



NEIGHBORHOOD TRAFFIC MANAGEMENT PROGRAM



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This document was prepared by the efforts of a collaborative team which included Keizer Council members, Planning Commissioners, Traffic Safety Bike and Pedestrian Committee, city staff and engineers.

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1.0 Introduction

A Neighborhood Traffic Management Program (NTMP) is a systematic approach to initiating resident requests to treat neighborhood traffic issues. This is one "tool" the city has for bringing up safety concerns, but ultimately the city council and staff are responsible for executing safety for Keizer's streets to be equipped for all users. Therefore, they are expected to regularly assess all city streets for safety deficiencies and independently implement the necessary changes to improve safety for all users.

Keizer is committed to serving all its residents equitably. The NTMP provides a process to allow all voices to be heard. A focus on equity ensures we look beyond merely improving the system to improving the quality of life of every resident and to ensure the projects are distributed equitably.

1.1 Neighborhood Traffic Management Element

As traffic conditions change in the future and the city grows, there is a greater potential for neighborhoods to experience traffic, including cut-through traffic, and speeding that negatively impacts neighborhood livability. Having an established process allows the city to respond in a consistent manner.

Neighborhood Traffic Management (NTM) has evolved to encompass a wide range of measures and activities that can be effective in improving neighborhood safety and livability. While there is a wide range of issues that are commonly attached to NTM, the bottom line is how the speed and volume of vehicle traffic are addressed to create a safer and more livable community.

Neighborhood traffic management measures are a means of addressing traffic safety issues on a city-wide basis. As such, their application should not be limited to just local streets. NTM measures should be used to increase safety for pedestrians, bicyclists, and motorists despite street classification. It should be recognized that not all NTM measures are appropriate for all streets. Where appropriate, NTM measures may be installed in neighborhoods to limit speed and volume of traffic, and on collector streets to reduce speeding traffic. (Concerns on Arterials will go to Keizer Police Department or Public Works). Often a combination of solutions may be required.

Types of streets within the city that the NTMP can affect:

- Local streets: cul-de-sacs, or short streets with limited or no connectivity
- Neighborhood streets: have connections within and between neighborhoods, but do not serve as city-wide streets.
- Collector streets: provide citywide or large district connectivity and circulation.

Street classifications can be found in the Keizer TSP in figure 4.2.

2.0 NTM PROGRAM

Neighborhood Traffic Management programs are built off the three "E's" of transportation.

- **Education:** By making people visibly aware of the problems, they can help by slowing down, sharing with other people their concern regarding the negative impact of traffic, and by using other modes of transportation.
- **Enforcement:** By focusing the Police Department's enforcement efforts to acknowledged areas of concern, community awareness of transportation problems can be increased.
- **Engineering:** There is a suite of traffic calming and safety measures or multimodal facilities.

The process for the City of Keizer NTM program incorporates each of the "E's" at various stages of the plan. To be comprehensive, the NTM plan includes major components that work together to produce a complete NTM program. They include:

- **Process:** Outlines how an existing problem is brought to the city, what the thresholds/warrants are for defining a problem, steps toward a solution, prioritization of the project and monitoring of the benefit/ impact.
- **Standards:** This provides a uniform way for NTM measures to be implemented in the city. It provides guidance to minimize the impacts to safety and other users/stakeholders (maintenance, liability, diversion, parking, noise, aesthetic, emergency response, utility vehicles, or other roadway users). These can be found on the city website on the Public Works page.

3.0 NTM PROCESS

ASSESSMENT: The process for assessing NTM issues includes many steps and decisions to assure the safest projects are developed for the city. To be eligible, the project must be a two-lane street that has residential zoning or mixed use for at least 75 percent of the fronting properties. The intent of the following steps is to implement Education and Enforcement in a Level 1 study, and initiate Engineering in a Level 2 Action. The key steps are as follows:

3.1 Step 1. Identification of a Neighborhood Problem

The application is started on the city website. The information provided as answers to questions will filter the application to the correct department. Public Works and Keizer Police Department will review the submittal for immediate safety concerns and assess for support of Action Plans and prioritization. City staff will distribute to Traffic Safety Bikeways Pedestrian Committee (TSBPC) chair and applicable Neighborhood Association. Applicant will be contacted and informed which TSBPC meeting this topic will be included on the agenda.

