NEIGHBORHOOD TRAFFIC MANAGEMENT PROGRAM

April 2021

ADOPTED BY CITY COUNCIL RESOLUTION 2021-044

City of Midland
Engineering Services Department
Traffic Operations Division
300 N. Loraine
Midland, Texas 79701

1 Introduction

1.1 Purpose of Program

The Neighborhood Traffic Management Program is intended to provide residents, business owners, and visitors in the City of Midland with a standardized, well-structured program for addressing a variety neighborhood traffic issues. See Section 2 for further descriptions of the types of issues that are most often the source of complaints to the City.

1.2 Eligible Alleys and Roadways

Alleys and roadways eligible for inclusion under the Neighborhood Traffic Management Program include all dedicated, public local and collector streets that are operated and maintained under the jurisdiction of the City of Midland.

Private streets, including parking lots and drive aisles in commercial developments, are not regulated by the City regarding traffic operations, and those facilities are the responsibility of their respective private owners or homeowners' association. Property owners should note that there may be Fire Code or Zoning Code issues that affect what can be done regarding traffic on private property, so they should consult the City's Code Compliance or Traffic Operations divisions for input before considering changes that impact vehicle and pedestrian access.

Arterial streets, as defined in the most recently adopted Thoroughfare Plan, are not considered "neighborhood streets", and are not eligible for physical traffic calming features.

Also, state highways are maintained by the Texas Department of Transportation (TxDOT) and are not under the jurisdiction of the City, so they are also not eligible for traffic calming features.

2 Understanding Neighborhood Traffic Issues

It should be noted that residents and frequent guests are often the source of most traffic complaints in their own neighborhoods. This is simply because residents make up the majority of drivers on local streets, and residents are familiar with the streets and assume they know what conditions they will encounter as they drive in the area. Drivers unfamiliar with an area often drive more slowly in order to read house numbers and street name signs, and to identify turns needed to reach their destination. Therefore, good communication between neighbors, or with the homeowners' association if there is one, is often the most effective way to convey concerns and try to influence driver behavior.

2.1 Speeding

By state law (Texas Transportation Code Sect. 545.352), the speed limit on local streets in an urban district (which includes most of the City of Midland) is 30 mph, unless otherwise posted.

The City's typical practice is to post a speed limit sign on local streets at or near the entrance into an area from a major roadway as a reminder to drivers that the speed limit has changed. Since 30 MPH is a standard local speed limit throughout Texas, and in much of the country, drivers are accustomed to this limit and the posting of large numbers of additional signs throughout neighborhoods is not likely to change driving behavior.

In general, the City posts speed limits to be consistent with other similar roadways across the city based on the roadway conditions, number of intersecting streets, density of driveways, and nature of the surrounding development. Allowing too much variation in speed limits between similar roadways contradicts drivers' expectations and creates additional compliance issues.

The City does post reduced speed limits (either regulatory or warning) for conditions that are unusual, unexpected, or present some additional degree of hazard that many not otherwise be readily apparent to drivers based on their assessment of their surroundings. Examples include physical features, such as sharp curves, or adjacent land uses, such as schools.

In cases where an engineering study is needed, speeds are typically evaluated by analyzing the 85th percentile speed. The 85th percentile is the speed at which 85% of the traffic is travelling at or below, with 15% of traffic exceeding that speed. This is the target speed that is most often used for setting speed limits on highways and is also used as a representation of the speeds on the street in other types of studies, such as for this program.

Unfortunately, most local streets in Midland are relatively wide for the traffic they carry because they are also designed to carry storm water drainage. Since Midland is very flat and lacks any natural waterbodies, such as rivers or lakes, drainage must be carried completely across the city for long distances with very little drop in elevation. Therefore, there are few underground storm drain systems in Midland as compared to other cities of similar size, and much of the drainage is carried on the surface in the streets and alleys. As a result, wide streets are the standard to accommodate this water, which tends to create neighborhood traffic complaints.

2.2 Cut-Through Traffic

Residents often have complaints about "cut-through" traffic on their neighborhood streets. While it is important to remember that public streets are intended to serve all of the public, streets are classified by the purpose for which they are intended.

