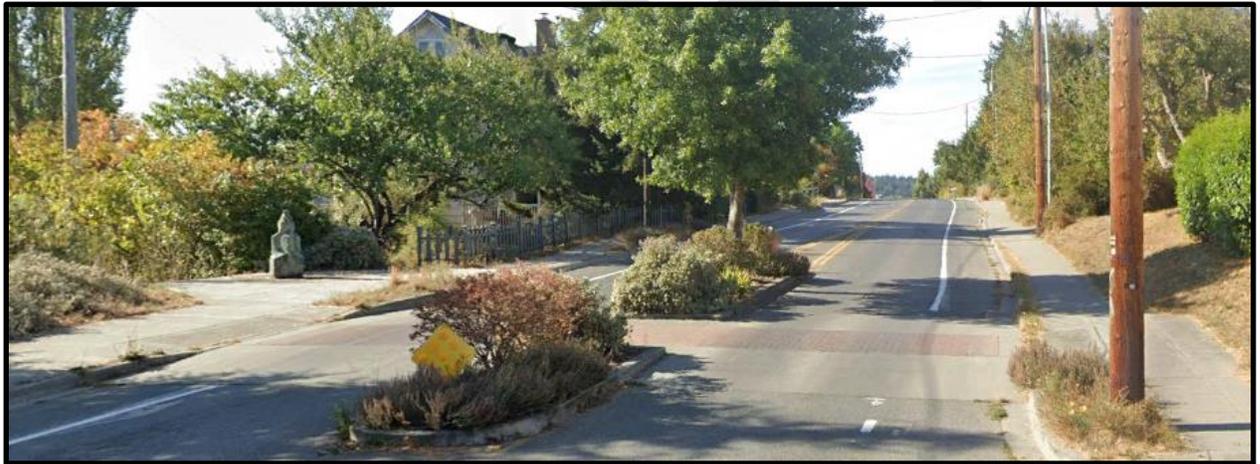


2023 Traffic Calming Guidebook



**City of Port Townsend
Engineering Department
250 Madison Street, Suite 2R**

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Why this guide

Welcome to the City of Port Townsend's Traffic Calming Guidebook! Seattle Department of Transportation has a traffic calming motto: "Slow the flock down!" And that's what this Traffic Calming Guidebook is setting out to do here in Port Townsend: slow down motorized transportation, making our streets safer for all. The intent of this guidebook is to provide readers with knowledge of how to implement traffic calming in our community. Slowing traffic is of utmost importance because it increases safety for all road users, especially pedestrians and bicyclists, and ultimately:

TRAFFIC CALMING SAVES LIVES!

This guidebook is about traffic calming in Port Townsend and has two parts:

- Part I - Educational material about the concept of traffic calming.
- Part II - Documentation of City of Port Townsend policies and strategies for implementing traffic calming.

In Part I, we will review the psychology of traffic calming, defining traffic calming, discussing what traffic calming is and is not, the costs of traffic calming features, why traffic calming is important, and review some examples both locally and further afield.

In Part II, we will look the steps a neighborhood group can take to get traffic calming implemented in their neighborhood. There will also be a review of the City's process for prioritizing locations, metrics for determining the citywide benefit, budget availability, and fundraising by citizens for traffic calming.

City staff is very excited to share with you what we have learned about traffic calming. Let's keep learning together, and grow our community traffic calming program!

Part I

What Is Traffic Calming?

Definition of traffic calming

Traffic calming is the intentional building of infrastructure that encourage motorists to reduce their speed. Traffic calming features are self-enforcing since they cause motorists to go slower because that is what feels most comfortable to do. Traffic calming comes in a variety of forms and one size does not fit all. The type of traffic calming installed depends on site specific considerations as well as available budgets.

