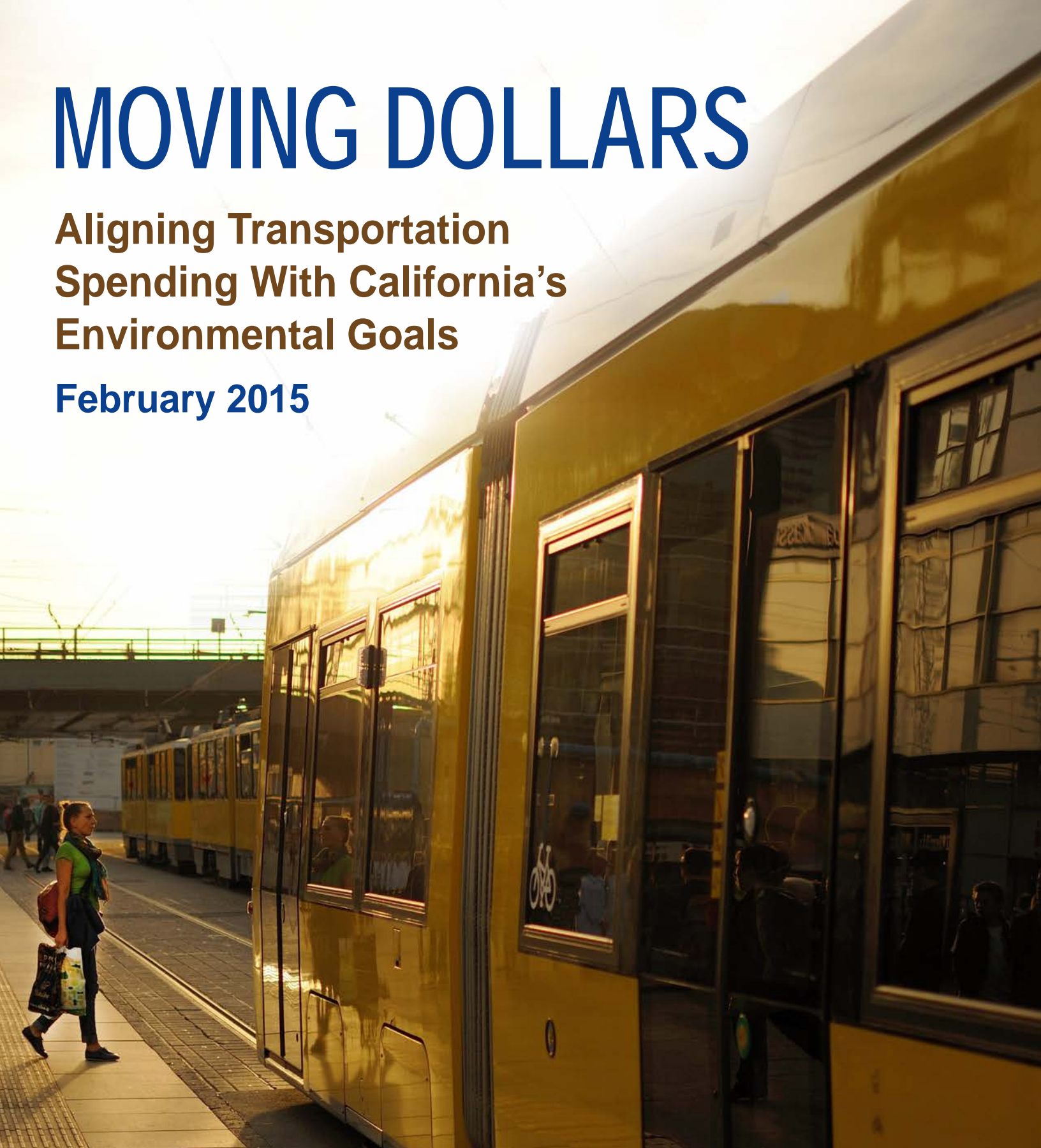


# MOVING DOLLARS

Aligning Transportation  
Spending With California's  
Environmental Goals

February 2015





### **About this Report**

This policy paper is the fifteenth in a series of reports on how climate change will create opportunities for specific sectors of the business community and how policy-makers can facilitate those opportunities. Each paper results from one-day workshop convenings that include representatives from key business, academic, and policy sectors of the targeted industries. The convenings and resulting policy papers are sponsored by Bank of America and produced by a partnership of the UCLA School of Law's Emmett Institute on Climate Change and the Environment and UC Berkeley School of Law's Center for Law, Energy & the Environment.

### **Authorship**

The author of this policy paper is Ethan N. Elkind, Associate Director of the Climate Change and Business Research Initiative at the UCLA School of Law's Emmett Institute on Climate Change and the Environment and UC Berkeley School of Law's Center for Law, Energy & the Environment (CLEE). Additional contributions to the report were made by Sean Hecht and Cara Horowitz of the UCLA School of Law and Jordan Diamond of the UC Berkeley School of Law.

This report and its recommendations are solely a product of the UCLA and UC Berkeley Schools of Law and do not necessarily reflect the views of all individual convening participants, reviewers, or Bank of America.

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THE EMMETT INSTITUTE  
ON CLIMATE CHANGE AND THE ENVIRONMENT



## Glossary of Terms

**California Air Resources Board (CARB):** An organization within the California Environmental Protection Agency responsible for providing and maintaining clean air, including enforcement of the state's greenhouse gas reduction law (AB 32).

**California Environmental Quality Act (CEQA):** A statute that requires state and local agencies to identify the significant environmental impacts of their actions and to avoid or mitigate those impacts, if feasible.

**California Global Warming Solutions Act of 2006 (AB 32):** California state law which sets out the greenhouse gas emissions reduction goal to be achieved by 2020.

**Caltrans:** California's state Department of Transportation, responsible for planning, designing, constructing and maintaining the State Highway System.

**California Transportation Commission (CTC):** An eleven voting member state entity responsible for the programming and allocating of funds for the construction of highway, passenger rail and transit improvements throughout California.

**Complete Streets:** a transportation facility that is planned, designed, operated, and maintained to provide safe mobility for all users, including bicyclists, pedestrians, transit vehicles, truckers, and motorists, appropriate to the function and context of the facility.

**Congestion Management Agency (CMA):** a county-designated agency to manage and preserve existing traffic levels by coordinating land use, air quality and transportation planning among local jurisdictions and preparing a "congestion management program" to spend transportation funds.

**Federal Highway Administration (FHWA):** a federal agency that provides stewardship over the construction, maintenance and preservation of the Nation's highways, bridges and tunnels.

**Federal Transit Administration (FTA):** an agency within the United States Department of Transportation that provides financial and technical assistance to local public transit systems.

**Federal Railroad Administration (FRA):** an agency in the United States Department of Transportation that promulgates and enforces rail safety regulations, administers railroad assistance programs, conducts research and development in support of improved railroad safety and national rail transportation policy, provides for the rehabilitation of Northeast Corridor rail passenger service, and consolidates government support of rail transportation activities.

**High-Occupancy Toll (HOT) Lanes:** a road-pricing scheme that gives motorists in single-occupant vehicles access to high-occupancy vehicle lanes (sometimes referred to as HOV lanes).

**Interregional Transportation Improvement Plan (ITIP):** a listing of interregional highway and rail projects prepared by Caltrans and approved by the California Transportation Commission.

**Metropolitan Transportation Commission (MTC):** the transportation planning, coordinating and financing agency for the nine-county San Francisco Bay Area.

**Moving Ahead for Progress in the 21st Century Act (MAP-21):** a federal funding and authorization bill for transportation.

**National Environmental Policy Act (NEPA):** federal law that establishes national environmental policy and goals for the protection, maintenance, and enhancement of the environment and provides a process for implementing these goals within the federal agencies.

**Regional Transportation Improvement Plan (RTIP):** prepared by regional entities for submission to the California Transportation Commission, to reflect priorities identified by counties, project sponsors, and members of the public.

**Senate Bill 375:** 2008 state law that instructs the California Air Resources Board to set regional emissions' reduction targets from passenger vehicles and Metropolitan Planning Organizations for each region to develop a "Sustainable Communities Strategy" that integrates transportation, land-use and housing policies to plan for achievement of the emissions target for their region.

**State Highway Operations and Protection Program (SHOPP):** a state funding program that covers spending needs related only to the maintenance, safety, and rehabilitation of state highways and bridges.

**State Transportation Improvement Plan (STIP):** a biennial five-year plan adopted by the California Transportation Commission for future allocations of certain state transportation funds for state highway improvements, intercity rail, and regional highway and transit improvements.

**Vehicle Miles Traveled (VMT):** a measurement of miles traveled by vehicles in a specified region for a specified time period.



## Introduction and Summary: A Vision for Better Transportation

California's state, regional and local governments spend roughly \$28 billion a year on transportation infrastructure projects, with almost half of that amount derived from local funding sources. Local decision-makers control almost three-quarters of these funds, while state agencies control the remaining quarter. Year after year, the majority of these dollars goes to automobile infrastructure, including new road and highway expansion projects

At the same time, California's environmental and energy priorities include increasing public access to transportation options beyond the private, single-occupancy automobile – such as walking, biking, and taking transit. These modes of travel can provide residents with more convenient and affordable options to access jobs and services, improve public health, and meet growing market demand for communities that provide such mobility. They can also decrease the air pollution that, in addition to sickening residents, contributes to global climate change.

However, the continued, predominant financial support for automobile infrastructure, particularly new road and highway expansion projects, undermines California's environmental goals. With relatively little funding remaining for alternative transportation modes, it also increases transportation costs for residents. And it exacerbates inequality related to housing, transportation affordability, and access to jobs.

To develop a vision and policies for moving a greater share of state transportation dollars to projects and outcomes that are more cost-effective and better aligned with environmental goals, a group of transportation advocates, experts and public officials gathered at the University of California, Los Angeles in October 2014 for a discussion sponsored by the University of California Berkeley and Los Angeles Schools of Law.