- **Highways** – State highways provide for regional traffic circulation and are designed for high speeds and heavy volumes. These highways are typically limited access, with restrictions on the locations of driveways to adjacent properties, in order to preserve the safety and efficiency of traffic flow. Examples include Interstate 20, Loop 250 and SH 191.
- **Arterials** – These larger streets are meant to provide connections for traffic moving within the city, and typically move higher volumes of traffic at higher speeds, while also providing reasonable access to adjacent properties. Examples include smaller state highways such as Andrews Highway and Big Spring Street, as well as city roads like Midkiff Road and Wadley Avenue.
- **Collectors** – Medium-sized streets are meant to provide access for traffic in and out of neighborhoods, linking local streets with the surrounding arterial network. Collectors may be designed in various sizes, some with homes or businesses fronting directly on them, and some with more restricted access. Neely Avenue and Carver Street are examples in Midland.
- **Locals** – Local streets are the lowest classification of street and provide the highest level of access, with numerous driveways and on-street parking. The vast majority of streets in Midland are local streets.

In most residential neighborhoods, the collector streets that are intended to feed traffic in and out of the neighborhood may look very similar to other local streets. This is particularly true in older parts of town where the streets were developed in a more uniform grid pattern and do not clearly follow the hierarchy described above.

It is important to remember the various functions that a street serves when considering cut-through traffic. Even on local streets, traffic going to or from other parts of the neighborhood may be perfectly appropriate, even if unwanted by the residents on that street, depending on the layout of the street network.

Cut-through traffic becomes a legitimate neighborhood traffic concern when traffic is routinely travelling between major collectors or arterials using local streets when they have no business with any property on that street. This type of traffic should stay on the larger streets. When the City receives these types of complaints, the situation is reviewed to see if there are issues on the primary streets that drivers are avoiding, and if it is possible to address these issues first. The goal is to draw the traffic back to the appropriate facility.

In many cases, unfortunately, there are no good engineering solutions because of the way the street network was designed decades ago. However, staff reviews all complaints to determine the extent of the evaluation that is appropriate in each case.

2.3 Sight Distance

Proper visibility at intersections and driveways is important for the safety of all users of the street network. Property owners are responsible for ensuring that vegetation and structures, such as fences, do not obstruct sight lines, and that landscaping, mailboxes, and other items do not block safe passage on the sidewalk, if there is one.

Sight distance concerns should always be reported to the City using the contact provided at the end of this document. If a situation is urgent, such as a tree branch blocking a stop sign, City staff may step in and remove the conflict directly. In most cases, however, a notice will be provided to the property owner informing them of the requirement to clear the obstruction.

2.4 Parking

Public streets serve a number of purposes, including providing access to adjacent properties, emergency vehicle access, and parking. As described in Section 2.1, most local streets in Midland are fairly wide, and therefore most can easily accommodate on-street parking on both sides of the street.

With vehicles parked on both sides of a street, there may be some locations where drivers are not comfortable passing oncoming traffic in all areas, and it may be necessary for opposing directions of traffic to alternate. This sometimes generates complaint calls to the City, but requiring drivers to take turns traveling in each direction on a residential street is not considered to be a problem that needs to be corrected. The presence of on-street parking narrowing the feel of the roadway, and particularly cases where traffic must alternate, helps to reduce speeds on local streets.

Although parking parallel to the curb is allowed on most streets, by state law (Texas Transportation Code Sect. 545.302) it is not legal to park within an intersection, within 15 ft of a fire hydrant or within 20 ft of

a crosswalk. If there are some vehicles that are routinely parked in these areas, City staff can check the situation and post a "No Parking" sign, if warranted.

It should be noted that in order to be parked legally on a public street (Texas Transportation Code Sect. 545.303), the vehicle must be facing in the same direction as traffic, parallel to and within 18 inches of the curb or edge of pavement. Parking on the wrong side of the street, facing oncoming traffic, is illegal and unsafe because it requires vehicles to cross oncoming traffic with limited visibility from the driver side of the vehicle. Parking head-in or at an angle within a cul-de-sac is also illegal because it interferes with the intended purpose of the cul-de-sac, which is to allow for fire trucks, ambulances, and other large vehicles to turn around.

2.5 Crashes and "Near Misses"

The Traffic Operations Division compiles an annual summary of all reported traffic crashes citywide and reviews that to determine if there are locations that are outliers, with unusually high numbers of crashes for the volume of traffic and nature of the intersection. As expected, higher volume intersections typically have higher numbers of crashes, but that does not necessarily mean that there is a specific safety issue that can be addressed through engineering measures. In neighborhoods, crashes are very rare occurrences, and are typically so random that it is difficult to predict or prevent them.

If the City receives a complaint about crashes at a particular location, staff will review police records and visit the site to assess whether there may be any physical factors that could contribute to crashes. If the data supports that there is an actual documented history of crashes, then possible mitigation measures will be considered as appropriate. In this type of case, no neighborhood involvement through the Neighborhood Traffic Management Program is required.