Psychology of traffic calming

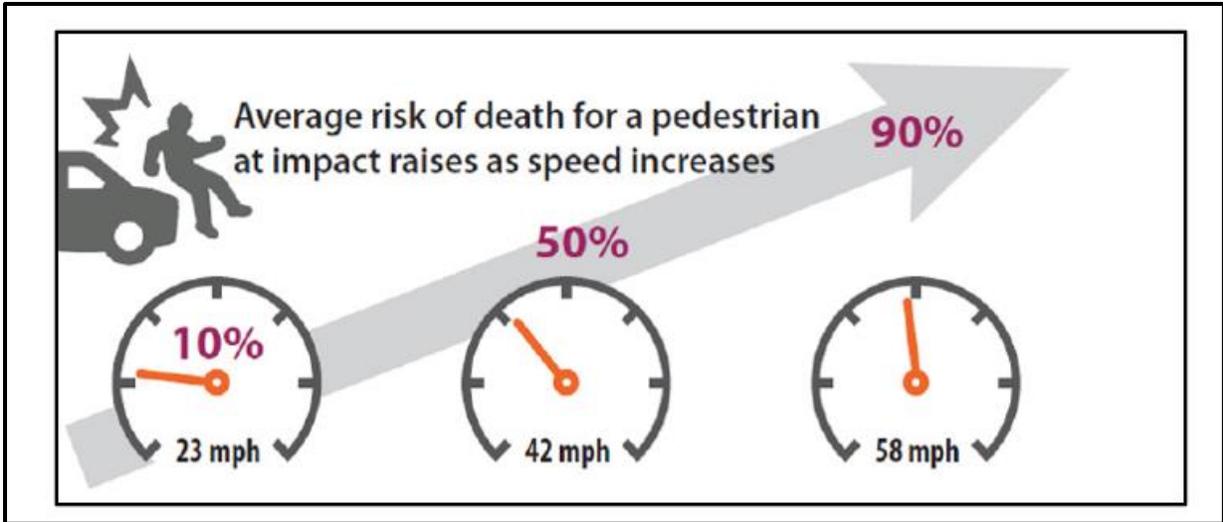
Visual appearance of a road correlates to motorists' speeds. If a road appears wide open, where a motorist can see long distance, like on a sag curve, drivers will go faster. When a street looks narrow, cars are likely to go slower. During the 1950s, the national highway programs designed many roads to be wide open and straight, which induced higher speeds. Implementing traffic calming is a reversal of those 1950s traffic engineering practices.



Wide open road (19th Street in Port Townsend) vs. narrow curved road - Vermont Street in San Francisc, California

