



MEMORANDUM

TO: Mayor and Council
FROM: Howard S. Lazarus, City Administrator
DATE: November 6, 2016
SUBJECT: Response to Council Resolution 16-352: Design Criteria for Local Streets Speed Limits and Traffic Calming

I am forwarding the attached technical paper to you in response to the subject Council Resolution, which directed the City Administrator to:

- Review the traffic calming process to see if the technical criteria for speeds should be expanded, the streets on which traffic calming is allowed should be expanded or allowed under a separate program, and if the second survey super quorum and supermajority requirements should be modified.
- Evaluate whether or not to allow for citizen-initiated review aimed at lowering of design and posted speeds on streets with high pedestrian and bicycle activity through a process similar to the traffic calming method.
- Explore the reduction of design speeds on streets with high pedestrian and bicycle activity during the engineering design of roads when they are reconstructed.

The paper has considered each of these concerns, and provides the following conclusions and recommendations:

Traffic Calming

Changes to the existing Traffic Calming Program criteria for speeds and public support would not likely yield a significant number of additional streets qualifying for the program. However, the following modifications to the existing Traffic Calming Program may provide some additional project qualification opportunities:

- Add a qualifying criterion based on the percentage of vehicles traveling in excess of 10 mph over the speed limit. The threshold percentage of violators at this level will need to be studied further to determine what level that would be statistically valid.
- Add a qualifying criterion for “peak hour” speeding, for the morning and afternoon rush hour periods.

- Eliminate the response rate requirement of the public support criteria. This would help simplify and streamline the process, and eliminate one additional step to qualify for the program. If this change is implemented, staff recommends increasing the criterion for the qualifying petition from 30% to 50%.
- Reduce the public support criteria to a simple majority (greater than 50%) of responding residents.
- Change the street classification criteria from the current Act 51 based standard to National Functional Classification definition of a Local street.

In order to implement these changes to the existing Traffic Calming Program, the governing Resolution (R-257-06-06) and supporting documents, which were approved by City Council on June 5, 2006, will need to be adjusted or replaced.

To meet the desire outlined in resolution R-16-352 for a citizen initiated process for traffic calming on higher order streets, staff recommends the creation of a separate traffic calming program aimed at major streets, which would likely include a different method of evaluating public support, and a different “toolbox” of treatments more appropriate to these classifications of streets.

Designing for Lower Speeds

Designing for lower speeds is a concept already embodied into the design process when a road is reconstructed, no additional actions are recommended at this time. Staff will continue to monitor and follow best practices on reconstruction projects in the future and will increase efforts to implement such opportunities on resurfacing projects as well.

It should be noted that all of the above recommendations are dependent upon making the necessary resources available to implement the changes.

Traffic Calming, Speed Limits, and Design Speeds Report

Date: November 3, 2016

Section I – Background and Current Efforts

The purpose of this report is to respond to Council resolution number 16-352, which directed the City Administrator to:

- Review the traffic calming process to see if the technical criteria for speeds should be expanded, the streets on which traffic calming is allowed should be expanded or allowed under a separate program, and if the second survey super quorum and supermajority requirements should be modified.
- Evaluate whether or not to allow for citizen-initiated review aimed at lowering of design and posted speeds on streets with high pedestrian and bicycle activity through a process similar to the traffic calming method.
- Explore the reduction of design speeds on streets with high pedestrian and bicycle activity during the engineering design of roads when they are reconstructed.

The City currently has many policies and efforts in place that are aimed at calming traffic and improving the pedestrian experience. These include:

- The Complete Streets Policy. The philosophies espoused in this policy are incorporated into all of the City's road reconstruction projects.
- Crosswalk Design Standards. The City is currently working on an effort to bring greater standardization to crosswalks. Consistency in the appearance of crosswalks at similar locations can lead to improved consistency in driver behavior.
- Traffic Calming Program. The City currently has a Council-approved program for traffic calming on local streets. This is described in more detail in Section II of this report.
- Sidewalks and Ramps. The City is continuing repairs of the sidewalk system, and replacing non-compliant curb ramps with ADA compliant ramps.
- National Association of City Transportation Officials (NACTO) Standards. The NACTO standards were described and included in the Non-Motorized Transportation

Plan Update of 2013, and is utilized by staff engineers in the design of streets and non-motorized facilities.