3 Request Process

3.1 Initiating a Request

To initiate a neighborhood traffic management request, contact the City of Midland Traffic Operations Division by phone at 432-685-7287, or visit the City's website at www.midlandtexas.gov to locate the latest staff email addresses.

Any detailed information that can be provided by the resident, such as typical times or days of the week when most problems occur, will be helpful when reviewing the situation.

3.2 Data Collection and Analysis

In most cases, City staff will need to collect additional data in order to properly review the issue. This typically includes visiting the site to observe the conditions in person, as well as placing automatic traffic recorders to collect traffic volume and speed data for a 24-48 hour sample period.

All streets have occasional drivers travelling at a recklessly high speeds, but this issue cannot be addressed with engineering measures. So the highest speeds recorded during data collection do not provide a useful representation of whether there is an overall problem with excessive speeds on a particular roadway.

When reviewing traffic speed data, the most common result that is considered is the 85th percentile speed. The 85th percentile is the speed that 85% of the traffic is driving at or below, and 15% of the traffic is exceeding. As discussed in Section 2.1, this is commonly used in the industry as a guide for setting speed limits.

3.3 Staff Review and Recommendation

Based on the site visit and traffic data, City staff will respond to the resident with a recommendation on what traffic control or calming measures would be appropriate, if any, for each specific situation. Staff will then guide the resident through additional steps in the request process, if appropriate.

3.4 Resident Petition Process

Some neighborhood traffic management measures require a petition process to be followed in order to ensure that a significant majority of the nearby residents that will be impacted by the proposed measures are in support of the action. The need for a petition is identified for those specific measures that require it under Sections 5 and 6.

A blank petition form is included in the Appendix at the end of this document. If the need for a petition is not specifically included under Sections 5 and 6, then no petition should be submitted. If measures are not eligible or not recommended under this program, then submitting a petition will not change that assessment.

Notwithstanding any provision of this document, the City shall have no obligation to take any action on any matter that is the subject of a petition.

3.5 Funding

Funding for any measures included in the Neighborhood Traffic Management Program, as with all City programs and projects, is subject to available funding as allocated by the City Council through the annual budget process. In cases where the City may participate in funding under this program, but sufficient funds

are not available, the project may be placed on a waiting list in case funds become available in the future. In such cases, projects may be advanced more quickly if residents provide supplemental funding, or if an outside funding source, such as a grant, can be secured. The City will assist with identifying grant programs, when possible, based on staff availability.

Refer to Sections 5 and 6 for descriptions of eligible traffic management measures. The table below lists the funding responsibilities for each type of measure. In some cases, conditions such as the type of roadway or vehicle speeds affect the funding responsibilities. Regardless of the funding, all measures are subject to the requirements described in this document and technical staff approval.

	Eligible Measure	Conditions	Funding Arrangement
Alleys	**Traffic Signs**	N/A	City pays 100%
	Full Closure / Diverter	N/A	City pays 100%
Streets	**Targeted Enforcement**	N/A	City pays 100%
	Portable Driver Feedback Trailers	N/A	City pays 100%
	Permanent Driver Feedback Signs	Major Collector or Arterial Street	City pays 100%
		Minor Collector or Local Street, 85th %tile speed 10 MPH or more over posted limit	Resident contribution of $1,750 per sign, City pays remainder
		Minor Collector or Local Street, 85th %tile speed between 5-10 MPH over posted limit	Resident contribution of $3,500 per sign, City pays remainder
	Speed Limit Changes	N/A	City pays 100%
	Physical Traffic Calming Features *(Petition Required)*	Major Collector Street, 85th %tile speed 10 MPH or more over posted limit	Resident contribution of 25% of construction cost, City pays 75% plus design and project management
		Major Collector Street, 85th %tile speed between 5-10 MPH over posted limit	Resident contribution of 100% of construction cost, City pays design and project management
		Minor Collector or Local Street, 85th %tile speed 10 MPH or more over posted limit	Resident contribution of 50% of construction cost, City pays 50% plus design and project management
		Minor Collector or Local Street, 85th %tile speed between 5-10 MPH over posted limit	Resident contribution of 100% of construction cost, City pays design and project management

In all cases, after funding is secured, the City will be responsible for procurement of all materials and installation of the approved measures unless a specific agreement is negotiated to permit work by private parties in the public right-of-way. The City will pay directly for any traffic signs or pavement markings associated with physical traffic calming features. The City will also be fully responsible for operation and

maintenance of all measures after installation at no cost to the resident, unless alternate arrangements are made in advance.