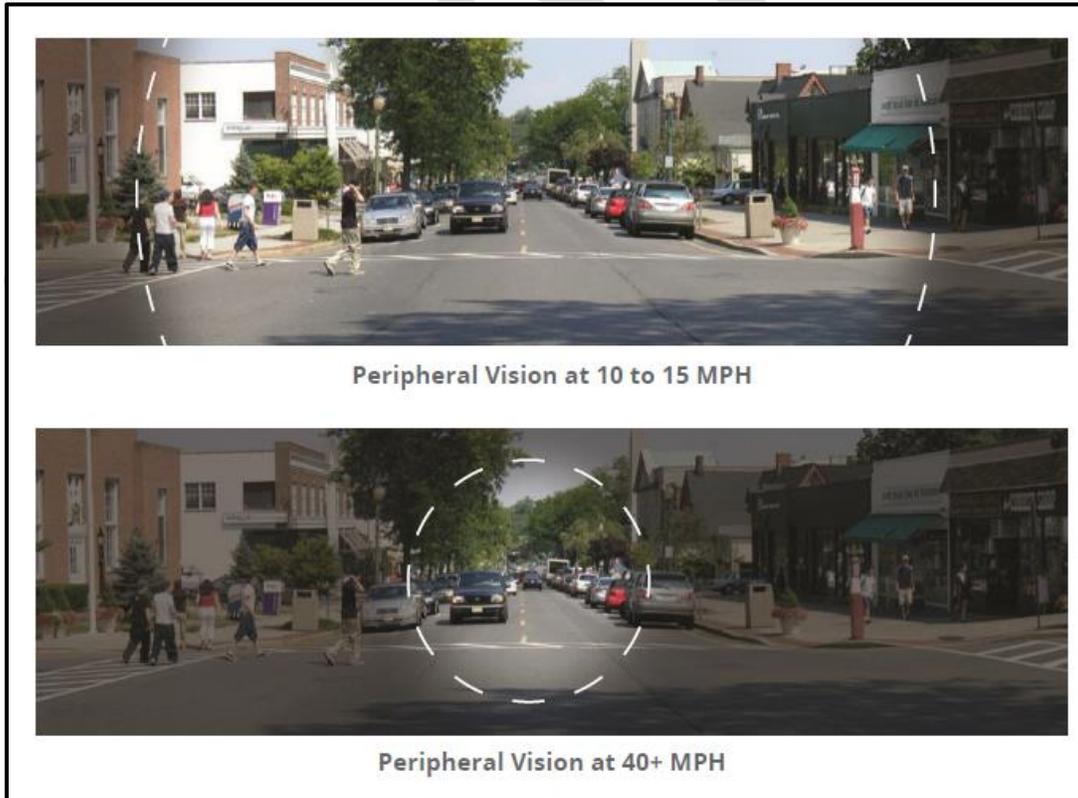
Importance of reducing motorist speeds

Why are pedestrians and bicyclists considered vulnerable road users? This is because when pedestrians and bikes are struck by motorists, they have a higher likelihood of sustaining serious injuries or being killed. For example, as noted on King 5 News: "An analysis of serious crashes in the City of Tacoma showed that while people who area struck while walking or biking only makeup 6% of overall crashes, they represent 57% of fatalities and serious injuries." And the faster a car is going at impact, the poorer the outcome is for the pedestrian or bicyclist.



Cited from Burlington, Vermont – 2020 Traffic Calming Manual

As well, reducing the speed of motorists, reduces the chances of a motorist striking vulnerable road users (pedestrians or bicyclists) at all. Our peripheral vision improves the slower we go. When we can take in all the activity on and around the road where we are traveling, we are more likely to see pedestrians, bicyclists, children, and animals. Traffic calming improves drivers peripheral vision by ending them to go slower.



Cited from Burlington, Vermont - 2020 Traffic Calming Manual

Traffic calming is not achieved by...

1. Stop signs. Stop signs can result in serious accident danger.
2. Speed limit signs and other warning signs. When there are too many signs, drivers start to ignore them.
3. Traffic enforcement. Traffic enforcement only achieves temporary compliance.
4. Speed radar trailers. Speed radar trailers only provide temporary compliance.
5. Spot treatments. Spot treatments entice motorists to accelerate after passing the location.

Traffic calming cannot eliminate all higher speeds. Effective traffic calming achieves statistical reductions in speed. Furthermore, traffic calming is not to be used as a diversion technique. In other words, the average daily traffic volume before and after traffic calming should be approximately the same. A side benefit is that on streets where the speeds are decreased, there has been shown to be a reduction in crime.

Additional consequences

While traffic calming influences motorists to naturally drive slower, there are also other consequences which proponents should be mindful of:

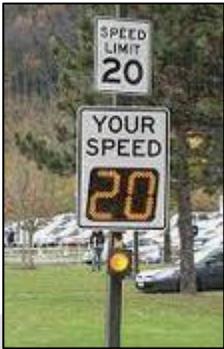
- Rumble strips cause additional noise
- Speed humps cause additional noise
- Medians with landscaping require additional maintenance
- Raised crossings and speed humps can be damaged by snowplows
- Midblock medians can restrict driveway access

Types of Traffic Calming

Traffic calming infrastructure comes in many forms, and one size does not fit all. Here is a list of the most common forms of traffic calming:

Type of Traffic Calming	Image
Chicane	
Choker	
Curb Extensions	

	
<p>Edge Lane Roads</p>	
<p>Median/Splitter Island</p>	
<p>Neighborhood Traffic Island</p>	
<p>Speed Hump</p>	
<p>Speed Table / Raised Crosswalk</p>	

Radar feedback sign	
Raised Intersection	
Rumble Strips	

Budgeting for installations

Most types of traffic calming cost a minimum of \$10,000. Here is a list of representative costs for a variety of features:

Type of Traffic Calming	Costs in 2020
Chicane	\$5,000 - \$15,000
Choker	\$10,000 - \$25,000
Curb extensions	\$10,000 - \$25,000
Edge Lane Roads	\$0.50 per lineal foot
Median/Splitter Islands	\$10,000 - \$15,000
Neighborhood Traffic Island	\$15,000-\$25,000
Speed Hump	\$5,000
Speed Table/Raised Crosswalk	\$15,000 - \$25,000
Radar feedback sign	\$10,000 - \$15,000
Raised Intersection	\$25,000 - \$70,000
Rumble Strips	\$1.00 per lineal foot

