

City of Dallas

SCHOOL TRAFFIC SAFETY GUIDE

2020

Preface

The development of this guide is led by the Dallas Department of Transportation (DOT) in coordination with the Department of Sustainable Development and Construction, Department of Public Works, and the Courts and Detention Services Department, all of whom are involved in the establishment and maintenance of traffic safety for school children. The School Safety Traffic Guide is intended to serve three purposes:

1. Group under one cover all school-related policies, practices, and procedures for consistent application by various City departments and affected agencies.
2. Provide citizens, school districts and school operators, school administrators and other professionals involved in locating, designing, and operating school sites with a comprehensive reference on school transportation-related matters under the purview of the City of Dallas.
3. Define the roles and responsibilities of all agencies and stakeholders sharing the responsibility of establishing and maintaining the safety of school children.

This guide will serve as a major revision of the original School Safety Manual adopted in 1980. Once adopted, this guide will be reviewed, revised or confirmed as needed. Any revisions or confirmations will be attached in the Appendices.

The policies and practices in this guide shall apply to all public, private, and open-enrollment charter, primary and secondary schools, operating in the City of Dallas City Council Districts unless otherwise noted.

Acknowledgements

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Department of Sustainable Development and Construction (SDC)

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Courts & Detention Services (CDS)

School Districts (TBD)

AUTHORITY

The School Traffic Safety Guide is issued under the authority of Chapter 28 of the Dallas City Code entitled "Motor Vehicles and Traffic" and more specifically Section 28 - 50 entitled "Speed in School Zones: Signs; Designated Streets" and Section 28-60 "One-way Streets in School Zones" The School Traffic Safety Guide conforms to the requirements of the Texas Manual on Uniform Traffic Control Devices, as amended.

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Introduction

The protection of the student pedestrian is one of the most challenging tasks that face city and school officials today. Factors such as: roadway characteristics, driver behavior, pedestrian activity, parental concern, and procedures and guidelines are just a few of the considerations affecting a decision to install, modify, or remove a school traffic control device. Therefore, an affirmative school safety program must be based upon a *uniform* application of policies, practices, and standards developed through engineering studies and criteria, and industry guidelines.

Pedestrian safety depends largely upon the public's understanding of accepted methods for effective traffic management. This is especially true in the vicinity of schools. Neither school children nor motorists can be expected to move safely in school zones unless both the need for traffic controls and the ways in which these controls function for their benefit are understood. These measures can be accomplished through the proper education of the school children, the parents and the motoring public, along with strict enforcement of these rules and regulations.

This guide is intended to provide citizens, school staff, officials, and engineering professionals with a comprehensive reference on school zones and safe travel to and from school within the City of Dallas. It is a compilation of the policies, practices, and recommendations that are industry best practices and have proven to be effective in the resolution of school traffic safety matters. These policies and practices are and consistent with nationally accepted standards in the Manual of Traffic Control Devices (MUTCD), the State standards as presented in the Texas Manual on Uniform Traffic Control Devices for Streets and Highways (TMUTCD), Texas Department of Transportation Procedures for Establishing Speed Manual, and the Texas Administrative Code Rule 25.22. In all cases, traffic engineering studies will be used to properly evaluate and assess the installation of a traffic control element. In very unusual and extenuating circumstances there may be situations that require the installation of traffic control elements at the discretion of the City Traffic Engineer.

Definitions

Terms relevant to school traffic safety used in this guide are defined as follows:

Arterial Streets - A major road or highway with a minimum of four travel lanes that is designed to move a relatively large volume of traffic operating at higher speeds.

Barrier-Free Ramps – curb ramps designed to be free of barriers and obstructions to support the independent functioning of individuals with physical or other disabilities by providing an alternative to steps to access sidewalks or other pedestrian paths.

Collector Streets - A street, typically two to four lanes with moderate traffic volume and speed, that serves to move traffic from arterial roads to access residential properties, schools, parks, and other neighborhood amenities.

Engineering Judgment - The evaluation of available relevant information, and the application of appropriate engineering principles, criteria, and practices, for the purpose of deciding upon the installation and maintenance of traffic control devices. Engineering judgment is exercised by an engineer, or by an individual working under the supervision of an engineer.

Engineering Study - A comprehensive analysis and evaluation of available data and the application of engineering principals to justify the installation of a traffic control device. The types of data considered in engineering studies includes:

- Traffic volumes
- Crash history
- Gap study
- Exposure Index
- Pedestrian Volumes
- Vehicular speed study
- Input and participation by school district representatives, principals, parents, neighborhood residents, and law enforcement.

Local Streets - Streets, typically no more than two travel lanes, that carry low volumes of traffic at lower speeds and provides direct access to residential property.

School Zone – Where the speed limit is reduced by more than 10 mph on roads adjacent to schools when children are going to and from school.

School Crossing Guard – an adult, stationed at designated locations, whose primary responsibility is to guide unaccompanied elementary students safely across streets.

Texas Manual on Uniform Traffic Control Devices (TMUTCD) - This manual adopted by the State of Texas sets standards for all traffic control devices installed on any street, highway, bikeway, or private road open to public travel. The TMUTCD includes signage and pavement marking standards for school zones and pedestrian crossings.

Traffic Control Device - A sign, signal, marking, or device used to regulate, warn or guide traffic.

Warrants - Minimum conditions that justify the installation of a traffic control device or for an engineering study to proceed to evaluate other traffic conditions for further justification. Warrants are not a substitute for engineering judgment.

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Roles and Responsibilities

The responsibility to provide safe walking conditions and safe habits among students is shared by parents, school authorities, government agencies and officials, and students themselves. Understanding of respective roles and responsibilities among these groups is essential to maintain a high uniform quality of safety for children on their way to and from school.

City of Dallas

- A. Develop and conduct suitable warrants and engineering studies for traffic controls to provide adequate protection for students.
- B. Administer School Crossing Guard program.
- C. Maintain signs, pavement markings, and other traffic control devices in the public right-of-way.
- D. Administer Safe Routes to School Programming initiatives.
- E. Oversee the review and approval process for new schools and school upgrades, including school traffic management plans and ensuring compliance with approved plans.
- F. Administer the Sidewalk Safety Program by evaluating, prioritizing, and constructing sidewalks on direct routes to school, as funds become available.