For cases where the residents have a funding obligation per the policy shown above, the residents' share of project costs must be paid in full to the City prior to construction. The City will work directly with one resident as a point of contact, or with a representative of a homeowners' association, but cannot assume responsibility for collection of payments due from individual residents. Full payment of the residents' share must be received prior to the City scheduling any project. City staff will determine project priorities based on the order in which requests were received, the relative severity of problems as determined by engineering surveys, and the level of neighborhood support demonstrated by petitions submitted or supplemental funding received.

3.6 Removal or Modification

Unless initiated by the City, no changes may be made to new traffic calming projects within one year of installation. Following that "adaptation period", any removal or modification of existing traffic calming measures is required to follow the same funding, petition, and approval process as the installation of new measures.

4 Ineligible Measures

4.1 Stop Signs

Stop signs are intended to assign right-of-way between conflicting traffic flows at intersections. They are only authorized for intersections meeting certain criteria, and they do not ultimately solve speeding problems. The proper use of stop signs is governed by state and federal regulations, including the *Manual on Uniform Traffic Control Devices* (MUTCD).

- Research has shown that motorists often speed up between stop signs to make up for the perceived wasted time.
- Drivers recognize unjustified stop signs, and this results in many people rolling through the stop signs. This encourages a general disrespect for all stop signs in the area and leads to a new series of traffic complaints from residents.
- Although the stop signs may be intended to interrupt a few people that may be speeding at certain times of the day, the remaining residents must still stop unnecessarily each time they go through these intersections.

4.2 Other Non-Standard Traffic Signs

Non-standard traffic signs, such as "Slow", "Children at Play", or similar messages, are no longer installed by the City of Midland for a variety of reasons:

- Warning signs are intended to alert drivers to unexpected or unusual conditions. The presence of children in a residential area is neither unusual nor unexpected, so these signs provide no useful information to drivers and no clear direction as to how drivers should react.
- There is no evidence to indicate that these signs reduce speeds or crash rates.
- The use of unnecessary and ineffective warning signs breeds a general lack of respect for all traffic signs, potentially harming the effectiveness of critical signing.

- The use of these signs in some neighborhoods incorrectly implies that children are not present in other neighborhoods that do not have signs, and that motorists do not need to be alert for children in those areas.
- Federal and state regulations do not permit the use of these non-standard signs on public roadways for the reasons described above.

Although "Children at Play" and similar signs are not permitted, the City does install other warning signs when appropriate to alert divers to specific locations which might have unusually high concentrations of children near or crossing the roadway, such as schools and playgrounds. These areas generally already have signs installed as part of the Traffic Operations Division's normal duties, but residents should contact the division with specific locations if such signs are noticed to be missing, damaged, or excessively faded.

4.3 Speed Humps for Streets

The City of Midland does not allow speed bumps, humps, cushions, or related vertical devices to be installed on any public street for speed control.

In the past, speed humps were technically allowed, but that policy was extremely restrictive. Effectively, no speed humps have been permitted in the City since at least 1998.

Therefore, the prohibition of speed humps in this Neighborhood Traffic Management Program remains consistent with the intent of past Councils and better formalizes that prior direction. This policy has been thoroughly reviewed by the Fire Department, Police Department, and Engineering Services Department (Traffic Operations), and adopted by the City Council though this program.

Although speed humps can be effective in reducing speeds on residential streets in some cases, experience in other jurisdictions has shown that the negatives typically outweigh the benefits:

1. Individual speed humps only reduce speeds at the specific location where they are installed. Therefore, to have any effectiveness on speeds along a street, speed humps must be installed in a series with no more than 300-400 ft between them. This multiplies the negative effects of the speed humps along the street.
2. Emergency response times are increased, especially if a fire truck or ambulance must negotiate a series of humps. Unlike passenger vehicles and pick-up trucks, the heavy weight of emergency vehicles, as well as the sensitive nature of the patients and equipment they carry, requires the vehicle to come to nearly a complete stop to cross each speed hump. Studies have shown that this can add 10-15 seconds of response time for each speed hump encountered.
3. Speed humps increase noise, especially for homes adjacent to the device, due to squeaky suspensions on vehicles, loose items in truck beds, and the repeated braking and acceleration on either side of each speed hump.
4. Vehicles sometimes try to avoid the humps by driving around them and onto residents' yards. This may require the modifications to on-street parking or the installation of additional barriers in residents' yards.
5. Residents complain about lowered property values as prospective homebuyers think that there is a serious safety problem on the street as compared to other similar streets that do not have speed humps.