- The “5 E’s”. Part of the contemporary understanding of transportation systems includes the 5 E’s: Engineering, Education, Encouragement, Enforcement, and Evaluation. This is a framework within which staff works as they develop projects and address concerns.
- Changing Driver Behavior Study. The City is participating in this study with Western Michigan University to utilize a combination of engineering devices, enforcement, and education to alter driver behavior around crosswalks and ultimately improve pedestrian safety.
- Vulnerable Road Users Ordinance. Staff is currently drafting a Vulnerable Road Users Ordinance for submittal to Council. The intent of this ordinance is to provide a definition of a safe passing distance and a legal framework to protect vulnerable road users including cyclists, pedestrians, and workers in the right-of-way such as police, fire, and construction or maintenance workers.

In order to continue making progress improving the pedestrian environment in the City, it is appropriate to review certain policies and programs. As requested in the above referenced Resolution, this report provides information gathered on several of these programs and efforts, and makes recommendations for possible changes going forward. Those items are discussed in detail in Sections II through IV below, followed by discussions of resource and maintenance needs, and concluding with proposed next steps.

Section II – Traffic Calming: Local Streets

Existing Program Overview

The City of Ann Arbor Traffic Calming Program was established in 1999 and most recently updated in 2006. The Traffic Calming program was designed to address speeding concerns on residential, neighborhood streets. The final program adopted by City Council was based on input from the community and industry best practices.

Over the years that the Traffic Calming Program has been in effect, the current program has received qualifying petitions for 76 streets segments. These applications for traffic calming have resulted in 24 street segments with traffic calming installed, roughly 32% of the number that petitioned. 43 (57%) of the street segments did not qualify based on the speed criteria. One street did not qualify based on the response rate portion of the public support criteria and seven street segments did not qualify based on the percent support of responses received. One street

that submitted a petition did not qualify based on classification of the street (i.e. not a local street). As of October 2016, one petition submitted to the Program is in the queue for completion of a traffic study to determine qualification. No project areas are awaiting construction.

Peer Community Comparison Overview

City staff has reviewed the traffic calming programs of peer communities (see Appendix A) to assist in evaluating the current program. This included researching publicly available information on the organization's website and contacting some of the communities by phone for follow-up on specific questions.

Detailed results from the review of peer communities can be found in the appendices; summary findings are presented below. The following 16 communities were reviewed:

- Auburn Hills, MI
- Austin, TX
- Birmingham, MI (no formal traffic calming program)
- Bloomington, IN
- Boulder, CO (inactive traffic calming program; funding suspended)
- Dearborn, MI (no formal traffic calming program)
- East Lansing, MI
- Eugene, OR
- Farmington Hills, MI
- Grand Rapids, MI (inactive traffic calming program; funding suspended)
- Madison, WI
- Minneapolis, MN
- Portland, OR (no formal traffic calming program)
- Seattle, WA
- Traverse City, MI
- Washtenaw County Road Commission, MI

Evaluation of Speed Criterion

Resolution No. R-16-352 proposed new and revised speed criteria for the Traffic Calming Program to address the issues specifically identified in this resolution as follows:

- Jackrabbits: While most traffic may travel within 5 mph of the posted speeds, the street regularly experiences vehicles travelling significantly in excess of posted speeds, such as 40 mph in a 25 mph neighborhood; and
- Rush Hour Rushing: While a street may experience appropriate speeds 22 hours per day, it experiences a significant amount of speeding during rush hours.

The City of Ann Arbor Traffic Calming Program specifies that the 85th percentile speed must be at least 5 mph over the legal speed limit, or 30 mph to qualify for the Program.

A review of peer communities was conducted to determine if the City of Ann Arbor Traffic Calming Program speed criterion is consistent with industry best practice. A summary of the results are as follows (see Appendix B for detail):