School Districts and School Operators

- A. Coordinate with City staff on new, upgraded, and transitioning school sites to ensure that all devices and design features needed to ensure the safety of students are provided.
- B. Update school traffic management plans as approved by City Council.
- C. Install signs and construct and maintain sidewalks for when new schools and upgrades to existing schools impact the public right-of-way.

School Administrators

- A. Notify police or Dallas DOT on hazardous traffic situations that may be reported by parents or students or needed improvements identified by school personnel.
- B. Develop a School Arrival and Dismissal Plan that identifies how school drop-off and pick-up should be managed if the school does not already have a council approved traffic management plan. Communicate and train staff, students, and parents on the plan.
- C. Oversee the orderly arrival and dismissal from school to maximize the safety of students walking to and from school and ensure minimum disruption to roadway traffic.
- D. Educate and encourage students to walk, bicycle and carpool to school, where feasible.

Parents

- A. Understand and adhere to the school's drop-off and pick-up procedures.
- B. Know and follow traffic rules. Exercise utmost caution.
- C. Avoid distractions, including refraining from using cell phones while operating a motor vehicle.
- D. Avoiding making U-turns, backing vehicles, and illegal parking around schools.
- E. Educate children on walking and bicycling safety. Encourage children to walk and bicycle to school or walk with your kids to school where feasible.
- F. Observe student's walking and cycling to and from school. Report any unsafe activities or needed improvements along route.

Students

- A. Listen to school personnel and crossing guards assisting with arrival/dismissal.
- B. Wear a seat belt immediately upon getting into the car, a helmet if riding a bicycle, and cross at crosswalks when walking.

Law Enforcement

- A. Enforce laws and supervise traffic in public right-of-way.
- B. Enforce parking restrictions in public right-of-way.
- C. Cooperate, coordinate and participate with the appropriate school authorities on all traffic safety problems.

School Traffic Control Devices

Traffic control devices are traffic signs, traffic signals, pavement markings, and other devices placed along roadways to provide for the safe and efficient movement of all road users by regulating traffic movement. Traffic control in the vicinity of schools is a delicate matter and it is important that similar traffic conditions are treated in the same manner from school to school to ensure uniform school traffic control throughout the city. Traffic control devices are installed to fulfill a specific function under specific traffic conditions or when studies show the existence of a definite need. Unnecessary traffic control devices cause lack of respect by the motorists which lessens the respect for traffic control devices in general. Effective traffic control can best be achieved through the uniform application of realistic policies, practices, and guidelines developed through properly conducted engineering studies.

The TMUTCD promotes uniformity in design and application of signs and pavement markings. Consistency in application increases compliance as signs are quickly recognized and the messages are easily understood. School authorities may not install signs of any kind in the right-of-way, nor may they use or install traffic control devices in the right-of-way, except as approved by Dallas DOT. At no time can school personnel direct traffic in the public right-of-way onto or off of the school campus. Only uniformed police officers can direct traffic in the right-of-way.

The following guidance is provided as a service to stakeholders within the City of Dallas; it does not create a standard or supersede requirements found in the TMUTCD or other local policies. The following guidance is based on the Current City of Dallas Traffic Sign Standards and Chapter 7 of the 2011 Edition – Revision 2 TMUTCD and subsequent updates.

School Zones

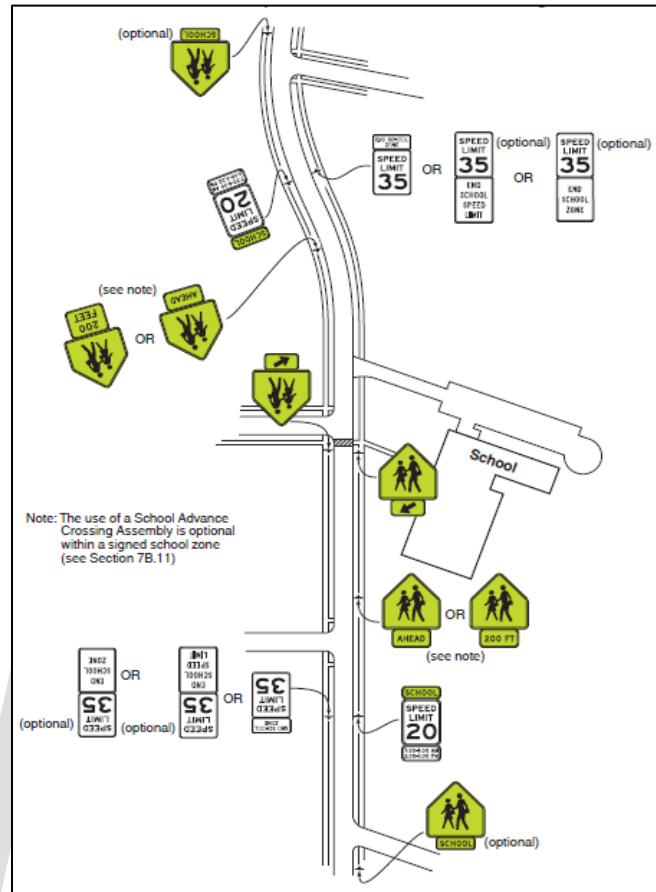
In the City of Dallas, a school zone is a section of a roadway adjacent to a school site where school age pedestrians are likely to be present. School zones have a reduced speed of 20 MPH during the morning and afternoon drop-off and pick-up busy periods and are identified by signs and road markings that alert drivers to proceed at a reduced speed and with extra caution.

School zones extents typically range from 600 feet to 1200 feet depending on site conditions. Placement of **signs** and **pavement markings** defining the school zone are based on TMUTCD guidance.

School Zone Signs

School zones are installed on streets that surround the school. All traffic signs shall conform to the standards and specifications provided in Part 7. Traffic Controls for School Areas of the Texas Manual on (TMUTCD) with regard to their design, and placement. The most common type of signs that should be used in warranted school reduced speed zones are listed in **A.3**.

Figure 1: Example of Signing for a School Zone



Source: TMUTCD 7B-5

Uniform Control Devices dimensions, lettering

School Zone Flasher Assemblies

Flashing warning beacons are installed on the basis of protecting student pedestrians in school areas and are placed at the start of any designated school zone. A time clock is used to flash the beacons to alert motorists to the real time conditions with which they must pay special attention. Usually, the flashers are programmed to begin flashing 45 minutes before school starts and to stop flashing 15 minutes after school is in session each school day. For afternoon dismissal, the flashers are programmed to begin flashing 15 minutes before school ends and to stop flashing 30 minutes after school ends.