6. Due to the list of negative effects, it is uncommon for all impacted residents in an area to reach consensus, leading to conflicts among neighbors.
7. In many cases, making one street less desirable for drivers simply shifts traffic to other streets in the same neighborhood. This does not actually solve traffic problems, but may shift the negative consequences to other residents.

4.4 Speed Bumps for Alleys

As with streets, the City of Midland does not allow speed bumps, humps, cushions, or related vertical devices to be installed on any public alley.

Although speed humps can be effective in reducing speeds on alleys in some cases, experience in other jurisdictions has shown that the negatives typically outweigh the benefits:

1. Alleys in Midland are frequently not paved to the same standard as streets, and the surface of many alleys is not smooth and sturdy enough to mount speed bumps. Speed bumps that are not securely fastened can easily come loose, particularly when subjected to repeated trash truck traffic, and may injure pedestrians or damage vehicles.
2. Speed bumps increase noise, especially for homes adjacent to the device, due to squeaky suspensions on vehicles, loose items in truck beds, and the repeated braking and acceleration on either side of each speed hump.
3. Alleys are intended to provide rear access to properties, but they also serve as corridors for underground utilities, paths for storm water drainage, and access for trash collection.
    - Public utilities (water and sewer) and franchise utilities (gas, electric, cable, telephone) frequently install and maintain underground infrastructure in alleys, often trenching both along and across alleys. Speed bumps would interfere with utility access, requiring the City to repeatedly remove and reinstall the speed bumps.
    - Most alleys in Midland are inverted, meaning that they have a shallow V-shape which channels storm water down the center and out to the street. Even with a small gap in the center, the placement of speed bumps across the alley will tend to interfere with the flow of water and collect sediment and debris at each bump location. The City does not have a sufficiently staffed street sweeping program to keep these alleys clear of trash and debris when this occurs.
    - Trash trucks are significant users of alleys throughout the City. As with fire trucks, trash trucks would need to come to nearly a complete stop to cross each speed bump, reducing the number of containers that can be emptied in a shift, causing additional wear on the vehicles, and increasing noise in the neighborhood.
4. Just as with streets, making one alley less desirable for drivers may shift traffic to other alleys in the same neighborhood. This does not actually solve traffic problems, but may shift the negative consequences to other residents.

4.5 Pedestrian Crossings

Pedestrian crossing measures, including marked crosswalks, signing, and flashing lights, may be installed only at locations where pedestrians are documented to cross the roadway at a well-defined location and in significant numbers.

The use of marked pedestrian crossings at other locations that do not meet these criteria creates a false sense of security for the occasional pedestrian but does little to create additional awareness on the part of drivers who repeatedly pass the marked crossing without seeing any conflicting pedestrians. As with other non-standard or unwarranted signs, this causes drivers to lose respect for traffic control devices in general, and it creates compliance issues for legitimate crossings at other locations.

Therefore, City staff reviews the need for pedestrian crossings based only on the specific site conditions and engineering considerations as part of Traffic Operations' normal duties. Such facilities are not subject to resident petition or funding considerations and are not implemented as part of the Neighborhood Traffic Management Program.

5 Eligible Measures for Alleys

Refer to Section 3.5 for details on funding of these eligible measures.

5.1 Traffic Signs

Speed Limit Signs

By state law (Texas Transportation Code Sect. 545.352), the speed limit in all alleys is 15 MPH. The City does not have the legal authority to post a speed limit lower than 15 MPH in an alley.

As discussed in Section 2.1, most people tend to drive at speeds they are comfortable with based on their perception of the surrounding conditions and risks, so posting of additional speed limit signs does little to change driver perceptions and is generally ineffective at reducing speeds. Therefore, to avoid the excessive sign clutter created by posting thousands of speed limit signs in the many hundreds of alleys scattered throughout the City, it is standard practice not to sign for speed limits in alleys. Under very rare conditions, City staff may consider posting of speed related signs in alleys, but any such situation would be handled on a case-by-case basis by approval of the City Traffic Engineer.

"No Thru Traffic" Signs

Since alleys are narrow and often contain frequent obstructions such as utility poles and trash containers, most alleys are generally not enticing places for traffic to cut-through if they have no business being in the alley. Typically, traffic in most alleys has legitimate cause to be in the alley, whether it is for property access, utility maintenance, or to make deliveries.

