  
December 4, 2018

## Technical Memorandum

**To:** Mr. Karl Crawley – Masterplan  
**From:** DeShazo Group, Inc.  
**Date:** December 4, 2018  
**Re:** Traffic Management Plan for Justin F. Kimball High School, Dallas, Texas  
*DeShazo Project Number 18078*

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### INTRODUCTION

DeShazo Group, Inc. (DeShazo) is an engineering consulting firm based in Dallas, Texas, providing licensed engineers skilled in the field of traffic/transportation engineering. The services of DeShazo were retained by Masterplan to provide a traffic management plan (TMP) for Justin F. Kimball High School (Kimball High School) located at 3606 S Westmoreland Road in Dallas, Texas.

The school site will be undergoing renovations as well as the addition of administration space. The student enrollment is anticipated to remain the same and no new classrooms will be added. As part of the approval process, the City of Dallas requires a TMP as a record of the preferred traffic control strategies and to ensure overall traffic safety and efficient operations. The plan is intended to assess anticipated traffic conditions during the morning drop-off and afternoon pick-up activities on the basis of satisfying these objectives.

By consent of the TMP submittal, the school agrees to the strategies presented herein. In addition, the school is held self-accountable to enforce the plan until and unless the City of Dallas deems further mitigation measures are necessary.

### TRAFFIC MANAGEMENT PLAN

A school TMP is important to safely achieve an optimum level of traffic flow and circulation during peak traffic periods associated with student drop-off and pick-up. By properly managing the vehicular traffic generated during critical periods, the safety and efficiency of other modes of travel—including pedestrian traffic—will also inherently improve and the operational impact on the public street system should also be minimized. **This plan, however, should not be considered a comprehensive set of instructions to ensure adequate safety; it should be used as a tool to facilitate a safer and more efficient environment.**

#### **School Operational Characteristics**

DeShazo observed on-site traffic on five different occasions at the following times:

- Friday, May 25, 2018; *during student arrival*
- Wednesday, May 30, 2018; *during student dismissal*
- Thursday, May 31, 2018; *during student arrival*
- Thursday, May 31, 2018; *during student dismissal*
- Wednesday, September 5, 2018; *during student dismissal*

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Field observations indicate that current practices during the morning drop-off period do not present significant obstruction of vehicular traffic compared to afternoon dismissal. Arrival of vehicles in the morning is also notably more sporadic than any traffic generated during the afternoon pick-up period. In general, vehicular traffic near the vicinity of the school operates without any major traffic delays or congestion during the morning drop-off period. **Table 1** summarizes the school's operational characteristics assumed in this analysis.

**Table 1. School Operational Characteristics**

	<b>Existing Conditions</b>	<b>Proposed Conditions</b>
Enrollment (by grade):	9 <sup>th</sup> Grade: $\cong$ 432 Students 10 <sup>th</sup> Grade: $\cong$ 361 Students 11 <sup>th</sup> Grade: $\cong$ 304 Students 12 <sup>th</sup> Grade: $\cong$ 269 Students Special Education (SPED): $\cong$ 148 Students  <i>Total: <math>\cong</math> 1,514 Students</i>	No significant change
Daily Start/End Schedule	All Grades: >Start: 9:05 AM >End: 4:20 PM	No significant change
Approximate Number of Students Travelling by Mode Other Than Drop-off/Pick-up:	By School Bus: $\cong$ 30% By Self-Driving: < 1%	No significant changes

NOTE #1: To the highest degree practical, the accounts of "existing conditions" presented in this report were based upon actual on-site observations conducted by DeShazo during typical school day(s) conditions and from personal interviews of school representatives. The analyses and recommendations presented in this report for "proposed" or "future" conditions were based upon evaluations of "existing conditions" and may be supplemented by DeShazo's professional judgment and experience. "Proposed"/"Future" conditions are intended to reflect the anticipated day-to-day conditions at full occupancy.

NOTE #2: Occasional functions or other events may be held at the school, which generate traffic outside of the traditional peak drop-off and pick-up periods. While some of the measures presented in this report may be applicable in such cases, traffic characteristics other than those directly associated with the primary drop-off and pick-up periods are not the subject of this analysis.

## EXISTING TRAFFIC CONDITIONS

### **Site Access**

The school is bordered by S Westmoreland Road to the west and Boulder Dr to the east. The school currently provides a parking lot on the north side of the school for staff/faculty and students. The parking lot is accessible from both S Westmoreland Rd and Boulder Drive. In addition, there is a pull up area (i.e motor court) on the west side of the school off of S Westmoreland Road which includes visitor and handicapped parallel parking only.

