-333-9330. The student population will remain unchanged. The school campus includes two existing vehicular access points on West Illinois Avenue and one access point on Chalmers Street.

The TMP exhibit, attached, consists of a site-specific plan providing guidelines to coordinate traffic circulation during school peak hours. Specifically, the TMP is intended to promote strategies to manage all modes of transportation and maintain student safety at all times.

Traffic Operations

The following roadways provides access to the Golden Rule School - Illinois campus:

- West Illinois Avenue is an east-west roadway with three lanes in each direction. The posted speed limit on West Illinois Avenue near the school is 35 mph. During drop-off and pick-up traffic enters the school on West Illinois Avenue.
- Chalmers Street is a north-south direction roadway with width for one lane in each direction. The speed limit is not posted on Chalmers Street near the school. During drop-off and pick-up traffic exits the school to Chalmers Street.

The Golden Rule School – Illinois campus has a current enrollment of 746 full-time students. The existing enrollment includes 45 Pre-K students during either the morning hours (arrive at 7:30 AM, dismiss at 12:00 PM) or the afternoon hours (arrive at 12:00

MEMORANDUM

Date: June 29, 2020

Re: Golden Rule School – Illinois Campus – Traffic Management Plan

PM and dismiss at 3:00 PM). The remainder of the student population consists of elementary and middle school students. Elementary students arrive at 7:30 AM and dismiss at 3:00 PM, while middle school students arrive at 8:00 AM and dismiss at 3:30 PM. There are no school buses associated with the school, and students arriving on alternative modes of travel are minimal and discouraged by the school.

During drop-off and pick-up traffic enters the school through the West Illinois Avenue access point. Vehicles circulate internally to the main drop-off/pick-up point in the parking lot located on the eastern portion of the property and then exit out the Chalmers Street access point. Additionally, parking is available via a separate access on West Illinois Avenue. This parking should be utilized primarily for Pre-K pick-up and drop-off.

The school has an identification system in place for dismissal that involves student name signs displayed in vehicles and radio communications in order to coordinate students with their vehicles as they arrive. There are three peace officers that direct traffic during arrival and dismissal periods. Six school staff members assist in walking students to/from vehicles during arrival and dismissal periods. School officials will identify parents' vehicles as they wait in the queue and communicate via radio to have students ready for car entry as each parent arrives at the pick-up point. School officials will be positioned in strategic locations throughout the travel path in order to efficiently identify parents' vehicles as they are waiting in the queue.

Currently, there are approximately 10-15 walkers among the student population. In order to safely accommodate walkers, a questionnaire will be required in order for a student to be allowed to walk home to/from school. Students who are approved to walk to/from school will be issued badges. The badge requirement will allow peace officers and school officials to easily identify which students are allowed to walk to/from the campus. A walker dismissal time will be implemented approximately 10 minutes after the middle school dismissal time. The badge system is also expected to mitigate any possibility of students attempting to walk off the campus to vehicles parked on Chalmers Street or Engle Avenue to the south of the property.

TMP Exhibit and Summary

The TMP Summary, on the next page details school enrollment and arrival and dismissal details.

MEMORANDUM

Date: June 29, 2020

Re: Golden Rule School – Illinois Campus – Traffic Management Plan

TABLE 1: SUMMARY OF TMP





FEATURE	Existing Conditions	Projected Conditions
Student Arrival Time:	Elementary - 7:30 AM, 12:00 PM (Pre-K only) Middle School – 8:00 AM	Elementary - 7:30 AM, 12:00 PM (Pre-K only) Middle School – 8:00 AM
Student Dismissal Time:	Elementary – 12:00 PM (Pre-K only), 3:00 PM Middle School – 3:30 PM	Elementary – 12:00 PM (Pre-K only), 3:00 PM Middle School – 3:30 PM
School Enrollment:	PK3 – 15 students PK4 – 30 students KG – 62 students Gr. 1 – 78 students Gr. 2 – 75 students Gr. 3 – 70 students Gr. 4 – 82 students Gr. 5 – 99 students Gr. 6 – 79 students Gr. 7 – 81 students Gr. 8 – 75 students	Same as Existing Enrollment
Number of School Staff Assisting Loading/Unloading:	6	6
Number of Crossing Guards and/or Peace Officers:	3	3
Storage Capacity:	910 feet	1,495 feet

