

**REGIONAL SURVEY**  
**of**  
**NEIGHBORHOOD TRAFFIC CONTROL PROGRAM CRITERIA**  
**October 18, 2007**  
by City of Kirkland Public Works

Note: the following is a summary of a survey that asked specific questions to help the City of Kirkland in a review of its policies. The following summary is paraphrased from the responses and is not intended to provide a detailed description of each agency's Neighborhood Traffic Calming Program (NTCP), each of which is more complex than portrayed here and each should be considered as having been developed to address situations unique to each jurisdiction and its constituencies.

1. What support rate do you require for the installation of traffic calming devices such as traffic circles and speed humps?

**Auburn:** 40% must vote, 70% of which must favor.

**Bellevue:** 65% of those returning ballots + 100% of adjacent properties.

**Bothell:** 60% except 90% for diverters, closures, and turn restrictions.

**Federal Way:** 51% of returned ballots. If a ballot measure fails, a one-year waiting period is required to restart the process. The removal of a traffic calming device requires all of the following criteria to be met: a petition by owners or residents of at least ten lots within the affected area; 51% of the returned ballots favor removal; and a minimum period of 12 months has passed since the installation of the device(s) and the completion of an engineering analysis

**Issaquah:** Petition of 70% for humps on thru streets; 80% for humps on sole access streets; 60% for circles, chicanes; 70% for closures, diverters, turn/access restrictions.

**Metro/King County:** 70% or higher

**Kennewick:** 75%

**Kirkland:** 70% of all households if the project area is less than 70 households; 70% of returned ballots if the project area is larger. Work with a Task Force of 6 – 12 residents to develop a traffic control plan; the Task Force presents to the whole neighborhood at an Open House prior to the vote.

**Kitsap County:** 70%

**North Bend:** 90%

**Pierce County:** Majority

**Redmond:** 70% but considering reducing that to 65% or 60%

**Seattle:** 60%

**Shoreline:** 60%

**Snohomish County:** 60%

**Thurston County:** 30% support to begin design, 50% to construct.

**Woodinville:** 80% of the residents within 500 feet of the device plus approval of the household(s) where the device is located. *100% of the property owners within 150 feet along both sides of the street adjacent to a traffic control device provide a letter of support. To remove a traffic control device, 67% if the device has been in place for at least 12 months.*

2. How do you define the area of households who get to vote?

**Auburn:** On a case-by-case basis, but can be up to 4 blocks away.

**Bellevue:** By development or nearest collector arterial.

**Bothell:** Generally residents who have a frontage along the street, however, in the case of cut-through issues, parallel routes need to be considered.

**Federal Way:** Property owners and residents (owner-occupants get 2 votes) within 600 feet of the proposed device plus properties where the proposed devices would be located along their sole access route.

**Issaquah:** The street to receive the devices.

**Metro/King County:** All impacted homeowners are included in the petition area (e.g., all homes on nearby alternate/bypass routes)

**Kennewick:** the area is determined by the City's Traffic Engineer.

**Kirkland:** The impact area: households along the street and those who would have to use the route for access to their homes.

**Kitsap County:** People who live on the street or have to drive on that street to get home.

**North Bend:** By neighborhood

**Pierce County:** Neighborhood

**Redmond:** We don't vote, we survey. The area is generally the street to be calmed within 400 feet of the device or the nearest intersection, whichever is less. The area for a traffic circle is one block in each direction. These are guidelines that can be modified as judgment dictates.

**Seattle:** Generally the immediately adjacent blocks. Mid-block measures would be households on each side of the street of that block. Traffic circles would be each block face of the intersection streets. Traffic diverters would require a wider neighborhood approval.

**Shoreline:** Traffic circles – households within one block of the intersection; speed humps and chicanes – households on the street where the devices will be installed and any other streets that, based on engineering assessment, would be significantly impacted.

**Snohomish County:** The area is based upon a number of factors such as direct access to the road, attendance at the neighborhood meeting, etc.

**Thurston County:** If there is an association, then it is the entire association; if there is no association, then just the street being evaluated and abutting residents.

**Woodinville:** The households within 500 feet of the device.

3. What are your minimum speed requirements? (e.g. 85<sup>th</sup> percentile 5 mph over the speed limit)

**Auburn:** 85<sup>th</sup> percentile speed 10 mph over the speed limit; or 5 or more drivers per 24 hour period driving in excess of 15 mph over the speed limit; or Evidence of cut-through traffic from parallel high volume arterials; or criteria nearly met and engineering judgment deems there to be a significant speeding problem.

**Bellevue:** 85<sup>th</sup> % must be 35 mph or greater (on 25 mph streets), 30 mph or greater in marked school zones, & 33 mph or greater adjacent to neighborhood parks.

