TRAFFIC CALMING GUIDEBOOK

City of Ann Arbor

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INTRODUCTION

WHAT IS ANN ARBOR'S VISION ZERO?

Ann Arbor City Council adopted a Vision Zero goal of zero traffic-related fatalities by 2025.

As defined by the Vision Zero Network:

> Vision Zero is a strategy to eliminate all traffic fatalities and severe injuries, while increasing safe, healthy, equitable mobility for all.
>
> Vision Zero starts with the ethical belief that everyone has the right to move safely in their communities, and that system designers and policy makers share the responsibility to ensure safe systems for travel.

WHAT IS TRAFFIC CALMING?

Traffic calming is a method of slowing vehicle traffic through physical treatments to streets. These physical treatments (such as speed humps and curb bump-outs) are intended to influence a change in driving behavior restulting in improved conditions for people living, walking, and bicycling in a neighborhood. Traffic calming is based on sound engineering judgment; device selection must include thorough analysis and engineering study.

PURPOSE OF THE PROGRAM

Through the City of Ann Arbor Traffic Calming Program, residents have a formal process for engaging with the city in a partnership to perform a technical analysis of traffic concerns on local streets and explore potential solutions.

The main objectives of the Traffic Calming Program are to:

- Improve the safety and convenience for pedestrians and cyclists by reducing the speed of vehicular traffic on local streets.
- Use engineering best practices and stakeholder engagement to advance Vision Zero principles as adopted by City Council.
- Empower residents to participate in making neighborhood streets safer through a resident-driven process.

YOUR INVOLVEMENT

Before you begin working on a traffic calming effort in your neighborhood, inform yourself by reading this guidebook and visiting other project locations throughout the city. Throughout your neighborhood process attend meetings, share your ideas openly with others, and be willing to consider other perspectives. Your active participation through meetings and feedback opportunities is critical to express your views and impact the outcome of the traffic calming process.

HOW TO INITIATE TRAFFIC CALMING ON YOUR STREET

The following process is used to determine if a neighborhood is eligible for Traffic Calming, and if so, to arrive at a design that aligns with engineering best practices and community interests. This process emphasizes resident initiation and participation.

ENGAGEMENT PROCESS

BASIC CHARACTERISTICS

Project areas must meet these basic characteristics to be considered for traffic calming:

- The street must be paved and within the city limits.
- The street must be classified as a local street, as indicated on the National Functional Classification maps.
- The street must not be a designated truck route.
- The project area must be equal to or greater than the length of one average city block (300 feet).
- If the street lies on an Ann Arbor Area Transportation Authority (AAATA) or Ann Arbor Public School (AAPS) bus route, qualification may be contingent on AAATA/AAPS input.

Note: For additional help and to discuss the process and program qualifications please contact the Traffic Calming Team. (TrafficCalming@a2gov.org; 734.794.6410)

Use the check boxes below to follow where your neighborhood is in the 5-step process, and to better understand possible outcomes and the importance of your involvement.

Note: If qualification criteria are not met at the identified checkpoints, the project will not move forward.

❑ STEP 1: PETITION

Any resident or property owner can submit a petition for traffic calming to the City of Ann Arbor. Petition signatures indicate community support for the street to be considered under the Traffic Calming Program and are the first step toward device installation.

Community Role:

- Define the project area limits.
- Describe the existing conditions.
- Gather petition signatures (one signature per address).

Qualification Criterion:

- The petition must include the signature from a representative (renter or owner) of at least 50% of addresses within the area of interest.
- The petition area must meet the basic characteristics (see left side panel).
- The petition must earn sufficient points within identified petition evaluation categories (see the Resources section at a2gov.org/TrafficCalming).

What's Next?

If the qualification criteria are met staff will mail guidebooks and initial questionnaires to the project area.

❑ STEP 2: INITIAL QUESTIONNAIRE

Project area residents and property owners complete the initial questionnaire to indicate support or opposition to participation in the Traffic Calming Program which may result in traffic calming device installation throughout the project area. Use the questionnaire to give your feedback about existing conditions of the project area and help staff understand community preferences to prepare for meetings.