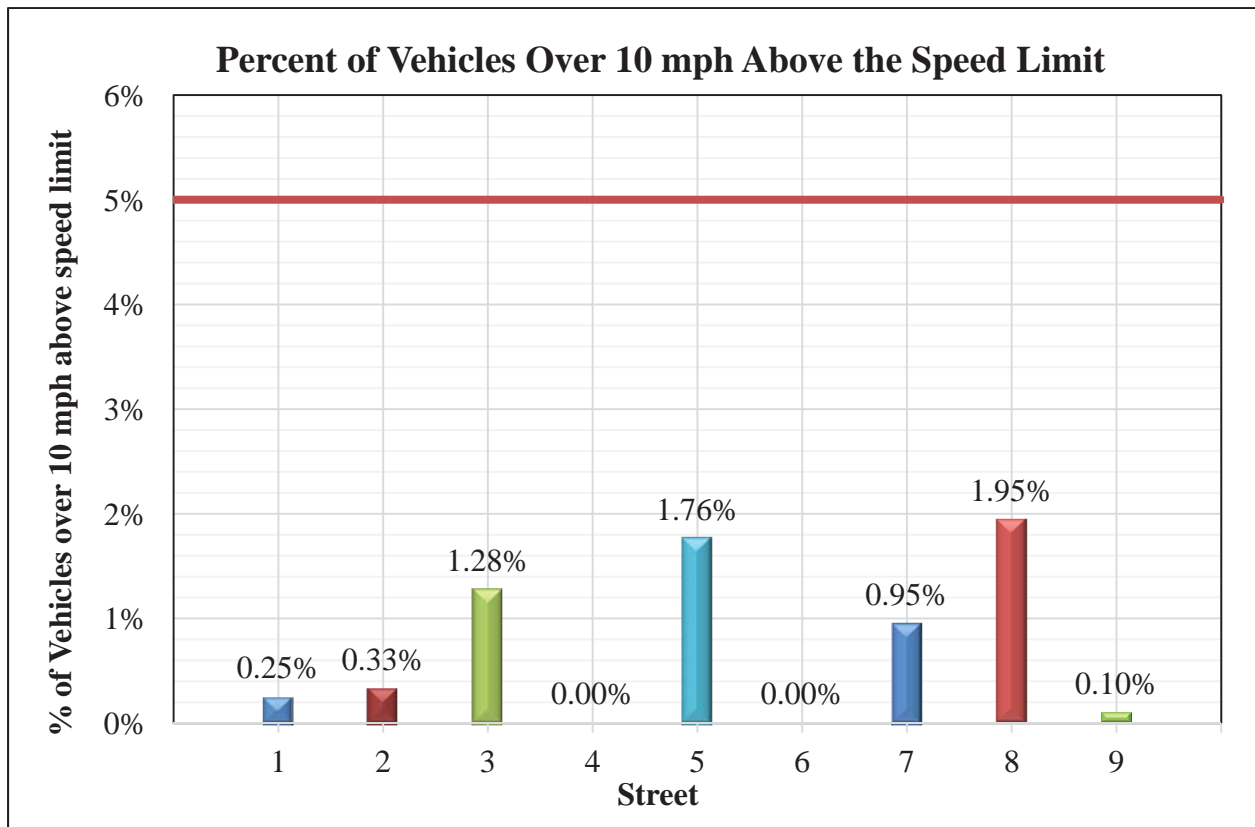
- Two out of 16 programs reviewed use a criterion consistent with Ann Arbor: 85th percentile speed 5mph over speed limit
- Two programs use a criterion very similar to Ann Arbor: 15% of the traffic traveling at 5mph over the speed limit
- One program uses a criterion more stringent than Ann Arbor: 85th percentile speed 3 mph over the speed limit
- Two programs use a criterion more lenient than Ann Arbor: 85th percentile speed 10mph over the speed limit
- Two programs do not require a speed threshold criterion; however, considers speed in project ranking and prioritization.
- Other variations of speed criteria revealed in the review of peer communities include:
 - Average 24-hour speed 5mph over the speed limit
 - Multi-part criteria including average speed exceeding 20mph, or 10% of traffic traveling above the speed limit.
 - Multi-part criteria including 50% of traffic over the speed limit, 85th percentile 7mph over the limit or 85th percentile 5 mph over the speed limit in specified areas (e.g. along bike boulevards, near schools, etc.)
- None of the programs reviewed indicate criteria for jackrabbits or rush-hour-rushing

While variations in speed criteria exist among programs reviewed, it appears that Ann Arbor's speed criteria is generally consistent with the practices of peer communities.

Staff reviewed data from a sample set of nine recent petitions that did not qualify for the existing City of Ann Arbor Traffic Calming program to determine if any would become qualifying petitions under the additional criteria proposed by Resolution No. R-16-352. Note that the time and resources available did not allow evaluation of all previously qualifying petitions; in addition, not all of the data from earlier years of the traffic calming program was available or in a usable format. The nine locations evaluated for this report provide a sample of streets that have applied for the program.

The "jackrabbits" criterion was presented as a way to identify less frequent but more egregious speed violators. For this criterion, existing traffic data was reviewed from the sample set of streets to determine the percentage of vehicles traveling in excess of 10 mph over the speed limit.

The percentage of violators at this level was compared to the proposed 5% threshold. The results of analysis are displayed on the following graph:



The analysis revealed that none of the streets in the sample set would have qualified for the program under the proposed 5% criterion. According to this data, the criterion would need to be lowered to around 1% to qualify additional streets for the program. However, 1% of the traffic on a residential street may not be a statistically valid amount of traffic on which to base a decision. Further sampling and resources will be needed to determine if such a criterion is viable.