### **Passenger Unloading/Loading and Vehicle Queuing**

During the morning arrival and afternoon pick-up period, nine large buses enter the parking lot either from S Westmoreland Rd or Boulder Dr and proceed to the "horseshoe area." Once buses reach the "horseshoe area" they form in a clockwise direction around the horseshoe to unload/load. In addition, there are three small buses that proceed to the northernmost point of the motor court to unload/load SPED students.

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Kimball High School employs an unmanaged protocol during the morning arrival and afternoon pick-up periods for parent vehicles. Parents park and wait anywhere in the parking lot with approximately 80% arriving from S Westmoreland Rd and 20% arriving from Boulder Dr. Parents also park and wait in the front motor court. Once the motor court reaches capacity parents park on S Westmoreland Rd and on Blue Ridge Blvd disrupting thru traffic, especially on S Westmoreland Rd. Observations indicated during the peak dismissal period there are about 50 parent vehicles in the main parking lot, 20 parent vehicles in the front motor court, and 59 parent vehicles parked on S Westmoreland and Blue Ridge Blvd. Once students are dismissed they find their parents wherever they are parked.

### ***Vehicular Queue Lengths***

Kimball High School should accommodate morning arrival and afternoon dismissal traffic operations in accordance with **Exhibit 1**. School staff should try to maximize efficiency of student loading operations at all times. Maximum accumulation of vehicles is subject to both the rate of arrival traffic and the rate at which the school staff is able to load/unload students into their corresponding cars; any delay or inadequacy in the loading/unloading operations results in unwarranted accumulation of traffic.

### ***Off-Street Parking***

#### Main Parking Lot

The main parking lot will lose approximately 123 parking spaces to accommodate all queueing operations on-site. However, this does not include the parking on the east side of the existing fence.

DeShazo conducted a parking accumulation study on a typical school day at 1:30 PM and found that the school provides ample parking. Observations indicated that the parking lot, not including the area to the east of the fence, was approximately 40% occupied. The parking area to the east of the fence had zero parked vehicles during this time.

#### Student Parking

As indicated by school staff, there are 25-30 student drivers. Parking for student drivers should be located as depicted in **Exhibit 1**. This parking supply should reflect the number of students who have purchased a parking pass for the school year and should be adjusted accordingly.

## **RECOMMENDATIONS**

The school administration should implement an active management of student loading to expedite queueing operations and reduce the maximum accumulation of traffic. Queue pick-up participation is a challenge that schools face constantly. Despite the anticipated practices and operational characteristics at Kimball High School, full cooperation of all school staff members, students and parents is crucial for the success of the systematic queue. Proper training of school staff on the duties and expectations pertaining to this plan is recommended. Sufficient communication at the beginning of each school term (and otherwise, as needed) with students and parents on their duties and expectations is also recommended. DeShazo recommends consideration of the following recommendations to optimize queue operations:

#### Traffic Queue Operations

- Implementation of an "Advance Passenger Identification System" to expedite queue operations. This system uses hangtags displayed through the windshield of arriving vehicles to identify arriving vehicles with the name(s) of corresponding student(s).

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- Use of apps or software (e.g., Driveline Dispatch®) to expedite queue operations. This software efficiently displays family names of upcoming vehicles on indoor screens and provides students and school staff with a chart of vehicles approaching the loading zone.
- Staff participating in student drop-off/pick-up operations should, in lieu of simple hand gestures, procure and use reversible hand-paddle signs with the messages “STOP” and “SLOW”. Optional additional equipment for staff may include whistles (for audible warnings) and flashlights (for visual warnings) in order to gain the attention of motorists.
- The School should investigate the use of apps or software (e.g., Driveline Dispatch®) to expedite queue operations. This software efficiently displays family names of upcoming vehicles on indoor screens and provides students and school staff with a chart of vehicles approaching the loading zone.
- Morning arrival and afternoon dismissal traffic operations should be managed in accordance with the traffic circulation, loading zones, depicted in **Exhibit 1**. The plan includes the recommended configuration of temporary traffic control devices (such as traffic cones, etc.) that shall be installed on a daily basis when typical traffic conditions are expected. An appropriate number of school staff shall be assigned to fulfill the duties of student supervision, traffic control, and other related duties as generally depicted on the plan. Parents who enter the parking lot from S Westmoreland Rd should begin queueing in the southernmost aisle and continue to form queues in the aisles to the north.
- As depicted in **Exhibit 1**, all unloading/loading operations should occur in the main parking lot with the exception of SPED/accessible student unloading/loading. These students are recommended to utilize the motor court. The motor court provides one accessible vehicle parking space with a passenger loading zone. This designated parking space should be prohibited to all other vehicles; thus, vehicle queueing should not occur within this area.

