

August 20, 2008

The Honorable Michael N. Castle
United States House of Representatives
1233 Longworth House Office Building
Washington, D.C. 20515

Dear Representative Castle:

We are interested in your recent legislation introduced in the House of Representatives, H.R. 6435, the 'National Highway Chokepoint Congestion Relief Act' and would like you to consider amending the legislation to specifically include trees and green infrastructure as eligible capital improvements.

There is a growing body of evidence from studies done nationally and in Toronto¹, Washington², New Hampshire, and Florida⁴ that the inclusion of trees and other streetscape features may actually reduce crashes and injuries on urban roadways. Research done in Orlando showed that motorists benefit from vertical features such as trees and buildings to gauge their speed⁴. Other studies that identify commuting as one of the most stressful experiences of urban life showed that stress response decreases and frustration tolerance increases with views of nature³. In fact, in Delaware, we've successfully used trees for traffic calming.

In addition, a recent Delaware Urban Forest Effects study showed that air pollution removal by trees and shrubs has the greatest impact at minimizing the effects of ozone, followed by particulate matter, nitrogen dioxide, sulfur dioxide, and carbon monoxide⁵, which are harmful automotive outputs. Conventional transportation engineering approaches discourage the use of roadside features such as trees as being fixed-object hazards, but, in fact, in Delaware, we have found them to be more of a benefit to motorists.

Based on cited research and local applications of trees and green infrastructure as vital elements in improving the safety and health of motorists, we recommend the following additions and amendments to H.R. 6435:

Sec. 2 (10)

Trees and green infrastructure reduce traffic congestion by calming traffic and creating safer roadways. Trees reduce air pollution by removing air-borne contaminants. Automotive accidents are less likely along tree-lined streets, and resulting fatalities are 14 times more likely in accidents between cars than in accidents between cars and trees.

Sec. 4 (13)

percentage of trees and green infrastructure;

Sec. 6 (b)(4)

livability factor that includes estimates of canopy cover;

Sec. 7 (b)(1)

consult with local governments, port authorities, design engineers, urban forestry professionals, and regional planning organizations during the project selection process;

Thank you for consideration. Please contact either of us if you have any questions or we can be of further service.

Sincerely,

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Cc.

Senator Biden
Senator Carper
Jim Catella
Kate Rohrer
Mike Quaranta
Tonya Baker
Lisa Borin
Laura Haynes

¹ Naderi, J.R. Landscape Design in the Clear Zone: Effect of Landscape Variable on Pedestrian Health and Driver Safety. *Transportation Research Record; Journal of the Transportation Research Board, No. 1851*, TRB, National Research Council, Washington, D.C., 2003, pp. 119-130.

² 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.: Transportation Research Board of the National Academies of Science.

³ Cackowski, J.M., and J.L. Nasar. The Restorative Effects of Roadside Vegetation: Implications for Automobile Driver Anger and Frustration. *Environment and Behavior*, 35, 6, 2003, pp. 736-751.

⁴ Dumbaugh, E. Safe Streets, Livable Streets. *Journal of the American Planning Association*, 71, 3, 2005, pp. 283-300.

⁵ Nowak, David J., Hoehn, Robert E., Wang, Jun, Lee, Andy, Krishnamurthy, Vikram and Schwetz, Gary. Urban Forest Assessment in Northern Delaware, 2008.

⁶ St. Martin, A. J., J. C. Milton, and M. E. Hallenbeck. The Safety Effects of Urban Principal Arterial Streetscape Redevelopment Projects Including Street Trees: A Context-Sensitive Case Study, Paper 07-2829. *Proceedings of the 86th Annual Meeting of the Transportation Research Board (January 21-25, 2007)*. Washington D.C.: Transportation Research Board of the National Academies of Science, 2007.

⁷ Wolf, K. L. and N. J. Bratton. 2006. Urban Trees and Traffic Safety: Considering U.S. Roadside Policy and Crash Data. *Arboriculture and Urban Forestry*, 32, 4, 170-179.