

City of Littleton

Neighborhood Traffic Management Program



City of Littleton

Neighborhood Traffic Management Program

**Public Service Department
Traffic Engineering Division
2255 West Berry Avenue
Littleton, CO 80165
303-795-3863**

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INTRODUCTION

The Littleton City Council has adopted a long established goal to strengthen neighborhoods. One major effort to achieve this objective is to properly manage traffic flows and patterns through residential areas to minimize the negative impacts that faster and higher volumes of traffic can impose.

The city's street system is separated into three different street classifications: arterials, collectors, and locals. Attachment 3 at the back of this manual identifies the classification for all streets within the city. The city's arterial street system is designed to move high traffic volumes through the city with minimal interruption of traffic flow. The collector street system is designed to collect neighborhood traffic and distribute it to the arterial street system. The local streets are designed to accommodate neighborhood traffic, including pedestrians and bicyclists, in a non-threatening, non-intrusive manner.

As mentioned above, arterial streets carry the highest traffic volumes through the city, with minor arterials carrying volumes of 7,000 to 15,000 vehicles per day while volumes on major arterials can exceed 50,000 vehicles per day. Collector streets typically carry traffic volumes greater than 1,500 vehicles per day, with the volume on major collectors in the range of 4,000 to 7,000 vehicles per day.

Excessive traffic volume and speeding vehicles create problems on residential streets and affect the quality of life of the residents and the serenity of the neighborhood. The purpose of the city's Neighborhood Traffic Management Program is to provide to the residents a "toolkit" to maintain the neighborhood quality that all citizens should be able to enjoy, free from outside traffic intrusion and excessive speeding.

PROGRAM GOALS AND OBJECTIVES

- Improve neighborhood livability by minimizing the impact of traffic volumes and the speed of vehicular traffic on residential neighborhoods.
- Provide comfortable and efficient environment for citizens to approach city government with their concerns on neighborhood traffic and document and track these citizen concerns.
- Inform citizens of various traffic calming tools available for their use to address neighborhood traffic problems and encourage citizen participation in developing solutions to these problems.
- Implement traffic calming measures selected by the neighborhood through this program.

NEIGHBORHOOD TRAFFIC MANAGEMENT PROBLEMS

Speed

Generally, speeding occurs on roadways which, by design, allow the motorist to feel comfortable while exceeding the posted speed limit. Factors which contribute to this perception include long, uninterrupted sight distances, steep roadway grades, overly wide roadways, low-density development, low pedestrian activity and deep building setbacks. While “youthful” motorists and outsiders are popularly accused of speeding, the blame does not entirely lie with these two groups. Often, those drivers who consistently violate posted speed limits are local residents.

A common misconception to reduce the speed of vehicles is to lower the speed limit. As was stated earlier, motorists will generally travel at speeds that feel comfortable. Motorists will continue to travel at excessive speeds unless enforcement or physical devices are present to slow the traffic. By lowering the speed limit, we only compound the problem by increasing the number of motorists exceeding the speed limit.

The control of speeding traffic is the responsibility of several different groups:

- First, and foremost, roadways are designed to safely accommodate vehicular traffic, and it is up to drivers to obey the law regardless of how fast they feel the roadway will safely accommodate traffic.
- If motorists fail to comply, it is up to the Police Department to enforce safe speeds.
- Assuming that some motorists will regularly and habitually violate the posted speed limit if they feel safe and comfortable doing so, it is up to the city’s engineers and planners to propose solutions that will make the drivers feel uncomfortable as they exceed the posted speed limit. Two alternatives are available to staff: educational programs and physical design or alterations of the roadway.

Intrusions

Intrusion is the result of increased traffic volume or excessive non-local traffic on a neighborhood street. Often, this intrusion is caused by drivers using a local street to cut-through a neighborhood and save time. Local streets, which are less impeded than others within the same neighborhood, invite cut-through traffic. Motorists are naturally attracted to these routes, which they perceive will save them time, even if that route does not provide the most direct path from their origin to their destination. This increased cut-through traffic can cause a local street to function as a collector street.

Much like speeding, intrusion of traffic can be promoted or discouraged by the street network design. A logical system of arterial, collector and local streets will provide for a proper distribution of traffic.

Land uses adjacent to roadways must be appropriately matched based upon expected traffic volumes. The local neighborhood street should serve as the final destination roadway for the immediate residents of the neighborhood.

The control of intruding traffic can be accomplished by several alternatives:

- Proper street design while the land is being planned for development is the most sensible approach to affect intruding traffic.
- In already developed residential areas, the neighborhood residents may have to turn to the city to modify the physical features of the street to discourage out-of-neighborhood traffic.
- Most importantly, before the city can discourage non-resident traffic on the local street, certain steps must be taken to encourage through traffic to use the arterial and collector streets: coordination of traffic signals, adequate street capacity and designing the major streets to accommodate through traffic.

Accidents and Safety

The safety of motorists and neighborhood residents is of primary concern for the city. Safety is an implied concern on streets experiencing speeding and/or intrusive traffic. There are cases where a particular intersection or pedestrian crossing is considered dangerous due to its location, the design of the street and the behavior of the average driver. Of particular concern are locations near neighborhood schools, parks and other activity or shopping areas. These locations generate high volumes of pedestrian activity and require special consideration to the safety and mobility of the pedestrian and bicyclist.