Traffic calming examples in Port Townsend

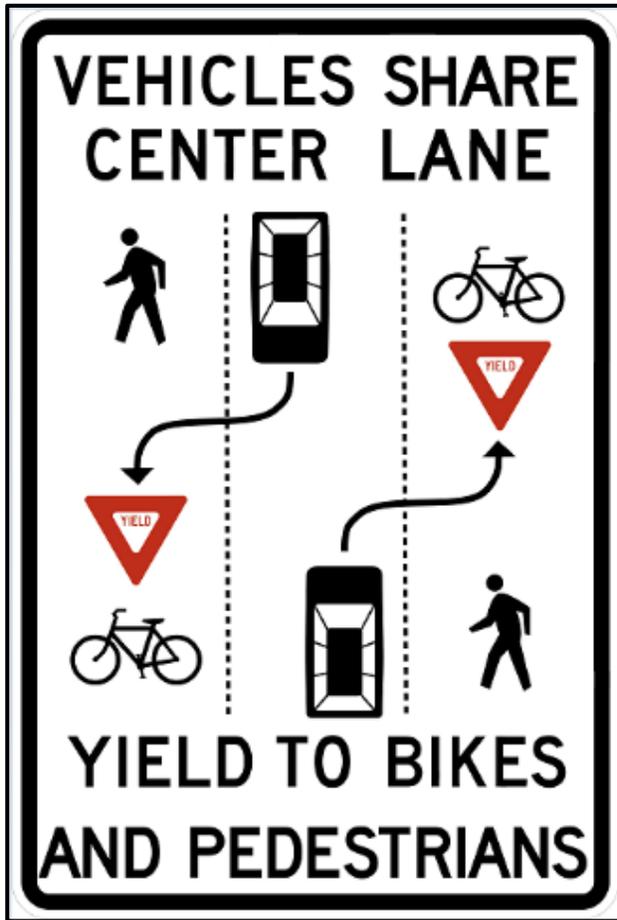
For all new capital improvement projects implemented in Port Townsend, traffic calming options are reviewed to determine what can be included in the project design. Also, there is community wide interest in slowing down motorists in locations where no new projects are being implemented. The following are examples of traffic calming constructed locally:

Kuhn Street in Port Townsend - Edge Lane Road Striping

Edge Lane Roads (ELRs) are the most cost effective option for traffic calming that the City has recently installed. This striping configuration, which has been used in Europe for years, is gaining wider acceptance in the United States. ELRs have no centerline, which has been shown to slow traffic by 2-7 mph. They have dashed white 8-inch lines on both edges of the driving lane. (Wide edge lines have been shown to slow traffic 1-4 mph.) ELRs calm traffic because they visually narrow the driving lane, and slow drivers down as they navigate by each other and around bicyclists and pedestrians.