Community Role:

- Become familiar with the Traffic Calming process and device options outlined in this Guidebook and other resources listed on page page 14.

Qualification Criterion:

- At least 50% of those who respond to the initial questionnaire must support the program moving forward.

What's Next?

If the project area qualifies, staff will schedule Meetings #1 (step 3) and #2 (step 4).

❑ STEP 3: MEETING #1: ORIENTATION/ WORKSHOP

Meeting #1 includes a program orientation and workshop-style discussion. Engineering staff present starter ideas in response to community concerns identified via the initial questionnaire. Meeting participants are encouraged to share input and ideas about potential traffic calming solutions for the project area. Anonymous feedback opportunities are provided.

Community Role:

- Achieve a general understanding of traffic calming concepts and program/process.
- Exchange ideas and provide constructive feedback about project area improvements.
- Remain open to other ideas and perspectives.

What's Next?

Staff will develop a preliminary plan based on:

- ✓ Engineering best practices,
- ✓ Starter ideas shared at Meeting #1,
- ✓ Community feedback,
- ✓ Street conditions, and,
- ✓ Utility locations

The preliminary plan will identify proposed traffic calming devices at specific locations. Ann Arbor Police and Fire Departments, TheRide, and schools near the project area are invited to participate in plan development.

❑ STEP 4: MEETING #2: ON-SITE, WALKING

Meeting #2 is held on-site; attendees walk the project area with staff to view the proposed traffic calming devices marked on the street and share additional input.

Community Role:

- Provide constructive feedback about the preliminary plan. Input may include reactions to device placement, device type or other outstanding concerns.
- Remain open to other ideas and perspectives.

What's Next?

Staff will develop a final plan to distribute as part of the final polling based on:

- ✓ Engineering best practices,
- ✓ Starter ideas shared at Meeting #1,
- ✓ Community feedback from Meetings #1 and #2,
- ✓ Street conditions, and,
- ✓ Utility locations

❑ STEP 5: FINAL POLLING

Each address within the project mailing area (residents and property owners) will receive a copy of the final plan and polling opportunity (postage-paid card and electronic option) to evaluate community support.

Community Role:

- Indicate support or opposition for the plan by marking 'yes' or 'no.'

Qualification Criterion:

- Greater than 50% of returned final polls must indicate support (yes) for the final plan.

What's Next?

If all qualification criteria are met and the engagement process is complete, the proposed Traffic Calming project moves forward to City Council for final construction approval.