In a very small number of cases, the layout of the street and alley network does create a situation where an alley may be more likely to serve cut-through traffic, or may encourage unfamiliar drivers to enter an alley seeking an alternate route in or out of a neighborhood. In these cases, City staff may consider the posting of "No Thru Traffic" or "No Outlet" signage at the sole discretion of the City Traffic Engineer.

5.2 Full Closure / Diverter

In rare cases, the layout of the street and alley network is such that an alley is longer than it needs to be to serve its intended purpose of providing reasonable access to adjacent properties, or that it has more connections to surrounding streets than are needed. In such cases, City staff will evaluate whether the full closure of part or all of an alley may be appropriate to reduce the inappropriate use of the alley by

outside traffic. Any such situation would be handled on a case-by-case basis by approval of the City Traffic Engineer and City Manager.

If the consideration of a full closure or diverter is recommended by City staff, the resident point of contact will be responsible for providing a petition showing support from the impacted residents. Traffic Operations will provide a list or map showing all properties determined to be impacted, based on whether they have direct vehicle access to the alley, or if the alley in question is the shortest and most reasonable means of accessing their property, even if indirectly. To advance the project, the petition must show that representatives of at least 80% of the impacted properties support the measure.

6 Eligible Measures for Streets

Refer to Section 3.5 for details on funding of these eligible measures.

6.1 Targeted Enforcement

Whenever traffic data is collected in response to a complaint, Traffic Operations will forward the results of the speed study to the Police Department Traffic Unit if the analysis shows that the 85th percentile speed is notably higher than the posted speed limit. The forwarding of this data constitutes a request for targeted enforcement by the Police Department. Of course, the time that can be spent on any enforcement effort is always subject to the number of competing calls for service and staff availability.

6.2 Portable Driver Feedback Trailers

In addition to providing targeted enforcement, the Police Department can also provide portable driver feedback trailers on rotating basis through their Community Service Officer program. These trailers have signs showing the posted speed limit and utilize radar to display the actual speeds of approaching vehicles as a reminder to drivers of their speed. The City has several trailers in use citywide at all times and rotates them among complaint locations or areas of concern to staff.

6.3 Permanent Driver Feedback Signs

Permanent driver feedback signs are very similar to the portable driver feedback trailers. They are installed to provide a real-time dynamic display of a driver's speed. When coupled with a traditional speed limit sign, they are useful in reminding drivers of the appropriate maximum speed at that location. These signs are typically mounted on sign posts or poles, making them less obtrusive than the trailers, and allowing them to remain indefinitely at a problem location. Signs are typically solar-powered with internal batteries to allow for 24-hour operation, so they may not be practical in areas that are continuously in the shade.

Figure 1. Driver Feedback Sign

6.4 Speed Limit Changes

As described in Section 2.1, speed limits in Midland are typically set to be consistent with other similar roadways based on the roadway conditions, number of intersecting streets, density of driveways, and nature of the surrounding development. Allowing too much variation in speed limits between similar roadways contradicts drivers' expectations and creates additional compliance issues.

Figure 2. Speed Limit Sign

Although there have been some reduced speed limits posted on a few streets in the past, experience has shown that this has not changed the perceived issue of speed as a concern in the neighborhood. Therefore, the City now follows the practice of reducing speed limits only in those cases where there is a unique or unusual condition that justifies alerting drivers to a change in the normal residential street environment.

By state law (Texas Transportation Code Sect. 545.356), the lowest speed limit that may be placed on any public street is 25 MPH, except within a designated school zone during school hours. The City does not have the legal authority to post a speed limit lower than 25 MPH (or higher than 75 MPH) on any street.

6.5 Physical Traffic Calming Features

Although vertical deflection devices (i.e., speed humps) are not permitted, there are a variety of physical traffic calming features that can be used to introduce horizontal deflection into a roadway. Diverting a driver's path from a straight line, or forcing drivers to yield to other traffic, requires them to slow down, which is more compatible with the nature of a residential neighborhood.

When a request is received, the Traffic Operations Division will evaluate each case individually to determine, which, if any, of these measures may be appropriate and beneficial for that case. All physical traffic calming features are expensive to construct, so funding, as described in Section 3.5, is a major factor to be considered in these cases.

If the consideration of a physical traffic calming measure is recommended by City staff, the resident point of contact will be responsible for providing a petition showing support from the impacted residents. Traffic Operations will provide a list or map showing all properties determined to be impacted, based on whether they have direct vehicle access to the street, or if the street in question is the shortest and most reasonable means of accessing their property, even if indirectly. To advance the project, the petition must show that representatives of at least 80% of the impacted properties support the measure.

