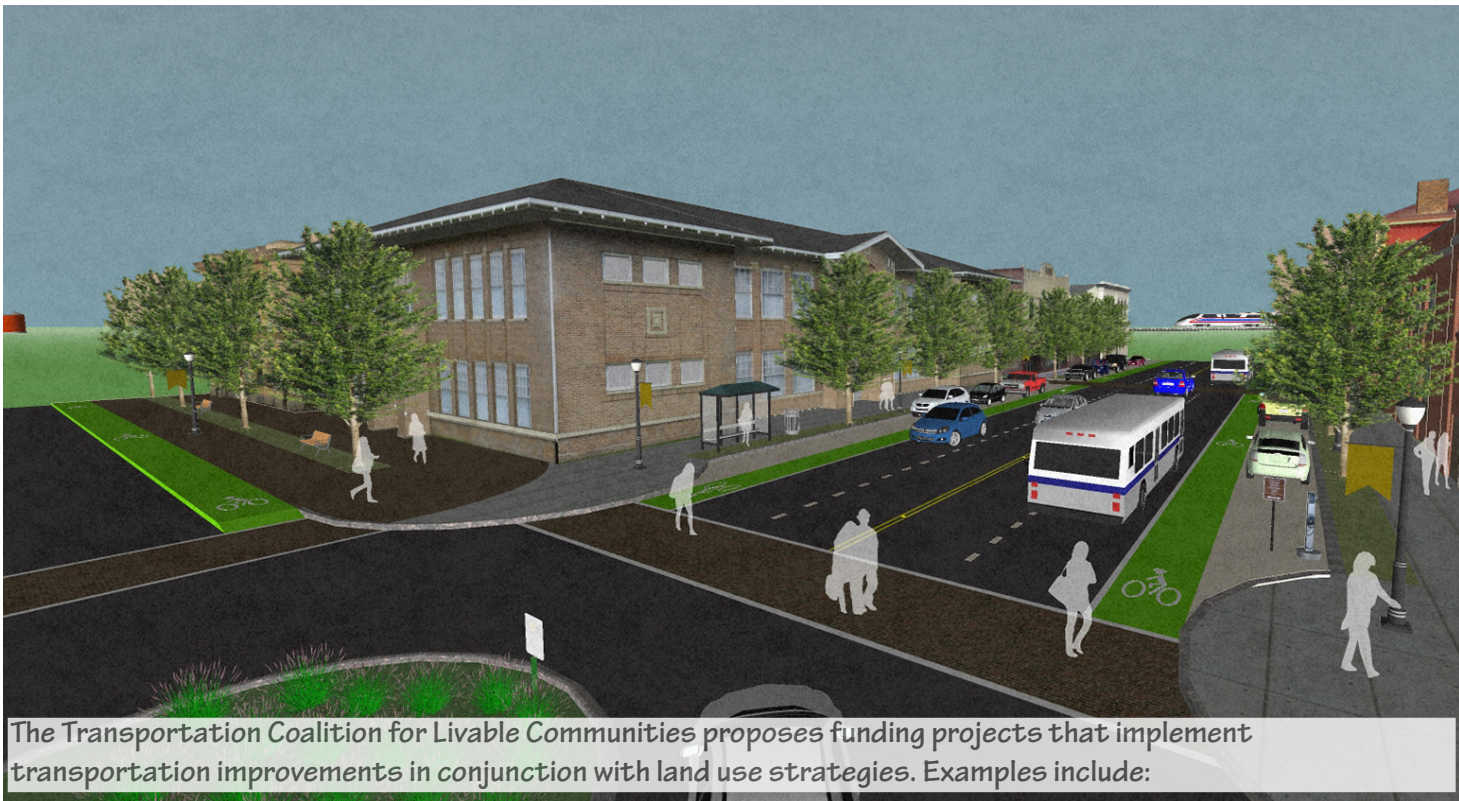


The premise of the program concept is that we must **INTEGRATE** transportation and land use strategies – combining livable community infrastructure, maintenance, and operations in order to maximize GHG reductions from neighborhood scale planning and combined projects rather than single purpose investments.

the strategy

With California's regions planning for higher density and more compact development patterns, successful implementation of SB 375 and other regional GHG reduction strategies relies on cost-effective and integrated investments in land use and transportation in existing urban and rural communities. Livable Community Infrastructure includes the streets and sidewalks that connect our neighborhoods, the pipes that move water to and from homes and businesses, and the parks and trees needed to improve quality of life in neighborhoods.

what we propose to fund



The Transportation Coalition for Livable Communities proposes funding projects that implement transportation improvements in conjunction with land use strategies. Examples include:

- bike facilities
- street repairs
- frequent and predictable transit
- clean technology infrastructure
- rail modernization
- streetscape enhancements
- traffic calming
- pedestrian safety improvements
- multi-use paths
- water, sewer, & utility improvements
- urban greening

the numbers behind it all

	Transportation and Land Use Strategies		Max GHG reduction if applied as an individual strategy to full neighborhood scale plan (not additive)	Max GHG reduction if applied to full neighborhood scale plan, in combination with other supporting strategies (not additive)
Transportation Efficiency Measures	Travel Demand Management	Commute Trip Reduction	7%	21%
		Transit Fare Subsidies	7%	20%
		Parking Cashout	3%	8%
	Transportation Network Management	Eco-Drive Education	5%	14%
		Multi-modal Network Connectivity	7%	21%
		Road Maintenance	10%	<i>Reductions not yet quantified</i>
		Variable Speed Limits	20%	<i>Reductions not yet quantified</i>
	Transit Service Frequency	1%	3%	
Land Use Incentives and Improved Transportation Options	Neighborhood Design Characteristics	Residential Density	5%	15%
		Transit Proximity	8%	25%
		Land Use Diversity	10%	30%
	Multi-modal Infrastructure	NEV Networks	1%	3%
		Bus Fleet Low Carbon Fuels	5%	<i>Reductions not yet quantified</i>
		Pedestrian Network	1%	2%
		Capital Transit Improvements	8%	<i>Reductions not yet quantified</i>

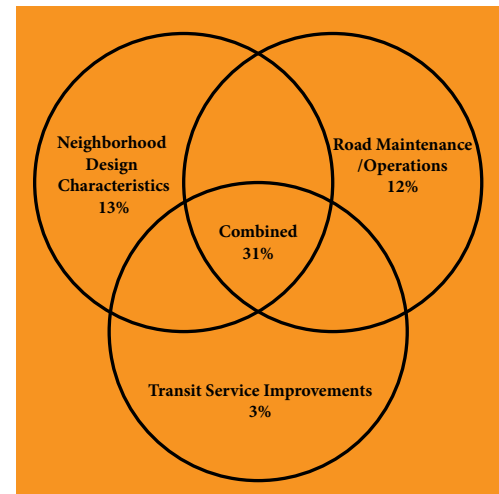
what it means

- The interactions of land use, urban form, and transportation are complex. They vary over time and depend on the context, scale, and intensity of application. Many achieve their greatest impact when they affect the full spectrum of travel purposes, destinations, and trip lengths. When attempting to project the full long-range effects of investments on travel and GHG reduction, illustrated above are measures applied at a community-wide or corridor level scale of development such as within a specific plan.
- Transportation efficiency measures such as lowering speed limits, using congestion pricing, expanding transit service, or making operational improvements, could be implemented within a few years to generate reductions in GHGs prior to 2020. Compounding GHG reductions can be achieved when combined with land use strategies and transit infrastructure.
- While strategies that involve land use patterns and improved transportation options take a longer time to implement, notable reductions are realized by 2030, with greater GHG reductions of 9% to 15% by 2050. Early investments must be made in land use in order to achieve these significant reductions.¹⁰
- Road maintenance is a transportation system efficiency strategy that can yield up to a 10% decrease in GHG emissions. Maintaining smooth roads allows vehicles to operate more efficiently, and well-maintained bridges keep detours to a minimum – improving traffic flow and reducing associated greenhouse gas emissions.
- Combining land use and transit strategies is projected to yield GHG reductions of 4% by 2020 and 16% by 2050 as compared to 2050 baseline trends.³
- Transportation efficiency measures yield greatest short term (2020) GHG benefits between 4% and 20% from 2050 trends, but infrastructure investments in land use, transit, and complete streets facilities have additional benefits such as improved public health.¹⁰
- When streets and transit infrastructure are co-implemented with land use, greater reductions in GHGs are realized, especially over a long term horizon. For example, land use code changes combined with expanded transit services achieve stronger GHG reductions than when only one option is implemented.

why it's important

No single strategy can achieve AB 32 goals. Key trends from existing research can help shape an understanding of why an integrated approach must be taken to maximize our investments in GHG reduction. From an initial assessment of research, a policy framework can be built around allocating funding to regions to promote combinations of integrated strategies for transportation efficiency, land use incentives, and improved transportation options at the local level. Implementing various “bundles” of transportation and land use strategies at a regional and local level could achieve 30% greater annual GHG emission reductions than expected baseline levels in 2050.

Combinations of transportation and land use strategies create synergies that substantially enhance the potential reductions from individual measures. The diagram and table presented in this document are a synthesis of the latest research on the ranges of GHG reduction from individual and combined strategies based on research published by various Universities, Caltrans, the Transportation Research Board, California Air Pollution Control Officers Association, US Environmental Protection Agency, and other institutions, and also found within the books *Growing Cooler* and *Moving Cooler*.



how we got here

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