The city's Public Services Department monitors every traffic accident in the city and adjusts conditions to provide for safer travel to potentially reduce the number and severity of accidents at a particular location. Accident prone intersections are a major concern. The city, working with neighborhood groups, can affect traffic conditions and hopefully reduce accident potential.

TRAFFIC MANAGEMENT STRATEGIES

Neighborhood traffic management strategies can be grouped into three categories: Education, Enforcement and Engineering.

1. **Education** A well-planned and executed education program, if continually and creatively reinforced, can preclude the need for enforcement or re-engineering. Education should be the first step implemented in any traffic calming effort.
2. **Enforcement** The Littleton Police Department has implemented a Community Resource Officer Program to assist neighbors to resolve problems. The use of the CRO to address speeding and intruding traffic is strongly recommended. The neighborhood officers work closely with the traffic engineer to manage day-to-day issues as they arise.
3. **Engineering** This refers to the physical alteration of the roadway in order to affect traffic patterns. Typical engineering alternatives are more expensive to implement and may require on-going maintenance; however, they are permanent in their effectiveness. Engineered devices are permitted only on collector and local streets, as identified in Attachment 3 at the back of this manual.

The City of Littleton strives to have a well balanced Neighborhood Traffic Management Program that includes emphasis on education and enforcement, but allows the opportunity for engineering solutions when warranted.

GENERAL TRAFFIC MANAGEMENT POLICIES

1. Through traffic should be encouraged to use higher classification streets.
2. The city should continue to accommodate through movement Traffic Management Programs on the collector and arterial street system; such as coordination of traffic signals; continuation of the policy that stop signs should not be used to control speeding or intruding traffic problems; and street improvement projects that encourage the motorist to use the collector and arterial street system.
3. A combination of education, enforcement and engineering methods should be employed. Traffic management devices should be planned and designed in keeping with sound engineering and planning practices. The Traffic Engineer shall direct the installation of traffic control devices (signs, pavement markings and signals) as needed to accomplish the desired results, in compliance with the standards of the Manual on Uniform Traffic Control Devices (MUTCD).
4. Pedestrian, bicycle and transit access shall be encouraged and enhanced wherever possible.
5. Reasonable emergency vehicle access shall be maintained. Changes in roadway physical characteristics shall consider the affect on emergency response standards.
6. Parking restrictions shall be considered on a case-by-case basis. Parking interests of residents shall be balanced with the functions of traffic and emergency vehicle response, as well as transit, pedestrian and bicycle movement.
7. Application of Stage 3 projects shall be limited to local streets and collector streets in neighborhoods. Collector streets in the vicinity of schools, parks and other high pedestrian use areas shall be considered for Stage 3 projects, as the need dictates.
8. Requests for Neighborhood Traffic Management Projects shall be considered on a first come/first serve basis, using the annual budget allocation to fund each project. Each citizen contact shall be documented on the appropriate form and tracked by the staff during the investigation, implementation and follow-up phases.
9. Some Stage 3 projects will require joint funding. The neighborhood will be responsible for 40% of the construction cost for movable gates. Costs shall not include city administration or labor.
10. Stages 1 and 2 shall be implemented by the city, without the need for specific funding. All Stage 3 projects shall be presented to the City Council for funding approval. Landscape installation and maintenance costs for Stage 3 projects will be identified and included as a consideration item, at the time of Council approval.
11. Neighborhood support for any Stage 3 Traffic Management Project must be demonstrated by the neighborhood. The boundaries of the "neighborhood" required for approval of Stage 3 projects

will be defined by the city. A minimum of 75% of the neighborhood shall approve any Stage 3 project. Before a Stage 3 project is presented to the City Council, the neighborhood must demonstrate 75% acceptance.

12. Stage 3 Traffic Management Projects are considered permanent. A petition signed by 75% of the affected households will be required to remove any Stage 3 project.

The City Council shall be the final authority regarding any appeals or modifications to the program.

City of Littleton

Neighborhood Traffic Management Program

Tool Kit

INTRODUCTION

The Neighborhood Traffic Management Program consists of three stages:

- Stage 1 - Education
- Stage 2 - Enforcement
- Stage 3 - Engineering

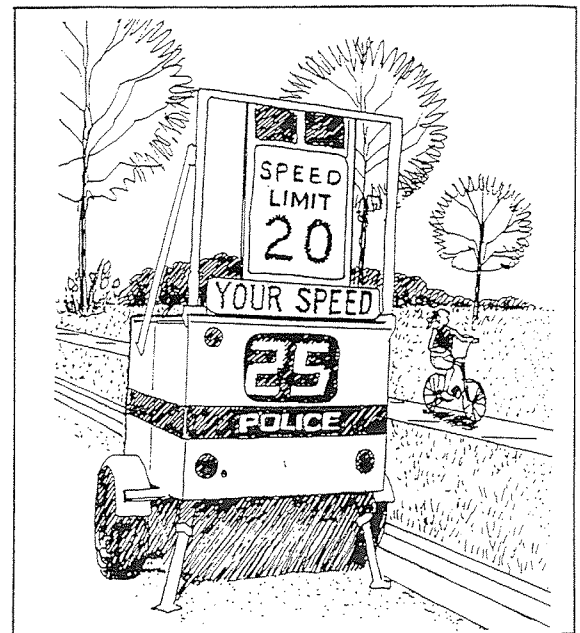
Residents shall complete a Request for Neighborhood Traffic Management form, which can be found in the back of the Toolkit, prior to requesting the city implement any elements of Stages 1, 2 or 3. The city will maintain a record file of each request. All requests are prioritized and evaluated on a first-come/first-serve basis.