Operations of flashing warning beacons may vary by school type (elementary, middle, or high school) and district (DISD, RISD, CFB-ISD, open-enrollment charter, or private school). Motorists are required to adhere to the 20 MPH speed limit of the school zone when it is in effect, per city ordinance.



What are the Criteria to Establish a School Zone?

Any primary and secondary (K-12), public, private, or open-enrollment charter school is eligible for a school zone. For existing schools, site-specific conditions are evaluated with the application of appropriate engineering criteria and nationally accepted standards in the MUTCD and TMUTCD to justify the installation of a school zone.

For a street to be eligible for consideration, the street must be adjacent to the school campus, sidewalks are present and student pedestrian crossing activity is confirmed, in addition to at least one of the following criteria:

- The posted speed is 40 MPH or below.
- There is at least one marked school crosswalk within the proposed school zone which is not protected by a signal or STOP sign.

A traffic engineering study will be conducted on requests meeting the minimum requirements to determine if a school zone should be implemented in that location. The study will evaluate the following factors:

- Pedestrian crossing activity
- Presence of a school crossing guard
- Sidewalk connectivity
- Type of traffic control (traffic signal, all-way stop, etc.)
- Crash/Accident history
- Vehicular speeds
- Traffic volumes
- Street width
- Geometric conditions (site distance issues)
- Special conditions such as construction along a route of extended duration that affects children's travel pattern.

One-way Operation

If traffic operations are a concern in a school zone, one possible solution is to convert the school zone to one-way operation during the school's arrival and dismissal periods. It should be noted that one-way operation does not automatically improve traffic congestion or increase safety. For one-way street operations to be effective, school administrators should adjust internal arrival and dismissal polices to see improvements in traffic operations. Designating only one pick-up/drop-off lane and requiring students to load/unload vehicles, including buses, directly adjacent to curb (right wheels to curb) should be standard operation in a one-way school zone.

For a school zone to be considered for one-way operations the following conditions shall exist:

- The street is not a major thoroughfare.
- The street segment to be converted is relatively short, and much of the traffic to be impacted is school-related.
- The street has few or no intersecting streets and driveways.
- Residents, neighboring businesses, and passing motorists are not greatly inconvenienced.
- Emergency routes are maintained.

Signage on streets operating as one-way during school arrival and dismissal periods are determined depending on direction of incoming traffic. In addition to school zone signage identified in this chapter, drivers will also see either a One Way and/or Do Not Enter sign.



Removal of a School Zone

For a school zone to be eligible for removal, the following conditions shall exist.

- The school is closed or scheduled to be closed, temporarily or permanent.
- Changes in pedestrian activity have occurred, such as changes in school curriculum, rezoning of the school's attendance boundaries,
- Most of the school's students are bussed or driven to school.
- The school zone is located adjacent to a private or public high school.
- Engineering judgment has determined it will provide a benefit to the public as a whole.

If the school zone removal request meets the above eligibility requirements DDOT will proceed with an engineering study to determine if the school zone is no longer warranted.

Crosswalks

Crosswalks are defined as white lines and bars in the full continental crosswalk style installed using thermoplastic or approved paint material on City streets whose primary function is to control and guide pedestrians, and whose secondary purpose is to identify pedestrian crossing areas to motorists. Crosswalks may be located at intersections or at a mid-block crossing location in front of a school and along primary walking routes to a school.



When reviewing an area for installation of a crosswalk, many factors are considered. Some of the important factors include:

- a. Volume of vehicular and pedestrian traffic
- b. Average vehicular speed
- c. Type of traffic (domestic, commercial, highway, etc.)
- d. Terrain
- e. Visibility available to motorist and pedestrians
- f. Type of traffic controls present
- g. Width of street to be crossed
- h. Proximity to school and school walking route
- i. Location of adjacent crosswalks

Crosswalks at Signalized intersections

The crosswalks are implied and therefore may be installed without pedestrian counts, given the following conditions are met:

- The intersection corners are accessible with barrier free ramps in place.
- The location is not deemed unsafe for pedestrians to cross due to other reasons.

Crosswalks at Unsignalized Intersections (Controlled Approach)

An unsignalized intersection with a controlled approach is that which has STOP signs present at the crosswalk approach. If barrier free ramps are present, a crosswalk can be installed without pedestrian counts. If no barrier free ramps are present, pedestrian count to be performed to justify a crosswalk. The minimum pedestrian volume for the peak hour evaluated is 14 pedestrians/hour for both directions, for a crosswalk to be warranted.

Crosswalks at Mid-Block and Uncontrolled Intersection Approaches

A pedestrian study must be completed for mid-block and uncontrolled crosswalk location requests.

Parking Prohibition Signs

In order to promote safe and efficient traffic circulation around a school. It may be necessary to regulate, restrict or prohibit parking, stopping, or standing adjacent to the school grounds or at an established school crossing. The legend on the parking sign shall state the applicable regulation. All signs shall conform to the standards for shape, color, position and used as specified in the TMUTCD.



Generally, parking signs should display the following information as appropriate, from top to bottom of the sign, in the order listed:

- a. Restriction or prohibition
- b. Time of day it is applicable, if not at all hours
- c. Days of weeks applicable, if not every day

If DDOT determines the street to be eligible for parking restrictions, DDOT will provide a preliminary map noting the parking restrictions for use by the school to notify parents of changes around the school.

Parking is prohibited:

- In an unloading and loading zone (including buses)
- On a sidewalk or sidewalk area
- Within 10 feet of a fire hydrant
- Within 4 feet of the entrance to an alley or a private road or driveway
- On or within 20 feet at a non-signalized or unmarked crosswalk and 30 feet at a crosswalk with a traffic signal.
- On the roadway side of any parked vehicle (double parking)
- Anywhere else parking is prohibited, limited, or restricted by official traffic signs

ALL WAY Stop Signs

Since “All-Way” stop signs cause interruptions to the traffic stream regardless of the presence of pedestrian traffic, their use as school traffic control device is discouraged unless specific volume and pedestrian warrants are met. “All-Way” stop signs may create unnecessary delay when no school activity is present at the intersection and breed disrespect among drivers when installed without appropriate school and pedestrian traffic. Other forms of crossing protection, such as an Adult School Crossing Guard or a traffic signal, should be considered over an “All-Way” stop, if warranted. However, when traffic and pedestrian volume at an established school crossing are approaching the warrant requirements specified by the TMUTCD, installing an “All-Way” stop will be considered.