The applicant can be represented by a Neighborhood Association for the application. If applicant does not have this representation, 75% of fronting properties' owners will need to be contacted for support. City staff will handle the notifications if no Neighborhood Association exists for that location. City will send a mailer with a QR code to direct residents within a 250' proximity to the point of conflict (including connecting streets).

3.2 Step 2. Level One Action Plan study

Once a problem has been presented, the next step will be to implement education and enforcement related NTM measures which are carried out by the Police Department. (Should significant safety issues be presented in Step 1, Public Works will address this outside of the NTMP.)

Process: Keizer Police Department will already be aware of this application as described in step 1. Feedback can be provided immediately if the Police are already aware of this location having a high volume of speeders. Education efforts would include scheduling placement of the speed reader board trailer. Enforcement at these locations can follow.

Once this study is complete, Keizer Police Department will provide feedback at the next TSBP meeting.

3.3 Step 3. Level One Action Plan Study Analysis

Following Step 2, City staff will conduct field reconnaissance and analysis to provide a quantitative background regarding the street(s) of concern and will establish the limits of the project. The applicant or Neighborhood Association can appeal the project limits to the Public Works Director.

Process: City staff will make a determination of whether thresholds have been met and Level 2 considerations are warranted. These considerations include the traffic speed study by Keizer Police Department and location analysis by Public Works.

Local Streets and Neighborhood routes thresholds for Level 2 consideration will include:

Speed: 50 percentile speed five or more miles per hour above posted speed and,

Volume: Daily vehicle counts more than 800 vehicles per day, and,

Collector routes thresholds for Level 2 consideration will include:

Fronting Land Use: More than 75 percent of the properties in the project limits have residential zoning, and

Speed: 85th percentile speed 10 or more miles per hour above the posted speed zone, and

Volume: Daily vehicle counts more than 1,500 vehicles per day for collectors

If Level 2 thresholds are not met, further study could be recommended. This may include implementing temporary, low-cost measures to gauge the effect of speed calming measures.

Findings and assessment will be presented to the TSBPC at the next monthly meeting.

3.4 Step 4. Level 2 Action (Engineering) and Prioritization by scoring

At the point that thresholds have been determined to have been met in Step 3 above, the next step will be to prioritize the proposed NTM project by scoring the location. This is assessed by

the Public Works Department. The reason for prioritizing the problem prior to developing solutions is to assure that staff, public time and design efforts are expended where the greatest needs exist. A scoring system has been developed to assist with the prioritization process to allow city funds to be allocated to the more critical locations. Once the scoring and ranking process is completed by the Public Works Department and a plan is developed, the project list will be entered into the City Capital Improvement Program (CIP) process for funding and implementation. This is where the scheduling of a project will be identified and where other factors (such as upcoming projects), beyond the ranking are considered.

Process: The scoring system by functional classification is noted in Appendix A using the ranking criteria that were established by city staff. The Public Works Department will be responsible for ranking projects between functional classifications. A project list is forwarded to Public Works Director for review and submittal into the CIP process.

Equity is assessed using the Transportation Disadvantaged Population Census map.
<https://mwvcog.maps.arcgis.com/apps/webappviewer/index.html?id=c62511a653084df3a7391095f6af8d6d>

3.5 Step 5. Project Development

The basic steps of project development will include the following:

Criteria to begin development:

- The project is within two years of funding through CIP.
- The project limits are defined in detail.