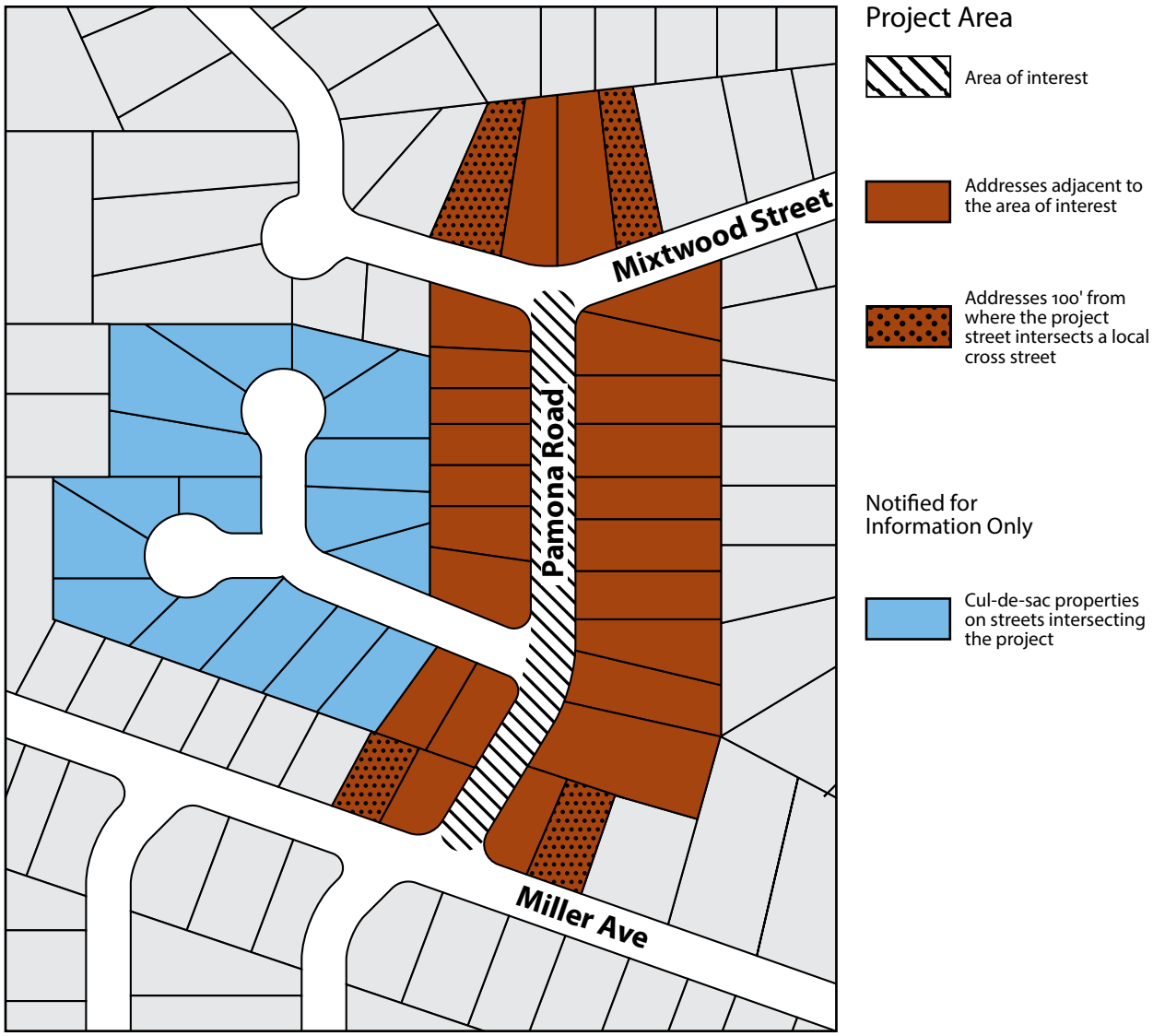
Device construction may be dependent on available budget and schedule of other planned projects.

PROJECT AREA

The project area includes all addresses adjacent to the area of interest and addresses 100 feet from where the project street intersects a local cross street.

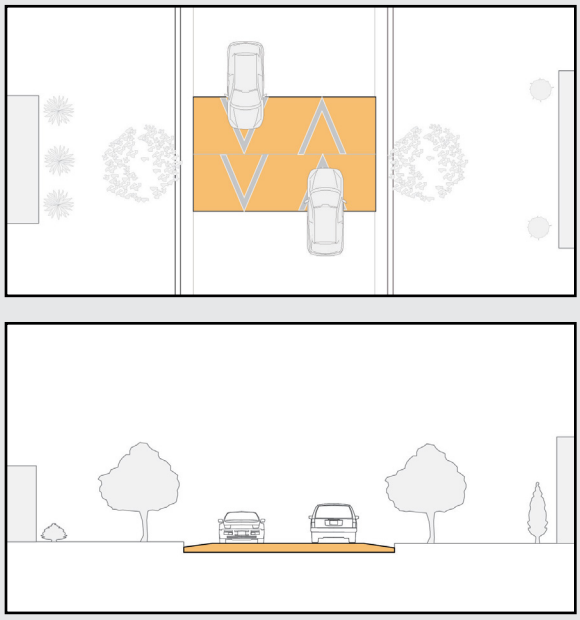
- Each property owner and current resident are included.
- Where one parcel includes multiple units, each unit is included.
- Cul-de-sac properties on streets intersecting the project area notified for information, but not provided a questionnaire or final polling opportunity.
- Other corridor users are welcome at public meetings.

