



An urban forest issue brief

Green Streets



Greener Streets are Safer Streets

Trees and landscape features are often perceived by transportation officials as a safety risk. However, evidence from national and local studies reveal that the inclusion of trees and other streetscape features may actually reduce crashes and injuries on roadways.

Tree-lined Streets...

- Are safer.
- Cost less to maintain.
- Reduce traffic congestion.
- Mitigate air and noise pollution.

Functioning
highways
need green
infrastructure.

Community benefits from roadside landscapes:

Calmer traffic. Research done in several states has shown that motorists benefit from vertical features such as trees and buildings to gauge their speed. Three-fourths of Americans believe that being smarter about development and improving public transportation are better long-term solutions for reducing traffic congestion than building new roads.¹

Less maintenance costs. All other factors equal, the condition of pavement on tree-shaded streets is better than on unshaded streets. In fact, shaded roads require significantly less maintenance and can save up to 60% of repaving costs over 30 years. That's a lot of savings considering the four million miles of roadways in this country (approximately 1% of the total area of the contiguous U.S.).²

Healthier residents. Human health effects from air pollution usually involve respiratory functions and can be quite severe. Studies show that trees and shrubs have the greatest impact at minimizing harmful automotive outputs. Not only are trees prettier to look at than asphalt and industrial areas, but also trees reduce noise pollution by acting as buffers. Let's turn all highways into greenways.³

Recommendations:

- Prioritize space and location for trees in the highway and streetscape design process.
- Incorporate stormwater management techniques like bioswales and infiltration planters.
- Update highway and streetscape standards to improve conditions for trees.
- Support H.R. 6435, the 'National Highway Chokepoint Congestion Relief Act,' specifically the provision that includes trees and green infrastructure as eligible capital improvements.
- Support an amendment to H.R. 1780 or H.R. 1329 to specifically includes tree planting as an eligible project for reducing greenhouse gas emissions from mobile sources.
- Support an amendment to S. 238- the 'Build America Bonds Act of 2009'- to specifically include nonprofit organizations working to improve our national transportation systems through the planting of trees and green infrastructure as qualified participants and projects.

Tree Benefit Facts

Serving Size 1 Million City Trees (2" caliper)
Recommended Servings Per City about 40%

Costs

Volunteer Service \$0 Trees \$250 million

Annual Value*

Energy Conservation 30% less usage

Cost Savings \$10 million

Stormwater 350 million gallons captured

Cost Savings \$3.5 million

Clean Air 1,000 tons less air pollutants

Cost Savings \$5 million

Public Revenue 11% more for goods

Cost Savings varies by city

Property Value 1-10% higher

Cost Savings varies by city

Lower Crime 50% less violent crime

Cost Savings priceless

Total Cost Savings \$18.5 million

ROI within 14 years not including public revenue, property, and crime benefits.

* Annual Values are based on studies from the Center for Urban Forest Research, Center for Urban Horticulture, Lawrence Berkeley Lab, and the Univ. of Washington, and vary by city. Approximate values are indicated where the differences vary less significantly by city.

References:

1. Bratton, N. J. and K. L. Wolf. 2005. Trees and Roadside Safety in U.S. Urban Settings, Paper 05-0946. Proceedings of the 84th Annual Meeting of the Transportation Research Board (January 9-13, 2005). Washington D.C.: National Academies of Science.

2. McPherson, G. and Muchnick, J. Effects of Street Tree Shade on Asphalt and Concrete Pavement. Journal of Arboiculture 31(6). November 2005. pp. 303-310.

3 National Oceanic and Atmospheric Administration.