Steps:

- I. A Neighborhood Association meeting is held (if applicable) to discuss the project and outline the schedule of activities.
- II. The sponsoring residents for the project will complete an NTM survey form. This requires that signatures of support of 75 percent or more of all the fronting properties' owners within the project limits for an NTM project. Project limits are those set in Step 3 by Public Works, or within a 250' proximity to the point of conflict (including connecting streets.) The Neighborhood Association can assist with attaining this support. If no Neighborhood Association exists at this location, city staff will handle outreach. Without this support, the project will stop at this point. Any appeals will go to the Public Works Director.
- III. For projects with a common, straight forward solution, project will advance to funding. For larger projects, a project subcommittee is created that includes residents and staff to develop conceptual design for the NTM project. A member from TSBPC will be assigned. This subcommittee can research best practices of other cities for solutions. (Steps IV through VIII discuss the remaining process for large projects.) Interim steps may be implemented for safety ahead of the permanent solution.
- IV. A concept map will be prepared by the subcommittee that outlines the types of measures anticipated and the possible alternatives (if any). This map can be a satellite picture of the area affected, with arrows showing needed information. It will need to

include nearby areas that can be affected. A non-exhaustive list of possible remedies can be found in Appendix C. The NTM project will use the Keizer NTM Tool Box. (Appendix B) for choices to recommend. Deviations from measures for which standards exist will require a separate process.

- V. Assessment of the NTM project will be undertaken to look for impacts and “fatal flaws”.
 - Potential for diversion. Potential for traffic diversion to another street will be estimated for the project. If the anticipated diversion to another neighborhood or local street is over 150 vehicles per day, then residents from that street will be required to be contacted. Diversion to arterials or collectors will not be considered an impact.
 - Impact to Emergency Routes. Obstruction measures will not be allowed on routes designated by the fire and police departments as primary response routes.
 - Multi-modal Access. Bicycle, pedestrian, and transit access will not be negatively impacted by the NTM project.
 - Noise. The potential for noise impacts will be identified with selected NTM measures.
 - Loss of parking. Where on-street parking is removed or added, adjacent property owners will be notified in the development process by PW.
 - Visual/Aesthetic Concerns. Samples of the visual character of the NTM measures selected will be reviewed in the public process.
 - Maintenance. The effect of the NTM program on maintenance will be identified. This includes added costs for NTM measure maintenance (Landscaping) and impacts to maintenance activities.
- VI. With the concept plan and assessment approved by the project subcommittee, the NTM project will be presented to the Neighborhood Association(s) for review and comment.
- VII. Final design will be completed and construction documents prepared.
- VIII. Final plan will be shared at the next TSBPC meeting.

4.0 CIP Implementation/Funding:

4.1 FUNDING

Funds for NTM projects would most likely come from the approved Capital Improvement Program. Funding may be limited or not available in any given year. NTM projects with private (local) funding will be able to proceed through the NTM process even if public funding is not available at the time.

There are several options for funding NTM measures in Keizer. They include:

- Full funding through the CIP
- Partial funding through the CIP
- Cash from local residents

Projects that have completed the above-mentioned steps will be advanced to the city for full funding and implementation. As identified in Step 4, the highest rated group of projects will be forwarded to the CIP for funding.

Process: The final steps for implementation will include

- Local funding (if provided) will be secured. Should the local funding not be available at the time of project implementation, the project will be integrated into the City's priority list if applicable. Local funding may also come from residents.
- City staff will prepare a schedule for implementation and notify the Neighborhood Association.
- Construction will be completed.

4.2 MONITORING

Once an NTM project is completed, feedback will be requested three months after completion to determine effectiveness and whether further refinements to the plan are required. Volume and speed data will be collected and summarized in a before and after report by City staff. If refinements are necessary, they will be identified following analysis of before/after data.

Process: City staff will set up a standardized approach for before and after studies and tabulate performance data on all NTM projects implemented. The data will be presented to the TSBPC at the three-month review time. Over time this research will be used to refine or upgrade the elements of the plan.

If interim measures were implemented to gain data, these will be monitored and follow the same Monitoring process.

5.0 References

For more information on Keizer's transportation system and community equity please see the below links.