Edge Lane Road striping – Kuhn Street between 49th Street and North Beach

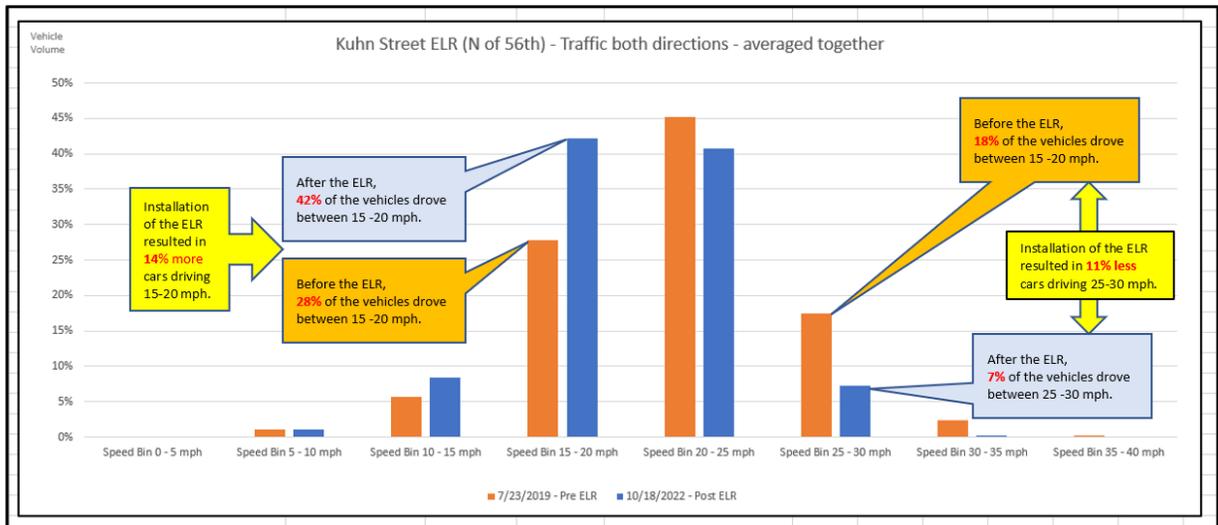


Informational sign about how the Edge Lane Road works

In the vicinity of Kuhn Street between 49th and North Beach, the neighborhood organized, and met with City staff as a group to discuss their concerns. The result was an Edge Lane Road project proposed by City staff and supported by the neighborhood.

The speed limit on Kuhn Street was also lowered by City ordinance to 20 mph. Citywide reduction in speeds on all residential streets may come later. Reducing the residential streets' speed limit to 20 mph is on the rise in other cities as well. For example, the City of Tacoma reduced residential neighborhood speeds to 20 mph, which went into effect January 1, 2023.

Due to the speed limit reduction and the ELR installation, the number of motorists driving between 10-20 mph increased, while the numbers driving 20-40 mph decreased. This is documented in the example bar graph. Orange represents before the ELR was installed and the blue is after.



The Kuhn Street Edge Lane Road (ELR) speed data shows the installation resulted in slowing down traffic.

Washington Street in Port Townsend - Neighborhood Traffic Islands

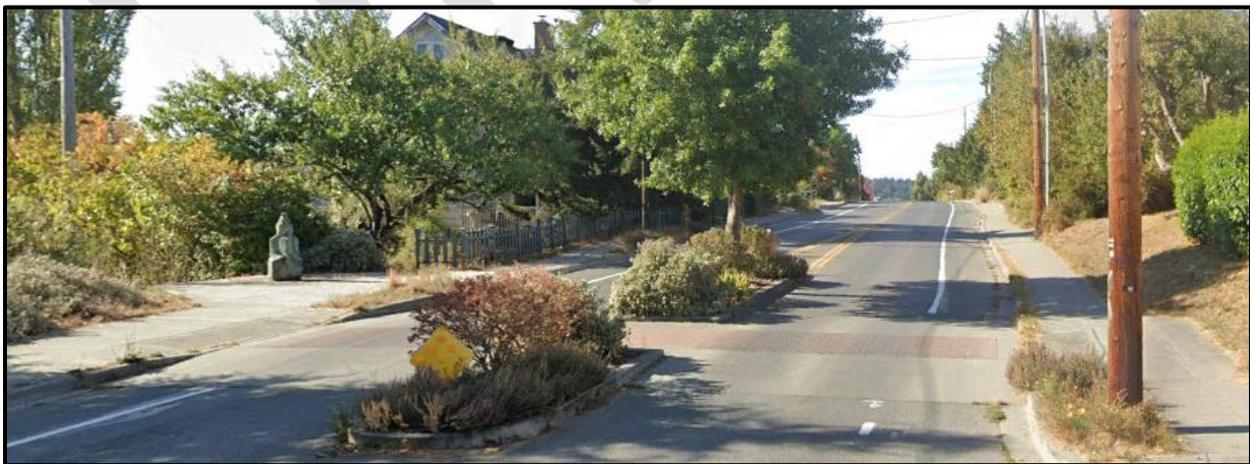
Neighborhood traffic islands are another traffic calming technique that slows motorists when they drive around the island (horizontal deflection). The neighborhood traffic islands on Washington Street are a project that started through neighborhood meetings. Neighbors were concerned by speeding on Washington Street and wished for sidewalks. Because the City did not have funding for sidewalks, traffic circles were proposed by City staff instead. The neighbors supported this proposal and raised money to fund the installation. Labor was provided by City crews.