The “rush hour rushing” criterion addresses the concept that speeding is more excessive during “rush hour” periods, when commuters are seeking shortcuts through residential neighborhoods. In other words, the speed results may meet the current speed criterion for the Traffic Calming Program during the AM and PM peak hours of travel; or the AM and PM hours with the most traffic volume.

To evaluate this concept, staff reviewed data from the sample set of streets specifically for rush hours (7-9 a.m. and 4-6 p.m.) against the proposed criterion to determine if street qualification would be impacted. The graph below shows the 85th percentile speeds for the morning and evening peaks, as compared to the 85th percentile speed observed during the complete traffic study.



The analysis found that one of the nine streets evaluated met the proposed criterion during individual peak hours. Excessive speeds during AM and PM peak rush hours, in comparison to speeds observed throughout the day, was generally not observed for the streets evaluated.

Often, the perception of speeding comes with increased volumes of traffic that may be observed on residential streets during rush hours. While a peak hour criterion could be added to the existing Traffic Calming Program, it would likely have a minimal effect on the number of streets that qualify for the program based on the sample data analyzed.

Evaluation of Public Support Criterion

Resolution No. R-16-352 proposed that the public support criteria for existing Traffic Calming Program be evaluated to determine whether the second survey super quorum and supermajority requirements are appropriate.

The City of Ann Arbor's Traffic Calming Program requires demonstration of public support during two phases of the program. This first is the petition requesting traffic calming, referred to as the qualifying petition, which must be signed by representatives from at least 30% of the households in the project area. The second show of support occurs at the end of the process and

uses a two part criteria to evaluate public support of a potential device installation. These parts are:

1. 60% of the resident homeowners in the project area must respond to the survey, AND
2. 60% of the returned survey cards must support all or part of the project, regardless of home ownership (i.e., renters and/or owners).

This translates to an overall level of support ranging from 36% to 60% of the total project area, depending on the initial response rate.

For example, if a project area includes 100 homeowner occupied units, 60% or 60 units must respond to the final survey. Of the 60 responses 60% or 36 units must support the project. However, if 100% of addresses in the project area are homeowner occupied, and 100% of the addresses respond to the final survey, then 60% or 60 out of the 100 total units must support the project.

A review of peer communities was conducted to determine if the City of Ann Arbor Traffic Calming Program public support criterion is consistent with industry best practice. A summary of the results are as follows (see Appendix C for detail):

- Two out of 16 programs reviewed use criteria similar to Ann Arbor, involving a two-part criterion to consider response rate and support level of responses received.
 - One peer community uses a 50% response rate and 60% support of responses.
 - One peer community uses a 60% response rate and majority support of responses.
 - No peer communities reviewed use the same 60% response rate and 60% support of responses defined in the existing Ann Arbor Traffic Calming Program.
- Most programs explored use a single-part criterion to assess percent support based on total project area responses.
 - Four peer communities require 75% support from the total project area.
 - One peer community requires 70% support from the total project area.
 - One peer community requires 60% support from the total project area.
 - One peer community requires 50% support from the total project area.
- Two peer communities use a single-part criterion to assess percent support based on responses received.
 - One peer community requires 60% support of responses received.
 - One peer community requires 51% support of responses received.
- One peer community does not define a level of neighborhood support, however considers evidence of neighborhood support in project ranking and prioritization.

The range of public support criteria used among peer communities do not demonstrate a clearly accepted best practice. The support criteria required by the existing City of Ann Arbor Traffic Calming Program seem moderate in comparison to peer communities reviewed, many of which require higher levels of public support. High public support requirements are sometimes correlated with traffic calming programs that require residents to contribute some or all of the required funding for project installation. This was observed in four of the communities reviewed.

However, the review of peer communities demonstrates that a single-part criterion is more common. The City of Ann Arbor Traffic Calming Program may be improved by simplifying the support requirements. One potential modification is elimination of the response rate criterion to simplify the evaluation of public support. Final support criteria could then either remain at 60% of responding residents, or alternatively, be lowered to a simple majority (greater than 50%) of responding residents. Removing the response rate criterion may increase the number of project areas able to achieve sufficient support for project installation.

If the response rate requirement is removed, staff recommends that it be coupled with a change to the qualifying petition requirement, raising that requirement to 50%. This increase will bring the program into consistency with other petition-based actions, such as the first time paving of gravel roads. This elevated support level at the outset will also demonstrate a substantial commitment to the traffic calming program and process prior to expending program resources on a project.

Other opportunities to modify the public support criteria could include an evaluation of eligible participants in the final survey process. The project area definition and decision to include residents, renters, and/or property owners impact the number of final surveys distributed and the required number of responses and supporters necessary to achieve overall program support. Potential modifications to these considerations could be explored through future research.