Public Participation Plan

<https://www.mwvcog.org/media/4036>

Traffic Safety Action Plan

<https://www.mwvcog.org/transportation/page/salem-keizer-transportation-safety-plan>

ODOT Transportation Options Plan

<https://www.oregon.gov/odot/Planning/Documents/OTOP.pdf>

Demographic Profile of Transportation Disadvantaged Populations in the SKATS Area

<https://www.mwvcog.org/media/4036>

Appendix A- Scoring System

Table 1- Local Street and Neighborhood Route Scoring Process

Criteria	Point	Basis for Scoring
Speed	Up to 35	Using 85 th percentile 2 points for an 85-percentile speed 4 mph over posted speed
	PLUS	
		3 points for every mph from 5 up to 10 mph over posted speed
	PLUS	
		Using speed profile: 1 point for every percent of volume with speed at or over 10 mph of posted speed up to 15 points.
Volume	Up to 20	1 point for every 100 vehicles per day over 500 vpd
Cut Through Traffic	Up to 15	10 points if an identified cut through route between arterials can be mapped and observed in the field
		PLUS
		5 points if data is provided that indicates of the traffic on the project street that 20% or more is cut through between arterials.
Pedestrian Generators	5	5 points if within 500 feet of street that there are pedestrian generators (parks, elderly housing, retail commercial uses, high school, college or hospital)
Sidewalks	10, 5, 0	10 points if sidewalks in project area are discontinuous on both sides 5 points if only one side of the street has continuous sidewalks 0 points if the street has continuous sidewalks on both sides in project area
School	10	10 points if an elementary or middle school (public or private) is within 500 feet of the project street
Equity	5	Project need per sheets 9 & 10 of MWVCOG report or lack of recent projects
TOTAL SCORE	Up to 100*	

Any projects that meet the threshold criteria and commit to funding the NTM project using private funds will be given five additional bonus points for every 20% local funds up to 25 pts.

* If a tie exists, consideration will be given from the demographics shown in *Demographic Profile of Transportation Disadvantaged Populations in the SKATS Area*.

Appendix A- Scoring System

Table 2- Collector Scoring Process

Criteria	Point	Basis for Scoring
Speed	Up to 50	Using 85 th percentile 2 points for an 85 th percentile speed 5 mph over posted speed PLUS 5 points for every mph from 6 to 10 mph over posted speed
	PLUS	
		Using speed profile: 1 point for every percent of volume with speed at or over 10 mph of posted speed up to 15 points
Volume	Up to 10	1 point for every 1000 vehicles per day rounded up
Pedestrian Generators	10	10 points if within 500 feet of street that there are pedestrian generators (parks, elderly housing, retail commercial uses, high school, college or hospital)
Sidewalks	15, 0	15 points if sidewalks in project area are discontinuous on both sides 0 points if the street has continuous sidewalks on both sides in project area
School	15	15 points if an elementary or middle school (public or private) is within 500 feet of the project street
Equity	5	Project need per sheets 9 & 10 of MWVCOG report/ lack of recent of projects
TOTAL SCORE	Up to 100*	

Any projects that meet the threshold criteria and commit to funding the NTM project using private funds will be given five additional bonus points for every 20% local funds up to 25 pts.

* If a tie exists, consideration will be given from the demographics shown in *Demographic Profile of Transportation Disadvantaged Populations in the SKATS Area*.

Appendix B

Keizer NTM Toolbox

Neighborhood/ Local

Traffic Circle
On-street Parking
Truck Restrictions
Turn Restrictions
Other Level I Measures
Street trees
Speed Hump
Curb extensions
Tighter turn radii
Speed Table

Collector

Pavement Texture
On-street Parking
One way entry/exit
Truck Restrictions
Turn Restrictions
Medians
Curb Extensions
Roundabouts

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City of Keizer Neighborhood Traffic Control Program

Capital Improvement Program or Plan is a short-range, usually four to ten years, that identifies capital projects and equipment purchases, provides a planning schedule and identifies options for financing the plan.

Potential Traffic Management and Control Devices

Described below are some typical traffic management and control devices that might be employed in a neighborhood traffic control project.

Traffic Management Devices:

(Physical devices which change street characteristics and traffic patterns.)