After the city has evaluated the request, the resident will be contacted by the Traffic Engineer to begin the process of conducting a traffic study and implementing Stage 1 and/or Stage 2 of the program.

STAGE 1

Stage 1 activities are focused at perceived speeds and utilize the following countermeasures:

1. Deployment of the “SMART Trailer” or electronic speed signs that are attached to streetlight poles. This program is designed to remind motorists of the posted speed limit and alert them of their actual speed. Enforcement (issuing of tickets) is not possible with this unit.

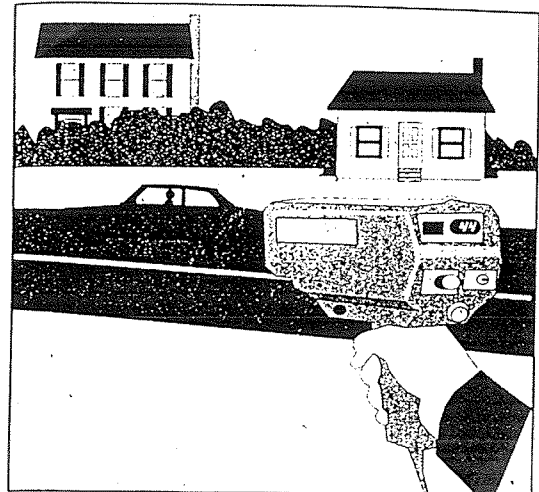


2. Utilization of the Community Resource Officer (CRO), public service announcements, and the media to educate the neighbors about excessive speeds through neighborhood meetings and school programs.
3. Mitigate traffic from your own, private yard.
 - Noise reduction (Note: This program can provide resources for learning about noise reduction, but it will **not** provide funding for noise abatement).
 - Use trees and other landscaping
 - Soundproof your home
 - Connect with informed groups working on noise issues city-wide.
 - Visual ways to narrow the street from your own lot.
 - Install street trees (trees along the sidewalk)
 - Use on-street parking.
4. Encourage the use of Neighborhood Block Parties to develop a sense of responsibility for the safety and welfare of the neighborhood.

STAGE 2

Stage 2 activities are focused at excessive speeds and utilize the following countermeasures:

1. Specialized enforcement of the speed limit through the Citizen Radar Program. Neighborhood representatives are loaned radar guns by the Public Services and/or Police Department, to monitor speed and identify chronic speeders. The city will then send letters to offending drivers calling their attention to their driving behavior and requesting them to change it.
2. Traditional enforcement of the speed limit and other violations by the Police Department.



STAGE 3

Stage 3 projects will be considered on **local and collector streets** only after the Traffic Engineer has determined that Stage 1 and 2 activities have failed to solve the problem(s).

Qualifying streets shall meet the following criteria before speed humps and other vertical devices are considered for inclusion in the traffic-calming plan:

- A minimum of 30% of the vehicles monitored exceed the posted speed limit by 5 mph or more, and
- The street has a daily (weekday) traffic volume greater than 500 vehicles, and
- The street shall have a daily (weekday) traffic volume less than 3000 vehicles.

Stage 3 projects will be considered after the Traffic Engineer has determined that Stage 1 and 2 techniques have been tried and have been unsuccessful in resolving the particular problem.

Collector streets in the vicinity of schools, parks and other high pedestrian use areas shall be considered for Stage 3 projects, as the need dictates.

Stage 3 projects are intended to primarily decrease the speed of vehicles on residential local and collector streets. Collector streets function to distribute traffic from a higher classification street to a local street. Because of this function, there should not be physical diversion of traffic from collector streets or the installation of vertical devices (speed humps) on collector streets, which impede the response of emergency vehicles.

Stage 3 project steps:

1. The requesting party desires to proceed to Stage 3, and the Traffic Engineer has determined that Stages 1 and 2 have failed to resolve traffic problems identified by the neighborhood.
2. The Traffic Engineer will define the boundaries of the neighborhood that will be affected by the development of a traffic-calming plan. Generally, the neighborhood is defined as the properties directly adjacent to a street being considered for traffic-calming devices.
3. The Traffic Engineer will schedule a meeting with the neighborhood and notify each household within the boundaries of the defined neighborhood. The city will facilitate this meeting, which is intended to inform the neighborhood of the requesting party's desire to prepare a traffic-calming plan to address neighborhood traffic issues. Resident participation is required in the development of the traffic-calming plan and a neighborhood sub-committee, including the requesting party, will be formed at this initial meeting.
4. The Traffic Engineer will facilitate a meeting, or meetings, with the neighborhood sub-committee to develop the traffic-calming plan. The city will present ideas and make

recommendations to the sub-committee on appropriate traffic-calming devices to use.

