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PK# 4010-17.463

Z178-198

TRAFFIC IMPACT ANALYSIS:

SCHOOL TRAFFIC ASSESSMENT

Project:

DISD Moises E. Molina High School

In Dallas, Texas

Prepared for:

City of Dallas

On behalf of:

Dallas Independent School District

Prepared by:



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TRAFFIC MANAGEMENT PLAN DISD Moises E. Molina High School

Dallas, Texas

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Exhibit 1. Recommendations/Proposed Conditions

INTRODUCTION

The services of **Pacheco Koch** (PK) were retained on behalf of **Dallas Independent School District**, to prepare a Traffic Management Plan (TMP) for the Moises E. Molina High School (the "School") located at 2355 Duncanville Road in Dallas, Texas. This TMP is site-specific and relates to the peak traffic activity associated with school traffic at the site.

DISD is seeking amend the Planned Development District for the property from the City of Dallas (the "Approving Agency") to facilitate proposed site Improvements. Submittal of a TMP, prepared by a registered professional engineer experienced and skilled in the field of traffic/transportation engineering, is one of the requirements of Approving Agency's application process. This TMP was prepared by registered professional engineers employed by Pacheco Koch. Pacheco Koch is a licensed engineering firm based in Dallas, Texas, that provides professional services in traffic engineering, transportation planning, and other fields.

Project Description

The site currently consists of an existing public high school. Current enrollment is summarized below in Table 1. The School is not anticipating an increase enrollment as a result of the Project. School starts at 9:15 AM and ends at 4:15 PM. Calculations for vehicle accumulation and parking numbers are based from on-site dismissal observations conducted on Wednesday, December 13th, 2017.

Table 1. Current Enrollment

LEVEL	STUDENTS ENROLLED
9th Grade	583
10th Grade	564
11th Grade	535
12th Grade	510
TOTAL	2,198

*Enrollment Data provided by DISD

Access to the campus is via Duncanville Road and Illinois Avenue, two six-lane, median-divided major thoroughfares. The intersection at Duncanville Road and Illinois Avenue is a signalized intersection. The school is located in a predominately residential area. Across the school, Mountain View College is located east of Duncanville Road.

TMP Objectives

A Traffic Management Plan (TMP) is a site- or area-specific plan of recommended actions and strategies to manage vehicular traffic and parking, pedestrian activity, and travel by all other modes during peak demand conditions for a planned event. The "Objectives" of a TMP are to:

1. Provide a safe environment for all Users on site and the travelling public in the vicinity of the site during the Event times;
2. Minimize (and maintain within reasonable levels) travel delays and traffic congestion on site and in the vicinity of the site during the Event;
3. Ensure reasonable access and circulation is maintained on the public street system in the vicinity of the site during the Event;
4. Provide appropriate information to the travelling public in the vicinity of the site to allow for proper awareness of anticipated traffic conditions during the Event; and,
5. Promote reasonable strategies to manage travel demand to and from the site, including use of alternative modes of travel (such as walk, bike, bus, transit, etc.), when practical.

DEFINITIONS:

Terms are used in this report:

“Event” – a planned event(s), recurring or non-recurring, for which this TMP is being prepared (i.e., “school day”)

“School” (a.k.a., “Event Organizer”) – the person, group, or organization responsible for the Event

“TMP Manager” – a person or persons designated by the School to implement the TMP (also see additional tasks in the *Expectations* section)

“Users” – guests/patrons attending the Event

“Analyst” – the person(s) preparing the TMP for the School

“Approving Agency” – the municipality or government agency requiring the Traffic Management Plan

“Traffic Department” – the department of the public agency responsible for traffic operations for a given right-of-way

“Site” – the property at which the Event is located (generally assumed to be occupied by the School)

“TMP Strategies” – actions recommended by the Analyst to be undertaken before, during, or after the Event in order to manage traffic on or off site

DISCLAIMERS:

A TMP should be developed by, or in concert with, an individual familiar with the general characteristics of the Event and the associated traffic/transportation needs. For this study, PK worked with School representatives to develop the proposed recommendations.

Recommended TMP Strategies should be based upon applicable engineering principles of traffic safety and traffic operations.

Any recommended TMP Strategies involving traffic control devices in the public right-of-way (including installation or removal of signs, pavement markings, etc.) are subject to the approval of, and must be implemented under direction of, the Traffic Department.

No private individual should perform, or attempt to perform, any act of traffic control within public right-of-way; only deputized officers of the law or other authorized representatives of the Traffic Department may manipulate traffic conditions within the public right-of-way.

The recommendations presented in this report reflect Pacheco Koch's assessment of current and projected traffic needs based on observations and professional judgment and incorporate feedback from DISD representatives. Pacheco Koch is not responsible for operations at the school; however, the recommendations have been presented to on-site school personnel with authority over implementation of the Plan (see **Exhibit 1** for on-site contact information). Pacheco Koch was not involved with site selection, site design, or the current operations for this project.