#### Bus Unloading/Loading

- The small school buses unloading/loading SPED/accessible students should proceed to the northernmost point of the motor court.
- All other buses should proceed to the “horseshoe area” of the parking lot and form in a clockwise direction around the horseshoe to unload/load. Buses that arrive after parent queueing operations has begun should access the parking lot from Boulder Dr and proceed to the “horseshoe area.”

#### Student Safety

- Student safety should remain paramount at all times. School administration should continuously remind students, parents and staff of their expectations relative to this traffic management plan throughout the school year.
- School administration should review traffic operations and address any problems concerning this traffic management plan and identify solutions in the interest of student safety.
- In accordance with the Transportation Code, Section 545.4252, State law prohibits the use of wireless communication devices while operating a motor vehicle during the time a school zone is in effect. Restrictions do not apply to stopped vehicles or the use of handheld free devices.

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## SUMMARY

This TMP should be used by Kimball High School to provide safe and efficient transportation of students, staff, and faculty to and from the site. The plan was developed with the intent of optimizing safety and efficiency and the goal of accommodating vehicular traffic generated by the school within the site at peak traffic periods. School administration should review details of this TMP on a regular basis to confirm its effectiveness.


**END OF MEMO**

### SCHOOL REVIEW AND COMMITMENT

This plan was developed for Kimball High School with the intent of optimizing safety and efficiency related to vehicular traffic generated by the school during peak traffic periods. A concerted effort and full participation by the school administration, staff, students and parents are essential to maintain safe and efficient traffic operations.

The School has reviewed the Traffic Management Plan and is in support of the strategies presented herein.

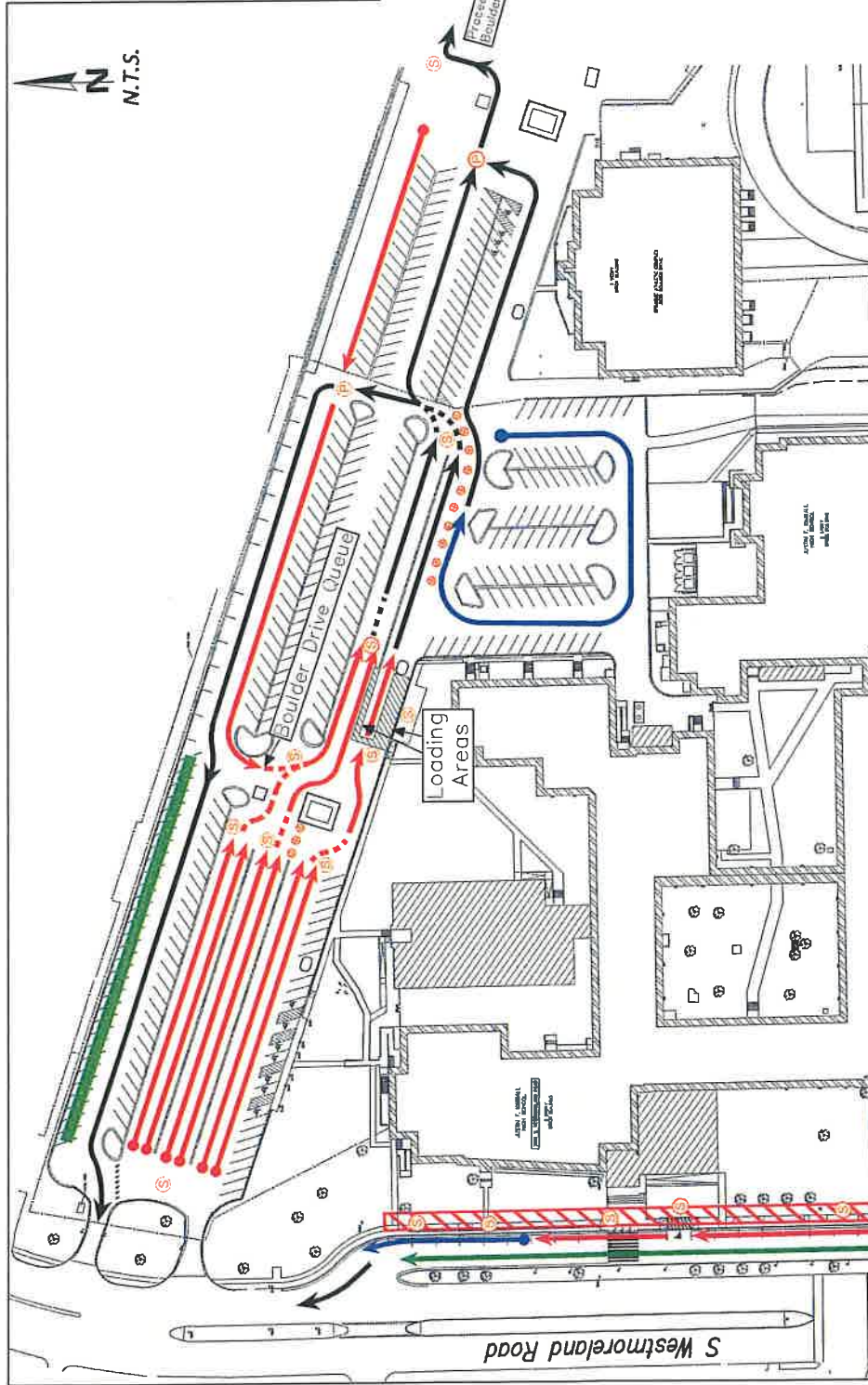
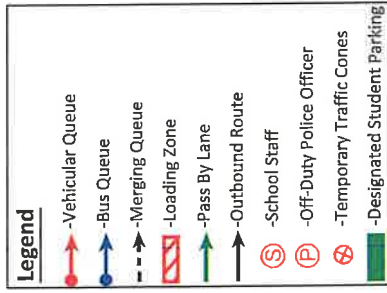
The School is committed to continually reviewing and assessing the effectiveness of the TMP and if warranted, will implement changes in the interest of increasing safety, efficiency and minimizing impacts on the surrounded community.