Other Findings

The presence and popularity of traditional traffic calming programs may be declining. Though only two out of 16 peer community programs reviewed specifically identified that their traffic calming program was inactive, phone conversations with at least three additional peer communities indicated that installation of new traffic calming devices is rare; some expressed that it had been years since a new installation. One peer community, Boulder, CO, is currently working through a public feedback process to determine whether their suspended program should be restored, updated, or replaced with other approaches (i.e. enhanced education and enforcement). A revision of the City of Ann Arbor Traffic Calming Program to allow for more lenient qualification criteria may not be in line with industry practices moving away from installation of traditional traffic calming devices.

Procedures for removal of traffic calming devices after installation was cited by several communities. The City of Ann Arbor has not previously removed traffic calming devices after installation. Our success rate in terms of long term satisfaction with devices installed may be attributable to our thorough community engagement process and existing response rate and support criteria. In considering revisions to the assessment of public support, it should be noted that potential dissatisfaction and requests for removal could be a potential side effect if criteria are not sufficient to truly assess neighborhood support.

Section III – Traffic Calming: Major Streets

Evaluation of Street Eligibility Criterion

Resolution No. R-16-352 proposed that the qualification criteria for existing Traffic Calming Program be evaluated to determine whether the streets eligible for traffic calming should be expanded.

The City of Ann Arbor Traffic Calming program is currently limited to local streets as defined by State of Michigan Act 51, as amended, and noted on the City's Act 51 Map. The City does not currently have a resident initiated program for installing traffic calming devices on collector and arterial streets. These higher classification streets are evaluated during the context sensitive design process for the reconstruction and resurfacing of streets. Please refer to Section I, Background & Current Efforts, of this report for more information.

A review of peer communities found that it was typical for traffic calming programs to be limited to local or neighborhood streets. A summary of the results are as follows (see Appendix D for more detailed information):

- Seven out of 16 programs reviewed specify that only neighborhood or local streets are eligible for their traffic calming program.
- Four peer communities provide some accommodations for collector or minor arterial streets within their neighborhood/local street traffic calming program, or allow for special consideration of these streets on a case-by-case basis.
- One peer community has a separate traffic calming program for neighborhood/local streets and collector or arterial streets.

Modification to how the existing program defines a local street may provide additional opportunities for traffic calming project qualification. The City of Ann Arbor Traffic Calming Program specifies that a petition area must be a "Local" street according to its Act 51 funding classification in order to qualify for the Traffic Calming Program. However, some streets within the City's system are listed as "Major" streets per Act 51 funding classification, which would not be listed as Major streets under other classification systems. Using an alternative system, such as

the National Functional Classification (NFC) system, would allow more streets to become eligible for the existing Traffic Calming Program. The official NFC map can be found at: http://mdotcf.state.mi.us/public/maps_nfc/

A separate Major Street Traffic Calming Program with a defined funding source and process separate from the existing Traffic Calming Program for local streets could be developed to address concerns regarding traffic calming on arterial and collector streets. It is anticipated that a major street traffic calming program would be considerably different from the existing program for local streets based on the type of devices and treatments suitable for higher classification streets and the different method of public engagement necessary to account for the larger number of road users on these streets. The resource needs to establish such a program are discussed in Section V below.

Section IV – Designing for Lower Speeds

The term “reconstruction” is used to describe the most in-depth treatment available when we fix a road. A road reconstruction typically means that the existing pavement, curb and gutter, and some of the earth below are all removed and replaced with new materials in order to create a brand new road. When the City plans for the complete reconstruction of a street it is the best opportunity to evaluate the need for significant improvements to the whole corridor in terms of creating the best environment for all transportation users. This is the core of the City’s Complete Streets Policy.

City staff currently applies a variety of tools and methods to help reduce speeds and improve safety for all road users, including:

- Configuration of intersections (traditional versus roundabout)
- Restriction or elimination turning movements at signalized intersections
- Adding traffic signals where warrants are met
- Lighting
- Signage
- High visibility pavement markings
- Lane and/or pavement narrowing to reduce speeds
- Curb bump outs
- Chicanes (a type of "horizontal deflection" used to reduce the speed of traffic by making drivers negotiate the lateral displacement in the vehicle path)
- Road diets (for example, a 4 to 3 lane conversion)
- Pedestrian refuge islands
- Lighting
- Addition of bike lanes and/or buffered bike lanes

- Coordination of bus stop placement with crosswalks
- Improve sight distances between motor vehicles and pedestrians
- Rectangular rapid flashing beacons (RRFBs) or Pedestrian Hybrid Beacons (PHB, formerly known as a HAWK)
- Gateway treatments at midblock crossings (still under evaluation)

Many of the above items listed, when appropriately applied, can aid in reducing speeds on a roadway and contribute improving safety on a corridor.

