

Sustainability in Transportation

What is “sustainability”? Sustainability is “meeting the needs of the present without compromising the ability of future generations to meet their own needs” (Brundtland Commission Report, 1987).

Why is sustainability important? According to the AASHTO report, *Transportation: Invest in our Future*, “America’s transportation system has served us well, but now faces the challenges of congestion, energy supply, environmental impacts, climate change, and sprawl that threaten to undermine the economic, social, and environmental future of the nation. With 140 million more people expected over the next 50 years, past practices and current trends are not sustainable. To meet the transportation needs of the present and pass on a better world to our children and grandchildren, it is necessary to expand the transportation network’s capacity while simultaneously reducing the environmental footprint of the system.”

The report urged transportation decision makers to adopt the so-called “triple bottom line” approach to sustainability by evaluating performance on the basis of economic, social, and environmental impacts and allocating equal consideration to these driving forces. The specific elements of the triple bottom line approach and the steps required to achieve them can be summarized as follows:

- *Robust economic growth*: Deliver a sustainable, high-performance transportation system in support of a robust economy by first optimizing existing infrastructure, then reshaping demand, and lastly expanding judiciously.
- *Improved quality of life for all citizens*: Enhance quality of life by integrating transportation with the built environment by using the full tool kit, including context sensitive solutions, land use policy, and diversified mode choice.
- *Better-than-before health of the environment*: Embrace environmental stewardship as a preeminent approach to delivering transportation services that result in a zero carbon footprint and a “better-than-before” environment.