Ultimately, the participants envisioned a transportation system that provides greater and more affordable access for all residents, while furthering environmental and public health goals through reduced emissions. The system should support a growing, dynamic, and equitable economy through enhanced access to destinations, while improving upon existing infrastructure and land use patterns. Mobility options should seamlessly connect between interregional and local transit, as well as eventual high speed rail.

“A sustainable transportation system is founded upon the built environment. So we need to integrate that built environment into a state transportation vision.”

-- Hasan Ikhata  
Southern California  
Association of  
Governments (SCAG)

### 3 Key Barriers to Improved Transportation Spending

- 1) **Counterproductive policies** at multiple levels of government that prevent transportation dollars from being spent in the most environmentally and economically effective manner;
- 2) **Uncoordinated decision-making** at multiple levels of government that creates competing visions and priorities for transportation spending; and
- 3) **Misaligned funding and financing policies and practices** at various levels of government that result in a lack of continued support for projects that are consistent with state environmental priorities.

### Solutions to Overcome the Barriers

- **State-developed project performance standards** to ensure that all new transportation projects meet various metrics that align with state environmental and energy priorities, such as reduced vehicle miles traveled and enhanced mobility options (e.g., walking, biking, transit, and car- and bike-sharing);
- **A 55 percent voter-approval threshold for local transportation funding measures** to ensure meritorious transportation projects that reduce vehicle miles traveled are easier to fund with local dollars, compared to the current 2/3 requirement;
- **A greater percentage of transportation dollars at all levels directed to the repair and maintenance of existing infrastructure**, including for “complete streets” options to make roadways safe for pedestrians, bikers, and transit riders, before funding new projects; and
- **Improved transparency and decision-making in allocating transportation funds** across the state to ensure alignment with state environmental and energy goals.

The following section summarizes these and other policies that are discussed in greater detail in this report, which also contains an overview of transportation spending and decision-making in the state.

#### State legislators

**Develop performance measures for state and regional transportation projects that align with state environmental goals** to ensure that spending on all transportation projects achieves specific outcomes and avoids negative effects, based on a list of key metrics such as improved cost effectiveness, decreased vehicle miles traveled, reduced greenhouse gas emissions, and increased public health benefits.

**Link all statewide transportation funding to project performance measures that align with environmental goals**, in order to ensure that regional and local transportation entities base transportation project decision-making on the outcomes of the performance standards analysis.

**Ensure a larger percentage of transportation dollars at all levels are directed to the repair and maintenance of existing infrastructure** (“fix it first”) so that funds are spent on existing infrastructure and complete streets (to make roadways safe for all users) before new road expansion projects.

**Place a state ballot measure allowing a 55 percent voter-approval threshold (from the current 2/3 requirement) for local transportation funding measures** to make it easier for local jurisdictions to fund meritorious transportation projects that would reduce vehicle miles traveled.

**Allow pricing on “mixed flow” highway lanes** to let regional entities better manage diverse mobility options with existing road capacity, provide travelers with improved access to destinations, and generate revenue that can be reinvested into alternative transportation options within that corridor.

**Authorize state leaders to set regional vehicle miles traveled reduction targets for congestion management agencies to replace auto delay analyses**, which will enable these agencies to focus on multi-modal mobility rather than alleviating auto delay.

**Require local governments to reduce parking requirements in transit-intensive areas** to allow developers to meet actual parking demand in more cost-effective ways and reduce the cost of building transit and transit-oriented projects.

**Subsidize interest payments on “America Fast Forward” bonds** to reduce the interest expense of long-term borrowing on transportation bonds, possibly by using cap-and-trade auction revenue.

**Explore privatization of some highway assets and operations** to free revenue for state, regional, and local leaders to allocate to non-automobile-based infrastructure.

**Further enhance the California Environmental Quality Act (CEQA) to streamline review of transportation impacts based on reduced vehicle miles traveled metrics and adopted regional sustainability plans**, in order to accelerate transportation infrastructure that supports California’s environmental and energy goals (such as rail or bicycle networks and complete streets).

**Develop a comprehensive legislative package to encourage ride-booking services** that provide dedicated “first/last mile” services for transit riders.

**Develop mileage-based user fees to fund transportation instead of the gas tax** so that tax revenue is based on the actual usage of the roads, as opposed to usage of fuels, with a possible discount for zero emissions vehicle miles.

**Place a state ballot measure to remove Article XIX restrictions on the use of state gas tax funds for transit operations, or at least transit rolling stock**, in order to alleviate the fiscal strain on transit operations and improve service across the state.

**Consider increasing vehicle registration fees to pay for pedestrian, bicycle, and transit infrastructure and operation** to encourage more transportation by these modes and less need for expensive new automobile infrastructure.

### **State agency leaders**

**Develop and implement a common state vision of sustainable transportation across various implementing agencies** to ensure transportation spending furthers greenhouse gas emissions reductions, as well as increased transparency and public engagement in state transportation project decision-making at the planning and programming stages.

**Reform the Caltrans highway design manual to promote “smart roadway” design** that focuses on multimodal transportation and more efficient use of land.

**Enhance the state’s role on regional bodies that determine local sales tax measures** so that these measures are better aligned with state policy goals.





### Regional and local leaders

**Develop performance measures for transportation projects that align with broader environmental and energy goals** so that spending on transportation projects achieves specific outcomes, based on key environmental and economic metrics.

**Explore privatization of some highway assets and operations** to free revenue for non-automobile-based infrastructure.

**Reduce parking requirements in transit-intensive areas** to allow developers to meet actual parking demand in more cost-effective ways and reduce the cost of building transit and transit-oriented projects.

**Require improved sustainability in local sales tax measures project criteria** so that funded projects meet certain environmental, equity, and economic goals, such as accessibility and livability, a reduction in vehicle miles traveled, and/or improved maintenance of infrastructure in existing housing and jobs centers.

**Ensure that a greater percentage of transportation dollars is directed to the repair and maintenance of existing infrastructure** (“fix it first”) so that funds are spent on existing infrastructure and complete streets before new expansion projects.

**Allow conversions of general purpose lanes to high-occupancy toll lanes and dedicate toll revenue to transit, walking, and biking improvements** to improve access to destinations to reduce emissions from the affected corridor.

### Federal leaders

**Reform the “Buy America” requirements to allow local procurement of some foreign parts, materials, labor and services** in order to speed construction and reduce costs, but only when a majority of the funds for a project are local.

**Consider delegating National Environmental Policy Act (NEPA) authority to qualifying local transit agencies** to save planning time and costs and add more certainty to the existing state-level environmental review process.

**Subsidize interest payments on “America Fast Forward” bonds** to reduce the expense of long-term borrowing on transportation bonds.

**Develop mileage-based user fees to fund transportation infrastructure** as a replacement for dwindling gas tax revenues, with possible incentives for zero emission vehicles.



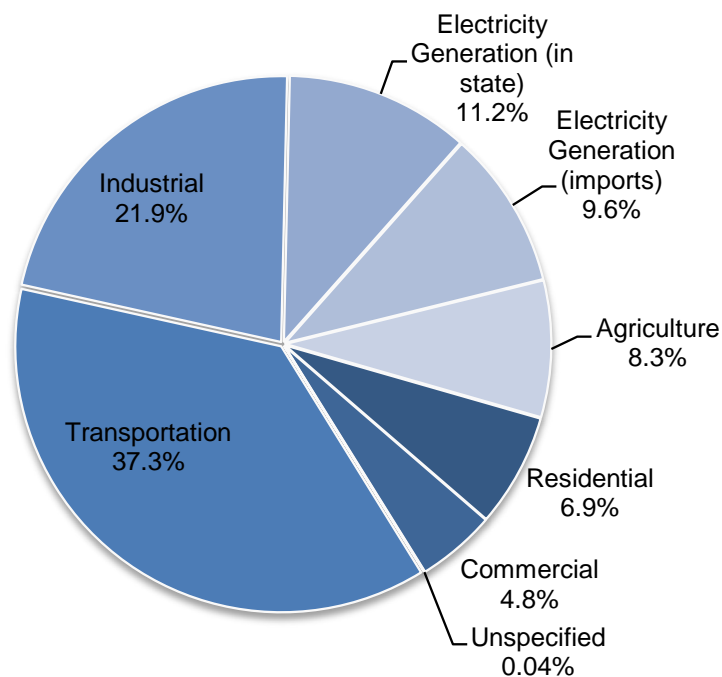


## The Economic and Environmental Benefits of Improved Transportation Spending Policies

### Transportation Investments Result in Significant Greenhouse Gas Emissions

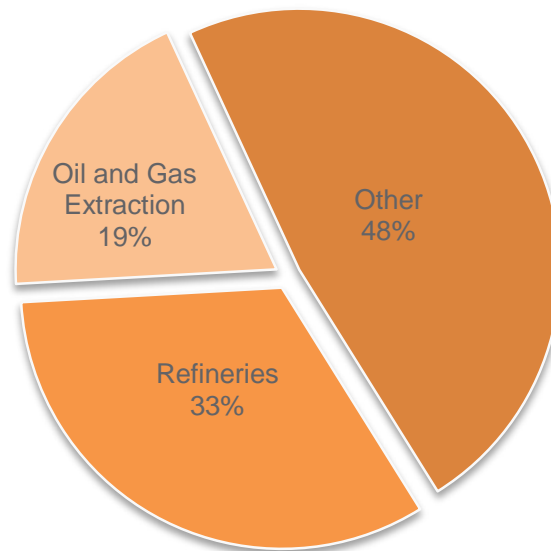
California's transportation sector represents the largest single source of greenhouse gas emissions in the state, at 37.3 percent (see Figure 1) – notably, greater than the approximately 33 percent nationwide.<sup>1</sup> Significantly, this percentage only refers to tailpipe emissions. Life cycle fuel costs, including oil and gas extraction and refinery processing from the industrial sector, add more than 10 additional percentage points, for a total of almost half of all greenhouse gas emissions in the state from transportation (see Figure 2).