**Bothell:** 85<sup>th</sup> percentile 30 mph or higher.

**Federal Way:** A point system us used ranging from ½ point for 85<sup>th</sup> percentile speeds of 26 mph to 3 points for speeds over 41 mph.

**Issaquah:** 10 mph over the posted speed limit in residential areas; 10 mph over the in school zones; 8 mph over adjacent to parks including neighborhood parks.

**Metro/King County:** Case-by-case

**Kennewick:** The 85<sup>th</sup> percentile speed a minimum of 5 mph over the limit.

**Kirkland:** An 85<sup>th</sup> percentile speed of at least 5 mph over the speed limit.

**Kitsap County:** 75 percentile 10 mph or more over the speed limit.

**North Bend:** 85 percentile 5 mph or more over the speed limit and the fastest 12 percent of the traffic must exceed the speed limit by 10 mph.

**Pierce County:** No minimum over the speed limit currently required. Pierce County is developing a program through a traffic calming pilot project.

**Redmond:** The 85<sup>th</sup> percentile speed 10 mph over the posted speed limit.

**Seattle:** No minimum speed requirement for traffic circles, although higher speeds weigh more in our priority ranking. Generally we look for 85<sup>th</sup> percentile speeds 10 mph over the speed limit for mid-block measures on residential streets, but it's not hard and fast. Arterial traffic calming standards will also generally require 85<sup>th</sup> percentile speeds of 10 mph over.

**Shoreline:** Traffic circles – no minimum; speed humps and chicanes – 85<sup>th</sup> percentile is 35 mph or greater, but if the street has a higher volume (over 1,000 vpd) then the speed criterion is lowered to an 85<sup>th</sup> percentile of 32 mph.

**Snohomish County:** The 85<sup>th</sup> percentile must be 35% over the posted speed limit; only 25 and 30-mph streets are eligible.

**Thurston County:** We have a weighted formula that includes speed, volume, and other factors such as schools. We use these factors if the project is funded by the County, but not if the neighborhood funds the project.

**Woodinville:** 85<sup>th</sup> percentile speeds over a 24 hour period 10 mph or greater over the posted speed limit or when the peak hour volumes are greater than 25 trips per hour or 40 trips per two consecutive hours and the 85<sup>th</sup> percentile of these vehicles are 10 mph or more over the posted speed limit; or if the location is within a school zone, the 85<sup>th</sup> percentile speed is 5 mph over the speed limit of either 25 mph or 20 mph when children are present

#### 4. Minimum/Maximum traffic volume and/or street classification requirements.

**Auburn:** not indicated (ni)

**Bothell:** 25% of the traffic is determined to be non-local, based on ITE trip generation guidelines. No speed cushions on collectors or higher classified streets.

**Bellevue:** Traffic circles 300 – 2000 ADT; 12' speed hump 300 – 2000 ADT; 22' speed hump 2000 – 3500 ADT

**Federal Way:** A point system is used ranging from ½ point for 500 vehicles per day to 3 points for volumes over 3,500 vpd. Only allowed on local, minor, and principal collectors with 25 mph posted speed limits.

**Issaquah:** 300 – 2,000 for speed humps, traffic circles, chicanes, slow point chokers; 300 – 6,500 for curb extensions, medians, entry treatments/gateways; less than 2,000 and more than 30% thru traffic during any given hour for street closures, diverters, turn/access restrictions. Calming devices are not allowed on classified roadways (arterials).

**Metro/King County:** Volume is case-by-case; non-arterial streets only.

**Kennewick:** A minimum of 500 vpd; local residential or neighborhood collector streets only.

**Kirkland:** A minimum of 200 vpd and a maximum of 5,000 vpd.

**Kitsap County:** 200 – 3,000 vpd. Must be in a 25-mph zone with the street classified as residential. Calming devices are discouraged on collector roads.

**North Bend:** Does not apply to arterials or collector streets.

**Pierce County:** Have used temporary (rubberized) and permanent (asphalt) speed humps on local roadways and use radar signs on arterials.

**Redmond:** Greater than 300 vehicles per day and less than 3,500 vpd.

**Seattle:** Traffic circles and speed humps are for residential streets only. We usually look for ADTs over 400 vpd, but it's not a hard and fast rule. Higher ADT's generally

rank higher. Certain traffic calming measures (e.g. speed cushions) can be considered on lower classification arterials, primarily collectors.