5. The final traffic-calming plan, developed jointly by the residents and the city, will be presented by the Traffic Engineer and the requesting party to the neighborhood at a neighborhood meeting. Notification for this meeting will be sent by the city to all those residents within the defined neighborhood.
6. The requesting party will be required to petition the neighborhood for final approval of the traffic-calming plan. The petition must detail the proposed project (including maps or drawings furnished by the city) and indicate the estimated cost, maintenance responsibilities, and the financial participation by the city and the neighborhood.

A minimum of 75% of the residents in the neighborhood must support the plan in order to proceed with the implementation of Stage 3. If the neighborhood supports the plan, the neighborhood shall enter into an agreement to fund 40% of the construction costs for the Stage 3 projects which require financial participation.

7. The Traffic Engineer will present the traffic-calming plan to the city council for final approval and funding consideration.
8. Traffic-calming plans meeting the above requirements will be implemented according to the availability of city funding.

The city reserves the right to construct Stage 3 projects in new or redeveloped areas at any time.

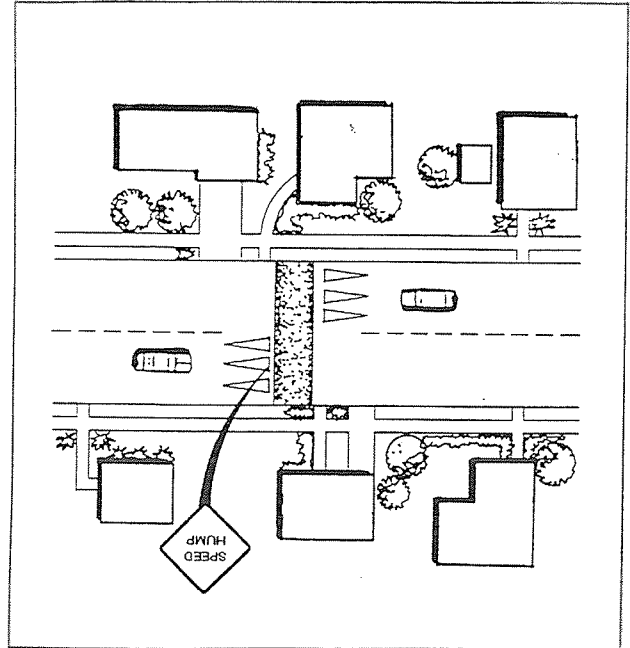
Appendix A

Stage 3 Tools

SPEED HUMPS

Speed humps are a minimum 3 inches/maximum 4 inches high and 12 feet wide. They are generally considered local street tools, since they may impede emergency vehicles and increase response times on collector streets. They are used to slow traffic. May increase noise (acceleration/deceleration at humps; honking due to driver frustration).

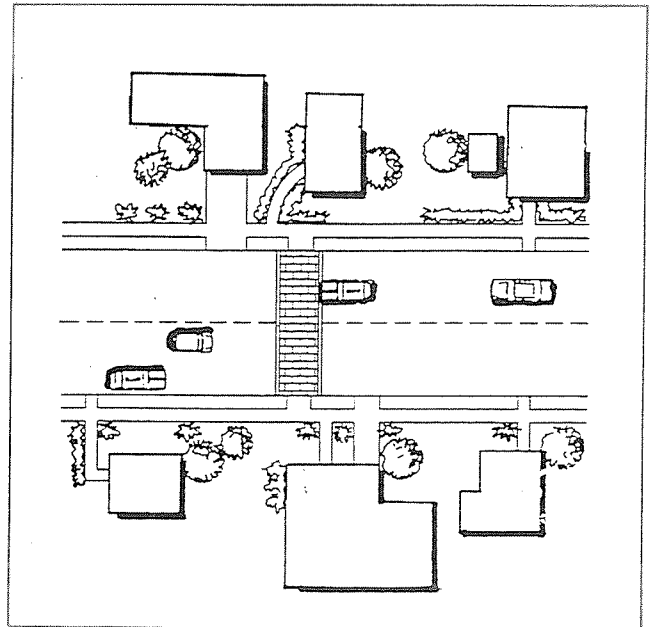
Estimated Cost: \$1,500 - \$2,000



SPEED TABLES/ RAISED CROSSWALKS

Speed tables are 4 inches high and 22 feet wide, 10 feet of which is a flat section. Tables are generally used at high volume pedestrian crossings where vehicle speed is a concern. May impede emergency vehicles and increase response times, but not as severely as speed humps.