Without reductions from the transportation sector, the state will not be able to meet its goals under the California Global Warming Solutions Act of 2006 (Assembly Bill [AB] 32) to roll back greenhouse gas emissions to 1990 levels by the year 2020 (equivalent to a 15 percent cutback from the business-as-usual scenario projected for 2020).<sup>2</sup> Former



**Figure 1. California's Greenhouse Gas Emissions by Sector (2012)**

Source: California Air Resources Board



**Figure 2. Greenhouse Gas Emissions from California's Industrial Sector<sup>5</sup>**

Source: California Air Resources Board

California Governor Arnold Schwarzenegger's Executive Order S-3-05 additionally calls for an eighty percent reduction from 1990 levels by 2050.<sup>3</sup> California reaffirmed this goal in Senate Bill (SB) 391 (Lowenthal, 2009) and in the AB 32 Scoping Plan first update.<sup>4</sup>

Transportation investment decisions, and the land use changes that result, are a major cause of these emissions. Thus the state has attempted to encourage more investment in transportation options and development projects in existing urbanized areas and downtowns, in order to decrease the amount of driving per capita in the state (the state is also encouraging the deployment of more fuel-efficient vehicles and low-carbon transportation fuels, which are not subjects of this report). Most prominently, state leaders passed SB 375 (Steinberg, 2008), which encourages a regional approach to transportation and land use planning to minimize greenhouse gas emissions from cars and light trucks.<sup>6</sup> Likewise, SB 743 (Steinberg, 2013) furthers the development of a multimodal transportation system by providing an alternative to vehicle throughput for evaluating transportation impacts, in order to promote reductions in greenhouse gas emissions and diversity of land uses.<sup>7</sup> The California Air Resources Board, the agency charged with implementing AB 32, relies on SB 375 in part to meet its greenhouse gas reduction goal of 5 million metric tons by 2020 from land use through regional vehicle miles traveled reduction targets.<sup>8</sup>

*Transit, biking, and walking infrastructure, among other non-automobile transportation modes, can provide Californians with mobility options that do not require a vehicle and can therefore improve public health through reduced air pollution and increased activity.*

### **Non Automobile-Focused Infrastructure Can Improve Public Health By Reducing Pollution and Increasing Activity**

Transit, biking, and walking infrastructure, among other non-automobile transportation modes, can provide Californians with mobility options that do not require a vehicle and can therefore improve public health through reduced air pollution and increased activity. Each non-automobile-based mode brings environmental, public health, and economic benefits. For example, the America Public Transportation Association estimated that reductions in driving facilitated by public transit save 37 million metric tons of carbon dioxide annually across the nation, equivalent to the emissions from generating electricity for 4.9 million households.<sup>9</sup> Transit also reduces the automobile sector's significant contributions to California's harmful and deadly air pollution, with over ninety percent of Californians breathing unhealthy levels of one or more air pollutants during some part of the year, according to the California Air Resources Board. Transit mitigates these impacts and also shapes land use patterns to minimize car dependence and encourage walking and biking.<sup>10</sup>

Biking and pedestrian infrastructure, such as protected bike lanes and pedestrian paths, can also reduce pollution from driving. According to a 2012 report to Congress from the Federal Highway Administration detailing a multi-year, four-city pilot program for bicycle and pedestrian investments, the four cities generated an estimated sixteen million miles of walking or biking that would have otherwise been driven in 2010. Overall, they averted an estimated thirty-two million total driving miles between 2007 and 2010. The four communities therefore saved an estimated twenty-two pounds of carbon dioxide equivalent emissions per person per year (a total of 7,701 tons) – the equivalent to saving over one gallon of gas per person or nearly 1.7 million gallons between 2007 and 2010.<sup>11</sup> Similarly, a Rail-to-Trails Conservancy study found that even modest increases in bicycling and walking nationwide could lead to an annual reduction of seventy billion miles of automobile travel, with more substantial increases leading to the avoidance of two hundred billion miles driven per year – equivalent to cutting oil consumption and greenhouse gas emissions from passenger vehicles by three to eight percent.<sup>12</sup>

Non-automobile-based transportation also encourages more physical activity, which improves public health. For example, the thirty-two million total driving miles averted in the four-city pilot program discussed above could equal over three billion extra calories burned by switching those miles to walking (assuming walking speeds of four miles per hour at four hundred calories burned per hour). In addition, a recent study in the American Journal of Public Health of almost seven hundred participants in King County, Washington over seven days indicated that the average transit user had significantly more daily overall physical activity and total daily walking time than the average non-transit user.<sup>13</sup>

### **Improved Transportation Options Can Improve Quality-of-Life and Save Money**

Investment in non-automobile modes of transportation can also provide significant economic, public health, and quality-of-life benefits for Californians. The Texas Transportation Institute estimated that bus and rail lines can reduce each household's driving by up to 4,400 miles per year, saving an estimated \$13.7 billion in congestion costs and providing more productive commuting time without the need to concentrate on driving. The bus and rail system in Los Angeles alone reduced 32.34 million hours of traffic delay in 2011 at a cost savings of \$695 million, while San Francisco's bus and rail system reduced over 36.7 million hours of traffic delay and saved \$775.9 million.<sup>14</sup> The Institute's 2009 Urban Mobility Report indicated that Americans living near transit services saved 646 million hours in travel time and 398 million gallons of fuel annually. In addition, the Rail-to-Trails Conservancy study found that the improved mobility, fuel savings, greenhouse gas reductions, and health care savings from increased bicycling infrastructure investment could amount to between \$10 and \$65 billion annually.<sup>15</sup>

### **More Diverse Transportation Investments Can Better Meet Market Demand for Real Estate**

Investments in non-automobile infrastructure can help California meet growing market demand for more convenient, connected communities with greater walkability and biking and transit options. For example, multiple-family housing units surpassed single-family homes in new construction throughout California for the first time in 2012, with local jurisdictions reporting 23,801 multiple-family housing units and only 20,883 single-family homes statewide.<sup>16</sup> Nationally, a United States Environmental Protection Agency survey of residential building permit data in the fifty largest metropolitan areas from 1990 to 2009 showed a substantial increase in the share of new construction built in central cities and older suburbs. This time period included a particularly dramatic rise during the 2005-2009 years, including the beginning of the recent real estate downturn.<sup>17</sup> Home values also tend to be higher near transit, in walkable neighborhoods, and near bike paths and other protected bikeways, indicating greater demand for housing near these amenities.<sup>18</sup> This demand for housing in core urban areas necessitates a corresponding investment in transportation options suitable for these non-automobile-oriented communities.

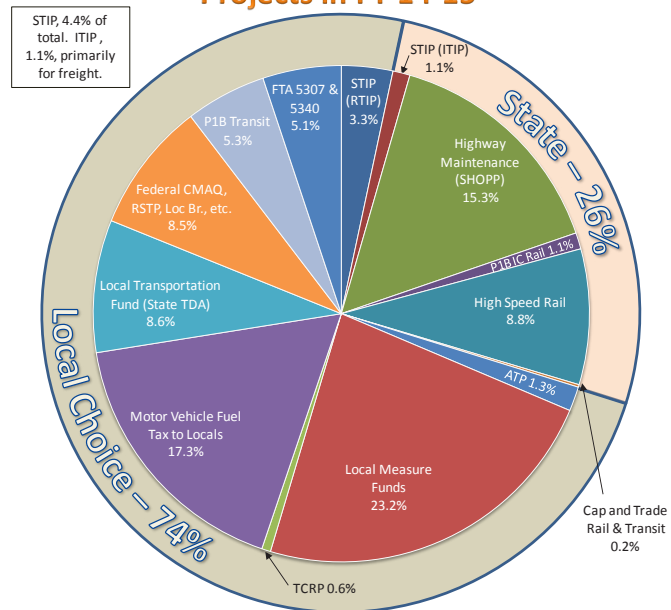
*Home values tend to be higher near transit, in walkable neighborhoods, and near bike paths and other protected bikeways, indicating greater demand for housing near these amenities.*



## California’s Current Transportation Spending Does Not Align with State Environmental and Energy Priorities

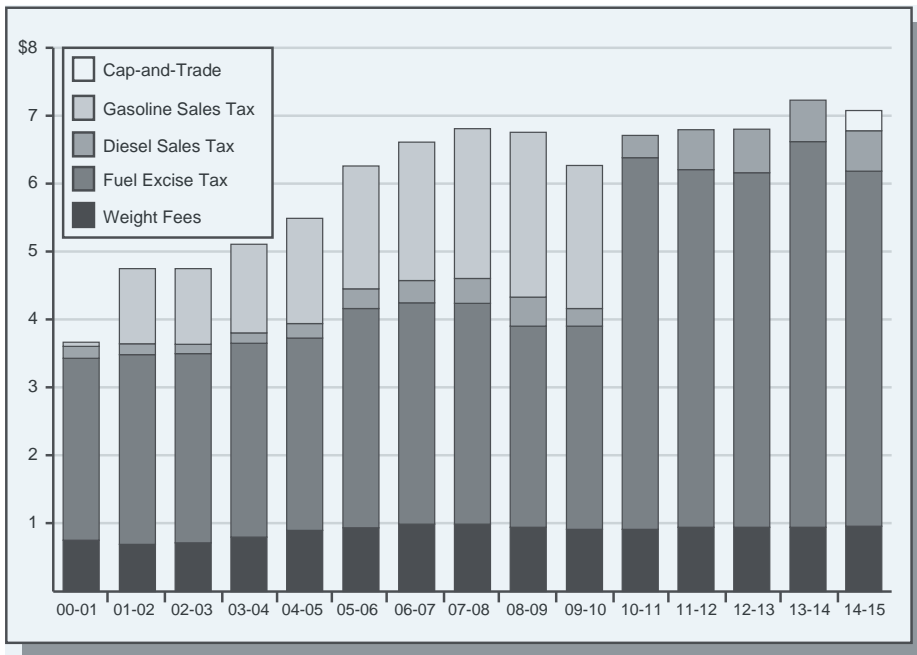
The majority of California’s transportation funding goes to automobile infrastructure, with most of the funds controlled by local entities.<sup>19</sup> California’s budget for 2013-2014 provided a total of \$19.8 billion for transportation departments and programs, an increase of \$273 million (or 1.4%) compared to the previous year. The budget included \$12.8 billion for the Department of Transportation (Caltrans), \$3.2 billion for the High Speed Rail Authority, and \$872 million for transit assistance.<sup>20</sup> Caltrans typically spends about 10% of its budget on maintenance of existing infrastructure.<sup>21</sup> Overall, California’s state, regional, and local governments combined spend roughly \$28 billion a year on transportation infrastructure projects, with almost half of that amount derived from local funding sources.<sup>22</sup>