Project area example:



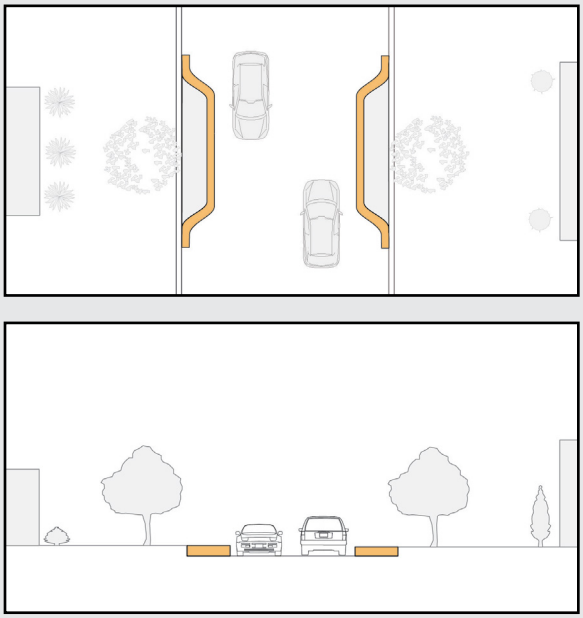
TRAFFIC CALMING DEVICE TOOLBOX

Many different traffic calming devices can be used to slow traffic in your neighborhood. Devices are only effective with the correct placement and combination. The devices are divided into two categories: "things you drive over" and "things you drive around."



THINGS YOU DRIVE OVER

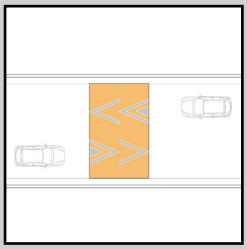
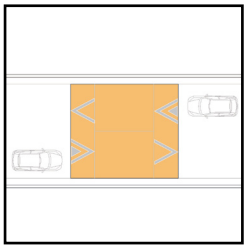
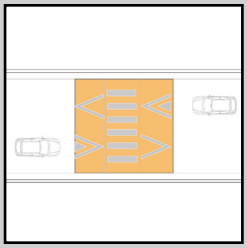
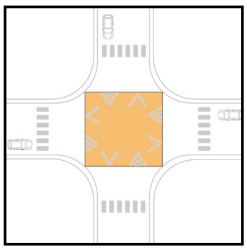
These devices slow traffic by creating discomfort if traveled over at a speed exceeding 25 miles per hour (mph).



THINGS YOU DRIVE AROUND

These devices slow traffic by creating the perception of less room for error and a road that is visually or physically more narrow.

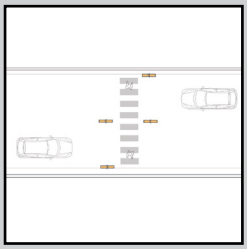
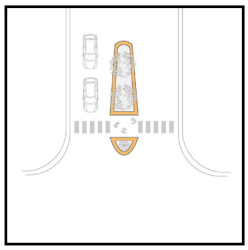
THINGS YOU DRIVE OVER

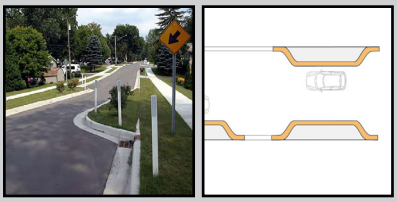
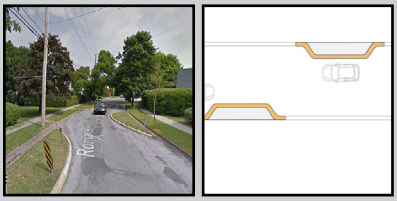
Examples	Description and Considerations
Speed Hump ($)  	Speed humps are 12 feet wide, 3 inches high, have a parabolic shape, and extend the full width of the street except for the gutter. • 20-25% speed reduction on average • 18% average traffic volume reduction • 3% average crash reduction
Speed Table ($$)  	Speed tables are typically 22 feet wide – including a 10 foot wide center platform and slopes tapering down on each side, 3 inches high and extend the full width of the street except for the gutter. The center platform width is variable and can be customized to the location. • 12% average traffic volume reduction • 45% average collision reduction • Less speed reduction than speed humps
Raised Crosswalk ($$)  	Raised crosswalks are 18 feet wide – including a 6 foot wide center platform marked with crosswalk striping and slopes tapering down on each side, 3 inches high and extend the full width of the street except for the gutter. • 20-25% average speed reduction • 18% average traffic volume reduction • 13% average crash reduction • Increases the visibility of pedestrians • Installation must be compliant with the Americans with Disabilities Act (ADA)
Raised Intersections ($$$)  	A raised intersection involves ramping each side of an intersection approach and raising the entire intersection 3 inches. Where there are pedestrian crossings, crosswalks can also be marked and raised to the elevation of the raised intersection. • Improves pedestrian visibility • May require utility work • Installation must be ADA-compliant