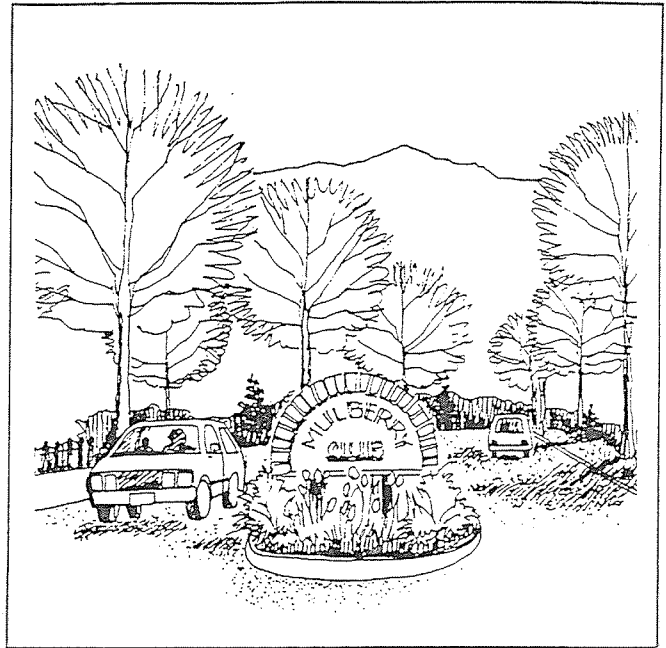
Estimated Cost: \$3,000 - \$4,000



NEIGHBORHOOD ENTRY ISLAND

An island at the beginning of a street and in the center of the street that includes a monument identifying a neighborhood. This device alerts drivers that a change in their driving behavior is being requested. May require the elimination of on-street parking adjacent to the island to provide enough width for two traffic lanes and the island.

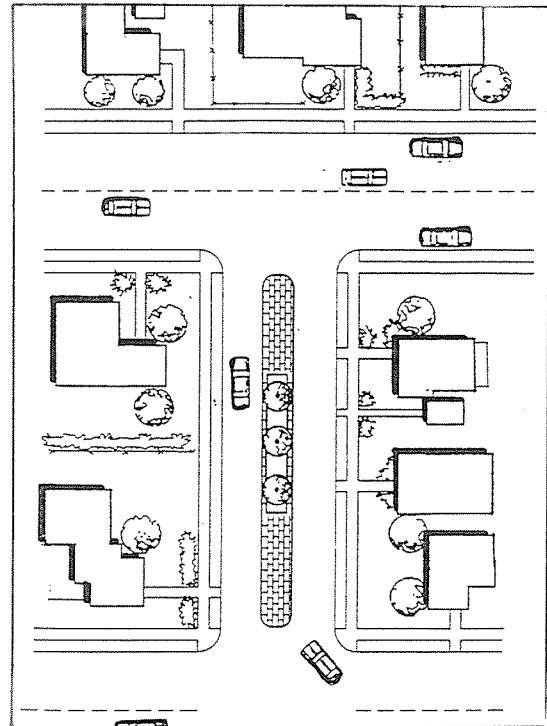
Estimated Cost: \$10,000



MEDIAN ISLANDS

An island installed midblock in the center of the street and landscaped with trees and/or shrubs depending on the width of the island. A device used to slow traffic by providing a calming affect or by narrowing traffic lanes. Generally, requires a minimum street width of 40 feet, curb face to curb face. Can be installed on narrower streets if on-street parking is eliminated. Restricts left turn movements in or out of driveways.

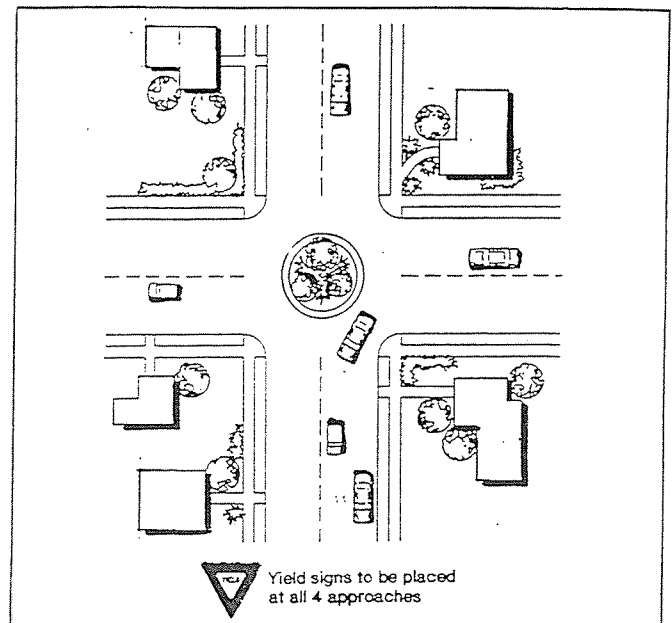
Estimated Cost: \$75,000 (per city block)



TRAFFIC CIRCLES

Traffic circles are raised circular areas (like medians) placed in an existing intersection or mid-block. Drivers travel in a counter-clockwise direction around the circle. Used to slow traffic and break long, uninterrupted sight distances. May require the elimination of on-street parking near the circle. Traffic movements around circle in the wrong direction may occur.