Traffic Signals

A traffic investigation for a traffic control signal includes an analysis of factors related to the existing operation and safety at the study location and the potential to improve these conditions. A traffic control signal, for a school crossing, may be warranted when an engineering study of the frequency and adequacy of gaps in the vehicular traffic stream as related to the number and size of groups of school children at an established school crossing across the major street shows that the number of adequate gaps in the traffic stream during the period when the school children are using the crossing is less than the number of minutes in the same period and there are a minimum of 20 school children during the highest crossing hour.

If a location meets the warrant for a traffic signal, the installation may be considered provided that:

- Other, less disruptive measures would not result in a better handling of the problem.
- The distance to the nearest traffic control signal along the major street is less than 300 feet, unless it has been determined that the proposed traffic control signal will not restrict the progressive movement of traffic.
- There is little probability that future changes in school curriculum and/or attendance boundaries could eliminate the need for a traffic signal.

School Crossing Guard

Crossing guards play a pivotal role for students who commute to school by walking or bicycling. The street environment may be considered adverse for child pedestrians and extra assistance is needed to assist children on their way to school. The School Crossing Guard Program provides adult crossing guards to assist unaccompanied elementary students crossing streets that require additional safeguards. Middle schools and High schools do not qualify for crossing guard assistance.

To ensure the safety of all students, each crossing guard receives comprehensive training on traffic laws and codes of the State of Texas and the City of Dallas pertaining to general pedestrian safety on public roadways.

What is the Criteria to Warrant a Crossing Guard?

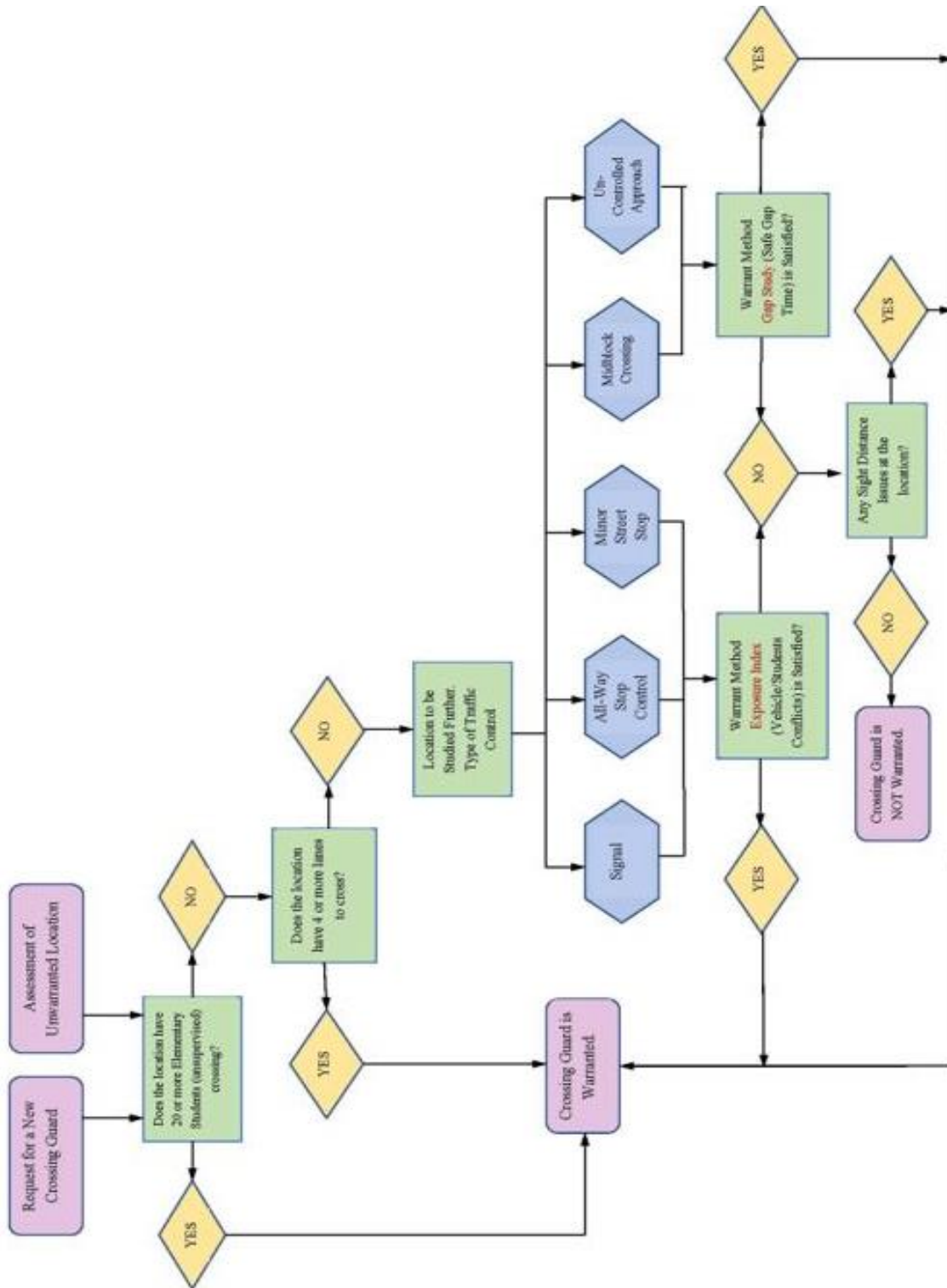
Due to demand and a limited budget, the City of Dallas must be strategic in determining where school crossing guards are deployed. For a requested location to be warranted a crossing guard, a detailed traffic engineering study conducted by the Dallas Department of Transportation is required. The study identifies areas with the highest need based on the street environment such as: the number of unaccompanied children crossing, traffic speed and volume, number of lanes, presence of control devices, and visibility.

Dallas DOT has developed School Crossing Guard Assessment Criteria based on prevalent industry standards and best practices. In summary, a crossing guard is justified if:

- 20 or more unsupervised students are crossing lane/lanes, or
- Students are crossing 4 or more lanes, or
- Exposure Index is met, or
- Gap Study Warrant is met.

The following chart provides the criteria and the process to determine if a crossing guard is warranted at a location.