- **Traffic Circles** are raised landscaped islands placed in the center of an intersection. Their primary purpose is to reduce speed and separate intersection conflicts. Circles are especially effective in a series and may reduce through-traffic.
- **Curb Extensions** narrow the street by widening the sidewalk or the landscaped parking strip. These devices make pedestrian crossings easier. They also narrow the pavement and provide a visual cue to motorists that they are on a non-arterial route.
- **Speed Humps** reduce speeds on residential streets by requiring vehicles to slow to residential speed limits as the driver approaches the "hump." These devices are from 14 to 22 feet in length and approximately 3 inches high. The newer "hump" design is unlike the older "speed bump" design in that it allows vehicles to travel near the legal speeds on residential streets.
- **Diagonal and Semi Diverters** limit access to a street from one direction by placing a barrier diagonally across an intersection, separating the legs of an intersection or by blocking half the street. They are effective in reducing volume and allow more freedom of circulation within the neighborhood than cul-de-sacs. Both diagonal diverters and semi-diverters can be designed and installed to allow emergency vehicle access.
- **Median Barriers** are used on arterials to prevent through-traffic or control turns onto neighborhood streets from arterials. Medians may also be used within a neighborhood to prevent non-local traffic movement through a street. Medians may be used effectively in combination with forced turn channelization and turn prohibitions.
- **Forced Turn Channelization** allows traffic entering or exiting a

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neighborhood street to move in one direction only. This discourages a potential or existing through-traffic pattern.

- **Parking Revisions** can modify traffic conditions by either removing parking to facilitate turns and visibility or revising parking to slow traffic movement or add spaces, i.e., angle parking on one-way streets.
- **Parking Bays** with wider parking strips can be used to narrow street pavement or lanes and enhance street tree planting areas with longer curb extensions.
- **Pavement Modification** can be used to emphasize heavily-used pedestrian crossings or neighborhood entries. Thresholds, different paving surfaces, or raised pavement surfaces, are often used in combination with curb extensions.
- **Lane Demarcations** such as striping, buttons, or curbing can be used to better define or separate travel lanes, bicycle lanes, parking lanes, pedestrian lanes, etc. Generally, narrower travel lanes slow traffic slightly, but can raise other safety or operational problems.

Traffic Control Devices:

(Standard regulatory and advisory controls, such as signage and signals.)

The Federal Highway Administration has established guidelines, criteria or warrants that must be met to install each device. These guidelines apply to all streets in Keizer.

- **Stop Signs** are devices used to assign right-of-way at an intersection. Stop signs should not be installed, and are not effective, in diverting traffic or reducing speeding. They are installed at uncontrolled intersections with accident problems, visibility restrictions (such as buildings or topography); and/or where volumes are high enough that the normal right-of-way and is unduly hazardous. Variations include two-way stops and all-way stops. Each variation has certain guidelines that dictate its use.
- **Signal Modifications** can discourage or prohibit non-local movement on neighborhood streets (Local or collector) to or from arterials. Generally, the longer the signal wait times between side streets and arterials, (e.g., double cycles, etc.), the less non-local traffic will short-cut through a side street.
- **Turn Prohibitions** are used on arterials to prevent non-local traffic from using neighborhood streets (e.g., no left turn). These prohibitions may be in effect all day or just at weekday peak hours.
- **Signage Changes** may be informational, (e.g., flashing school

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crossing signs, neighborhood entry signs), directional (e.g., "Arterial Route" signs), or regulatory (e.g., "No Trucks" signs).

- **Speed Limits** are established by the State Speed Control Board, based on engineering criteria, local land use character, and existing speeds. Without physical changes to a street, a lower speed limit will not actually reduce speeds.
- **Rumble Strips** are raised buttons placed on a street to warn of a hazard or cue drivers to another traffic control device; they may slightly decrease speed, but raise bicycle safety and maintenance concerns.
- **One Way Streets**, where practical, may be used to discourage non-local traffic movements on neighborhood streets.
- **Clear Vision Areas** are visibility zones at intersections and driveways. These areas are sometimes obstructed by fences, brush, shrubs, parked cars, etc., which the city can legally require to be removed or modified.

Other Techniques

- **Crosswalks** at heavily used pedestrian or school crossings can be enhanced by visibility improvements, striping, warning signage, and by reducing the crosswalk distance.