



October 2, 2017

To: Regional Planning and Highways Committee

From: Darrell Johnson, Chief Executive Officer

Subject: 2018 Long-Range Transportation Plan – Proposed Scenarios

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Overview

The Long-Range Transportation Plan provides Orange County's program of projects for the multi-county Regional Transportation Plan, prepared by the Southern California Association of Governments. The plan also serves as a policy framework for future transportation investments in Orange County. Several potential future scenarios will be evaluated to shape the 2018 Long-Range Transportation Plan. The scenarios were defined in a manner that corresponds with the previously reported key trends, issues, and goals. The proposed 2018 Long-Range Transportation Plan scenario principles are presented for review.

Recommendation

Direct staff to return by February 2018 with modeling analysis for the proposed scenarios.

Background

The Orange County Transportation Authority (OCTA) is preparing the 2018 Long-Range Transportation Plan (LRTP) as input into the Southern California Association of Governments (SCAG) 2020 Regional Transportation Plan and Sustainable Communities Strategy (RTP/SCS). The 2018 LRTP will analyze travel conditions based on a 2040 horizon year, which takes into account a ten percent growth in population and 17 percent growth in employment, based on projections from the Center for Demographic Research (CDR) at California State University, Fullerton. As a result of this growth, initial model results indicate that travel demand will also increase substantially.

In June 2017, goals and objectives were reported for the 2018 LRTP (Attachment A). The goals and objectives were developed in consideration of a number of key issues (Attachment B) that are expected to impact transportation throughout the LRTP planning period from 2015 to 2040. Additionally, the Board of Directors (Board) conducted a Managed Lanes Workshop on August 28, 2017, which began an important policy discussion that will influence the 2018 LRTP (Attachment C). The June report, along with input received to date from the Regional Planning and Highways Committee and Board, was utilized to draft scenarios for evaluation within the 2018 LRTP. It should also be noted that the OCTA Citizens Advisory Committee discussed and supported the approach for the proposed scenarios, which are outlined below.

Discussion

The key issues outlined in Attachment B, and ongoing discussions regarding the role of express lanes, require new considerations for evaluating Orange County's transportation system. Therefore, three financially constrained scenarios are proposed to explore new concepts and potential impacts of innovative technologies, services, and policies.

Trend 2040

The first scenario would follow OCTA's traditional forecasting methodology, accounting for projected socioeconomic growth, and prioritizing investments based on the goals in Attachment A. This scenario would be the foundation of the LRTP investment strategy and is intended to serve as the primary input for the SCAG 2020 RTP/SCS. The principles proposed for defining this scenario are outlined as follows:

- Prioritize Measure M and other OCTA commitments,
- Balance costs against the revenue forecast,
- Utilize socioeconomic data from CDR for 2015 and 2040,
- Reflect the OC Bus 360° Program and OC Transit Vision priorities.

While the Trend 2040 scenario takes a conventional approach to long-range planning, the next two scenarios take on some of the emerging issues in transportation. These scenarios will be OCTA's first systemwide look at the potential influence these factors could have on the transportation system. While the data and research to date is limited, the intent is to provide some context that can aid discussions regarding how OCTA should engage in these evolving issues over the next several years. In order to model potential impacts, it is proposed that the analysis focuses on average vehicle occupancy, capacity, telecommuting, as well as transit and active transportation mode shares.

Innovation

The proposed Innovation scenario builds on the Trend scenario. It would include the same financially constrained project list; however, it would also assume impacts to travel from private sector innovations. Examples include connected vehicles, ridesharing/ride-hailing applications, and advancements in communications and networking technologies. Assumptions will be derived from literature review, discussions with regional partners, and input from consultants. The principles proposed for this scenario include those from the Trend 2040 scenario, plus:

- Innovation impacts on average vehicle occupancy
 - Transportation network companies (TNC) and other applications have been emerging, which are incentivizing ridesharing and making it more flexible and convenient. For example, services like uberPOOL offer discounts to customers willing to share a ride; and, applications like Waze Carpool help individuals find others looking to carpool along their route and splits the driving cost.
- Innovation impacts on capacity and throughput
 - New vehicle technologies are beginning to emerge that may improve safety and allow vehicles to platoon, reducing accidents and increasing capacity. However, a substantial number of these vehicles need to be in operation before significant benefits are achieved. Further, these technologies could enable many non-drivers access to personal automobiles, which may create a spike in congestion.
- Innovation impacts on telecommuting in the workforce
 - Advancements in networking and communications technology have reached a point where individuals can work remotely while working on the same files and documents as a team. Cloud-based networks, video and teleconferencing, and personal devices that essentially function as a traditional desktop computer have made this possible, making telecommuting a more feasible and appealing option for many employers.