Figure 2: Crossing Guard Warrant Analysis



Request for a Crossing Guard

School districts and private schools requesting a new crossing guard must complete the City of Dallas School [Crossing Guard Request Form](#). This form is also located online at dallascityhall.com on the home page of Court and Detention Services Department website and **A.4** in this guide. Once completed, submit the form for consideration to:

Department: Court and Detention Services
Contact Person: Fred Gonzales
Contact Email: Fred.Gonzales@dallascityhall.com

Summer School Operations

School Zone Operations

School zones with flashing beacons will continue in operation during summer months to serve a school that has a summer school program. Often summer school arrival and dismissal times are considerably different than the normal school year schedule. Therefore, flashing beacons will be programmed accordingly for operating schools.

For school zones without flashing beacons, signs with posted times will be in effect. Therefore, school speed zones will be in effect at applicable schools during the summer months. School districts and private schools shall notify the city of the schools and the hours of their summer school program. The City will identify the locations and number of guards needed based on the information provided.

Crossing Guard Operations

School districts and schools needing crossing guards for their students attending a summer school program should notify Courts and Detention Services of schools and hours of operation of their summer school program. The City will identify the locations and number of guards needed based on the information provided.

Request for Traffic Study

Dallas Department of Transportation is committed to making our community safe for school children as they travel to and from school. As part of this commitment, DDOT is making the request for study process more transparent and responsive to the needs of the school.

To request a study for a school zone, crosswalk, parking restrictions, stop sign or traffic signal installation, a formal request shall be submitted through 311 from the school’s principal or designated representative, or a member of the board of the respective education entity that has jurisdiction over the requesting school. (To request a study for a crossing guard or sidewalk improvements see pages 14 and 27.) Requests received from the general public will be presented to the school principal and addressed only if the school’s principal agrees with the request.

The 311 request should include the following information:

- School Name
- Type of request (school zone, parking restrictions, etc.)
- Street or intersection of concern
- Boundaries of street segment

Once submitted, the 311 request will be assigned to a Dallas DOT engineer to work with the school principal and conduct a traffic engineering study to determine if the request is warranted. The procedures for a school-related traffic engineering study are explained in detailed in the next section.

School Zones and One-way Street Operation

The installation, removal, and adjustment of school zones and one-way street operations require city council approval. If it has been determined the installation, removal, or adjustment of a school zone and/or one-way street operation is warranted, a request for council action will be submitted for review and approval. Once the request has been approved by City Council, speeds will be enforceable as posted.

School Traffic Study

Engineering studies are necessary to properly understand existing traffic conditions, identify causes of operational problems, and to ensure traffic controls are placed only where they are needed. This section outlines DDOT’s procedures of conducting school traffic engineering studies, emphasizing the criteria normally used.

Study Procedures

Traffic engineering studies for school related matters are conducted during the morning peak time and afternoon peak time when student pedestrians are present, and crossings are heavily used. The parameters of the study vary with the age of students, geographic location of the crossing, the school, and the characteristics of the issue being studied.

Dallas DOT will deploy either a camera or an engineer to observe the study area. The engineer or designee conducting the study will be located close enough to the location in question to observe all pedestrian and vehicular activity, but not close enough to attract attention or disrupt the normal traffic patterns of students and motorists. The camera, largely used for crossing studies, will be located in an area that provides good visibility of the school crossing or crossing locations that are being studied. All students crossing must be counted whether they are in or out of the crosswalk, jaywalking, or crossing in the general vicinity of the crossing under study.

Study Criteria

The major focus of gathering information is to better understand both existing and proposed traffic conditions on and around the school site. The following criteria presents the sources of information and the data that may be considered in an engineering study.

Existing Operations

An important part of any engineering study addressing school traffic related issues is an accurate representation, via site plan, of the schools traffic circulation during student arrival and dismissal. This will include:

- Issue at hand.
- Circulation routes for motorists, buses and pedestrians/cyclists.
- Loading/unloading areas for students arriving by car and bus.
- Student entrances and exits to school building for arrival and dismissal.
- On and off-site visitor parking areas.
- Loading system for student dismissal.
- School hours.
- School curriculum.
- Student demographics.
- Student travel mode.
- Any other relevant information unique to the site.

The engineer will first verify if the school has a council approved traffic management plan on file with the City.

- a. If the school has a traffic management plan on file, the engineer will assess the school's compliance with the approved plan. The school is in compliance if the approved plan was renewed as specified in the ordinance and the school's traffic operations during arrival and dismissal are as described in the plan.
- b. If the school is not in compliance with the council approved traffic management plan, depending on the nature of the request, the assigned engineer may require an updated traffic management plan to be approved by the Sustainable Development and Construction Department before installing requested traffic control measures, if warranted.
- c. If the school does not have a council approved traffic management plan, the engineer will move forward with the traffic engineering study and will install requested traffic control measures, if warranted.

Field Inventories

The extent of inventory data used in the study depends on the study's scope. The data will evaluate existing conditions and provide the basis from which potential improvements can be determined. The engineer will consider the following field inventories.

Roadway Facilities.

- Roadway classification (local, collector, arterial) Geometric data (cross section)
- Travel lanes (number and width)
- Median type, width, and feasibility as a pedestrian refuge
- Intersection geometry and approach lane designations (left turn, right turn, etc.)
- Sight restrictions (parking, trees, buildings, curves)

Pedestrian Facilities.

- Existence and extent of pedestrian path networks and their relationship to the school site
- Type and width of pedestrian facilities
- Location of pedestrian facilities (intersection, midblock, etc.)
- Width, condition, quality, and elevation of sidewalks, pathways and bike lanes
- Height and purpose of any fencing, railing and barriers present
- Presence of lighting

Traffic Control Devices.

- Location, type, size and mounting height of signs
- Sign operations (flashing beacons, variable message, and speed feedback)
- Traffic signal location (intersection, mid-block)
- Traffic signal actuation, timing, and phasing
- Type, location, and condition of pavement markings

- Type and location of protective barriers (guardrails, median barriers)
- Regulatory speed limit, reduced speed zone length, and reduced speed limit period
- Parking location, restriction limits, and practices (no standing)

Functional Classification

Planning documents are reviewed to understand how the roadway(s) in the study area are to function. This helps the engineer assess the relative importance of mobility and access in the study area.