**Shoreline:** A minimum of 700 AWDT and a maximum of 2,500 AWDT.

**Snohomish County:** Minimum volume of 600 vpd, must be through. Must be residential streets, not arterials.

**Thurston County:** Only consider calming on residential roads; see response to question 3.

**Woodinville:** No max/min volume requirements if the 85<sup>th</sup> percentile speed requirement is met. Cut-through traffic volumes represent at least 30% of the total daily traffic on a residential street. Used on residential streets only.

5. Other criteria if any:

a. Do you prohibit calming devices on emergency response routes?

**Bothell:** No.

**Bellevue:** Have MOU with the Fire Department; each proposal is reviewed by Fire. Generally do not have calming measures such as circles or speed humps on emergency response routes with volumes greater than 6500 ADT. Exceptions have extensive design/review process with Fire.

**Federal Way:** Nothing more disruptive than speed tables (3" x 22') on principal collectors.

**Issaquah:** No.

**Metro/King County:** Yes

**Kennewick:** Must not be on primary emergency routes. Other emergency routes may have restrictions on the types of devices.

**Kirkland:** Yes, on both primary and secondary emergency response routes. We are working with the KFD on a policy for the installation of traffic circles on non-designated emergency routes where the measure of their response time criteria would be measured against the delay added by a traffic circle.

**Kitsap County**

**North Bend:** Not indicated in their program

**Redmond:** No prohibition, but we try and avoid placing devices on primary response routes.

**Seattle:** Traffic circles and speed humps are prohibited. Speed cushions can be used.

**Shoreline:** We work with the Fire Department to obtain support for each specific location. If they have serious concerns about a proposed installation or oppose the project, we will not install it.

**Snohomish County:** No

**Thurston County:** No, we work with emergency services and only install devices they approve. Emergency services have veto rights.

**Woodinville:** No, because the design of our traffic control devices allows emergency responses to pass with minimal to no delay.

b. Do you have a maximum grade criterion?

**Bothell:** No, although good engineering judgment is used.

**Bellevue:** less than 8%

**Federal Way:** 8%

**Issaquah:** No, but interested in what other jurisdictions use.

**Metro/King County:** No

**Kennewick:** 8% maximum grade or along horizontal curves with sight distances less than 200' or adjacent to driveways.

**Kirkland:** 10%

**Kitsap County:** 5% maximum

**Redmond:** 10% maximum grade.

**Seattle:** No speed humps over about 6% grade. Traffic circles installed at intersections with high grade approach streets get additional striping on the approach.

**Shoreline:** We do not install speed humps on streets with a grade of 8% or greater.

**Snohomish County:** Less than 8%.

**Thurston County:** No, but we have not installed them on any grades of significance and we inform neighbors that we avoid grades and curves for installations.

**Woodinville:** No specific criteria, but all are subject to engineering judgment.

c. Do you have any street width requirements?

**Bellevue:** No

**Bothell:** Yes, 11 foot lanes are typically desired.

**Federal Way:** No. Only placed on streets with no more than 2 lanes and a pavement width not greater than 40 feet.

**Issaquah:** No

**Metro/King County:** No

**Kirkland:** No.

**Kitsap County:** No.

**Redmond:** No, but we generally don't build streets narrower than 20 feet for two-way traffic.

**Seattle:** No.

**Snohomish County:** No.

**Thurston County:** No, but we only use these physical devices on residential roads so roadway width is typically not an issue. If width becomes an issue, we may look at medians and bulb-outs as options in lieu of more traditional approaches.

**Woodinville:** No.

d. Other?

**Auburn:** Three-phased process used. Phase I primarily pavement marking and signing solutions; Phase II temporary traffic calming devices using rubberized material bolted to the pavement; Phase III permanent devices. Removal of Phase III devices can be done at the neighborhood's expense after the devices have been in place for at least 6 months.

**Bothell:** No blockage of bike lanes.

**Federal Way:** Points are given for the number and severity of accidents in a 5-year period. ½ point for 0.3 accidents per year to 3 points for more than 1.3 accidents per year; ½ point for 0.1 injury accidents/year and 3 points for more than 0.5 injury accidents per year.

**Kennewick:** There must be a minimum of ¼ mile in uninterrupted street length. Drainage, utility location, street lighting, and other considerations may also limit the placement of traffic calming devices.

**Kirkland:** Collision rates on non-arterial residential access streets are so rare in Kirkland that we do not use them as a criterion for installation.

**Kitsap County:** Discouraged around schools where there is a lot of bus traffic.

**North Bend:** Three phase approach before physical modifications are considered. The City Council must approve and provide funding.

**Redmond:** We don't put devices on severe curves. No speed humps within 300' of a stop sign or traffic signal.

**Shoreline:** The households immediately adjacent to proposed speed humps must support the installation.

**Snohomish County:** Minimum sight distance of 150' from humps or islands; humps at least 100' from intersections; spacing of speed humps 150' – 300' apart; islands are typically not landscaped.