  
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Llewellyn Smith, Principal  
Justin F. Kimball High School

12.5.18  
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Date

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The purpose of this Traffic Management Plan (TMP) is to evaluate traffic operations that promote safety and efficient vehicle circulation. This TMP was developed to prevent queuing of drop-off/pick-up related vehicles within the city rights-of-way. The school administration should adhere to this TMP. Any deficiency due to spillover of queuing into undesignated areas of the city rights-of-way, including roadway travel lanes, should be corrected by the school immediately.

**Queuing Summary for Motor Court**

Grade	Student Enrollment	Daily Schedule	Travel Demand Queue Summary				
9th - 12th	36 Students (1)	9:05 AM - 4:20 PM	<table border="1"> <thead> <tr> <th>Parent Pick-Up</th> </tr> </thead> <tbody> <tr> <td>Provided: 450 LF (20 veh)</td> </tr> <tr> <td>Required (1): 352 LF (16 veh)</td> </tr> <tr> <td>Surplus: 98 LF (4 veh)</td> </tr> </tbody> </table>	Parent Pick-Up	Provided: 450 LF (20 veh)	Required (1): 352 LF (16 veh)	Surplus: 98 LF (4 veh)
Parent Pick-Up							
Provided: 450 LF (20 veh)							
Required (1): 352 LF (16 veh)							
Surplus: 98 LF (4 veh)							

Note: (1) As indicated by the school, approximately 36 handicapped/special education students are dropped-off/picked-up in the motor court. Of those 36 students, observations indicated approximately 20 students use the bus and the rest are dropped-off/picked-up by parents.

**Queuing Summary for Parking Lot**

Grade	Student Enrollment	Daily Schedule	Travel Demand Queue Summary				
			Access Point	Parent Pick-Up			
9th - 12th	1,478 Students (1)	9:05 AM - 4:20 PM	Westmoreland	<table border="1"> <tbody> <tr> <td>Provided: 2,120 LF (96 veh)</td> </tr> <tr> <td>Required (2): 1,980 LF (90 veh)</td> </tr> <tr> <td>Surplus: 140 LF (6 veh)</td> </tr> </tbody> </table>	Provided: 2,120 LF (96 veh)	Required (2): 1,980 LF (90 veh)	Surplus: 140 LF (6 veh)
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Surplus: 140 LF (6 veh)							
Boulder	<table border="1"> <tbody> <tr> <td>Provided: 560 LF (25 veh)</td> </tr> <tr> <td>Required (2): 506 LF (23 veh)</td> </tr> <tr> <td>Surplus: 54 LF (2 veh)</td> </tr> </tbody> </table>	Provided: 560 LF (25 veh)	Required (2): 506 LF (23 veh)	Surplus: 54 LF (2 veh)			
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Required (2): 506 LF (23 veh)							
Surplus: 54 LF (2 veh)							

Notes: (1) This does not include the students who are dropped-off/picked-up in the motor court.  
 (2) Based on observations to determine maximum queue.

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