Neighborhood traffic island - Washington and Cass Street adjacent to Jefferson County courthouse

F Street in Port Townsend - Splitter Islands with Raised Crosswalks

Splitter islands visually narrow the street, which encourages slower speeds. Raised crosswalks provide vertical deflection, which also encourages slower speeds. These combined traffic calming elements were constructed on F Street as part of a larger capital improvement project.



Splitter Island with Raised Crosswalk - F Street west of Oak Street

Port Townsend Post Office - Curb Extensions

Curb extensions are a traffic calming feature that make pedestrian crossings shorter, as well as visually narrowing the street, which encourages motorists to slow down. The curb extension constructed at the post office accomplishes both those goals.



Curb extension - Northwest corner of Harrison and Washington Streets at the Port Townsend Post Office

Traffic calming examples in other places

Port Townsend City staff also look to other communities for inspiration by reviewing traffic calming project away from home. Here are a few examples:

Wide gutter pans

Standard gutter pans are 24 inches wide. When constructed wider, they add to a sense that the road is narrow, and it is most comfortable for motorists to slow down. Below is a photo of this technique in Santa Barbara, California. In the Golden, Colorado (image below), a thirteen foot land looks like it has been narrowed to eight feet by the additional gutter pan width.



Santa Barbara, California



Golden, Colorado

Street trees and raingardens as traffic calming features

Street trees visually narrow a street, thus inducing lower speeds. Curb extensions that are filled in with landscaping can dual as raingardens and visually narrow the street at the same time.



Portland, Oregon

Part II

Traffic Calming Implementation

Part II of the Port Townsend Traffic Calming Guidebook documents City policies for implementing traffic calming. It describes the City policy, funding approach and an implementation process.

City policy

All traffic calming policies reflect the intent of the Port Townsend Comprehensive Plan. In particular, they are guided by Chapter 6 Transportation Element, Goal 6, “Provide safe streets for neighborhoods” and Policy 6.2 “Develop a program for neighborhood traffic calming and traffic control based on the fundamentals of education, enforcement, and engineering.” In summary, the Comprehensive Plan supports that the Port Townsend street network provide safe travel for all users and traffic calming is an effective strategy for this meeting this goal.

As identified in the Comprehensive Plan, the City will support the implementation of traffic calming throughout the City, with a particular focus on residential streets that have a speed limit of 25 mph. With this in mind, the City is developing a Traffic Calming Program, subject to funding. City staff will collaborate with neighborhood groups requesting traffic calming on a first come, first serve basis. Each project will take approximately two years to plan and construct. Council’s role in the implementation of traffic calming policies is to ensure that the entire community is well served by the program and that the program

is implemented with equity. The City will also ensure that the traffic calming program remains as simple as possible from initiation through implementation.

Implementation budget

Budgets for implementing traffic calming will be both City and neighborhood funded. The City will strive to provide \$25,000 annually through its budget process to support traffic calming efforts. This funding will be intended to cover some of the material and labor costs incurred during construction of the traffic calming feature. The number of projects the City has capacity to will depend on funding. It is not anticipated that the annual traffic calming budget will cover maintenance costs. Also, it is preferred that neighborhoods take responsibility for non-technical maintenance efforts such as weeding.

Whenever the City constructs a new capital improvement project, traffic calming is incorporated into the design. Traffic calming in the design is funded by the grants that fund the entire project.

Implementation process

Implementing traffic calming in Port Townsend will be a joint effort between the neighborhood requesting traffic calming, City engineering staff, and city crews. The neighborhoods will initiate the process and be open to collaborative discourse with City Engineering staff about traffic problems and solutions. City Engineering staff will analyze field conditions and context, and if warranted, develop a solution. Neighborhoods will also be open to fundraising to support traffic calming construction. City field crews will be responsible for construction of the identified traffic calming feature.