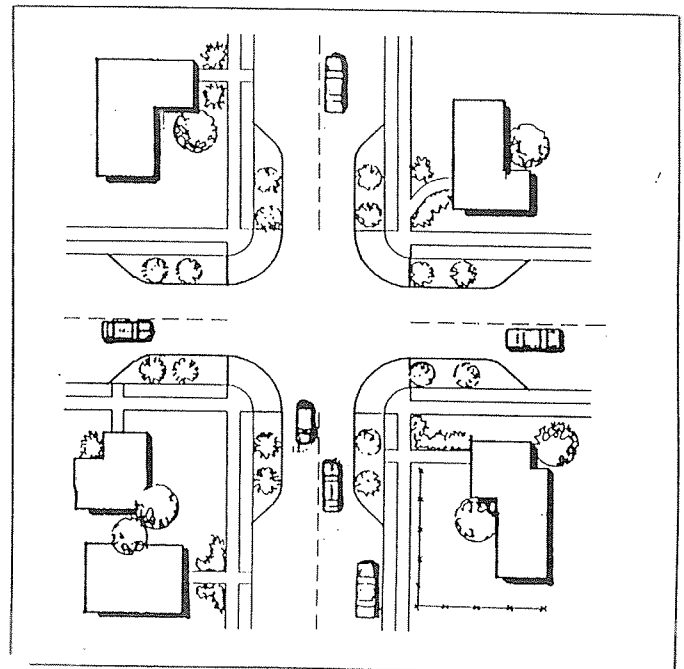
Estimated Cost: \$10,000



NECKDOWNS

Neckdowns are installed at intersections to reduce the width of the road. Used at intersections where speed and volume are a concern for pedestrian safety. Use requires the removal of on-street parking adjacent to neckdown. Forces bicyclists into traffic lane.

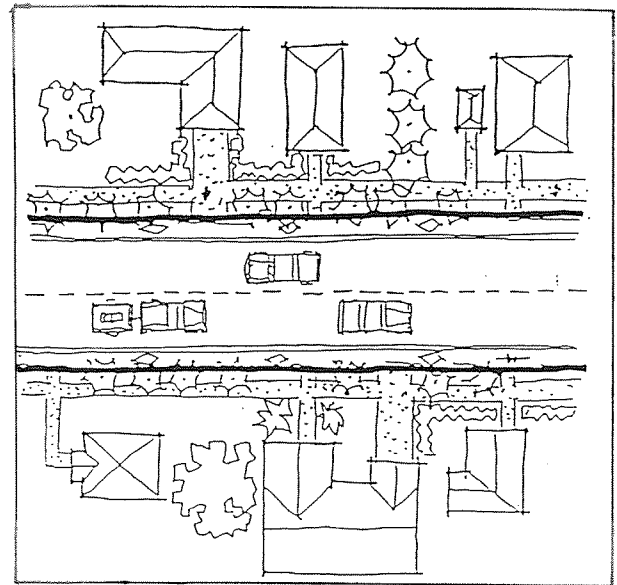
Estimated Cost: \$7,000 (per neckdown)



LANE NARROWING

Basically, the same application as a neckdown except the road is narrowed through pavement striping. Usually involves the installation of a bike lane along each side of the street to create 10' to 11' traffic lanes. May require removal of on-street parking.

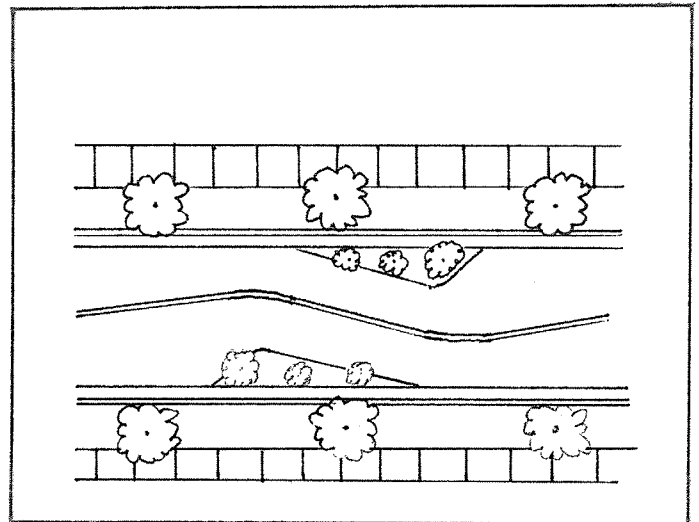
Estimated Cost: <\$1,000 (per city block)



CHICANES

Serpentine curb protrusions offset from each other in mid-block locations that narrow the width of the street and force traffic to slow to maneuver through the devices. Requires the removal of on-street parking.

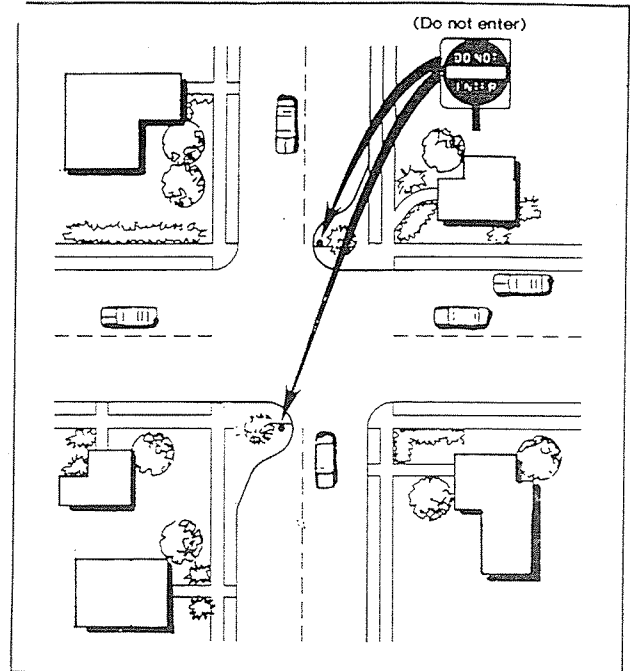
Estimated Cost: \$10,000 (per pair)



SEMI-DIVERTERS

One-way access to a street at an intersection that restricts turning movements by physical blockage of one direction of traffic. The open lane of traffic is signed “One Way/Do Not Enter.” Used on local streets to manage neighborhood cut-through traffic. Cut-through traffic shall be routed to a higher classification street.