Traffic Volume

Traffic volume quantifies the type of traffic flow and describes the function of the activity. The type of traffic flow can be subdivided into two basic categories motorized (vehicles) and non-motorized (pedestrian). Activity function is categorized as either movement through the roadway facility or parking. The following sections provide information relative to the traffic volume that should be considered during the study.

Vehicular Data

The engineer evaluates the number of vehicles crossing the study area that pose a potential conflict to students. When evaluating crossing locations, turning movements are considered to know how many vehicles turn right or left before and after crossing the crosswalk. This will help determine crossing locations and special needs such as turn restrictions. Depending on the conditions, other factors may be considered, such as:

- Vehicular speed
 - Nearby major traffic generators (shopping centers, industrial warehouses, etc.)
- Vehicular classification (large trucks, buses, and emergency vehicles)
- Interval and distribution of gaps in the vehicle stream (Gap Study)
- Potential changes in traffic volume and traffic pattern due to:
 - Changes in school busing policies
 - Changes in school attendance boundaries
 - Changes in school curriculum
 - Changes in surrounding land use (new development and redevelopment)
 - Construction zones
 - Population changes

Pedestrian Data

The engineer will collect pedestrian volume data and observe pedestrian habits and patterns in the study area. When determining pedestrian data needs for the study, the engineer will consider the following:

- Location of data collection (mid-block or intersection)
- Pedestrian volume (total number, grouping, jaywalkers)
- Mix of pedestrians (students walking alone or with parents, cyclists)
- Age of pedestrians (young elementary students)
- Major generators near study area (recreation center/park, convenience store, other destinations popular to youth)
- Stature, mental capabilities, reaction time and walking speed
- Potential vehicular and pedestrian conflicts (Exposure Index)
- Transit activity

Parking Data

The engineer will evaluate availability and accessibility of on and off-street parking adjacent to the school as well as the impact of on street parking on traffic flow and safety. When addressing parking-related issues, the engineer will consider the following:

- On-street versus off-street parking facilities
- Parking capacity and demand
- Traffic circulation patterns
- Parking duration and turnover
- Physical dimensions of parking areas
- Local ordinances
- Traffic crash data
- Illegal parking
- Pedestrian conflicts

Traffic Crash History

The engineer will evaluate traffic crash records to identify patterns and probable causes if conflicts in traffic circulation are an issue and to determine potential safety improvements. When evaluating crash records, the engineer may consider the following:

- Collision types
Vehicular and/or pedestrian direction
- Location of crashes
- Crash frequency and patterns
- And other relevant factors needed for the study (vehicular type, environment, weather)

Special Conditions

Any special conditions adjacent to the school or in the school must also be considered. These special items may include such things as special geometric conditions, topographic conditions,

social problems such as high crime areas and/or abandoned buildings, or a high concentration of special needs students.

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School Traffic Management

Schools generate atypical traffic conditions that require special consideration. Schools produce higher than usual vehicular traffic, high traffic loads at specific times, and differing types of vehicles. Traffic management should be given the highest priority when evaluating new school sites, upgrading current sites, or reviewing existing school operations.

The City of Dallas has implemented policies and tools to help manage school traffic and minimize intrusion of traffic in adjacent neighborhoods. This chapter will focus explicitly on Traffic Management Plans.

When is a Traffic Management Plan?

A traffic management plan is a site-specific plan of a school's campus and adjacent street network providing guidelines to coordinate traffic circulation during school peak traffic hours. The plan includes procedures and protocols on how traffic from road users, will be safely and efficiently guided through the site, and ensure the performance of the roadway and surrounding properties are not adversely impacted for the duration of the school day. A traffic management plan usually consists of two parts: a traffic study and a traffic management Plan.

Traffic Assessment

Traffic Assessment evaluate existing traffic conditions and is based on field observations of school arrival and dismissal periods. The traffic study allows City staff to evaluate the efficiency of the proposed Traffic Management Plan to determine what improvements are needed in the surrounding area. Traffic assessments are required when the new school or upgrades to an existing school creates an impact on the public right-of way.

The traffic assessment at minimum, should include an evaluation of existing traffic operations and an inventory of all traffic control devices, including signage, striping, and signals. The inventory should describe the type of traffic control device, its condition, and location and if it is to be removed, relocated, or remain at the existing location. For signaled intersections, the inventory should include the number and location of existing vehicular and pedestrian signal heads, phase sequence, pedestrian clearance times, and needed maintenance.

The school district or school operator is responsible for designing and installing all signing and markings on all streets within, and adjacent to, their school sites. All signage and markings shall comply with the requirements of the current edition of the Texas Manual of Uniform Traffic Control devices.

Traffic Management Plan

A traffic management plan provides a descriptive summary and physical site plan describing how traffic will operate during arrival and dismissal periods. The plan allows City staff to ensure traffic is operating at maximum potential and impacts on surrounding neighborhoods are minimized.

The traffic management plan should detail the following elements at the minimum. The Traffic Management Plan Review Checklist can be found in **A.1**.

- Site location
- School hours
- School grades
- Enrollment by grade
- Temporary control signs
- Traffic circulation by mode (passenger cars, buses, vans, pedestrians, bicyclists)
- Points of ingress/egress
- Staff responsibilities
- Loading zones
- Loading system
- Adult school crossing guards
- Recommendations

When is a Traffic Management Plan Required?

Traffic Management Plans are required for new schools and existing schools proposed for upgrades. Traffic Management Plans are required to be submitted when the school operator submits a zoning request (Planned District (PD) or Specific Use Permit (SUP)) to operate a new school or as required by the ordinance adopted for the site.

Traffic management plans shall comply with the standards set forth by the City of Dallas and are vested in the authority of the Department of Sustainable Development and Construction. All traffic management plans are required to be prepared by a Professional Engineer registered in the State of Texas with specific expertise in transportation and traffic engineering. The Traffic Management Plan Review Checklist can be found in **A.1**.

What Happens When a School's Traffic Operations is not in Compliance with the Traffic Management Plan?

Any school not in compliance with their adopted traffic management plan or the standards set forth by City Council may experience a delay in installation of traffic control measures if requested by the school. The decision to install traffic control measures when a school is not in compliance with their adopted traffic management plan shall be at the discretion of the City Traffic Engineer.

Non-compliance can be defined as:

- Traffic is not operating as shown in plan.

- School has not implemented appropriate safety measures as described in plan.
- Traffic Management Plan has not been renewed as set forth by City Council (See **A.2** for traffic management plan renewal process).