Additional Considerations:

- Devices are marked with painted chevrons to increase visibility for oncoming motorists
- Emergency response may be delayed 2 to 10 seconds per device
- Possible increase in traffic noise
- Drainage requirements and the Americans with Disabilities Act (ADA) requirements may limit the application of these devices

THINGS YOU DRIVE AROUND

Examples	Description and Considerations
Pedestrian Gateway Treatment ($)  	Signs within crosswalk indicating vehicles have to stop for pedestrians. Must be consistent with crosswalk design guidelines. • Defines the area of preferred crossing for pedestrians • Communicates high pedestrian activity areas to motorists • Pedestrian awareness and visibility improved • Will incur maintenance expense • Results have shown high vehicle yielding rates
Pedestrian Island/Median Landscaping ($$)  	Raised islands placed in the center of the street at intersection or midblock locations. • Reduces pedestrian crossing distance by providing a refuge within the street • Reduces pedestrian-motorist crashes • Provides a visual cue to motorists that people are crossing the street. • Can provide an attractive gateway to a neighborhood • May require additional right-of-way • May interrupt driveway access and result in U-turns at the end of medians
Residential Traffic Circles ($$)  	Raised circular islands of pavement, most commonly at four-legged intersections. Does not change existing traffic control, e.g., stop signs. • 10% reduction in midblock speed • 70% reduction in intersection crashes • 28% reduction in overall crashes • Can provide an attractive gateway to a neighborhood • Minimal effect on cut through traffic • Left turns may be difficult for larger vehicles • May shift vehicles closer to crosswalks • Bicyclists navigate with traffic around circle • Possible driver confusion
Compact Urban/Mini Roundabout ($$$)  	A type of roundabout characterized by a small center island. This changes traffic control to yield upon entry. • Decreases conflict points • May require additional right-of-way • May require changes to intersection configuration • May shift vehicles closer to crosswalks • Bicyclists navigate with traffic around circle

Examples	Description and Considerations
Curb Extensions ($–$$$$$) Curb bump outs 	An extension of the curb line to physically and visually tighten the corridor by narrowing street width. Two parallel curb bump-outs can be used to create a single lane width passageway, or choke-point. Alternating curb bump-outs can be used to create a chicane effect. • May require drainage considerations • May require loss of on-street parking • May cause debris to collect around the device
Choker/Neckdown 	2-lane chokers: • 4% speed reduction • Minor reduction in traffic volume 1-lane chokers: • 14% speed reduction • 20% reduction in traffic volume • Rely on regulatory signs and driver courtesy
Chicane 	Devices applied at intersection and midblock locations: • Shorten pedestrian crossing distance • Improve pedestrian visibility • Eliminate illegal parking

Additional Considerations:

- Provide opportunities for neighborhood landscaping
- Neighborhood or adjacent property owner would bear landscaping installation and maintenance costs
- Landscaping must be designed to maintain pedestrian visibility
- Emergency response may be delayed 2 to 10 seconds per device

OTHER OPTIONS

Examples	Description/Considerations
Landmarks ($) 	A physical landmark that indicates a change from a higher speed arterial road to a lower speed residential or commercial district. • Increases awareness for residential speeds • May require additional right-of-way • Neighborhood or adjacent property owner would bear landscaping installation and maintenance cost

WHY NOT JUST PUT IN A STOP SIGN?