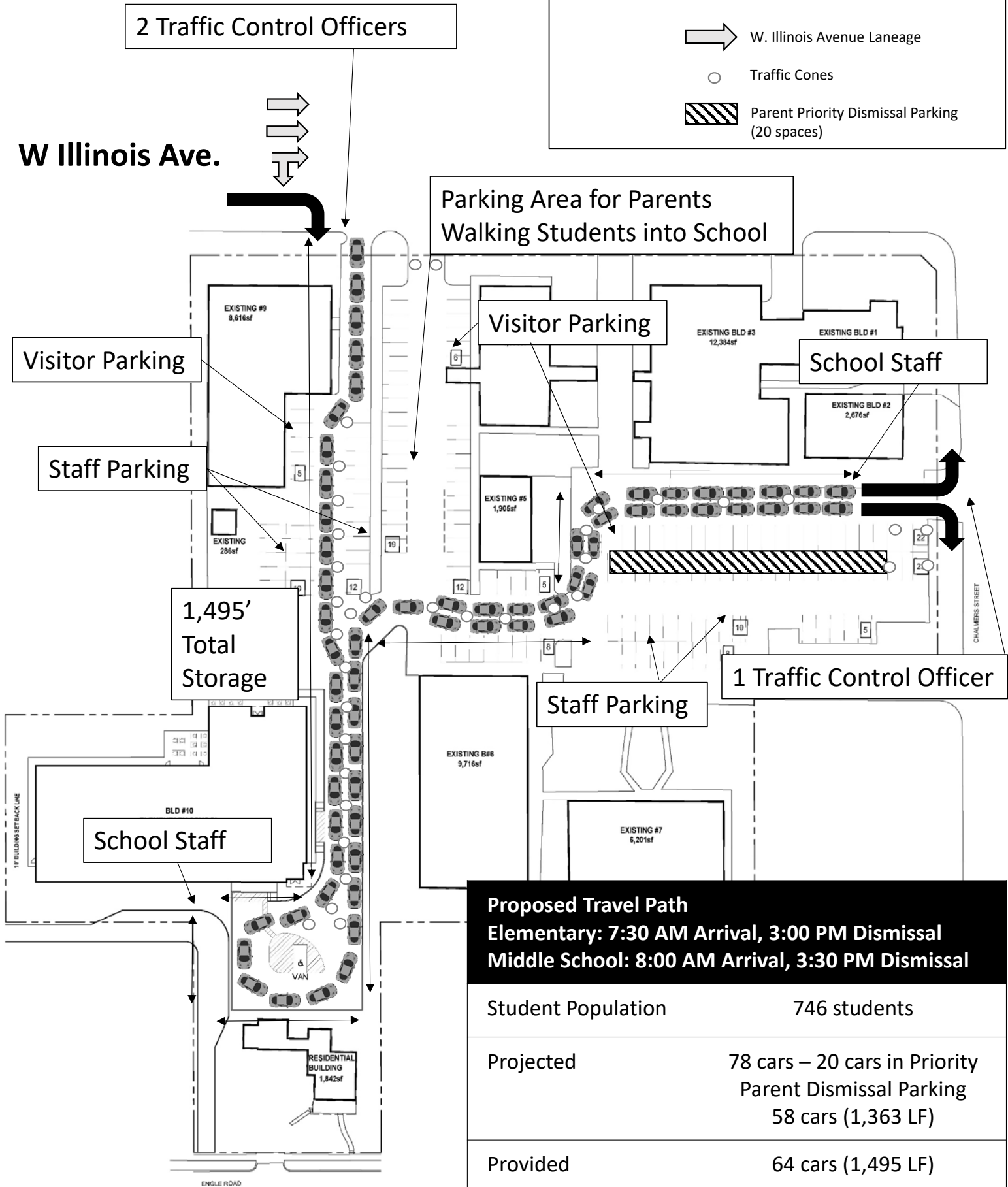
The TMP exhibit is shown on the next page. The TMP exhibit shows the following features of the Illinois campus:

- Building footprints, curbs, parking, pavement markings, designated student drop-off and pick-up locations.
- School site location and all ingress and egress points of access for motor vehicles or pedestrians.
- On-site traffic circulation, including any temporary traffic control devices.
- Location of school staff assisting with unloading and loading students, as well as location of school crossing guards and/or peace officers. Existing peak hour traffic volumes are presented on a figure at the end of the report.