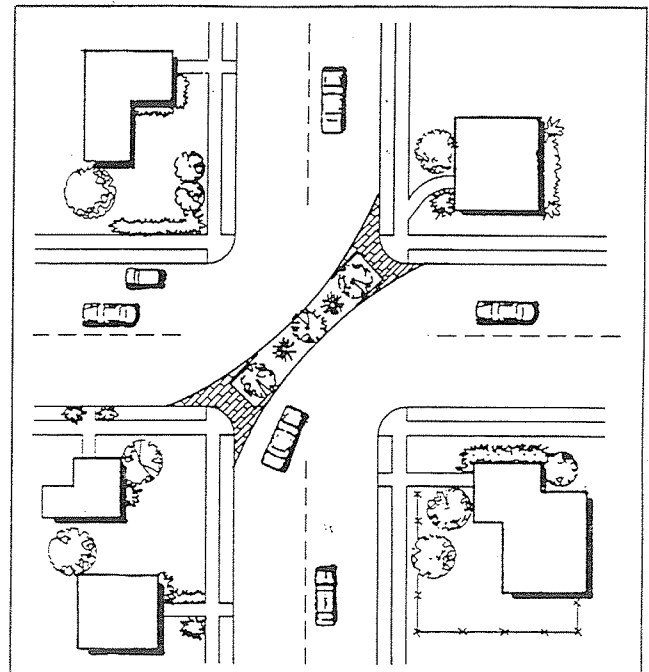
Estimated Cost: \$7,000 (per diverter)



DIAGONAL DIVERTERS

A barrier placed diagonally across a four-legged intersection, preventing straight through traffic movements. Used on local streets to create a maze-like effect in a neighborhood to discourage cut-through traffic.

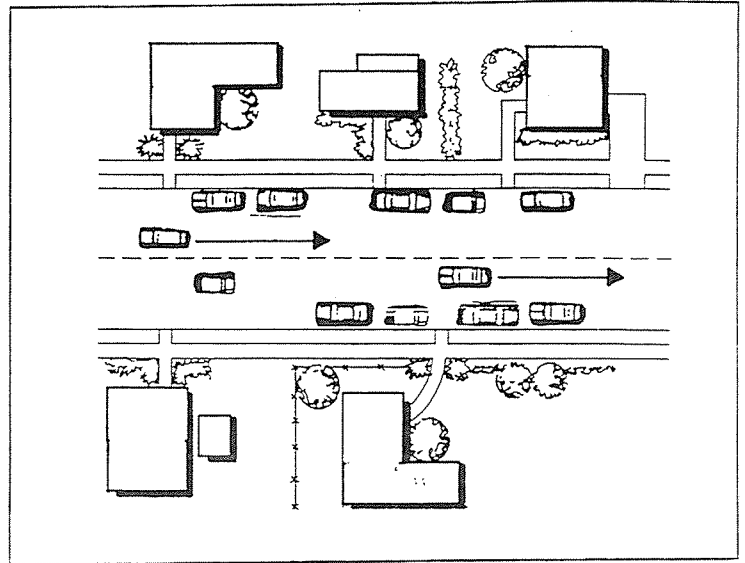
Estimated Cost: \$25,000



ONE-WAY STREETS

Self-explanatory. Used to discourage cut-through traffic. Can lead to increased speeds.

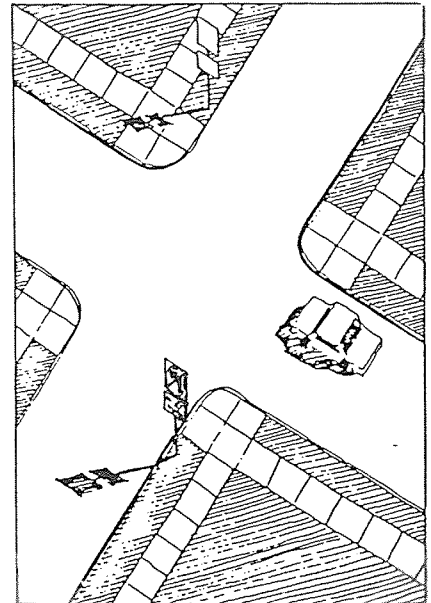
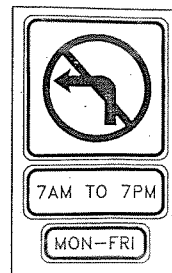
Estimated Cost: <\$1,000 (per city block, for re-striping and signage)



TURN PROHIBITIONS

Signs that prohibit certain movements at an intersection. Can be supplemented with a flashing light or to indicate that movement is prohibited while light is flashing, or an additional sign placard that shows the hours of the restriction. Used to manage cut-through traffic.