**Funds Available for Transportation Capital Projects in FY 14-15**



**Figure 3. Funds for California Transportation 2014-15**

Source: California State Transportation Agency



**Figure 4. California Transportation Revenues, 2000-2015 (in billions)** <sup>27</sup>

Source: Legislative Analyst's Office

Funding for the state transportation budget is derived from a variety of sources at all levels of government:

1. Regional and local governments provide approximately 49% of the state's transportation funding. Local funding sources include local sales taxes, transit fares, property taxes, developer fees, street assessments, bonds, fines, and forfeitures.<sup>23</sup> Notably, local governments spend 74% of the total funds (see Figure 3).
2. State funding accounts for approximately 27% of the state's transportation funding. There are two main sources of state funding:
  - Revenues – The “pay-as-you-go” approach.<sup>24</sup> Total state transportation revenues have roughly doubled over the last 15 years, from \$3.5 billion in 1999-2000 to \$7.2 billion in 2013-2014.<sup>25</sup> The main revenue streams come from fuel excise taxes, vehicle weight fees, and sales taxes (see Figure 4). The state also collects vehicle license, registration, and driver license fees, although these revenues are not earmarked for transportation.<sup>26</sup> In addition, up to 60% of cap-and-trade revenue from AB 32 implementation may be dedicated to continuous appropriations to transportation-related programs (see Figure 5).
  - Borrowing – The budget for 2013-2014 appropriated \$258 million and \$2.3 billion respectively from Proposition 1B and Proposition 1A, ballot measures authorizing the issuance of general obligation bonds for certain transportation programs. The budget also assumed a one-time loan of \$26.2 million from the Public Transportation Account to the High-Speed Passenger Train Bond Fund.<sup>28</sup>
3. The federal government provides approximately 24% of the state's transportation funding. Funding comes from the federal fuel excise tax or through programs such as the Moving Ahead for Progress in the 21st Century Act (MAP-21) or Transportation Investment Generating Economic Recovery/Transit Investments for Greenhouse Gas and Energy Reduction grants.<sup>29</sup> The state budget for 2013-2014 assumed, for example, that the High-Speed Rail Authority will derive \$900 million from federal funds.<sup>30</sup>

*More than half (between 55 and 60 percent) of transportation funding from all levels of government in California support automobile infrastructure, with local transit at approximately one-third and relatively negligible amounts spent on bicycle and pedestrian infrastructure.*

Transit-Related Uses	FY 14-15	% of total cap-and-trade revenue (ongoing)
Transit Capital	\$25 M	10%
Transit Operations	\$25 M	5%
Housing & Sustainable Communities	\$130 M	20%
High Speed Rail	\$250 M	25%

**Figure 5. Cap and Trade Funding**

Source: California Air Resources Board

Overall, transportation funding derives from multiple levels of government and therefore can be difficult to track precisely over different entities and reporting time periods. However, data from the Legislative Analyst's Office and California State Controller's Office indicate that more than half (between 55 and 60 percent) of transportation funding from all levels of government in California support automobile infrastructure, with local transit at approximately one-third and relatively negligible amounts spent on bicycle and pedestrian infrastructure.<sup>31</sup>



## California's Transportation Funding Decision-Making Process Does Not Incorporate State Environmental Goals

Transportation spending decision-making happens at multiple, often uncoordinated levels, without requirement that those dollars are spent to align with AB 32 or SB 375 implementation. Even within the same level of government, multiple entities with competing visions often make uncoordinated transportation decisions.

At the state level, decision-making regarding transportation is divided among the California State Legislature, the California Transportation Commission (CTC), and Caltrans. The legislature creates the framework for how state revenues are allocated on the transportation network. It establishes transportation policies and financial sources through state statutes, such as the Revenue and Taxation Code, the Streets and Highways Code, and the Government Code. Together with the governor, the legislature appropriates categories of funds for transportation each year through the annual budget. It can also designate transportation projects statutorily.

The California Transportation Commission is comprised of eleven appointed voting members and two non-voting ex-officio members. The governor appoints nine voting members, and the Senate Rules Committee and the Assembly speaker each appoint one voting member. The California Transportation Commission is mainly responsible for recommending policies and funding priorities to the legislature, providing project oversight for the state, adopting state transportation programs, and approving projects nominated for funding by Caltrans and regional agencies.

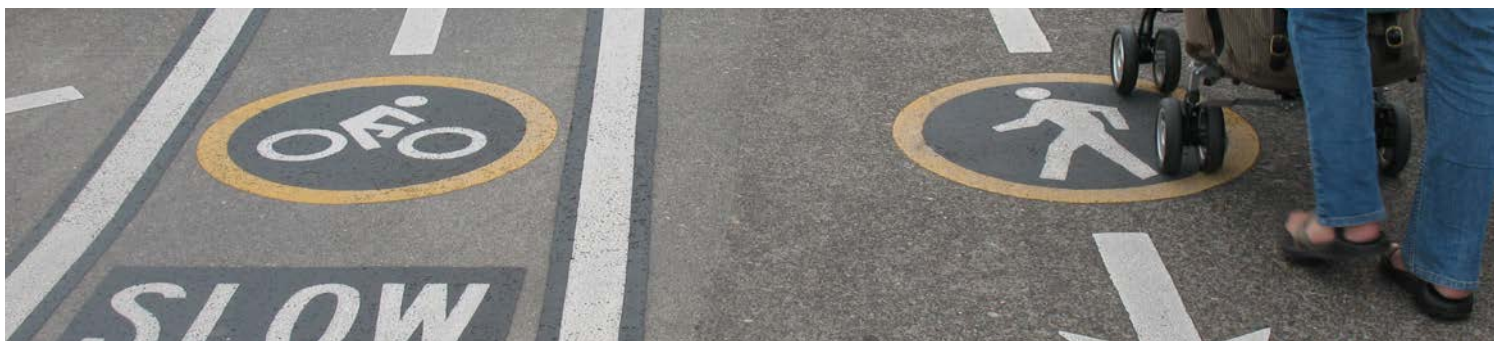
Caltrans is primarily responsible for planning, designing, constructing, and maintaining the State Highway System. This involves nominating interregional capital improvement projects for construction, operating three intercity rail lines, and collaborating with federal, state, regional, and local entities to build and maintain the transportation network.<sup>32</sup>

Decision-makers allocate transportation funds to specific programs and departments according to the statutory authority that authorized the raising and use of these funds, as well as any applicable agency guidelines. For example:

- Funds generated through revenues (e.g., taxes, fees) can be divided between “general funds” on the one hand, and “special funds” on the other hand, with the latter designated for particular purposes.<sup>33</sup> For example, some of the revenues from state sales taxes are earmarked for the Public Transportation Account, which funds local transit operations.
- Funds raised through bond programs may also be designated for specific purposes. For example, Proposition 1B funds are reserved for the following projects: congestion relief, goods movement facilitation, air quality improvement, and safety and security enhancements to the transportation network.<sup>34</sup>
- Federal funds may also support specific programs, such as MAP-21 which promotes surface transportation. The United States Department of Transportation is in charge of allocating federal funds to states and regional and local agencies.

“We still don’t have an objective, state-wide basis for determining good projects from bad projects. The only thing that we look at is whether the funding pieces are in place.”

-- Jeff Tumlin  
Nelson\Nygaard



## Barrier #1: Counterproductive Policies at Multiple Levels of Government

The federal, state, and many local governments have laws that sometimes inadvertently prevent transportation dollars from being spent in the most environmentally and economically effective manner. From outdated restrictions on how the money can be spent, to high voter-approval thresholds for new transportation ballot measures, to land use policies that contradict transportation priorities, many levels of government send mixed messages about the best use of transportation dollars or otherwise restrict the use of transportation dollars in ways that would further state environmental and energy policies.

### SOLUTIONS

**State leaders should place a ballot measure allowing a 55 percent voter-approval threshold for local transportation funding measures that reduce vehicle miles traveled.** Currently, California's voter-approved Proposition 13 (1978)<sup>35</sup> and Proposition 218 (1996)<sup>36</sup> constitutional initiatives require a two-thirds voter approval threshold for local ballot measures that raise revenue for "special purposes" such as transportation. This high threshold makes it difficult to secure voter approval for local funding measures, such as sales tax increases or bond initiatives, for badly needed transit measures. And when local officials are able to secure enough support for passage, they often have to make extensive political compromises to ensure this supermajority support, which can weaken non-automobile transportation choices. Setting the threshold at 55 percent would therefore make it easier for local jurisdictions to fund meritorious transportation projects, similar to what Proposition 39 (2002) achieved for local school bond funding.<sup>37</sup> In order to set this new threshold, two-thirds of state legislators would have to vote to place the proposed change on the ballot to amend the state constitution; alternatively, a citizen-led signature-gathering effort could qualify the measure for the ballot. Rather than funding more highway projects, many participants recommended that this reduction in the voter threshold be linked to project performance standards consistent with AB 32 and SB 375 goals. By linking project performance to the voter threshold reduction, any projects that receive funding under the new threshold would have to be consistent with state environmental and energy policy.