Methodology

When feasible, the Analyst should conduct first-hand observations of existing event to develop an understanding of site-specific traffic/transportation characteristics, such as: drop-off/pick-up frequency, parking needs, alternative travel mode use, safety issues, queuing, traffic congestion, site access, current traffic management strategies in use, etc. When it is not feasible to conduct such observations, interviews with staff or personnel familiar with those items is desirable. When neither option is available, the Analyst may be required to rely upon published information and/or professional judgment and experience.

Once the base information is assembled, the Analyst should estimate the projected traffic/transportation characteristics generated by the proposed Event. Next, the Analyst should inventory the attributes and resources of the subject site and determine how the site can best accommodate those projected conditions. Based upon that assessment, the recommended TMP Strategies shall be developed to optimally achieve the basic TMP Objectives. The recommended TMP Strategies should be reviewed by the School (ideally, the TMP Manager) for refinement and approval before formal submittal to the Approving Agency.

Expectations

NOTE TO SCHOOL: By submittal of a TMP to the Approving Agency, the School is implicitly agreeing to implement, maintain, and comply with the recommended actions presented herein subject to acceptance by Approving Agency and any associated conditions Approving Agency may impose. It is also inferred that the School agrees to be self-accountable for these actions until and unless Approving Agency deems further measures are appropriate or the TMP is no longer required.

Recommended TMP Strategies may include one-time measures to be implemented before the Event and/or ongoing actions to be performed before, during, or after the Event. Recommended TMP Strategies involving on-site measures or actions are generally considered to be the responsibility of the School.

To ensure appropriate compliance and consistent implementation of the TMP, it is recommended that the School appoint a TMP "Manager". In general, a Manager should be a qualified and capable individual or group of individuals assigned to take responsibility of the TMP and be accountable for successful implementation in order to achieve the Objectives described earlier (see "**Exhibit 1**"). Other specific duties of the Manager include:

- Monitor effectiveness of TMP strategies and make prudent adjustments, as needed, to more effectively accomplish the TMP Objectives
- Maintain an awareness of readily-available alternative transportation modes serving the site and facilitate and promote their use during the Event when practical
- Serve as a liaison to the Approving Agency(-ies), when needed
- When applicable, provide training and direction to other personnel assigned to implement the TMP measures
- Provide instruction to Users on how to comply with the intent of the TMP

Recommended TMP Strategies were developed specifically for the period(s) of peak traffic demand and are depicted in the respective exhibit. For periods of less intense traffic demand, recommended TMP Strategies may be utilized, in part or in whole, as needed to realize the TMP Objectives.

Changes to TMP

Informal changes to any recommended TMP Strategies presented herein to improve efficiency or effectiveness may be implemented at the discretion of the School if those changes are prudent and do not compromise the TMP Objectives. It is recommended that changes implemented under such circumstances be documented and retained by the School for future reference or upon request. At the discretion of the Approving Agency, submittal of a formally revised TMP report/document or a validation study may be required on a predetermined or as-needed basis.

TRAFFIC MANAGEMENT PLAN

NOTE: Recommended TMP Strategies contained herein are based upon the best data, site-specific information, and analytical processes readily available at the time of the study. However, specific quantities related to traffic congestion at peak periods (e.g., duration, length of queue, etc.) are estimated values. Actual quantities may vary due to unknown or unquantifiable variables and other operational factors that may occur. In the event that actual, future conditions generate undue burden on Users and/or the travelling public, modifications to the TMP should be considered. (See preceding NOTE for guidance on implementing changes to the TMP.) However, in extreme conditions, TMP actions may not be capable of mitigating all traffic conditions, and it may be incumbent on the School to consider operational, institutional, or other long-term changes to address issues on a more permanent basis.

graphical summaries of recommendations and proposed conditions are depicted in **Exhibit 1**.

A summary of existing conditions is provided below:

- Based on observations of the subject site, parent drop-off/pick-up activity did not significantly affect the traffic signal at the intersection of Duncanville Road and Illinois Avenue,
- Parent pick-up activity currently occurs on Duncanville Road. The crosswalk on Duncanville Road intersecting with the school's main driveway gave access to many of the students being pick-up on the northbound curb lane of Duncanville Road.
- Traffic operations at the school main driveway on Duncanville Road is a median opening, minor STOP-approach and contains both heavy inbound and outbound traffic. The driveway's approach includes outbound left-turn and right-turn lanes. Also, the school provides an inbound left-turn bay into the site.
- Traffic operations at the school minor driveway on Duncanville Road is a minor STOP-approach and includes both heavy inbound and outbound traffic. The operation of the driveway is a right-in only and right-out only. School buses enter the site at this driveway.
- Traffic operations at the school minor driveway on Illinois Avenue is a minor STOP-approach and includes only light outbound traffic. The operation of the driveway is a right-in only and right-out only. School buses exit the site at this driveway.

