

Appendix E: Discussion Concepts for Potential Future Action

In addition to the suite of Actions identified in Appendix C, the State agencies have also identified transformational concepts for further exploration and potential future action. They include complex, big-picture ideas that are promising, but will require further discussion with experts and stakeholders to determine feasibility and effectiveness.

The State agencies will continue to gather more detail on the concepts described here, and will develop any subsequent actions through separate public processes. As the State agencies move forward, the concepts may change, be adjusted or new concepts may be added. Implementation of these concepts and any subsequently identified actions will also be conditional based on applicable public processes, necessary financing approvals, and environmental reviews.

A. Inland Marine Corridors

In 2013, the U.S. Department of Transportation partnered with State and local agencies to partially fund the operation of Marine Highway 580 green trade corridor.

A barge service moving among the ports of Oakland, Stockton, and West Sacramento holds promise for increased freight volumes and capacity. Public and private benefits could include reduced emissions and congestion on nearby Interstate 580 corridor. The barge service also offers an opportunity for the State to establish a zero or near-zero emission freight corridor, with the use of low emission marine vessels. The State sees this as an opportunity to expand markets and promote workforce development at inland ports, with a focus on zero emission corridors.

B. Non-traditional Transport Methodologies

As congestion near major freight hubs increases, it is important to explore innovative methods to moving freight. Some private companies have already begun considering transformational ideas, including hyperloop and un-manned aircraft for freight. Another option is to divert trucks hauling freight via dedicated, clean energy underground facilities serving inland locations where transloading and distribution can occur. These types of projects could transform freight movement by increasing efficiency, improving safety, reducing traffic congestion, and using alternative cleaner fuel technologies.

C. Packaging Optimization

As e-commerce continues to increase, it is important to explore opportunities to reduce the full life-cycle impacts of packaging production. Reducing the size and weight of packaging materials could provide private and public sector benefits, including cost, time, waste, and emission savings. The shipping industry is already

implementing strategies to promote package optimization. For example, several shippers apply dimensional weight pricing. This aims to avoid the use of oversized boxes by setting the dimensional weight according to the size of the box and charging for the dimensional weight or the actual weight, whichever is greater. In addition to smaller and lighter packaging, companies are also beginning to use sustainable, natural, bio-degradable, and non-petroleum-based materials to reduce waste. Additionally, packaging is important to protecting the commodity being shipped, therefore optimized packaging must continue to minimize damage to products. This will help to avoid reverse logistics.

D. Supply Chain Consolidation in the Agriculture Industry

A fragmented food supply chain leads to inefficient transportation of goods and can limit the ability for some growers to reach competitive markets. Coordination among regional producers, carriers, and logistics facilities can help harness economies of scale by reducing the number of less-than-load trips and providing a centralized location for the storage and consolidation of perishable goods. Regional collaboration through options such as centralized storage locations and incentives to freight consolidators and managers may lead to increased efficiencies and lower transportation costs.

E. System Efficiency

System efficiency improvements can produce economic and air quality benefits. By implementing one or more efficiency strategies, businesses may be able to cut travel time, decrease fuel costs, and increase the capacity of the system to transport more freight within the existing footprint. Supply chain efficiencies generally decrease cost, and if proven, become widely adopted due to their ability to increase business competitiveness.

To gain insight into industry vision and best practices, the State convened a group of academic and industry professionals that were tasked with providing recommendations on how the public and private sectors can work together to bring about new technology or practices that can enhance efficiency. The resulting concepts, as well as others, could lead to significant public benefit and further the State's sustainable freight goals. Some efficiency measures the State agencies are pursuing include increased and more advanced truck parking, freight traveler information systems, load consolidation, reservation systems at ports, and coordinating data gathering and modeling at the State level. Other concepts, which are of interest but require industry leadership, are receiver-led consolidation, full integration of chassis pool systems, virtual container yards, and load tracking systems. Detailed descriptions of the efficiency measures are in Appendix F, Freight Efficiency Working Group Papers. Some freight optimization efforts are already underway and can be part of the continuing dialogue of the Freight Efficiency Strategy Development Group.

