

SAFE SYSTEM CASE STUDY

Lowering citywide speed limits in Seattle

KEY TAKEAWAY: Seattle's speed management strategy treats serious injury as a predictable, preventable outcome. By applying survivable speed limits systematically across the network, the city reduces the most dangerous speeding before crashes occur, rather than waiting to respond after people are hurt.

SAFETY LEVER



In November 2016, an ordinance took effect in Seattle lowering default speed limits from 30 mph to 25 mph on arterials and from 25 mph to 20 mph on residential roads unless otherwise posted. The Seattle Department of Transportation (SDOT) also increased the density of speed limit signs on arterials throughout the city. In addition to adjusting speed limits, SDOT layered signal timing changes, traffic calming and speed safety cameras to comprehensively approach speed management.



Seattle Department of Transportation

Instead of basing speed limits on traffic flow ...

... Seattle based speed limits on safety needs

Setting speed limits using engineering methods, such as the 85th percentile speed

This can result in speed limits that match traffic flow but not the surrounding context and do not meet the safety needs of everyone who uses the streets.

Setting speed limits based on the road's purpose, the types of crashes likely to occur and the speeds at which people can survive them

Seattle's reduced limits reflect speeds that are more survivable for the pedestrians and bicyclists who use its urban streets. A pedestrian struck at 25 mph or below faces less than a 5% risk of death. That risk rises sharply as impact speeds increase — for example, reaching nearly 40% at 40 mph.

Instead of being reactive ...

... Seattle was proactive

Making piecemeal changes in reaction to crash data or public complaints

This can delay improvements until after crashes occur or concentrate changes where community voices are loudest, not where the actual risk is highest.

Scaling up successful interventions citywide based on where risk of serious injuries or fatalities is high

- In 2016, Seattle posted new 25 mph signs on downtown arterials.
- In 2017, 25 mph signs were expanded to neighborhood business districts. By the end of 2019, 8 of the city's 32 urban villages were signed at 25 mph.
- In 2020, Seattle began updating its speed limit policy to place 25 mph signs on most arterial streets.
- Currently, 90% of Seattle's arterials are signed at 25 mph.

Instead of a narrow approach ...

... Seattle took a broad approach

Relying on a single method to address speed

Lowering speed limits alone will change the behavior of some drivers but not others.

Layering multiple tools to address speed

SDOT complemented speed limit changes with design and operational strategies that reduce speeding.

- Prior to modifying speed limit signs, SDOT retimed downtown signals to support 25 mph travel speeds.
- Seattle has installed traffic calming countermeasures on approximately 10 arterial streets a year. These include speed cushions, street striping changes to narrow field of vision, median islands, speed feedback signs and intersection daylighting.
- Seattle expanded the number of school zones with speed safety cameras.
- Seattle increased the density of speed limit signs to ¼ mile intervals in each direction to improve driver awareness. Previously, signs were 1 to 1½ miles apart, and some streets were unsigned.

Instead of maintaining silos ...

... Seattle fostered cooperation

Addressing safety problems agency by agency

No single agency has the authority or capacity to achieve safety goals on its own.

Addressing safety as shared responsibility and prioritizing multi-agency partnerships

- SDOT worked with the City Council to pass an ordinance lowering default speed limits in October 2016.
- Without this ordinance, SDOT would have needed to complete time-consuming and costly engineering studies to implement widespread speed limit changes.
- SDOT also worked with the Washington DOT to reduce speed limits to 25 mph on several state-owned arterials.

What lever did this intervention pull?

 **PRIMARY:** Seattle reduced **severity** by lowering vehicle speeds and in particular the proportion of vehicles traveling at speeds that carry a high injury risk to pedestrians and bicyclists.

State and local DOTs can reduce crash injuries by lowering one or more of the following

SAFETY LEVERS:



EXPOSURE

how much people drive



SEVERITY

how fast vehicles travel and how heavy they are



LIKELIHOOD OF A CRASH

how often road users come into conflict

What were the results?

- ✓ SDOT [documented](#) speed reductions. Median speed fell 10% and the 85th percentile speed fell 7%. In addition, 54% fewer drivers exceeded 40 mph on roads previously signed for 30 mph.
- ✓ Crash injuries also went down, according to an [IIHS evaluation](#). The study found a 20% reduction in odds a crash resulted in injuries on arterials downtown and an 11% reduction in those odds outside of downtown.

What else can be done?

Rapid-deployment steps: Seattle already uses some quick-build treatments, but wider application of quick-build curb extensions, median islands or speed cushions could strengthen speed management.

Policy/process trigger: Seattle's speed limit changes have been applied more broadly and consistently than its traffic calming efforts. The city could strengthen its approach by adopting policies that support more systematic deployment of traffic calming or roadway reconfigurations across a larger share of the network.

Continued data collection: Continue to track changes in vehicle speeds in corridors where speed management strategies have been applied with a particular focus on extreme speeds, which carry the highest risks.