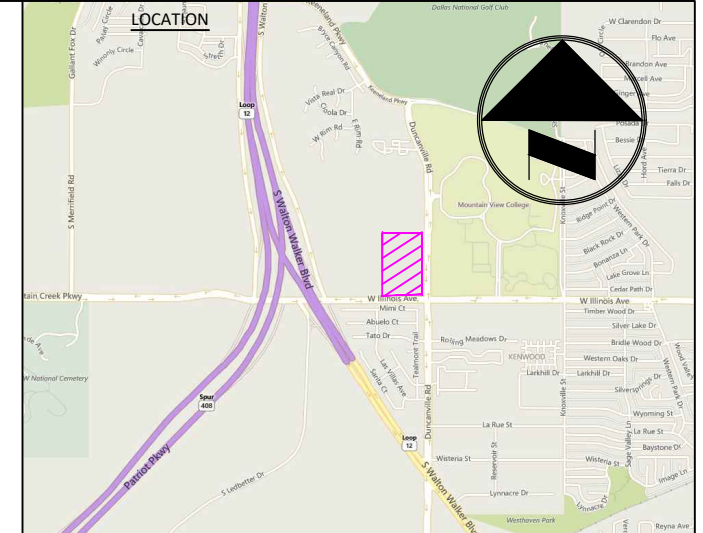
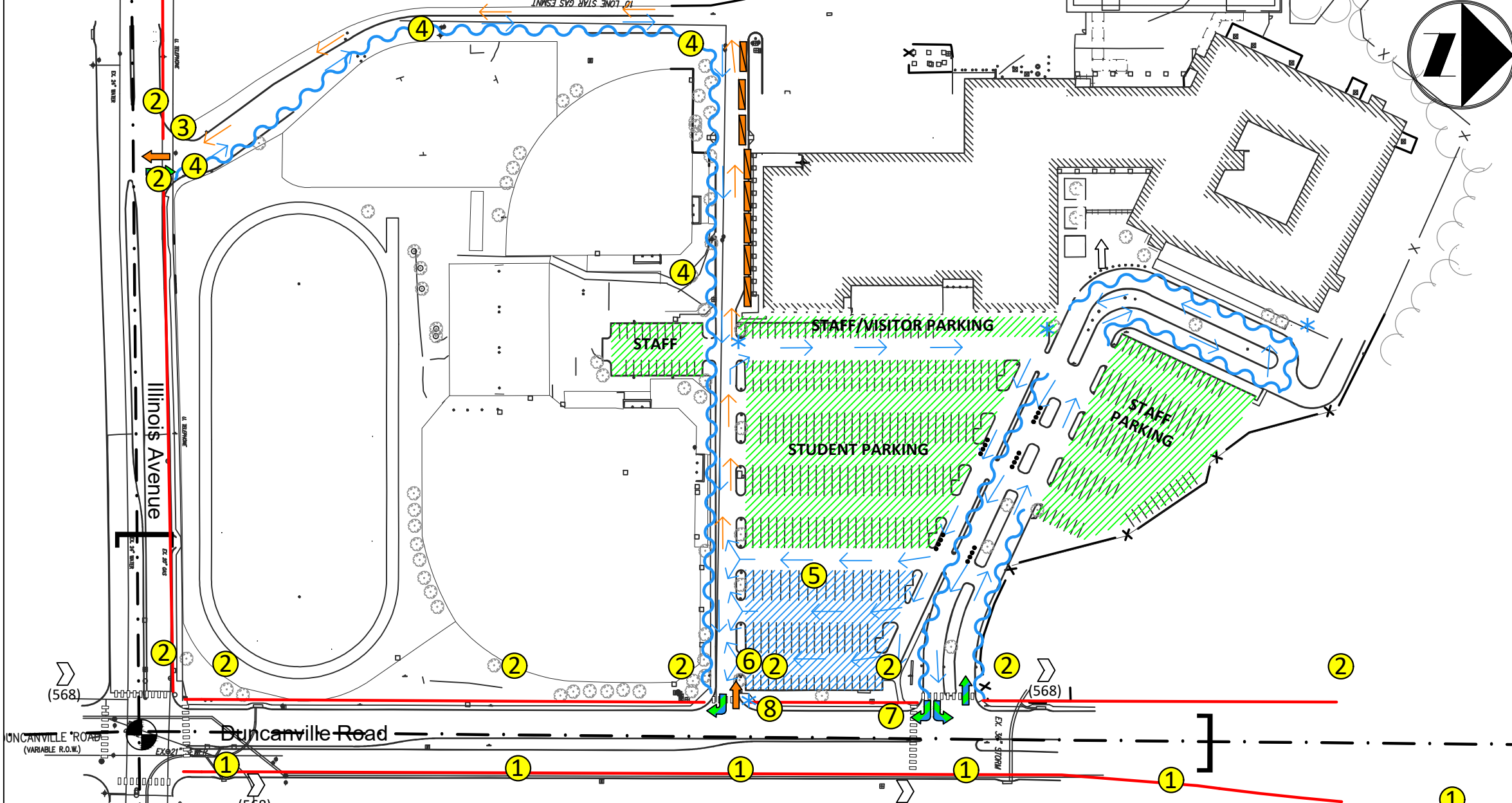
A summary of specific recommendations is provided below:

1. Enforce existing, on-street parking restrictions along Northbound Duncanville Road during school traffic periods. [Intent: to minimize impact to thoroughfare.]

2. Install "No Parking or Standing" Signs to create parking restrictions along Southbound Duncanville Road during school traffic periods.
3. Convert one-way outbound traffic flow to one-way inbound parent traffic flow.
4. Allow parent waiting/loading area along internal roadway.
5. Allow parent waiting/loading area in student parking lot.
6. Enforce inbound traffic for busses only during drop-off/pick-up periods on school days by installing traffic sign.
7. Existing crosswalk/median to comply with current ADA Accessibility requirements.
8. Staff assistance to direct and enforce inbound traffic for busses only during drop-off/pick-up periods on school days. It is recommended that the school has a certified police officer present each school day for the first two weeks of the school semester and once a month for the remainder of the school semester during morning and afternoon peak times to assist with student drop-off and pick-up procedures.

END OF MEMO

GENERAL NOTE: The subject school administration shall issue a formal communication that summarizes the intent of the Traffic Management Plan at least once every school year.



- Parking**
- No Parking
 - Parking Allowed
 - Access Point
- Queuing/Loading**
- Parent Waiting and Loading Area
 - Queue Area (Unmanaged)
 - Circulation/Flow
 - Access Point
 - School Bus Loading/Unloading
 - School Bus Access Point
 - Staff Assistance
- Pedestrian/Other**
- Trail/Path
 - Crosswalk
 - Pedestrian Access Point
 - School Zone
 - Traffic Cone/Barricade
 - Public Transit Stop and Waiting Area (DART Route No.)
 - City Designated Bicycle Route
 - Traffic Signal

Mode of Travel	%	# of Students
TOTAL	100	2200
Parent Pick-up	40	880
Bus	20	440
Walking	30	660
Self-Driving	10	220

Vehicle Accumulation/Capacity	Vehicles
Projected Maximum Vehicle Accumulation*	191
Capacity	210
On-site Queue	114
Available On-site Parking Spaces	96
Surplus	+19

Proposed Parking*	Vehicles
Parking Supply	492
Parking Demand	391
Surplus	+101

BACKGROUND:

Approving Agency: City of Dallas
 Event/Type: Public School (High School)
 School Name: Moises E. Molina High School
 Event Time(s)/Date (s): Weekday morning & evenings (seasonal)
 Event Frequency: Recurring
 On-Site Contact: Dr. Rodriguez/Principal/(972) 502-1000

Proposed Conditions

RECOMMENDATIONS

- 1 Enforce Existing, On-street Parking Restrictions (Not Fronting School Property) During School Traffic Periods
- 2 Install "No Parking or Standing" Signs
- 3 Convert One-way Outbound Traffic Flow to One-way Inbound Parent Traffic Flow
- 4 Allow Parent Waiting/Loading Area Along Internal Roadway
- 5 Allow Parent Waiting/Loading Area in Student Parking Lot
- 6 Enforce Inbound Traffic For Buses Only during Drop-off/ Pick-up Periods on School Days by Installing Traffic Sign
- 7 Crosswalk/Median to Comply with Current ADA Accessibility Requirements
- 8 Staff Assistance to Direct and Enforce Inbound Traffic for Busses Only During Drop-off/Pick-up Periods and School Days (See Report for Details)

THE SEAL APPEARING ON THIS DOCUMENT WAS AUTHORIZED BY STEVE E. STONER, P.E. 125343 ON 05/15/2018. ALTERATION OF A SEALED DOCUMENT WITHOUT PROPER NOTIFICATION TO THE RESPONSIBLE ENGINEER IS AN OFFENSE UNDER THE TEXAS ENGINEERING PRACTICE ACT.

TX. REG. ENGINEERING FIRM F-469 PK #4010-17.463
 TX. REG. SURVEYING FIRM LS-100080-00 (HWL: 05/15/18)

EXHIBIT 1 **Z178-198**

Traffic Management Plan
Proposed Conditions

DISD Moises E. Molina High School, Dallas, Texas

NOTE: This drawing is conceptual only and does not reflect a detailed design.