**Thurston County:** Our ranking formulas are under review and will probably be revised in the coming months. In general we use a ranking system to prioritize county-funded work. We spend \$0k on traffic calming construction annually and this will increase to \$60k in 2008. We also require neighborhoods to actively participate in the process for traffic calming devices regardless of the funding source. Active participate is residents using the speed watch program. We also deploy smart trailers and temporarily mount speed feedback signs on signposts and streetlights in neighborhoods. The speed feedback signs and streetlights have been very popular with our elected officials and neighborhoods. Our sheriff's department likes the mounted signs.

**Woodinville:** Other criteria include no pedestrian sidewalk, path, shoulder area, or trail is provided or road shoulders (paved, gravel, or earth) that are less than 3 feet wide. A sight distance condition exists where engineering judgment indicates that a traffic control device would improve safety.

All new installations shall be a single speed bump per travel direction. A double bump may be considered only after a single bump has been in operation for 6 months and based on engineering judgment a 2<sup>nd</sup> bump is needed. One of the following conditions must exist for a 2<sup>nd</sup> speed bump: 85<sup>th</sup> percentile speed 10 mph over the speed limit within 150 of the existing bump; peak hour volumes are greater than 25 trips per hour or 40 trips for 2 consecutive hours and the peak hour 85<sup>th</sup> percentile speed is 10 mph over the speed limit; or within a distance of 25 feet from the bump, the 85<sup>th</sup> percentile 24 hour or peak period speeds are greater than 25 mph.

6. If a "warrant" were not met for a traffic-calming device, under what conditions, if any, would you allow/recommend the device be installed anyway? e.g.
- a. Stronger support than you minimum required?

**Bothell:** Possible, but funding doesn't allow for much deviation from the criteria.

**Federal Way:** No

**Issaquah:** Only by City Council direction.

**Metro/King County:** Case-by-case

**Kirkland:** No

**Redmond:** No.

**Seattle:** We are developing criteria on these issues, but an increased level of community support will not likely be a factor.

**Thurston County:** No.

**Woodinville:** If 80% of a neighborhood along the affected section of street where a traffic control device is proposed, provide written support. In one case, a 90% support rate over-rode a homeowner objection to having the device in front of their home.

- b. A non-city funding source?

**Auburn:** Neighborhoods may pay for their NTC devices if they choose not to wait for the City funding process, which must prioritize within a budget.

**Bothell:** Possible, but funding doesn't allow for much deviation from the criteria.  
**Federal Way:** Yes  
**Issaquah:** Possibly, but this has not come up.  
**Metro/King County:** Case-by-case  
**Kennewick:** The City currently does not fund a program, so all devices are resident-funded.  
**Kirkland:** Only for traffic circles, which have other values: landscaped entry to a neighborhood, drainage infiltration.  
**Kitsap County:** Yes, but the device still requires a 70% support rate.  
**Redmond:** No.  
**Seattle:** For traffic circles we will allow lesser criteria when a community proposes alternative city grant sources for funding as compared with the criteria we use for internal programmatic funds. Our goal is to look further into this issue and systematically evaluate what prioritization/ranking criteria we will apply to devices built using internal program funds vs. non-city funds for other devices.  
**Thurston County:** We would consider it.

c. Collision rates higher than average

**Bothell:** Possible, but funding doesn't allow for much deviation from the criteria.  
**Federal Way:** This is one of their evaluation criteria.  
**Issaquah:** Possibly if other methods did not correct a collision problem.  
**Metro/King County:** Case-by-case  
**Kirkland:** Have not encountered this yet, but it would likely be a consideration.  
**Kitsap County:** Yes, we did this in one case.  
**Redmond:** This hasn't come up.  
**Seattle:** Not sure, although collision rates currently are central to our ranking criteria for traffic circles and are considered for other devices.  
**Shoreline:** If the collision rate were higher than average, we would consider installing physical devices.  
**Snohomish County**  
**Thurston County:** We would consider it.

d. Other?

**Bellevue:** City Council Directive  
**Federal Way:** If a project's severity score reaches 6 or more points, staff develops a proposal with citizen input, but the balloting process may be bypassed. Also, developer mitigation for connecting to a stub street.  
**Issaquah:**  
**Metro/King County:** Case-by-case  
**Kitsap County:** County Commissioner directive.  
**Seattle:** We are trying to strengthen our policies on the issue of non-city funded calming devices.  
**Snohomish County:** Elected official decision.

e. Would not consider it at all.

**Federal Way:** It depends  
**Issaquah:** Would consider all options but ultimately it is the decision of the City Council.  
**Metro/King County:** Case-by-case