Types of physical traffic calming features that have been identified for possible use in Midland are described in the following paragraphs.

Corner Extension / Bulb-Out

This extends the corner radius out into the intersection, which makes for a narrower intersection and tighter turns for vehicles.

Figure 3. Corner Bulb-Out (Source: www.pedbikeimages.org / Michael Austin)

Positives	Negatives
May reduce turning vehicle speeds at intersections	Less effect on thru traffic speeds
Shortens pedestrian crossing distances	May interfere with drainage
Can create sheltered on-street parking areas	

Median Island

A median island serves to narrow the roadway by pushing traffic towards the outsides of the road and also separates opposing directions of traffic.

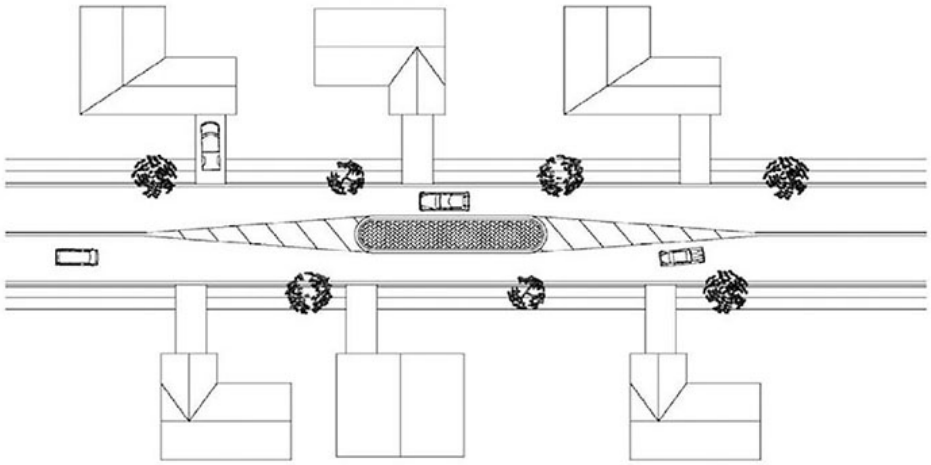

Figure 4. Median Island Example (Source: Delaware Department of Transportation)

Positives	Negatives
May reduce vehicle speeds	May limit on-street parking
Can be used at intersections or mid-block	May impact driveway access
Separates opposing directions of traffic	

Chicane / Choker

Chicanes or chokers narrow the roadway to deflect vehicle paths and reduce speeds, and are similar to bulb-outs, except that they are located mid-block.

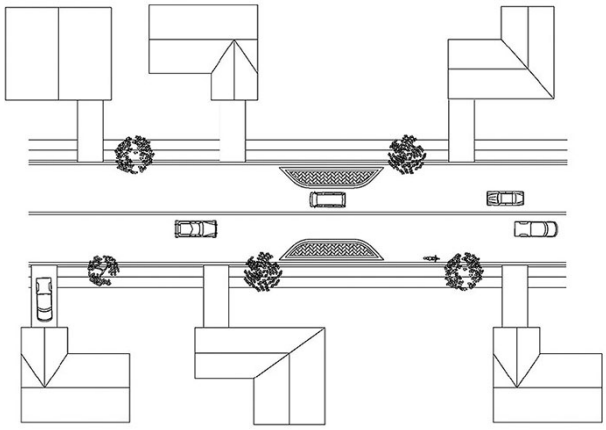

Figure 5. Choker Example (Source: Delaware Department of Transportation)

Figure 6. Choker with Passing Traffic (Source: James R. Barrera)

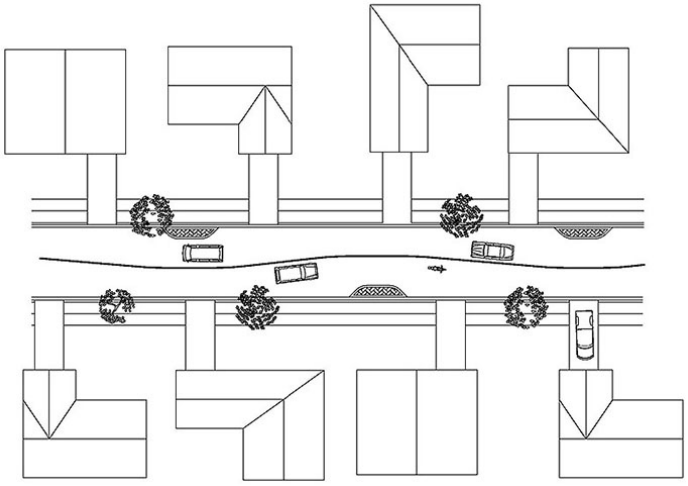

Figure 7. Chicane Example (Source: Delaware Department of Transportation)

Positives	Negatives
May reduce vehicle speeds	May limit on-street parking
Appropriate for mid-block locations with longer stretches between intersections	May impact driveway access
	May interfere with drainage

Mini-Roundabout

A mini-roundabout is a small roundabout, or circular intersection treatment, that can typically be installed within an existing intersection without significant changes to the outside curb lines.