Table of Traffic Calming Implementation Steps

Steps	Neighborhood	City Engineering Staff	City Crews
1	Organize		
2	Submit written concern to City		
3	Meet with City – Identify problem	Host listening meeting with neighborhood	
4	↓	Field review, data research	Traffic counts - pre
5	↓	Develop concept(s)	↓
6	Meet with City – review concepts	Host meeting to propose concepts	↓
7	↓	↓	Temp install
8	↓	Review temp installation/ adjust concept	↓
9	Meet with City – review revision	Host meeting to explain revisions/costs	↓
10	Fundraising	Create construction drawings	↓
11	Provide funding to City	↓	↓
12	↓	↓	Construct
13	Provide post const. feedback	Monitor post const.	Traffic counts - post

List of Traffic Calming Implementation Steps:

1. Neighborhood organizes itself around an adjacent traffic concern.
2. Neighborhood representative submits a letter to the City. This letter should identify the neighborhood concern(s) with traffic, rather than propose a solution. Also, this letter should contain a request to enter into the City’s traffic calming program. A list of (at least five neighbor signatures at individual addresses in support of the letter to be included.
3. In response to letter, City engineering staff to host a listening session with neighborhood group, where neighbors can discuss their concerns. Council member from I&D Committee to also attend this meeting. Staff to take notes and compile a list of concerns outlined by neighborhood group.
4. City engineering staff to do a field visit to review listed concerns and existing conditions.
5. City engineering staff to review location’s ADT, speeds, and crash data on GIS.
6. City engineering staff to gather Council input about proposed location and how traffic calming at the specified location might benefit the wider community. Equity and prioritization considerations will be discussed.
7. City crews to place traffic counters to collect pre-construction data.
8. If warrants met, City engineering staff will develop concepts for several traffic calming options to address problem.
9. City engineering staff to host a follow up meeting with the neighborhood group to propose concepts and review in collaboration with the neighborhood group.
10. City engineering staff to discuss traffic calming funding options, including fundraising, with the neighborhood group during meeting.
11. The neighborhood group to provide feedback regarding the traffic calming concepts and budgeting proposed by City staff.
12. City engineering staff and neighborhood group to agree on traffic calming strategy to explore further.
13. City crews to place temporary installation (with cones) and observe and record any changes in motorist behavior.
14. City engineering staff to discuss and test temporary installation with emergency response vehicles and local buses, if applicable.
15. Concept design to be adjusted based on findings during temporary installation.

16. City engineering staff to meet with neighborhood group to discuss concept adjustments.
17. City staff to propose preferred traffic calming concept option to Council for approval associated with funding for a Comprehensive Streets Program
18. Neighborhood group to provide funds raised for traffic calming.
19. City engineering staff to provide construction details in drawing form to City crews for construction.
20. City crews to build traffic calming feature.
21. Traffic counters placed to collect post-construction data.
22. City engineering staff to receive ongoing feedback from neighborhood group and to continue monitoring new installation (by observation) to evaluate effectiveness.

Lessons learned from other local neighborhood organizing

- City staff's engagement and quick response to meeting invitations helped build neighborhood enthusiasm for the project.
- Neighborhood point people will need to go door to door to gather neighborhood support.
- It is important to encourage neighborhood residents to all speak their minds, to understand their authentic opinion about the traffic concern.
- At initial neighborhood meeting with City staff, it would be helpful if staff explained the timeline to get a project implemented, budgeting limitations, limiting sign installations, and sequence of events (especially if Council will be giving approvals).
- Neighborhood participants should learn about traffic calming, so they understand what kind of projects make the most sense for their situation.
- Be ready to receive pushback from the wider community about the project.
- Having neighbors sign a petition that is presented to City Council is a good way to gauge neighborhood support for both the City and for the neighborhood representative(s).
- It was helpful, as neighborhood point people, to be two people, one focusing on technical items, and the other focusing on people.
- Neighbors were less ready to donate money to the project than was expected.
- There are residents who feel mistreated by the government, and do not want to collaborate with the City. These same people tend to think that the City should be funding all the traffic calming projects, not the tax-paying residents.
- Explain to the community how travel times are still very similar before and after traffic calming is installed.
- Labeling neighborhoods who organize as "upper class" feels inaccurate and takes the focus away from the success of fixing a problem.
- Neighborhoods who are organizing, should come to Council meetings to better understand how projects get done at the City.

Conclusion

Thank you for reading this guidebook and for your interest in implementing traffic calming in Port Townsend. Together we can work toward minimizing traffic accidents in our community, making it a safer place for all.

Let's go! (slowly, of course)