



MONTANA
STATE UNIVERSITY

Western
Transportation
Institute

PRIMER

Pop-up

Traffic

Calming

& Placemaking



Prepared for :

City of Bozeman

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WHY TRAFFIC CALMING?

Traffic calming features improve conditions for non-motorized modes of travel such as walking and biking. Physical changes to the roadway can create an environment that naturally slows traffic and increases pedestrian visibility in the immediate vicinity (Federal Highway Administration, 2016). Beyond injury and crash prevention, additional benefits of traffic calming include improved pedestrian and cycling infrastructure resulting in increased physical activity, community building, and increases in property values (Litman, 1999).

"A City That Prioritizes Accessibility & Mobility"

The Bozeman Community Plan states, "careful planning for the development of infrastructure is vital and that transportation infrastructure should result in interconnected networks permitting travel by foot, bicycle, automobile, public transportation, and other means" (City of Bozeman, 2022).

Pop-up Projects

Pop-up traffic calming projects are low-cost and temporary versions of street design features that affect the behavior of drivers and pedestrians. Pop-up traffic calming projects demonstrate the benefits of street design change through short-term, low-cost, and scalable interventions (Street Plans Collaborative, 2016). They provide an opportunity for immediate change before long-term infrastructure changes are available to address community needs. Additionally, pop-up traffic calming projects serve as a community engagement tool for neighborhoods and transportation.



TRAFFIC CALMING FEATURES

Traffic Circle

Reduce speeds and help control right-of-way at uncontrolled intersections.

Materials:

- PEXCO 3" round channelizer posts
- 36" round planter
- potting soil
- latex traffic paint - white
- striping paint
- paint roller pads
- retroreflective glass beads
- drought tolerant plants and grasses



*Cost estimate: \$1,400-\$1,700

Curb Extension

Increase safety and visibility of pedestrians, reduce crossing distance, and slow drivers' speed. Can be installed at intersections or mid-block pedestrian crossings.

Materials:

- PEXCO 3" round channelizer post
- 33" conical planters
- potting soil
- latex traffic paint - white
- striping paint
- paint roller pads
- retroreflective glass beads
- drought tolerant plants



*4-way cost estimate: \$7,700-\$8,000

Mid-block cost estimate: \$2,700-\$3,000

Pedestrian Refuge Island

Minimize exposure to vehicle traffic by offering mid-crossing protections, allowing pedestrians to cross one lane of traffic at a time.

Materials:

- PEXCO 3" round channelizer post
- 36" round planter
- 48" round end planter
- potting soil
- latex traffic paint - white
- striping paint
- paint roller pads
- retroreflective glass beads
- drought tolerant plants and grasses



*Cost estimate: \$2,000-\$2,300

Median Island

Slow driver speed by narrowing travel lanes and deflecting straight travel.

Materials:

- PEXCO 3" round channelizer post
- 36" round planters
- 48" round end planters
- potting soil
- latex traffic paint - white
- striping paint
- paint roller pads
- retroreflective glass beads
- drought tolerant plants and grasses



*Cost estimate: \$2,000-\$2,300

PLACEMAKING FEATURES

Bus Stop

Incentivize use of public transportation by providing a comfortable place to wait for the Streamline bus.

*Cost estimate: \$1,800- \$2,100

Materials:

- PEXCO 3" round channelizer post
- 48" flat end planters
- potting soil
- latex traffic paint - white
- striping paint
- paint roller pads
- retroreflective glass beads
- wood for benches
- drought tolerant plants and grasses



Street Art

Strengthen public spaces, foster local identity, and promote the culture unique to Bozeman. Street art can be installed alone or as part of other traffic calming features

*Cost estimate: \$450-\$700

Materials:

- latex traffic paint - white
- paint roller pads
- various colors of spray paint
- other supplies such as stencils, chalk, paint brushes, etc.



PROJECT GOALS

	Traffic circle	Curb extension	Ped. refuge island	Median island	Bus stop	Street art
Reduce speed	✓	✓		✓		
Increase pedestrian visibility		✓	✓			
Control right-of-way	✓					
Minimize pedestrian exposure		✓	✓			
Create comfortable space		✓	✓		✓	✓

MATERIALS AND TOOLS

Materials & Cost

PEXCO 36" round channelizer post	\$50 each
Cybertech 36" round self-water planter	\$370 each
Cybertech 48" round end self-water planter	\$405 each
Cybertech 33" conical self-water planter	\$325 each
Cybertech 48" Flat end self-water planter	\$420 each
Potting Soil (1 cubic foot)	\$4/bag
Drought tolerant plants	\$20/flat
Ornamental Grasses	\$15/flat
Latex traffic paint (180 Linear Feet/Gallon)	\$18/gallon
Retroreflective Glass Beads (20lb Tub)	\$30/tub
SherLiner Striping Paint (18 oz can)	\$16/can
Spray paint - various colors	\$16/can
Paint roller pads - 6ct	\$15/pack
Wood for benches	\$50/bench

Choosing Plants

For pedestrian visibility and safety, choose plants under 12" in height. As most planters will be in full sun, choose drought tolerant plants such as fountain grass (6"), candytuft (10"), petunias (8"), or marigolds (6")

*Amount of materials and cost will vary depending on the size and scope of the traffic calming or placemaking project. Marketing and outreach costs (\$425) are included in each cost estimate. PEXCO 3" round channelizer posts should be installed at 6' apart.

Traffic Calming Trailer and Tools

The City of Bozeman Pop-up Traffic Calming Trailer is a resource for City of Bozeman staff and residents. The trailer includes many of the tools needed to install the traffic calming features listed above. Some common tools used in the installation of traffic calming projects include: chalk line, paint rollers and trays, tape measure, pressure washer, power drill, personal protective equipment and safety vests.



References

1. City of Bozeman. (2022, June 15). Bozeman Community Plan Executive Summary. Retrieved from Bozeman MT: <https://www.bozeman.net/home/showpublisheddocument/11764>
2. Federal Highway Administration. (2016). Small Town and Rural Multimodal Networks. Washington DC: U.S. Department of Transportation .
3. Litman, T. (1999). Traffic Calming Benefits, Costs, and Equity Impacts. Victoria, BC: Victoria Transport Policy Institute.
4. Moore-Gough, C. (2020, June 14). Annual Flowers. Retrieved from Montana State University Extension: <https://apps.msuextension.org/montguide/guide.html?sku=MT199501AG>
5. Street Plans Collaborative. (2016). Tactical Urbanist's Guide to Materials and Design. Miami: Street Plans.