Sidewalk Requirements

School Districts and School Operators are responsible for designing and constructing sidewalks along the frontage and within the school site. All sidewalks must be designed and constructed to be barrier-free to the handicapped, and in accordance with the requirements contained in the Street Design Manual, Standard Construction Details, and any other applicable council approved plan as amended.

Traffic Safety Programs

Sidewalk Safety Program

One of the most common school route deficiencies will be the need for sidewalks. A continuous and accessible sidewalk network encourages and provides students safe pedestrian travel to school. Sidewalk improvements are usually financed through special assessment to the adjoining property owner, but the City of Dallas has taken the position that sidewalks are critical to student pedestrian safety and has funded the Sidewalk Safety Program to construct sidewalks within two miles and on direct routes to schools.

The Sidewalk Safety Program is vested in the City of Dallas' Public Works Department. Sidewalk projects recommended through a sidewalk program are placed on the needs inventory and are considered as a candidate for inclusion in a future capital bond program.

How to Request Sidewalk Improvements?

Requests for Sidewalk Safety projects may be submitted by the public, parents, teachers and school administrators by contacting the Sidewalk Safety Program (Appendix A). Sidewalk requests that are considered a priority based on selected criteria are recommended to the needs inventory to be considered for future bond programs.

What are the Criteria to get Sidewalk Improvements?

Sidewalk Safety projects are recommended based on construction feasibility, traffic conditions, and the type of pedestrians. The priority will be given to projects with the highest total score.

Safe Routes to School

Safe Routes to School is an initiative to increase the number of students to walking and biking to school improving student health and safety while reducing hazardous conditions in a school's vicinity. These efforts include assessing barriers and making safety changes around schools,

educating students on traffic safety for all modes of travel, with emphasis on pedestrian and bicycle safety, and organizing activities and incentives to encourage students to walk and bicycle to and from school safely. This comprehensive approach is employed by incorporating the 5's of Safe Routes to School: Engineering, Education, Encouragement, Enforcement, Evaluation, and Equity.

- **Engineering**– Creating physical improvements to streets that make walking and bicycling safer, more comfortable, and more convenient.
- **Education** – Providing students and the community with the skills and education to walk and bicycle safely.
- **Encouragement** – Generating enthusiasm and increased walking and bicycling for students through events, activities, and programs.
- **Evaluation** – Assessing which approaches are successful and identifying unintended consequences or opportunities to improve the effectiveness of each approach.
- **Equity**– Ensuring that Safe Routes to School initiatives are benefiting all demographic groups, with attention to ensuring safe, healthy, and fair outcomes for all.

Ignacio Zaragoza Elementary

City of Dallas
Dallas Independent School District

Safe Routes to School Plan



2017



Source: NCTCOG

A Safe Routes to School Plan outlines projects and activities that the school, City, and community can advance to make walking and bicycling to and from school safer and a more attractive travel choice for their students and families.

Review, Amendment and Maintenance

Annual Review and Amendment

The Dallas DOT is empowered to revise this guide deemed necessary. Revisions to this guide which cannot be resolved internally shall be taken to the governing body for formal approval.

The Dallas DOT will review this guide on an annual basis and take action on proposed additions/ revisions or reconfirm without changes. Upon completion of the review and incorporation of approved changes, if any, this guide will be reprinted with a summary of changes referenced inside the document with the date of the latest review and/or revisions shown on the cover.

Maintenance of Document

Copies of the adopted guide will be distributed to respective agencies for their records, filing and posting for public viewing/information. A copy of the most recently approved document will be transmitted to the City Secretary for the City of Dallas and the superintendent of schools for all school districts operating in the City of Dallas for retention in their files.

Appendices

- A.1 School Traffic Management Plan Review Checklist
- A.2 Traffic Management Plan Renewal Process
- A.3 School Traffic Control Signs
- A.4 School Speed Limit Assembly Flasher Placement
- A.5 School Crossing Guard Request Form

DRAFT

A.1 School Traffic Management Plan Guidelines

Traffic Management Plan Review Checklist

A school traffic management plan (TMP) is a site-specific plan providing guideline to coordinate traffic circulation during school peak hours. TMPs should promote strategies to manage all modes of transportation and maintain student safety paramount at all times. An effective plan requires continual planning, renewed understanding and coordinated efforts by city staff, school administration and staff, neighbors, parents, and students.