**State leaders should authorize the California Air Resources Board to set vehicle miles traveled (VMT) regional reduction targets for congestion management agencies (CMAs) to replace auto-delay analyses.** Each county in California designates these county-wide congestion management agencies to manage and preserve existing traffic levels, with existing transportation agencies often serving in this capacity. The agencies help coordinate land use, air quality, and transportation planning among local jurisdictions and prepare a "congestion management program" to spend transportation funds. They also monitor congestion levels on major roads and analyze the impacts that

*Many levels of government send mixed messages about the best use of transportation dollars or otherwise restrict the use of transportation dollars in ways that would further state environmental and energy policies.*



a proposed development will have on future traffic congestion. A VMT reduction target from the state would give CMAs a different metric to evaluate new road and highway projects and should replace the statutory requirement that CMAs alleviate auto delay.<sup>38</sup> The VMT metric would allow CMAs to focus instead on overall access to destinations through reduced driving per capita.<sup>39</sup> The CMAs could also consider securing revenues to meet these goals by dedicating funds from indirect source rule fees, which could be levied by local air districts under their Clean Air Act authority on edge developers of large residential, commercial, and industrial projects to reduce air pollution generated by their projects.

**The state legislature should allow pricing on “mixed flow” highway lanes.**

Currently, mixed-flow highway lanes (sometimes referred to as “dumb” lanes) cannot be converted to high-occupancy toll lanes under state law.<sup>40</sup> Only carpool (or “high occupancy vehicle”) lanes can convert to tolls. Allowing the conversion of these “dumb” lanes would allow regional entities to better manage traffic and road capacity, provide travelers with more mobility options, reduce vehicle miles traveled overall, and generate revenue that can be reinvested into other mobility options within that corridor to further relieve congestion.

**State and local leaders should reduce parking requirements in transit-intensive areas.**

Excessive parking requirements for real estate projects in transit-intensive areas is often counter-productive because it encourages driving, as opposed to using existing transit or other travel modes. In addition, the requirements can add costs to real estate projects, making them harder to build, while often reducing the size of the other uses (such as housing and commercial space). These costs may also be passed on to renters. Reducing local parking requirements to allow developers to meet actual parking demand in more cost-effective ways, such as through off-site parking, can increase transit utilization and promote other forms of mobility.<sup>41</sup> The state should therefore consider legislation to encourage or require local governments to make this change, while local governments can reduce the requirements under their land use authority powers.

**State leaders should consider further enhancing the California Environmental Quality Act (CEQA) to streamline review of transportation impacts based on a reduction in vehicle miles traveled and adopted SB 375 plans.**

SB 743 spurred the adoption of a vehicle miles traveled metric to measure transportation impacts from transit-oriented real estate development and related projects and streamline environmental review. California could continue to streamline CEQA review of transportation projects not currently covered by the SB 743 process but that still reduce vehicle miles traveled and are consistent with SB 375 sustainable communities strategies, which regional entities must prepare as part of their transportation plans to meet the SB 375 targets. Currently, CEQA provides an additional layer of analysis on these projects, which can delay, increase costs of, and sometimes stop transportation infrastructure that supports California’s environmental and energy goals (such as transit or bicycle networks).

**State leaders should consider reforming the Caltrans highway design manual to promote “smart roadway” design.**

The manual establishes uniform policies and procedures for designing state highways as a guidance document (not a legal standard) and is used by many local jurisdictions for roads.<sup>42</sup> The manual currently does not recommend design practices to account for environmental impacts related to increased driving miles and greenhouse gas emissions. “Smart roadway” design standards, such as described in the agency’s Smart Mobility 2010 report, represent transportation policy and practice that focuses on multimodal transportation, as well as efficient use of land.<sup>43</sup> Utilizing “smart roadway” standards with these principles could encourage better performing automobile infrastructure that uses context-specific solutions.

**Federal leaders should reform the “Buy America” requirements to allow local procurement from firms that use some foreign parts and services, but only when a majority of the funds for a project are local.** Federal rules currently require “Buy America” provisions for any project that receives federal dollars.<sup>44</sup> However, in some

“An emphasis in thinking about transportation should be the transformation of the urban fabric through land use. We need to deeply recognize the tie between urban form and transportation.”

-- David Mogavero  
Mogavero Notestine  
Associates

“California is in a great position to do things that others can’t, but we are still directed by federal policy. And one dollar of federal money brings with it all the federal restrictions, so we cannot tackle our problems without looking at federal transportation dollar spending.”

-- Jeff Morales  
California High Speed  
Rail Authority

“Currently, local moneys with federal matching funds cannot be spent to benefit the local economy in ways that locals decide is most beneficial.”

-- Richard Katz  
Richard Katz Consulting

instances, local transportation agencies may prefer to procure parts and services from local firms that do not fully comply with this provision, due to their use of foreign parts. Allowing more local firms to participate could help maximize decreasing federal dollars and encourage local transportation agencies to pursue revenue increases such as through a sales tax increase. Local hire and local purchases could also become an economic stimulus for the affected local area. Federal leaders at the U.S. Department of Transportation should therefore consider waiving the “Buy America” requirement, possibly via the “public interest” provision in the authorizing statute,<sup>45</sup> so that when local taxpayers pay more than 50 percent of the project costs, a local hire or buy local policy would be appropriate for up to 50 percent of the jobs, services, or materials for that project.

**State leaders should develop a comprehensive legislative package to promote ride-booking services as a complement to transit networks.** Companies such as Uber, Lyft, and Sidecar, which rely on internet-enabled ride-booking to lower costs, are facing legal uncertainty in the state due to the unregulated nature of their services with respect to insurance, safety, and other concerns. As part of a legislative package to resolve these uncertainties, state leaders should consider using the opportunity to encourage these companies to provide dedicated “first/last mile” services for transit riders. Currently, many would-be transit riders live or work slightly beyond a convenient walking, biking, shuttle, or bus ride distance from a major transit station. Encouraging ride-booking companies to close this gap, in exchange for more regulatory certainty, could greatly improve transit ridership. As another option, cities may want to explore encouraging traditional taxi companies to provide this service. Local jurisdictions could initiate public demand-response, small-bus local circulators as feeders to rail or major bus stations.

**Federal leaders should consider delegating National Environmental Policy Act (NEPA) authority to qualifying local transit agencies to save planning time for new projects.** NEPA review requires lead agencies to analyze a new project’s range of potential environmental impacts before issuing a permit. However, the state-level CEQA statute performs a similar function. Having a federal agency perform this review in addition to state-level environmental review, undertaken by the local lead agency, can add unnecessary time, costs, and uncertainty to the process. The federal government designated NEPA authority to Caltrans at the state level as a pilot program in 2007 and then broadened this delegating authority to other states in 2012.<sup>46</sup> Congress and the U.S. Department of Transportation could further delegate this authority to local transit agencies that meet certain federal requirements (such as frequent auditing and reporting, expanded staff training, and new quality control measures) for projects that use federal funds.

**Federal and state leaders should consider subsidizing interest payments on “America Fast Forward” bonds.** Federal leaders could modify the Internal Revenue Code to establish “America Fast Forward Transportation Bonds,” which would be eligible for annual federal tax credits that would reduce the interest expense of the long-term borrowing. The result would be a stronger federal subsidy than traditional tax-exempt bonds. No such program currently exists for large-scale transportation investments.<sup>47</sup> At the state level, California policy-makers could dedicate cap-and-trade funds to help pay the interest on this borrowing, given the strong nexus with greenhouse gas reductions. This support would therefore allow local transit agencies to leverage cap-and-trade funds for greater capital investment in transit and other non-automobile infrastructure that reduces greenhouse gas emissions.



## Barrier #2: Uncoordinated Decision-Making at Multiple Levels of Government

Federal, state, and regional and local agencies often have competing visions for transportation spending, while agencies within a level of government may also have disparate priorities. Examples include state agencies that prioritize auto-oriented transportation projects while other agencies seek to promote transit, walking, and biking, as well as more transit-oriented development projects. Meanwhile, local transportation agencies may pursue auto-oriented transportation projects while state and regional entities seek to build projects in existing urban areas in order to accommodate market demand and reduce pollution.

### SOLUTIONS

**State leaders should develop and implement a common state vision of sustainable transportation across the various implementing agencies.** The California Air Resources Board could lead this effort, potentially in partnership with Caltrans, which could develop it around greenhouse gas reductions. The agencies could also partner with the Strategic Growth Council, which helps develop modeling tools that could be aligned with this effort. In addition, the vision should ensure that all agency spending conforms, as AB 857 (Wiggins, 2002) required when it bolstered the state's environmental goals and policy report to ensure that all state spending aligns with those priorities.<sup>48</sup>

**State leaders should authorize and develop performance measures for state and regional transportation projects that align with state environmental goals.** The Metropolitan Transportation Commission (MTC) in the San Francisco Bay Area pioneered this approach by developing project performance standards and then selecting projects based on their score.<sup>49</sup> The state should consider legislation (or using existing regulatory authority under the State Transportation Improvement Program, discussed below) to authorize the adoption of such measures to determine which state transportation projects receive funding, based on a short list of perhaps 10 key metrics. A performance standards-based model would encourage transportation decision-making that results in better outcomes in terms of traffic reduction, mobility, public health, affordability, and emissions. The standards would need to be accompanied by accountability measures and possibly land use incentives to encourage growth around sustainable infrastructure. Ultimately, these performance standards would help state leaders better communicate state goals among state agencies and to regional and local officials on transportation spending priorities.

**State officials with voting authority on regional bodies that determine local sales tax measures should ensure that these measures are aligned with state policy goals.** Currently, many local counties and regions tax themselves to help pay for transportation projects. However, the criteria for these projects may sometimes conflict with state goals, even though the projects often have some state funding attached and state leaders typically have voting authority on the local boards that approve the tax measures. The state can use its voting authority to seek to amend existing local funding programs, where feasible, and be more vigilant and proactive regarding new or renewal funding measures, with the goal that they are consistent with sustainable communities strategies under SB 375.

“It’s all about letting local governments make appropriate decisions that aggregate to something beneficial. How do we incentivize and fund individual decisions that are in the right direction so that in the aggregate get to what we want? It can’t be entirely top down.”

-- Steve Brown  
Fehr & Peers

“Local politics need to be taken into consideration if the state is going to set barriers for how locally raised funds should be spent.”