F. Local Sourcing for Local Markets

Buying local provides environmental, infrastructure, and economic benefits. It reduces environmental impacts, as local purchases require less transportation, and contributes to less sprawl, congestion, habitat loss, and pollution. It also supports local businesses, stimulates the economy, provides jobs, and keeps more money in the community. To maximize the benefits of “buy local” programs California could further support local and regional programs as well as develop and initiate state-level programs. Some examples of state-level programs include competitive grant programs that incentivize partnerships with other California businesses, a focused advertising effort on the benefits of conducting business in California, and a database of California businesses and their goods and services for purchasers to readily search.

G. Programmatic Environmental Review Process for Freight Projects

One idea might be to use environmental review at the plan, or programmatic, level as a potential tool to help accelerate freight project construction and operation timelines, as well as improve the responsiveness of the system to competitive demands. To work for freight infrastructure and facilities, planners could develop regional scale plans that include multiple freight projects and conduct a programmatic environmental review of those plans. As part of the programmatic review, planners would expand community involvement and influence to seek local input and support for both the design and locations of the included freight projects.

H. Infrastructure Projects

In addition to the discussion concepts listed above, there are large transformational infrastructure projects proposed that could be critical in developing a sustainable freight transport system. They have the potential to provide lessons learned for future actions and a platform for innovative strategies. The State agencies will continue to track development of the following projects and seek opportunities for partnership with local governments, the ports, border officials, railroads, and others where appropriate.

1. Interstate 710

Interstate 710 is a vital transportation corridor, linking the ports of Long Beach and Los Angeles to major Southern California distribution centers and intermodal rail yard facilities. Interstate 710 experiences serious congestion and safety issues as a result of population growth, increased cargo container volume at the ports of Los Angeles and Long Beach, increasing traffic volumes, and an aging infrastructure. The Interstate 710 Corridor Project aims to improve air quality, noise pollution, public health, and traffic safety, modernize the freeway design, address projected traffic volumes, and address the projected growth in population,

employment, and activities related to freight. The corridor is 18 miles long and runs from the southern terminus of Interstate 710 to its connection to State Route 60.¹

2. Otay Mesa East Port of Entry

Insufficient capacity at existing border crossings in the San Diego-Baja California region costs the United States and Mexico billions of dollars in foregone economic output each year. Hours-long delays are undermining productivity and industry competitiveness. Additionally, the current border infrastructure between the U.S. and Mexico will be inadequate for projected binational commerce growth in the coming decades. The State Route 11/Otay Mesa East Port of Entry Project will provide fast, predictable, and secure crossings via tolled approach roads that connect directly to a new state-of-the-art port of entry serving both passenger and commercial vehicles.² The total cost of the project for facilities on both sides of the border is approximately \$900 million. The project consists of three segments, with construction of the first occurring now, construction of the second to be initiated shortly upon award of a 2016 Fostering Advancements in Shipping and Transportation for the Long-Term Achievement of National Efficiencies (FASTLANE) federal discretionary grant, and the final segment contingent on securing funds. The intelligent transportation system portion of the project, which will provide the underlying architecture, hardware, and software to support the entire toll collection system, will begin construction in 2018-2019 and will cost approximately \$36 million.

3. Southern California On-dock Rail

Intermodal transitions are an essential link in the freight transport system, especially for transcontinental freight. For international goods, on-dock rail facilities provide an opportunity to improve the efficiency of intermodal transportation and reduce the impact on nearby communities, compared to near-dock rail locations in Southern California. Examples of related concepts include previously proposed near-dock rail facilities such as the expansion of the Union Pacific Intermodal Container Transfer Facility and the Southern California International Gateway near the San Pedro Bay Ports. One idea to explore further is shifting anticipated growth from near-dock to on-dock rail facilities that utilize clean technologies and are not adjacent to communities.

¹ Caltrans, "I-710 Corridor Project Draft EIR/EIS", June 2012, <http://www.dot.ca.gov/dist07/resources/envdocs/docs/710corridor/docs/1.0%20Proposed%20Project.pdf>.

² San Diego Association of Governments, "SR11/Otay mesa East Port of Entry", January 2016, http://www.sandag.org/uploads/projectid/projectid_56_20230.pdf.