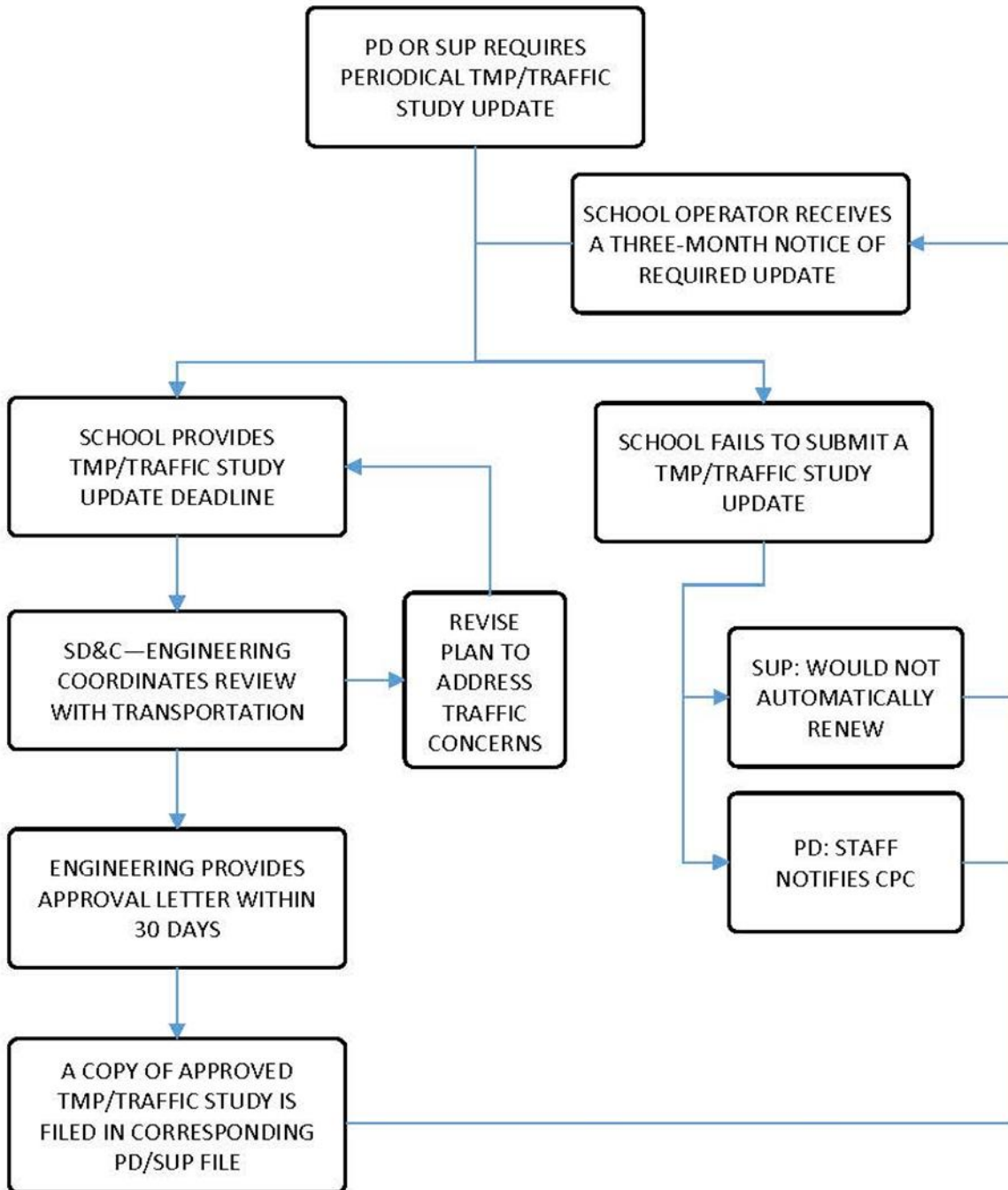
The school operator must prepare a traffic study evaluating the sufficiency of any TMP. The study must be based on field observations of both afternoon pick-up and morning drop-off periods. The study must include but is not limited to:

- 1. TMP exhibit to scale showing building footprints, curbs, parking, pavement markings, designated student drop-off and pick-up locations
NOTE: aerial image background is difficult to duplicate and therefore are not acceptable.
- 2. School site location and description of adjacent roadways
- 3. All ingress and egress points of access for motor vehicles or pedestrians
- 4. Pickup queuing summary table indicating school schedule and student enrollment for each grade, maximum vehicular accumulation, storage capacity, and surplus for each dismissal period and/or designated student loading zone
- 5. On-site traffic circulation, including any temporary traffic control devices
- 6. Proposed student drop-off and pick-up coordination system: passenger ID system, separation of modes of transportation, staggering times, etc.
- 7. Number and location of school staff assisting with unloading and loading students, including staff requirements and expectations
- 8. Number and location of adult school crossing guards and/or off-duty deputized officers
- 9. Statement confirming that plan was developed with direct input from individuals familiar with the general characteristics of the traffic needs and contact information of approving school administration official
- 10. Signed, stamped and dated by a licensed Professional Engineer in the State of Texas with specific expertise in transportation and traffic engineering, preferably certified as a Professional Traffic Operations Engineer
- 11. Prepared in a format that is easy to transmit to parents and school staff
- 12. Where applicable,
 - School bus loading operations
 - Methodology for projected maximum vehicular accumulation

- Identify pedestrian routes up to half a mile away from all pedestrian access points
- Parking management strategies
- Recommendations to encourage walking and biking
- Recommendations to inform and engage parents, students, staff and neighbors
- Traffic control plan depicting traffic signs on public rights-of-way
- If school is adjacent to any roadway with posted speed limit of 35 mph or greater, include:
 - Turning movement counts at all adjacent major intersections
 - Stopping and Intersection sight distances at school driveway approach

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A.2 Traffic Management Plan Renewal Process



A.3 School Traffic Control Signs









Sign Name	Image and Sign Code	Sign Size and Inventory Code	
School Advance Crossing Assembly	 S1-1	30" 400	36" 410 (Road = 6 or more lanes)
	 SW16-7P		24" x 12" 402
School Crossing Assembly	 S1-1	30" 400	36" 410 (Road = 6 or more lanes)
	 SW16-7P	24" x 12" 402	30" x 18" 412
School Speed Limit Assembly	 S5-1		24" x 48" 256
	 099		24" x 24" 099
End School Zone Assembly	 S5-2aTP		24" x 18" 086
	 R2-1-40		24" x 30" 124

Table Legend	
24" x 12"	Sign Size
SW16-7P	TMUTCD Sign Code
###	Dallas Sign Code

A.3 School Speed Limit Assembly Flasher Placement

The location of the School Advance Crossing Assembly relative to the School Speed Limit Assembly flashing warning beacons is based upon comfortable braking rates as defined by the American Association of State Highway Transportation Officials (AASHTO). See Table 1 for distance placement requirements of school flasher assemblies in relation to School Advance Crossing Assembly signs.

Posted Speed Limit (MPH)	Distance Between School Advance Crossing Assembly Sign and School Speed Limit Assembly (Feet)	Distance Between School Speed Limit Assembly and School Crosswalk (Feet)
20	100	150
25	100	150
30	100	200
35	150	250
40	200	300
45	250	375
50	300	450
55	350	550

A.4 School Crossing Guard Request Form



City of Dallas School Crossing Guard Request Form

This form is designated for use by school districts and private schools (within Dallas City limits) requesting new and/or additional crossing guard services for intersections near elementary schools.

Please forward the completed form to cheritta.johnson@dallascityhall.com for consideration. Once received, Dallas School Crossing Guard Program Liaison will submit the request to the Department of Transportation for a field assessment. This process may take up to 60 business days. Upon completion of the required assessment, the results will be emailed to the requester within 5 business days.

NAME OF SCHOOL: _____

PRINT REQUESTER'S NAME: _____

TELEPHONE NUMBER: _____

GUARD REQUESTED AT: _____

RESIDENTIAL OR COMMERCIAL AREA? _____

APROXIMATE NUMBER OF CHILDREN USING THIS ROUTE: _____

HOW MANY CROSSING GUARDS DOES THE SCHOOL CURRENTLY HAVE? _____

LOCATION OF CROSSING GUARDS: _____ & _____

_____ & _____

Requester's Signature

Date