The center island forces traffic to circulate counter-clockwise around the circle, with entering traffic yielding to traffic in the circle. The center island is often mountable to allow large trucks to run over it if they are too long to make the turn within the normal travel lane.

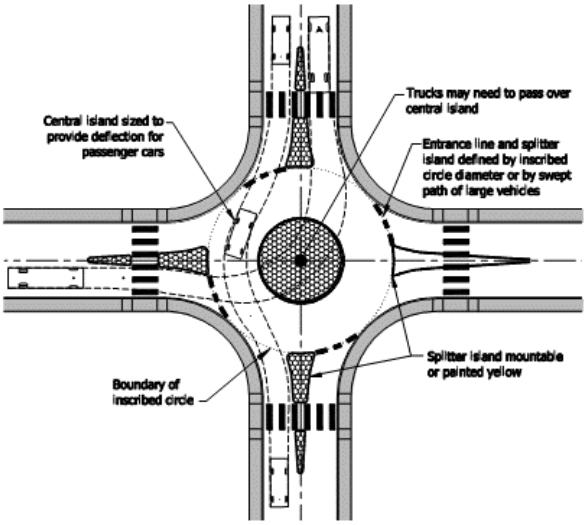

Figure 8. Mini-Roundabout Overview (Source: NCHRP Report 672, Federal Highway Administration, 2010)

Figure 9. Mini-Roundabout, County Road 79 and Vierling Drive, Shakopee, MN

Positives	Negatives
Reduce vehicle speeds for thru and turning traffic	May limit on-street parking
May improve pedestrian crossing access	May impact driveway access
Appropriate for intersections	May impact drainage on inverted street sections

Diagonal Diverter / Forced Turn Island

A diverter or forced turn island prevents certain vehicle movements, such as thru or left-turn movements, while allowing the street to remain open with restricted access.

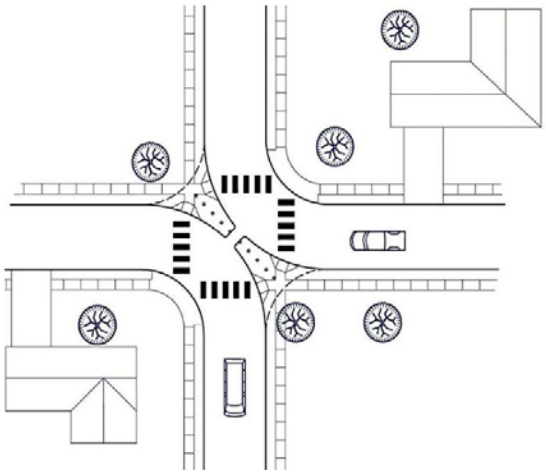

Figure 10. Forced Turn Median (Source: James R. Barrera)

Figure 11. Diagonal Diverter Example (Source: Delaware Department of Transportation)

Positives	Negatives
Reduces cut-through traffic	Diverts traffic to other streets
	May limit emergency vehicle access

Street Closure

A full street closure eliminates all thru traffic, greatly reducing the volumes of traffic on a street. However, permanent closures of public streets are very rare because they can negatively impact circulation and access for surrounding areas, and shift traffic issues to other streets.

Positives	Negatives
Eliminates cut-through traffic	Diverts traffic to other streets
	May limit emergency vehicle access

7 Contact Information

For additional information or to discuss a traffic issue with City staff, contact the City of Midland Traffic Operations Division by phone at 432-685-7287, or visit the City's website at www.midlandtexas.gov to locate the latest staff email addresses.

Appendix – Neighborhood Traffic Management Program Petition Form

A traffic management project requiring a show of support from impacted residents has been proposed. *(Neighborhood organizer or HOA representative to attach additional information about project.)*

For the project to be considered, at least 80% of impacted properties must support the measure.

PRINT NAME	PRINT ADDRESS	SIGNATURE

For additional information, contact the City of Midland Traffic Operations Division at (432) 685-7287.

Print additional sheets as necessary.