Estimated Cost: <\$5,000 (for signage and flashing light)

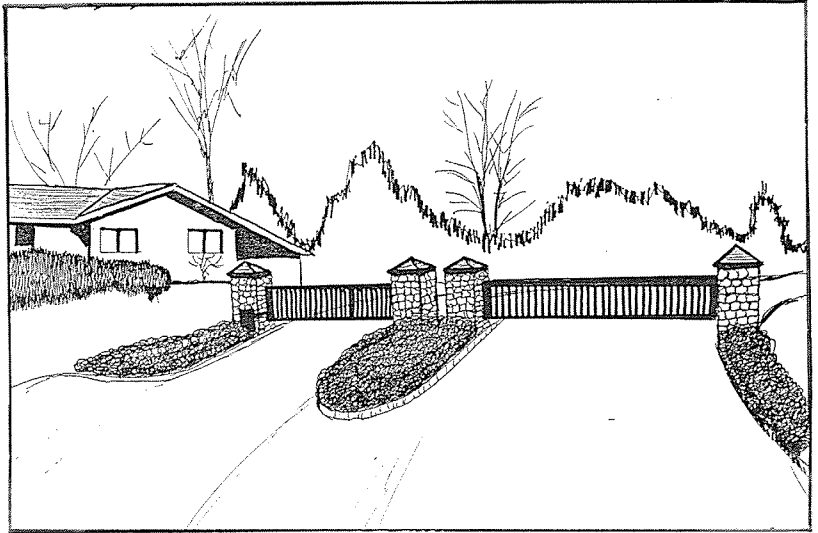


MOVABLE GATE

Allowed on collector streets only. Part-time closure of a street (typically during morning and afternoon peak volume hours) using time activated gates. Access through gate strictly limited to emergency personnel. Minimum daily traffic volume of 1000 and maximum daily traffic volume of 3000. Minimum cut-through volume shall be 40%. During closure, traffic shall be diverted to a higher classification street.

Estimated Cost: \$50,000 - \$60,000

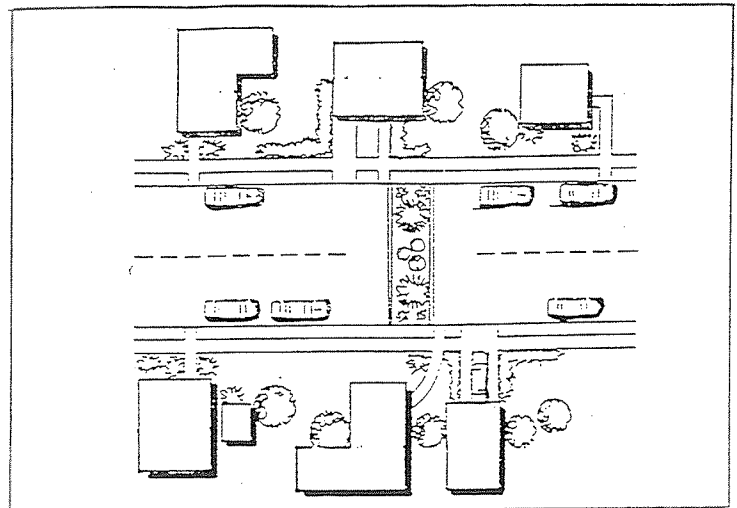
Requires 40% financial participation.



STREET CLOSURE

Allowed on **local streets only** with daily (weekday) traffic volumes less than 500 vehicles. Street closed to motor vehicles using planters, bollards, or barriers, etc. Pedestrian and bike access maintained. Requests for street closures will be evaluated on a case-by-case basis and a temporary 30-day closure required before implementation of permanent closure. Eliminates cut-through traffic.

Estimated Cost: \$25,000 (landscaped island)



Attachment 1

Request for Neighborhood Traffic Management

City of Littleton

Request for Neighborhood Traffic Management

Public Services Department
Traffic Engineering Division
2255 W Berry Avenue Littleton, CO 80165 (303) 795-3863

Name:	_____	Date:	_____
Address:	_____	Home #	_____
	_____	Work #	_____

Describe the Problem and Location (attach sketch if appropriate)

The Public Services Department received this request on _____.

It has been assigned case number _____. In general, we evaluate applications on a first-come/first-serve basis.

Comments: _____	Signature: _____
_____	Traffic Engineer

Copy sent to: Neighborhood Services Officer _____ Police Dept _____ City Council _____

Attachment 2

Resident Questionnaire

City of Littleton

NEIGHBORHOOD TRAFFIC MANAGEMENT PROGRAM

RESIDENT QUESTIONNAIRE

Resident Name: _____ Phone: _____

Address: _____

1. Mark which of the following traffic problems you feel exist in your neighborhood and provide a brief description if necessary (for instance, time when the problem is worst, or specific issue, such as a pothole).

_____ Speeding.

_____ Parking.

_____ Accident Problem (please describe what you have observed. Major accident problems will be directed to the Traffic Engineer for prompt attention).

_____ Danger to pedestrians/bicyclists, etc., using sidewalk.

_____ Danger to pedestrians/bicyclists, etc., crossing streets.

_____ Difficulty leaving/entering your driveway or street.

_____ Traffic volume.

_____ Traffic noise.

_____ Other (please explain).

2. Describe who you feel is involved with your neighborhood's traffic problem(s). For instance, does a particular driver seem the main problem, a certain kind of driver, or most drivers?

3. Would you be willing to participate in public meetings with fellow residents and city staff to develop a Traffic Management Plan, if your neighborhood is in favor of developing a plan and your street meets the requirements for implementing traffic calming devices?

Attachment 3

Street Classification Map