Figure 1: TMP Exhibit

Legend

-  Proposed Travel Path and Queue
-  W. Illinois Avenue Laneage
-  Traffic Cones
-  Parent Priority Dismissal Parking (20 spaces)



Proposed Travel Path	
Elementary: 7:30 AM Arrival, 3:00 PM Dismissal	
Middle School: 8:00 AM Arrival, 3:30 PM Dismissal	
Student Population	746 students
Projected	78 cars – 20 cars in Priority Parent Dismissal Parking 58 cars (1,363 LF)
Provided	64 cars (1,495 LF)
Surplus	6 cars (141 LF)

MEMORANDUM

Date: June 29, 2020

Re: Golden Rule School – Illinois Campus – Traffic Management Plan

As shown in the TMP Exhibit, the new traffic pattern for the student population is planned to travel through the adjacent church entrance southbound toward the new building, loop back north, and exit out of the existing access drive located on Chalmers Street. The staggered arrival/dismissal schedule along with the additional storage, totaling 1,495 feet, provided by the new travel path should help mitigate potential queueing. Through coordination with the City of Dallas, a ratio of one vehicle per six students included during a dismissal period was suggested as an equation to project a maximum possible queue length. As shown, the projected maximum queue length based on the suggested ratio would be approximately 58 vehicles (~1,363 linear feet).

The projected queue is anticipated to be less than the provided queue of 1,495 feet due to the recommended implementation of 20 parking spaces identified as Priority Parent Dismissal Parking. These spaces should be dictated to specific parents via an incentive rewards program. In the event these spaces are not filled at the time the queue approaches Illinois Avenue; staff should direct drivers near the Priority spaces to park; in order to fill all spaces and limit any potential queueing onto Illinois Avenue. Vehicles parked in the Priority spaces will also be provided priority egress by the Traffic Control Officer.

Finally, the Texas Transportation Institute's *Traffic Operations and Safety at Schools: Recommended Guidelines* was reviewed to determine if the provided storage length will be adequate to accommodate the school. This study provides recommended storage lengths based on student population size for elementary, middle, and high schools. According to the guidelines, it is recommended that 1,200-1,500 feet of storage be provided for elementary/middle schools with student populations greater than 600 students. Therefore, the proposed travel path with 1,495 feet of storage should be sufficient.

Sight Distance

Sight distance measurements were conducted on West Illinois Avenue at the site access drives to determine if adequate sight distance would be available for motorists making left or right turns from the site accesses. For a 35-mph speed on West Illinois Avenue, the guidelines from *A Policy on Geometric Design of Highways and Streets*, by the American Association of State Highway and Transportation Officials (AASHTO), call for a minimum stopping sight distance of 250 feet as a design value. This is the distance required for a motorist to detect an object in the roadway necessitating a stop and be able to stop before reaching the object. Within the project vicinity, this sight distance is available.

MEMORANDUM

Date: June 29, 2020

Re: Golden Rule School – Illinois Campus – Traffic Management Plan

Subsequently, AASHTO also provides minimum design values for intersection sight distance. For example, the intersection sight distance allows enough time gap for a motorist to turn from the site access drives onto West Illinois Avenue without requiring a motorist on West Illinois Avenue to significantly reduce speed. For example, for a speed of 35 mph, the design value for intersection sight distance for a motorist turning right from a stop is 335 feet. Therefore, it is desirable to provide a minimum of 335 feet looking to the west of the site access drive onto West Illinois Avenue.

According to field measurements, adequate intersection sight distance is available for all turning movements from the site access drives onto West Illinois Avenue.

Conclusions and Recommendations

The analyses presented in this memo that safe and efficient traffic operations can be achieved by implementing the following recommendations:

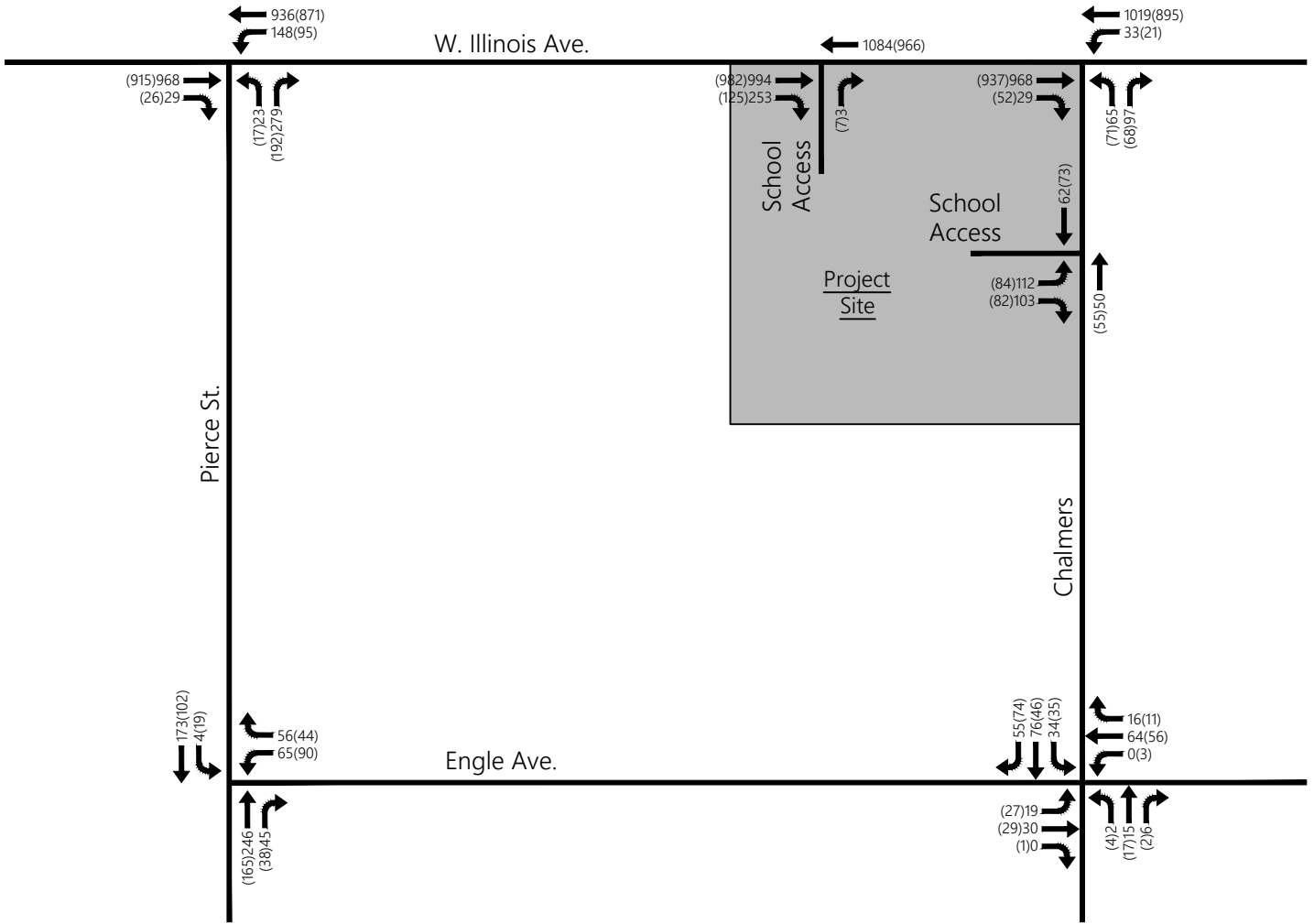
- Maintain existing traffic management plan characteristics, including 6 school staff members, 3 crossing guards, temporary traffic control equipment, and student identification system. Parking off-campus for pick-up and drop-off should be prohibited.
- Shift the front of the dismissal queue for the travel path to maximize storage. This shift will push the front of the queue approximately 110 feet west of its current location.
- Stagger arrival and dismissal times with as much time between phases as possible to avoid queueing issues.
- Implement the proposed travel path (shown on TMP Exhibit) for the entire student population.
- No parking, standing, or stopping on West Illinois Avenue is allowed. Any observed vehicular queue on West Illinois Avenue should be immediately mitigated.
- The school should implement an incentive program for students who carpool to/from school.
- The incentive program should include assignment of the 20 Parent Priority Dismissal Parking spaces.
- School staff members and peace officers on-site should wear safety vests during arrival/dismissal, as well as utilizing reversible hand-paddle signs (STOP/SLOW) and audible warnings such as whistles when directing traffic.
- Students should be required to be an approved walker by the school in order to walk to/from the campus. As previously mentioned, the badge identification system will be utilized to enforce this restriction.

MEMORANDUM

Date: June 29, 2020

Re: Golden Rule School – Illinois Campus – Traffic Management Plan

- The crossing guard stationed at the Chalmers Street access point should restrict this access drive to vehicular use, exclusively. The crossing guard should prohibit any pedestrians from utilizing this access point.
- All parents who desire to park and walk students into the school should access the property using the proposed travel path for pick-up/drop-off. These vehicles can exit the travel path and park in the parking lot located on the north side of the property to the west of the school building (shown on TMP exhibit). When leaving the property, these vehicles should re-enter the proposed travel path and exit using the Chalmers Street access point.
- A peace officer should be employed by the school to manage traffic operations on Chalmers Street during arrival and dismissal periods. According to school officials, a peace officer has been hired.
- Vehicles should be allowed to enter the school before school arrival and dismissal times in order to mitigate possible queuing on West Illinois Avenue. As previously discussed, vehicles that enter the campus early will be required to park and wait for the scheduled dismissal time before entering the queue.



XXX - AM Peak Hour
Traffic Volumes
(XXX) - PM Peak Hour
Traffic Volumes



Existing Peak Hour Traffic Volumes
(Not to Scale)

Figure 3.