-- Michael Turner  
Los Angeles County  
Metropolitan  
Transportation Authority



## Barrier #3: Misaligned Funding and Financing for Transportation Projects at Multiple Levels of Government

Transportation projects typically involve funding from federal and state sources, routed through regional entities, along with locally derived funds from local tax or bond measures. However, federal and state funding and financing programs do not consistently support transportation projects that further state environmental priorities, such as transit, bicycle or pedestrian infrastructure, and instead focus on auto-oriented projects. Meanwhile, local transportation funds are not always spent on projects that support environmental goals.

### SOLUTIONS

**State leaders should link statewide transportation funding to project performance measures that align with environmental goals.** State leaders should consider legislation (or using existing authority under the State Transportation Improvement Program) that would condition approval of state financial support on compliance with the performance standards discussed previously. Without such fiscal incentive, regional and local transportation entities may be less willing to base transportation project decision-making on the outcomes of the performance analysis.

**State leaders should reform State Transportation Improvement Program (STIP) funds to align with SB 375 and AB 32 goals.** STIP is the state's multi-year funding program to improve and build transportation projects both on and off state highways. STIP is funded with revenues from the "Transportation Investment Fund" (from sales and gas taxes) and other funding sources, and its programming generally occurs every two years. Both Caltrans and regional planning agencies prepare transportation improvement plans for funding under STIP: Caltrans prepares the Interregional Transportation Improvement Plan (ITIP) and regional agencies prepare Regional Transportation Improvement Plans (RTIPs). The California Transportation Commission then adopts the STIP and apportions funds. Once STIP funds are apportioned, local agencies work through their regional entities to nominate projects for funding.<sup>50</sup>

However, STIP funds are not required to be spent in furtherance of state environmental goals. To reform the process, state leaders may need to require alignment of California Transportation Commission decision-making with environmental goals. Draft guidelines for the 2016 STIP program propose to link some performance metrics to STIP-funded transportation projects.<sup>51</sup> However, legislation may be needed to clarify that the California Transportation Commission can reject projects that do not meet these performance standards and to ensure that more STIP funds are spent on maintenance of existing infrastructure. And as discussed above, state leaders may need to explore other statutory changes to require that new projects must undergo an analysis based on broader performance metrics, such as public health, greenhouse gas emissions, and vehicle miles traveled. State leaders should particularly focus on extending this

"Portland Metro has a good merit-based system of allocating funding. As local projects are proposed for state funding, the state is required to evaluate all projects to the degree that they fit the vision. Rather than just funding the projects that have been sitting in line the longest, they fund the projects that most efficiently meet the goals."

-- Val Menotti  
Bay Area Rapid Transit  
(BART) District

requirement to highway and roadway expansion projects, which often counter “fix it first” objectives and state environmental goals.

**State leaders should improve the transparency of spending decision-making of State Highway Operations and Protection Program (SHOPP) funds and ensure that the outcomes align with SB 375 and AB 32 and “complete streets” goals.**

This funding program covers spending needs related only to the maintenance, safety, and rehabilitation of state highways and bridges. SHOPP does not fund any new capacity, such as a new traffic lane. In 2014, the program had \$2.3 billion worth of funds for an estimated statewide maintenance need of \$8.2 billion – a \$6 billion shortfall.<sup>52</sup> State leaders allocating these funds should develop criteria and transparent processes to ensure that these funds (as well as any additional future funds) are spent only on projects that reinforce SB 375 and AB 32 goals and that maintenance projects also contain a smart mobility and complete streets performance requirements to make the roadway safer for all users, including bikers, pedestrians, and transit riders.<sup>53</sup>

**State and local leaders should ensure improved sustainability in local sales tax measures project criteria.**

As local entities develop these measures for the ballot, they should ensure that projects meet certain environmental goals such as a reduction in vehicle miles traveled or improved maintenance of infrastructure in existing housing and jobs centers. In return, the state could provide more financing and funding or other incentives, such as streamlined environmental review. Local leaders should also consider amending existing sales tax measures, where feasible, to refocus spending on maintenance rather than new projects.

**State leaders should ensure that more transportation dollars at all levels are directed to the repair and maintenance of existing infrastructure (“fix it first”).**

California currently faces deteriorating infrastructure in need of investment, simply to fill potholes, repair bridges, and resurface roads. Yet decision-makers are often rewarded politically for building new projects, typically to outlying areas that encourage growth dependent on auto travel. Transportation dollars should be spent first to repair the infrastructure the state already built before considering new projects, including by adding smart mobility and complete streets performance requirements. This focus would benefit residents and building owners in existing communities and encourage growth in already-urbanized areas, instead of in outlying areas with open space or agricultural lands.

**Federal and state leaders should develop mileage-based user fees with possible incentives for zero emission vehicles.**

The state gas tax that helps fund transportation projects has not been raised to keep pace with inflation or adjust for the increasing fuel efficiency of modern vehicles. As a result, revenues cannot keep pace with needs. Federal and state leaders should adopt a mileage-based user fee to apportion tax revenue based on the actual usage of the roads, as opposed to usage of fuels. California recently launched a pilot project effort to test various mileage-based fees via SB 1077 (DeSaulnier, 2014).<sup>54</sup> Depending on the lessons learned from this pilot, federal and state leaders should adopt the framework nation- and state-wide. Of note, in order not to discourage the purchase of zero emission vehicles, which are necessary for the state to meet its greenhouse gas and energy storage goals, policy-makers should consider discounting the mileage-based fees for zero-emission miles.

**State and regional leaders should allow more high-occupancy toll (HOT) lanes and dedicate new revenue for transit and other non-automobile transportation improvements in the corridor.**

More HOT lanes could help manage traffic, reduce congestion and driving, and generate revenue to improve mobility and reduce emissions in the affected corridor. Decision-makers should dedicate revenue from the HOT lanes to transit, bike lanes, and pedestrian infrastructure in these corridors.

“We should tell the people who are collecting the sales tax that they need to have a life-cycle-based plan for using the funding to ensure ongoing operations and maintenance needs are met.”

-- Hasan Ikhata  
Southern California  
Association of  
Governments (SCAG)

“Our arterials are underused, and we could be transforming boulevards into living spaces, not just overlaying another new more ‘wiz-bang’ system, but rather using the existing system better.”

-- Denny Zane.  
Move L.A.

“Look at the Netherlands: during the gas crises they said, ‘we can’t continue to afford to drive, so let’s make a national policy to encourage biking.’ Now 33 percent of trips there are by bike. That requires a policy and a grand vision to guide the way.”

-- Jeanie Ward-Waller  
Safe Routes to School  
National Partnership

**State leaders should consider placing a state ballot measure to remove Article XIX requirements restricting the use of state gas tax funds on transit operations or transit rolling stock.** The California Constitution, Article 19, Section 2(b) currently allows for state gas tax spending only on “research, planning, construction, and improvement” of public transit but not for “the maintenance and operating costs” related to public transit.<sup>55</sup> Removing this restriction would alleviate the fiscal strain on transit operations and improve transit service and infrastructure across the state. A two-thirds vote of state legislators can refer this initiative to the ballot, or citizens can gather enough signatures to place it on the ballot for voter approval. However, given the political challenges associated with amending the state constitution, state leaders may want to consider at least removing Article 19 restrictions on purchasing transit rolling stock, such as buses and train cars.

**State leaders should consider increasing vehicle registration fees to pay for pedestrian, bicycle, and transit infrastructure and operations.** This additional revenue for non-automobile infrastructure could encourage more transportation by these modes and therefore lessen the need for expensive new automobile infrastructure, while furthering state energy and environmental goals.

**State and regional leaders should explore privatization of some highway assets and operations.** Some automobile infrastructure could be operated profitably by private entities, such as toll road operators. Devolving responsibility for improving and maintaining this infrastructure could free revenue for state and local leaders to allocate to non-automobile-based infrastructure. In addition, employers in certain regions may have a profit motive to expand a transit network to their buildings in order to attract and retain employees. The state should ensure that transportation agencies are empowered to study and implement these options.



## Conclusion: A Cleaner, More Affordable and More Convenient Transportation Future

Improving California's transportation spending practices does not necessarily require new funds, but rather spending existing funds in more strategic ways. The state already spends billions of dollars each year on infrastructure projects. Updating the decision-making process that programs these funds would allow the state to more effectively achieve its environmental and energy goals, along with its transportation goals and objectives. In addition, Governor Brown announced in January 2015 a commitment to address the estimated \$59 billion backlog in transportation infrastructure repair and maintenance needs.<sup>56</sup> In the process, California could modernize its infrastructure and build a foundation for a dynamic, equitable economy with more cost-effective transportation options. While some of the changes require action at the federal, state, regional, and local levels, the state has within its power the funds and the knowledge necessary to move transportation dollars to achieve better outcomes for both the mobility and economy of the future.

"We should adopt a goal of moving towards a low-carbon and eventually carbon-neutral transportation system."

-- *Amanda Eaken*  
*Natural Resources*  
*Defense Council*





## Participant Bios

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### Steve Brown

Fehr & Peers

Mr. Brown is a Senior Principal with 25 years of experience in transportation planning and engineering. In addition to his 20 years of consulting experience, Mr. Brown was the Director of Transportation Planning for the City of Sacramento. He has managed projects in eight states that include the following disciplines: transportation master plans, traffic calming, environmental impact assessments, parking and circulation studies, bicycle and pedestrian facility plans, new-urbanist planning, freeway interchanges, intersection/signal designs and corridor studies. Mr. Brown was responsible for opening the firm's Sacramento-area office in 1989 and the first Southern California office in 2005. In addition, he has supervised both the San Jose and Reno office. As a member of the firm's Executive Committee for more than a decade, he has helped to lead the strategic growth of the company. Mr. Brown's teaching experience includes classes for professionals in transportation funding, writing, speaking, and neighborhood planning. He received his Bachelor of Science in Civil Engineering with Honors and a Master of Science in Transportation from the University of California at Berkeley, along with a Masters in Business Administration from Golden Gate University.