Policy

The Policy scenario builds on the Innovation scenario by assuming travel behavior impacts from potential regulations, requirements, and/or fees that could be implemented through public sector actions, such as state and federal legislation, and local policies. General policy concepts will be assumed based on current discussions surrounding managed lanes, disruptive technologies,

and other transportation planning strategies. The proposed principles for this scenario include those identified under the Trend 2040 and Innovation scenarios, plus:

- Policy impacts on average vehicle occupancy
 - It is expected that the state will increase the carpool lane requirements to three or more passengers by 2040. This will give travelers additional incentive to utilize some of the TNC services and carpool applications discussed above. Further, state and local investments in facilities like park-and-ride lots and direct access carpool ramps and connectors would make ridesharing a more attractive option.
- Policy impacts on capacity and throughput
 - Utilizing congestion pricing on managed lanes would help offset impacts to general purpose lanes caused by expected state actions to increase the carpool lane requirement to three or more passengers. This could also potentially improve overall corridor throughput. Additionally, allowing autonomous and connected vehicles to operate in the managed lanes would help achieve the fleet mix necessary to realize capacity benefits.
- Policy impacts on telecommuting in the workforce
 - Incentive programs can be offered to employers to leverage networking and communication advancements and reduce travel demand. Transportation related projects also provide opportunities to enhance communications infrastructure, such as adding fiber optic lines along corridors.
- Policy impacts on transit and active transportation mode shares
 - SB 375 (Chapter 728, Statutes of 2008) and SB 743 (Chapter 386, Statutes of 2013) both promote land use strategies that encourage use of transit and active transportation. The state also has several funding programs that support efforts related to SB 375, such as the Active Transportation Program. Furthermore, OCTA has coordinated with local jurisdictions to develop plans and local funding programs that support transit and active transportation. As these plans are implemented, they should lead to a higher share of transit and active transportation trips in Orange County.

In addition, the 2018 LRTP will include a financially unconstrained list of conceptual projects, some of which could emerge from the above Innovation and Policy scenarios. This conceptual listing serves to document projects that need further study and public input, and/or that require additional funding beyond

OCTA's revenue projections. Therefore, these projects could be advanced should funding become available.

Next Steps

A consultant has recently been retained to assist with development and analysis of the scenarios, as well as to prepare the draft and final LRTP documents. Input received from the Board will be incorporated, the scenarios will be modeled, and staff will return to present the initial results. Staff will also continue promotion of the public survey and coordination efforts with local jurisdictions prior to releasing the Draft 2018 LRTP for public review next spring.

Summary

The 2018 LRTP is currently in development. In consideration of the recent Managed Lanes Workshop and the key issues and goals reported in June 2017, three cumulative scenarios are being developed. The first is the Trend scenario that uses a conventional approach, similar to previous LRTPs. Second is the Innovation scenario, which layers on assumptions for private sector innovative technologies and services onto the Trend scenario. Third, the Policy scenario assumes public sector policies that relate to private sector innovations, and to transportation in general.

The Trend scenario is intended to serve as input into the 2020 RTP/SCS, whereas, the Innovation and Policy scenarios are primarily intended to provide context for discussions regarding planning priorities for the next few years. After considering input from the Board, the scenarios will be modeled and brought back to the Board for further discussion. Finally, a financially unconstrained alternative will be developed to document conceptual projects for further study and potential implementation, if new funding should become available.

Attachments

- A. 2018 Long-Range Transportation Plan, Goals and Objectives
- B. 2018 Long-Range Transportation Plan, Key Issues for Transportation
- C. Orange County Transportation Authority, 2017 Managed Lanes Workshop Questions and Answers

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