By law, the purpose of a stop sign is to assign who has the right to go first, not to slow vehicles. The Michigan Manual of Uniform Traffic Control Devices (MMUTCD) prohibits the use of stop signs as a traffic calming device. Installing stop signs at all approaches to an intersection does not result in fewer collisions or slower traffic.

Possible consequences of installing unwarranted stop signs at all approaches to a residential intersection include:

- Increased motorist speeds to make up for lost time from the stop sign (often referred to as "speed spiking").
- Increased risk of rear end collisions.
- Increased likelihood of "rolling stops" at intersections, which increases risk of collision.
- Increased violations as frustrated drivers pay less attention to the requirement for a full stop.

Although stop signs are not traffic calming devices, there are conditions where they are warranted. If you believe a stop sign is needed at an intersection, contact Engineering@a2gov.org or 734.794.6410.

Stop sign requests will be handled separate from the Traffic Calming process.

Speed hump - Broadway Street

ADDITIONAL RESOURCES

Visit a2gov.org/TrafficCalming for additional resources, including:

- Petition Form.
- Digital version of this guidebook.
- Interactive Traffic Calming Map: Use this to view past project areas throughout the City that have petitioned for traffic calming. A map key and additional instructions are provided on the website.
- Link to the Institute of Traffic Engineers (ITE) web page for additional information about traffic calming devices and best practices.

  Note: Not all options presented by ITE are included in the City of Ann Arbor Traffic Calming Toolbox.
- Link to the Ann Arbor Police Department Traffic Complaint Questionnaire to request speed enforcement and speed radar signs.
- Link to a2gov.org/NewSidewalk to request new sidewalk installation.

Curb bump out - Brooks Street

THANK YOU!

The City of Ann Arbor sincerely thanks the many groups and individuals who have contributed to the establishment of and ongoing improvements to the Traffic Calming Program. The improvements made to local streets would not be possible without the time and dedication of residents seeking safer, more livable neighborhoods.

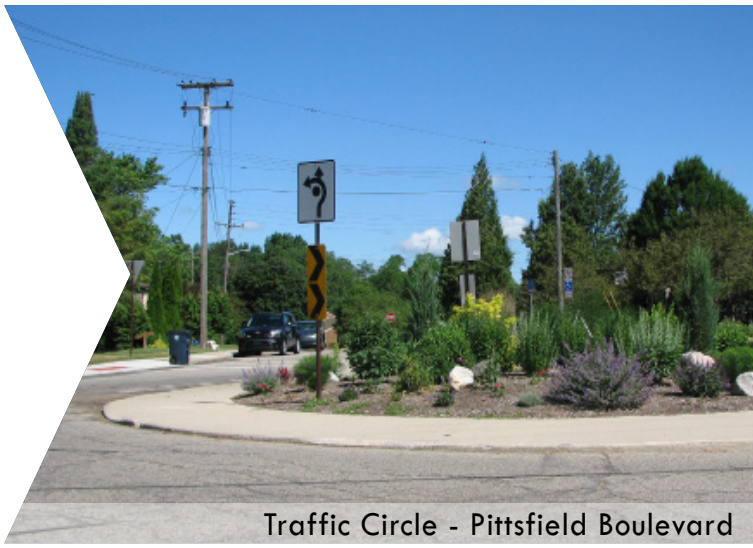
This Traffic Calming Guidebook is the result of meaningful observations and suggestions we have received from the community. We are committed to working with you and continuing to develop an exemplary Traffic Calming Program.

Respectfully submitted,

Nicholas S. Hutchinson, PE

City Engineer,
Engineering Unit

Speed hump - Larchmont Drive



Traffic Circle - Pittsfield Boulevard

Questions about neighborhood traffic calming?
Please contact Engineering at 734.794.6410
TrafficCalming@a2gov.org

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