While road reconstruction projects provide the most opportunities to implement substantial improvements, the majority of the road construction undertaken in the City consists of street resurfacing. Resurfacing consists of removing all or part of the pavement and leaving the underlying soil and the majority of the curb and gutter in place. While the smaller scope of a resurfacing project does not offer the “blank slate” that a complete road reconstruction does, there are still ample opportunities to include many of the improvements outlined above when appropriate.

In the past, resurfacing projects on major roads have focused primarily on the improvement of the pavement condition and installation of Americans with Disabilities Act (ADA) compliant curb ramps. City staff is henceforth committing to review major resurfacing projects more thoroughly and find more opportunities to implement pedestrian improvements, as they are able to fit within the project scope.

Resolution R-16-352 cites the Federal Highway Administration’s USLIMIT2 criteria for speed limits using the 50th percentile speed in areas of high pedestrian and bicycle activity. Historically, city traffic engineers have utilized the USLIMITS tool (the precursor of USLIMITS2) to cross check their results when setting speed limits, although it has been some time since an overall review of speed limits throughout the City has been conducted. As speed limits are reviewed in the future, the USLIMIT2 criteria will be referenced. Prior to utilizing the 50th percentile criterion, further research will need to be conducted to determine if such a basis for lowering speed limits would be legally enforceable in Michigan.

Section V – Resources

As is often the case, new initiatives or expanded programs require additional resources to implement, both in terms of staff time and financial resources. The three main components described above (Traffic Calming: Local Streets, Traffic Calming: Major Streets, and Designing for Lower Speeds) would all require different levels of resources to implement.

Designing for lower speeds is a part of normal project design operations. However, it should be noted that as additional treatments are installed on street resurfacing projects, there will be an incremental increase in the cost of those projects.

While modifications to the existing Local Traffic Calming Program would require some staff time to implement, the program already has an annual funding source, as a set aside from the Act 51 Local Street Fund, and modifications could be executed as part of the existing program budget.

Creating a new program for traffic calming on higher order streets would require dedicated funding similar to existing Traffic Calming Program. It would also require significant staff time to create and develop the program, and to administer the program once it is created. With existing traffic engineering and public engagement staff already overextended with existing workloads, additional staffing resources may need to be considered if additional programs are added. Similar to the existing traffic calming program, it would be most appropriate for funding for such a program to come from the Act 51 Major Street Fund.

Section VI – Maintenance

As with any new infrastructure investment, the long term maintenance of any added physical features needs to be considered and budgeted for. Traffic Calming Program devices such as speed humps, signage, pedestrian islands, pavement markings, or plantings all come with long term costs to maintain. Presently, maintenance of features created through the existing Local Traffic Calming Program, such as renewing pavement markings on speed humps, is funded through the existing budget allotment for that program.

A review of peer communities found that identifying funding and delegating responsibility to complete maintenance is often considered before the installation of a device. A summary of the results is as follows (see Appendix E for details):

- Some cities establish a maintenance agreement between the residents and the city before installation of the traffic calming devices.
- In most cities, the Public Works department maintains the roads, while neighborhood associations and/or volunteers maintain any enhanced landscaping in the right-of-way.

As the City of Ann Arbor installs more devices, possibly through expanded project qualification criteria and/or creation of a new traffic calming program for major streets, these maintenance needs will become a progressively larger percentage of the program's budget. Funding for any future program for higher order streets should also take into consideration the long-term maintenance needs of that program.

Section VII – Recommendations/Next Steps

Recommendations and next steps for each of the three focus areas of this report are outlined below:

Traffic Calming: Local Streets

As indicated in Section II above, changes to the existing Traffic Calming Program criteria for speeds and public support, would not likely yield a significant number of additional streets qualifying for the program. However, the following modifications to the existing Traffic Calming Program may provide some additional project qualification opportunities:

1. Add a qualifying criterion based on the percentage of vehicles traveling in excess of 10 mph over the speed limit. The threshold percentage of violators at this level will need to be studied further to determine what level that would be statistically valid.
2. Add a qualifying criterion for “peak hour” speeding, for the morning and afternoon rush hour periods.
3. Eliminate the response rate requirement of the public support criteria. This would help simplify and streamline the process, and eliminate one additional step to qualify for the program. If this change is implemented, staff recommends increasing the criterion for the qualifying petition from 30% to 50%.
4. Reduce the public support criteria to a simple majority (greater than 50%) of responding residents.
5. Change the street classification criteria from the current Act 51 based standard to National Functional Classification definition of a Local street.