### Ryan Chamberlain

California Department of Transportation

As District Director for District 12, Ryan is responsible for planning, designing, constructing, operating and maintaining the State transportation system in Orange County. Ryan joined the Department of Transportation in 1999 and has held positions in Local Assistance, Environmental Planning and Transportation Planning. He has extensive experience in the transportation sector that includes Caltrans headquarters, Districts 7 and 12, and in the private sector. As Deputy District Director of Planning and Local Assistance in District 12, Ryan worked cooperatively with regional and local agencies in developing partnerships, policy, transportation plans, and provided guidance on a wide range of planning concepts and current practices. Prior to beginning his tenure as District Director, Ryan served as the Caltrans Division Chief of Transportation Planning in Sacramento. Before joining Caltrans, Ryan worked on environmental compliance and geospatial mapping at Parsons Brinkerhoff in Orange. Ryan graduated from the University of California, Santa Barbara with a degree in Environmental Studies and considers himself a lifelong learner who embraces innovation in both his professional and personal life. Ryan and his wife Jodi have two children.

### Steven Cliff

California Department of Transportation

Governor Jerry Brown appointed Dr. Steven Cliff as the California Department of Transportation's (Caltrans) assistant director of Sustainability, a position the Caltrans Director created to lead the department's efforts in developing and implementing initiatives to align with California's goals on sustainability. Prior to Caltrans, Dr. Cliff was the assistant chief of the Industrial Strategies Division at the California Air Resources Board (ARB). He had served in multiple positions at the ARB since 2008, including chief of the Climate Change Markets Branch in the Stationary Source Division; manager of the program development section in the Office of Climate Change; and air pollution specialist in the Office of Climate Change. He served in different capacities at the University of California, Davis, since 1998, including positions in the Air Quality Research Center/Institute of Transportation Studies, the Department of Applied Science and the Atmospheric Science Graduate Group. Starting in 2001, he worked at the Advanced Light Source at the Lawrence Berkeley National Laboratory. Dr. Cliff earned his B.S. and PH.D. degrees in Chemistry from the University of California, San Diego.

### Stuart Cohen

TransForm

In 1997 Stuart Cohen co-founded TransForm, an organization that builds powerful, diverse coalitions to promote walkable communities with excellent transportation choices to connect people of all incomes to opportunity, keep California affordable, and help solve the climate crisis. TransForm has shaped Bay Area campaigns for transportation funding measures that have brought over \$8 billion for public transportation, bicycle and pedestrian infrastructure. Their Transportation Choices campaign is working to replicate that success at the state level. In 2006 Stuart helped conceive and launch the Bay Area's Great Communities Collaborative. He also co-founded ClimatePlan, a statewide network promoting smart land use and transportation as critical components of California's climate strategy. Stuart was awarded an Ashoka Fellowship in 2010 and the James Irvine Leadership award in 2013 for TransForm's innovative programs such as GreenTRIP which certifies and promotes model developments that dramatically reduce car trips, excess parking, and climate emissions while promoting more affordable homes. TransForm is based in Oakland, CA with field offices in San Jose and Sacramento.

**Tony Dang**

## California Walks

Tony Dang is Deputy Director of California Walks and oversees Cal Walks' policy advocacy, communications, development, and community engagement programs. Tony is passionate about creating more vibrant, livable communities through the intersection of health, transportation, sustainability and equity. Tony travels across California to educate and empower community residents to engage in local, regional, and statewide planning and policy processes and become effective active transportation advocates. Tony also serves on numerous advisory committees, including the California Transportation Infrastructure Priorities (CTIP) Work Group, the Metropolitan Transportation Commission's Active Transportation Work Group, the Caltrans District 4 Pedestrian Advisory Committee, and the Challenge Area 8 team (Making Walking & Street Crossing Safer) of the Strategic Highway Safety Plan. Tony holds a BA from Stanford University in Comparative Studies in Race & Ethnicity.

**Amanda Eaken**

## Natural Resources Defense Council (NRDC)

Amanda Eaken is Deputy Director of the Urban Solutions Program at the Natural Resources Defense Council (NRDC). Her recent work has focused on implementing California's Sustainable Communities and Climate Protection Law (SB 375) to create stronger, healthier, and more resilient communities in California. Ms. Eaken was honored by the San Francisco Business Times as one of the Bay Area's top Forty under 40 Emerging Leaders of 2013 in recognition of her role in securing passage of the nation's first law to link greenhouse gas emissions with land use and transportation planning. She is a founding member and Steering Committee member of ClimatePlan, a statewide coalition of environmental, social equity, and health groups focused on successful implementation of SB 375. Ms. Eaken has over 10 years' experience in land use and transportation planning, and in her previous positions she managed the development and construction of affordable housing and transportation infrastructure projects. Ms. Eaken holds a Master's Degree in Transportation and Land Use Planning from U.C. Berkeley's College of Environmental Design, and a B.A. in Environmental and Evolutionary Biology from Dartmouth College.

**Hasan Ikhata**

## Southern California Association of Governments (SCAG)

Hasan Ikhata is the Executive Director of the Southern California Association of Governments (SCAG), the largest metropolitan planning organization in the United States. Appointed in January 2008, Mr. Ikhata has over 25 years of public and private sector experience in Transportation Planning in the Southern California Region. At SCAG Mr. Ikhata implements the policies of an 86-member Regional Council and directs day-to-day operations of the agency.

He is credited with being a transformational and unifying leader who has enhanced SCAG's value to member agencies and fostered unprecedented levels of public input and participation in the development of regional transportation plans. Prior to joining SCAG in 1994, Mr. Ikhata worked for the Los Angeles County Metropolitan Transportation Authority (MTA), the South Coast Air Quality Management District (SCAQMD); and Mr. Ikhata also worked abroad for the USSR government, Moscow Metro Corporation. Mr. Ikhata has received numerous awards and honors from various organizations and agencies for his outstanding leadership and contributions. Mr. Ikhata holds a Masters Degree in Civil and Industrial Engineering from Zaporozhye University in the former Soviet Union; a Masters degree in Civil Engineering from UCLA and a PhD Candidacy in Urban Planning and Transportation from the University of Southern California in Los Angeles.

**Richard Katz**

## Richard Katz Consulting (RKC)

Richard Katz is the owner of a successful public policy and government relations firm based in Los Angeles, Richard Katz Consulting (RKC), Inc. RKC offers a wide variety of services including strategic advice, message development, negotiations/mediation and government relations strategies. Richard Katz was California's lead negotiator for the landmark Colorado River Agreement between California, the Federal Government, four California Water Agencies, and the six Colorado River Basin States, furthering his expertise as a negotiator on issues of statewide significance. Katz had already played a pivotal role in renegotiating \$30 Billion worth of California's Energy contracts and developing California's Transportation Blueprint for the 21st Century, which the voters approved as Proposition 111 in 1990. In October 2013, L.A. Mayor Eric Garcetti, appointed and the City Council confirmed Katz to the Citywide Planning Commission. In June 2005, L.A. Mayor Antonio Villaraigosa appointed Katz to serve with him on the Board of the Metropolitan Transportation Authority. After the horrific Metrolink accident in 2008, the Mayor appointed Katz to the Metrolink Board where he served as Chair from 2011-2013. Katz was first elected to the California State Assembly in 1980 and served for 16 years. Katz authored Proposition 111, a 10-year Transportation Blueprint passed by the voters. He created the Congestion Management Plan, requiring cities and counties to measure and mitigate impacts of land use decisions on their streets, highways and transit systems. A native of Los Angeles, Katz lives in Studio City with Wendy Mitchell, their 6-year-old son Mitchell Robert and their two dogs.

**Cynthia Marvin**

## California Air Resources Board

Cynthia Marvin is the Chief of the Transportation and Toxics Division at the California Air Resources Board (ARB or Board). The Division is currently leading development

of the new California Sustainable Freight Initiative; implementing existing diesel rules and Proposition 1B incentives for cleaner ports and rail yards; updating the State's air toxics programs to characterize and reduce the health risk from stationary and mobile sources; and guiding multiple State agencies responsible for investing nearly \$1 billion annually in Cap-and-Trade auction proceeds in transportation, energy, and natural resources projects that reduce greenhouse gases and maximize co-benefits for disadvantaged communities. Ms. Marvin's prior division assignment also included climate change policy and planning, low carbon fuels, and energy issues. Her background involves 25 years of experience with the Board managing California's State Implementation Plans; developing ARB's clean air strategy for mobile sources, fuels, and consumer products; and drafting air toxics regulations to protect public health. Prior to joining ARB, she worked as an Assistant Vice President in the banking industry and received a B.S. in Environmental Toxicology from the University of California at Davis.

### **Val Menotti**

Bay Area Rapid Transit (BART) District

Val Joseph Menotti is the Planning Department Manager for the San Francisco Bay Area Rapid Transit (BART) District, and has been with the BART for nearly 15 years. He oversees station area planning, expansion planning, and strategic planning.

### **David J. Mogavero**

Mogavero Notestine Associates

David Mogavero is the Senior Principal of Mogavero Notestine Associates, an architecture, urban planning and development firm in Sacramento, California. He began his career designing naturally heated and cooled buildings thirty years ago. His practice embraces the full range of progressive community design, such as high density mixed use infill and holistic building systems, including daylighting, natural ventilation, passive heating and cooling, solar shading, water recycling, on site energy generation and agriculture. His roles as developer and environmental advocate help him conceive projects that are economically viable and sensitive to the community and the environment. Through his professional practice, his writings and lectures, and as prior president and current Board member of the Environmental Council of Sacramento, Board President of The Planning and Conservation League and Board member of the Council of Infill Builders, he has promoted the widespread adoption of sustainable building and smart growth practices and policies.

### **Jeff Morales**

California High Speed Rail Authority

Jeff Morales is the Chief Executive Officer of the California High-Speed Rail Authority and has a distinguished record

of experience managing large and complex transportation issues and projects. As the former Director of the California Department of Transportation, Morales managed a \$10 billion program and more than 23,000 employees working to build, maintain and operate the largest state transportation system in the U.S. Morales most recently was Senior Vice President of Parsons Brinckerhoff, where he worked with transportation agencies across the United States and internationally to develop and implement major capital programs and is the past executive vice president of the Chicago Transit Authority where he spearheaded major reforms at the nation's second-largest transit agency. His experience at the federal level includes serving as a member of President-Elect Obama's transition team focusing on transportation, Vice President Al Gore's National Performance Review, the White House Commission on Aviation Safety and Security, the United States Department of Transportation and as U.S. Senate staff.