In order to implement these changes to the existing Traffic Calming Program, the governing Resolution (R-257-06-06) and supporting documents, which were approved by City Council on June 5, 2006, will need to be adjusted or replaced.

It should be noted that the Traffic Calming Program has not been updated since 2006. If there is a desire to implement the changes outlined above, it is recommended that staff be provided the time and resources to conduct a thorough review of the existing program, including process elements not addressed in this review of technical criteria, to develop and present a resolution to Council addressing all recommended changes and updates to the current program. For example, a review of the toolbox of traffic calming devices in the current program may be due for review. Additionally, some language in the current program could benefit from further clarification, i.e. in establishing the project area mailing list, clarification is needed on how cul-de-sac neighborhoods bound within a project area will be handled. Incorporating project area resubmittal into the process should also be considered.

Traffic Calming: Major Streets

To meet the desire outlined in resolution R-16-352 for a citizen initiated process for traffic calming on higher order streets, staff recommends the creation of a separate traffic calming program aimed at major streets, which would likely include a different method of evaluating public support, and a different “toolbox” of treatments more appropriate to these classifications of streets.

To establish such a program, funding will need to be identified to develop the program criteria and procedures, ultimately resulting in a Council resolution similar to that of the Local Traffic Calming Program that would formally adopt the program.

Designing for Lower Speeds

Designing for lower speeds is a concept already embodied into the design process when a road is reconstructed, no additional actions are recommended at this time. Staff will continue to monitor and follow best practices on reconstruction projects in the future and will increase efforts to implement such opportunities on resurfacing projects as well.

APPENDIX A Peer Community Comparison Overview

City	Program Name	Website
Auburn Hills, MI	Auburn Hills Traffic Calming Program	http://www.auburnhills.org/departments/emergency_services_department/police_division/traffic_division/traffic_calming.php
Austin, TX	Local Area Traffic Management program	http://austintexas.gov/departments/local-area-traffic-management
Birmingham, MI	<i>No Formal Program</i>	
Bloomington, IL	Traffic Calming Policy	http://www.cityblm.org/index.aspx?page=132
Boulder, CO	Neighborhood Traffic Mitigation Program (NTMP) – <i>Inactive; funding suspended</i>	https://bouldercolorado.gov/pages/neighborhood-traffic-mitigation-program
Dearborn, MI	<i>No Formal Program</i>	
East Lansing, MI	Action Plan for Addressing Neighborhood Speeding & Non-resident Traffic Issues	https://www.cityofeastlansing.com/624/Transportation-Commission
Eugene, OR	Traffic Calming Program	https://www.eugene-or.gov/1729/Traffic-Calming
Farmington Hills, MI	Traffic Safety for Everyone Through Education, Enforcement, and Engineering (Traffic Safe-te3)	http://www.fhgov.com/Government/Departments-Divisions/Engineering/Traffic-Safe-te3-Program.aspx
Grand Rapids, MI	Traffic Calming Program— <i>Inactive; funding suspended</i>	http://grcity.us/enterprise-services/Lights-Signals-and-Signs/Pages/Neighborhood-Traffic-Calming-Program.aspx
Madison, WI	Neighborhood Traffic Management Program	http://www.cityofmadison.com/trafficengineering/programsTraffic.cfm
Minneapolis, MN	Speed Hump Policy	http://www.minneapolismn.gov/publicworks/transportation/WCMS1P-107598
Portland, OR	<i>No Formal Program</i>	
Seattle, WA	Traffic Calming Program	http://www.seattle.gov/transportation/ntcp_calming.htm
Traverse City, MI	Traffic Calming Program	http://www.traverscitymi.gov/trafficcalming.asp
Washtenaw County Roads Commission, MI	Neighborhood Traffic Management Program	http://www.wcroads.org/Services/Traffic/Calming