### **Matt Robinson**

California Transit Association

Matt Robinson provides legislative advocacy for a variety of the firm's clients. Matt Robinson joined the Shaw / Yoder / Antwih, Inc. team as a legislative advocate in 2013. Prior to joining the firm, Matt worked in state service under two gubernatorial administrations, as well as in the legislature as a Capitol staffer. Matt was most recently appointed under Governor Jerry Brown to serve as the Deputy Director for Legislation at the California High-Speed Rail Authority. While at the Authority, Matt managed the Authority's legislative program, working with the Governor's Office, the California State Transportation Agency, the Legislature, local agencies, and stakeholders to ensure successful planning and implementation of the state's rail modernization program. Prior to his work at the Authority, Matt was an analyst at Governor Brown's Department of Finance, where he oversaw the budget of the Authority, as well as Caltrans' rail and transit programs. Before moving to Finance, Matt worked for five years as a legislative representative at the Department of Fish and Wildlife, under Governor Arnold Schwarzenegger, and before that, in the State Capitol for three years as legislative staff for two Senators, including the Senate Budget Committee Chair. Matt received his Bachelor of Arts degree in Government from California State University, Sacramento.

### **Jeff Tumlin**

Nelson\Nygaard

Jeff Tumlin is an expert in helping communities move from discord to agreement about the future. For more than twenty years, Jeff has led award-winning plans in cities from Seattle and Vancouver to Moscow and Abu Dhabi. He helps balance all modes of transportation in complex places to achieve a community's wider goals and best utilize their limited resources. He has

developed transformative plans throughout the world that accommodate millions of square feet of growth with no net increase in motor vehicle traffic. Jeff is renowned for helping people define what they value and building consensus on complex and controversial projects. He provides residents and stakeholders the tools they need to evaluate their transportation investments in the context of achieving their long-term goals. He understands that managing parking and transportation demand is a critical tool for revitalizing city centers and creating sustainable places. A dynamic and frequent guest speaker, Jeff is the author of *Sustainable Transportation: Tools for Creating Healthy, Vibrant and Resilient Communities* (Wiley, 2012). He received his Bachelor of Arts (with distinction) in Urban Studies at Stanford University.

### **Michael Turner**

Los Angeles County Metropolitan Transportation Authority

Michael T. Turner is the Government Relations Director for State Affairs at the Los Angeles County Metropolitan Transportation Authority. In that role, Mr. Turner is responsible for advocacy on all state legislation affecting transportation and transportation funding. He also manages communication with the 39 members of the Los Angeles County Legislative Delegation, the Governor's Office and State agencies. He is a registered lobbyist with the State of California. On behalf of the agency, Mr. Turner has worked on Metro sponsored legislation related to a variety of transportation issues from infrastructure financing, innovative project delivery, congestion pricing and the legislation authorizing Measure R. Additionally Mr. Turner is active in various statewide transportation related groups and has worked to develop consensus around major transportation issues in the region. Mr. Turner has Bachelor's Degree in Psychology from UCLA and a Master's Degree in Urban Planning from USC and is the proud father of Davis Turner.

### **Jeanie Ward-Waller**

Safe Routes to School National Partnership

Jeanie Ward-Waller is based in Sacramento and works with the National Partnership's statewide network of partners on policy goals dedicated to ensuring effective funding of Safe Routes to School projects, Complete Streets, and joint-use/shared-use policies for school facilities. Jeanie comes from a previous career in civil engineering, with both bachelors (Brown University) and masters degrees (MIT) in the subject. She changed her career focus to bicycle and pedestrian transportation advocacy during a bike trip across America to promote Safe Routes to School and bike-friendly communities.

### **Kate White**

California State Transportation Agency

Kate White was appointed Deputy Secretary of Environmental Policy and Housing Coordination by

Governor Brown in September 2013 at the California State Transportation Agency. Prior to her appointment at the Agency, Kate spent two decades in the sustainable development field, including as Initiative Officer at The San Francisco Foundation's Great Communities Collaborative, Executive Director of the Urban Land Institute Bay Area District, founding Executive Director of the San Francisco Housing Action Coalition, and founding Co-Director at City CarShare. Kate also worked for Urban Ecology and the National Low Income Housing. Kate earned a bachelor's degree in political science at Oberlin College, and Master of Public Administration degree from San Francisco State University.

### **David Vautin**

Metropolitan Transportation Commission (MTC)

David Vautin is a Senior Transportation Planner at the Metropolitan Transportation Commission (MTC) in Oakland, California, leading the agency's efforts in the fields of performance assessment and performance monitoring. His analytical work informs regional policy decisions by monitoring adherence to adopted goals and targets and by identifying high-performing transportation investments that achieve the region's sustainability objectives. David is also extensively involved in regional land use and travel modeling, transportation policy analysis, and public outreach for MTC's long-range planning efforts. David's performance assessment work has been particularly influential as part of the San Francisco Bay Area's first Sustainable Communities Strategy, known as Plan Bay Area. Performance-based approaches were used to achieve state-mandated greenhouse gas targets, to establish regional priorities for future New Starts and Small Starts funding opportunities, and to reconsider cost-ineffective or sprawl-inducing projects. In light of the Plan's adoption last year, he is currently working to launch Vital Signs, a new performance monitoring effort which will track a comprehensive set of regional metrics related to transportation, land use, economic development, and environmental protection. David received his Master of Science degree in Civil Engineering from the University of California, Berkeley and his Bachelor of Science degree in Civil Engineering from Cornell University.

### **Denny Zane**

Move LA

Denny Zane is Executive Director of Move LA, which coalesces business, environmental, labor, and community organizations to champion a robust transit system for LA County. He initiated the campaign for Measure R, approved by 67.8% vote in November 2008, a 1/2 cent sales tax increase expected to generate about \$36 billion in transportation funding over 30 years. A former Councilmember and Mayor of Santa Monica, Zane led the effort to create Santa Monica's Third Street Promenade.

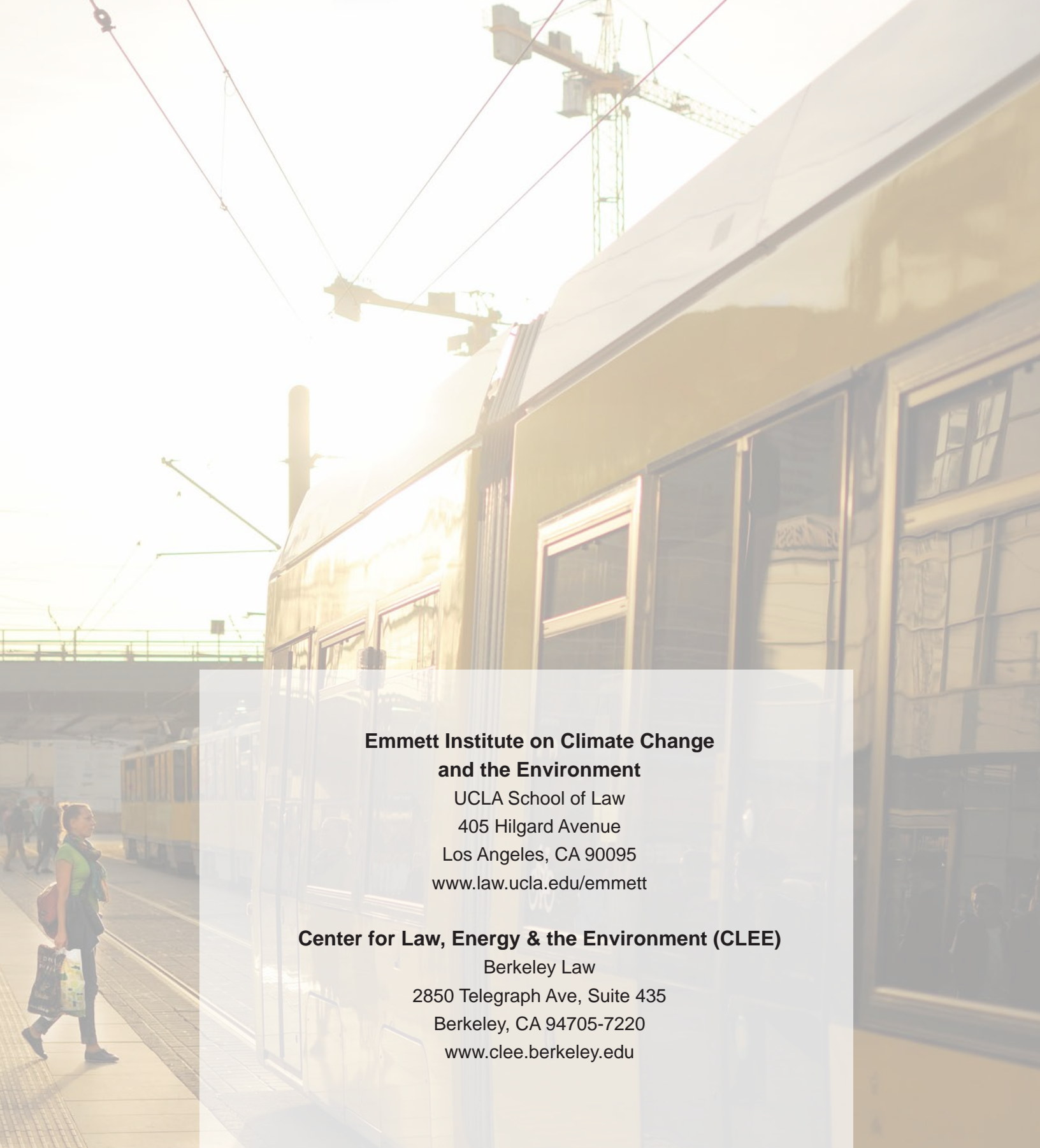
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