APPENDIX B Peer Community Comparison: Speed Criterion

Speed Criteria			
City	Speed threshold	Frequency/Rate threshold	Notes
Auburn Hills, MI	35mph or greater	85 th percentile	
Austin, TX	3 mph over limit	85 th percentile	Within a 24-hour period. Or, 5 or more speed-related crashes in the last 12 months.
Bloomington, IL	5mph over limit	85 th percentile	
East Lansing, MI	5mph over speed limit	Average 24-hour speeds	Or, at least 25% of traffic during problem hour found to be non-resident. 2mph over speed limit/average 24-hour speed for non-permanent traffic calming measures. Speed hump criteria requires 85 th percentile speed of 33mph or greater, during a 24-hour average
Eugene, OR	Above speed limit	50%	
	7mph over limit	85 th percentile	
	5mph over limit	85 th percentile	On bike boulevards, adjacent to parks, adjacent to schools or in the vicinity of designated school crossings
Farmington Hills, MI	35mph or greater	85 th percentile	
Grand Rapids, MI	5 mph over limit	85 th percentile	
Madison, WI			No minimum speed criteria are required. Percent of traffic traveling 5mph over the speed limit is considered in ranking requests. Other criteria also considered in ranking/prioritization.
Minneapolis, MN	Above speed limit	10%	Or, average speed exceeds 20mph for speed hump consideration
Seattle, WA	5mph over	15%	

	limit		
Traverse City, MI	5mph over limit	15%	Prioritization determined by speed, volume, auto accident history, pedestrian generators, sidewalks.
Washtenaw County Roads Commission, MI			No speed threshold defined. Eligibility is determined by a point system ranking speed, cut-through traffic, Average Daily Traffic, crash history, proximity of schools and pedestrian generators, and absence of sidewalks.

APPENDIX C Peer Community Comparison: Public Support Criteria

City	Public Support	Notes
Auburn Hills, MI	75% support from total project area (residents)	
Austin, TX	None	Notification/Evidence of support is considered in project ranking and prioritization; defined criteria for level of support are not specified
Bloomington, IL	70% support from total project area	An unreturned ballot is considered not in favor.
East Lansing, MI	51% of returned votes support the plan	
Eugene, OR	(1) 50% response rate, (2) 60% support from returned responses	Mail in survey with defined criteria only used as needed for controversial projects, otherwise general agreement from those involved is acceptable
Farmington Hills, MI	75% support from total project area (residents)	
Grand Rapids, MI	(1) 60% response rate, (2) 51% support from returned responses	One response allowed per property.
Madison, WI	60% of surveys returned must be in favor	If project is expected to result in traffic diversion then an expanded project area is used including a two approval criteria: a majority of response cards must be returned and 60% of returned cards must indicate support
Minneapolis, MN	75% support from total project area (property owners)	
Seattle, WA	60% support from total project area (owners or renters; property or business owner)	Project area is generally defined as one block from the proposed device
Traverse City, MI	Greater than 50% support from total project area (property owners)	
Washtenaw County Roads Commission, MI	75% support from those affected (property owners)	

APPENDIX D Peer Community Comparison: Street Eligibility

Street Eligibility			
City	Neighborhood /Local Street	Collector or Arterial Street	Notes
Auburn Hills, MI	X		
Austin, TX	X	X	Neighborhood street program; minor arterials may be accepted, major arterials not eligible
Bloomington, IN	X		Specifically stated that collector and arterial streets do not qualify
East Lansing, MI	X	X	Speed humps only allowed on 2 lane local residential collector streets with a speed limit of 25 mph or less
Eugene, OR	X		
Farmington Hills, MI	X		
Grand Rapids, MI	X		
Madison, WI	X	X	Neighborhood street program; consideration may be given to collector streets on a case-by-case basis
Minneapolis, MN	X		Local streets not designated as a “thru street”
Seattle, WA	X	X	Separate programs
Traverse City, MI	X	X	A single “Neighborhood Street Program” with separate specifications for neighborhood/locals vs. arterial/collectors
Washtenaw County Roads Commission	X		Residential subdivision streets

APPENDIX E Peer Community Comparison: Maintenance

Maintenance	
City	Notes
Auburn Hills, MI	<i>Resources available did not indicate maintenance practices.</i>
Austin, TX	Public works maintains the streets. A neighborhood association or volunteer maintains any enhanced landscaping.
Bloomington, IN	Public works maintains road surface treatments.
East Lansing, MI	Determined by a maintenance agreement, typically the City performs maintenance on road surface treatments
Eugene, OR	<i>Resources available did not indicate maintenance practices.</i>
Farmington Hills, MI	<i>Resources available did not indicate maintenance practices.</i>
Grand Rapids, MI	<i>Resources available did not indicate maintenance practices.</i>
Madison, WI	Public works maintains the streets. Parks department maintains the trees within the right-of-way. A neighborhood association or volunteer maintains any other landscaping.
Minneapolis, MN	Resident funded
Seattle, WA	Seattle Department of Transportation begins maintenance five years after installation
Traverse City, MI	Determined by a maintenance agreement signed before installation
Washtenaw County Road Commission, MI	WCRC maintains pavement markings and signs. Townships complete repairs.