



DIRECTIONS 2045

LONG RANGE TRANSPORTATION PLAN

Sustainable, Equitable, and Innovative Transportation Solutions



EXECUTIVE SUMMARY

May 2023

Executive Summary

This Long-Range Transportation Plan (LRTP) looks out to the year 2045 to identify strategies that we can begin developing today to meet Orange County’s transportation challenges anticipated for tomorrow. These strategies chart the path that will improve mobility, protect transportation resources, and enhance the quality of life for all Orange County travelers.

The Orange County Transportation Authority (OCTA) prepares an LRTP every four years to provide a system-level vision for Orange County. The LRTP is also used to provide input into the Regional Transportation Plan and Sustainable Communities Strategy (RTP/SCS) prepared by the Southern California Association of Governments (SCAG). Similar to the LRTP, SCAG’s RTP/SCS provides a system-level vision but at a larger scale, covering the counties of Orange, Los Angeles, Riverside, San Bernardino, Ventura, and Imperial. Projects must be included in an approved RTP/SCS to be programmed for state and federal funding through the Federal Transportation Improvement Program (FTIP) and to receive project-level approvals. This is a continuous planning process as shown in Figure 1-1.

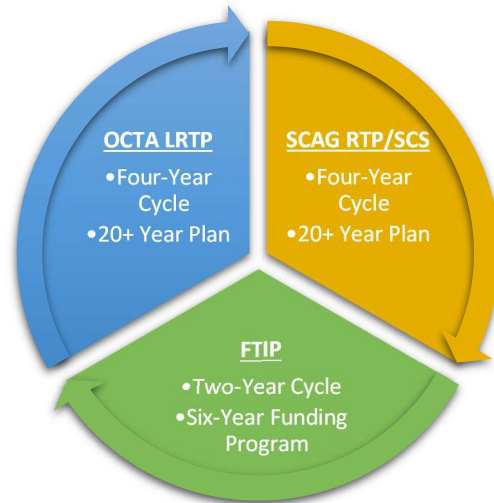


Figure 1: Continuous Planning Process

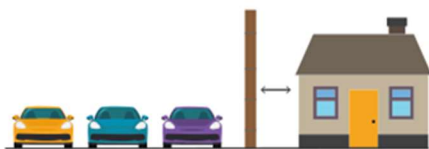
Planning for 2045

Many factors affect how people travel and how to plan for reliable mobility. Five key factors were identified as being particularly influential in this LRTP.

1. Growing Travel Demand and a Built-Out Roadway System



Road and freeway widening opportunities are limited by land availability and potential community impacts



2. Evolving Travel Trends



3. Increasing Climate-Related Risks



Orange County residents and infrastructure are impacted by high heat, wildfires, drought, coastal flooding and inland flooding

State and regional plans and policies include strategies to meet ambitious greenhouse gas emissions reduction goals



TRANSPORTATION EMISSIONS



4. Changing Funding Outlook



Orange County's local transportation sales tax is set to end in 2041

The state is leveraging its more than \$5 billion transportation budget to reduce greenhouse gas emissions and address inequities in transportation



5. Diversity, Equity, and Inclusion



Nationwide, disadvantaged populations have historically been disproportionately burdened by transportation inequities that have limited access to opportunities

Policies and practices need to be considered to make transportation options more equitable for all

Goals for 2045

While new challenges have emerged over the years, the goals of the LRTP remain steady, thereby allowing plans, programs, and projects to stay on course.



Goal 1: Deliver on Commitments

Prioritize the voter-approved OC Go programs and fulfill OCTA's responsibility for providing safe and reliable transit service.



Goal 2: Improve System Performance

Improve overall travel conditions with conventional and innovative solutions that respond to Orange County's growing travel demand.



Goal 3: Expand System Choices

Provide travelers with convenient and equitable travel options and reduce the number of single occupant vehicle (SOV) trips.



Goal 4: Support Sustainability

Include adaptation and resiliency strategies that reduce climate-related risks, while also supporting Orange County's economy, infrastructure maintenance, and environmental health.

2045 Preferred Plan

The 2045 Preferred Plan provides a long-term vision for Orange County’s transportation system that supports the LRTP goals. This vision prioritizes programs funded by the Measure M2 half-cent sales tax, also known as OC Go, but also includes seven strategy sets, referred to as the Paths to Success.

Deliver OC Go Programs

In 2006, nearly 70 percent of voters approved the OC Go sales tax to improve transportation in Orange County. Collection of the OC Go sales tax began in 2011 and will continue through 2041 to support the following OC Go programs:

<p>Freeway Projects</p>  <p>Implement 17 remaining projects to relieve congestion and improve safety</p>	<p>Motorist Services</p>  <p>Assists motorists and removes congestion-causing debris</p>	<p>Street Improvements</p>  <p>Over \$1 billion invested so far to support local street improvement projects</p>
<p>Signal Synchronization</p>  <p>Supports coordinated signal timing to improve roadway traffic flow</p>	<p>Bridges & Underpasses</p>  <p>Separates cars and freight trains to enhance safety and relieve congestion</p>	<p>Metrolink Station Improvements</p>  <p>Expands service, enhances the experience, and improves safety</p>
<p>OC Streetcar</p>  <p>Construction is underway with service to begin in 2024</p>	<p>Transit Access</p>  <p>Reduced fares and specialized services for seniors and persons with disabilities</p>	<p>Local Transit</p>  <p>Supports locally operated services to enhance community level mobility</p>
<p>Safe Transit Stops</p>  <p>Projects to improve the 100 busiest transit stops</p>	<p>Freeway Mitigation</p>  <p>1300 acres aquired and preserved as open space</p>	<p>Environmental Cleanup</p>  <p>Removes pollutants from roads before they reach waterways</p>

The Paths to Success

The Paths to Success, outlined below, identify seven sets of transportation strategies that are proposed in addition to delivering the OC Go program. These paths look beyond the 2041 sunset of OC Go to achieve the LRTP goals by responding to the five key factors, discussed above, and public engagement feedback.



Extend or Modify Programs Funded by OC Go

Fund popular and effective programs beyond 2041

Signal synchronization | Roadway improvements | Community circulators | Metrolink service | Transit accessibility | Senior mobility | Environmental mitigation



Expand Transit Services

Provide more service tailored to local needs

Rapid bus (BRAVO!) | Microtransit (OC Flex/SC Rides) | High-capacity transit | Reduced or free transit fares



Enhance Active Transportation

Provide safe and attractive facilities through coordination with local jurisdictions

Coordinate regional routes | Support local routes | Reallocation of excess roadway space



Explore Mobility Integration

Improve access to more options and overcome first-and last-mile challenges

Mobility hubs | Mobility as a Service (MaaS) | Micromobility



Eliminate Freeway Chokepoints

Enhance safety and reduce driving delays within existing right-of-way

Auxiliary lanes | Braided ramps | Address lane drops | System management



Embrace Technology

Leverage technology to provide more options and improve efficiency

Electric vehicle (EV) charging | Remote work/Teleservices | E-bikes/neighborhood EVs | Connected Vehicles | Enhanced signal Synchronization | Monitor emerging technology



Elevate Maintenance and Resilience Priorities

Protect travelers and preserve transportation investments

Maintain existing infrastructure | Assess risks and mitigations | Electric bus fleet by 2040

Achieving the Goals

The Preferred Plan combines the benefits from OC Go and the Paths to Success to achieve the LRTP goals. The findings below compare the 2045 Preferred Plan to the 2045 No-Build scenario, which considers how the 2019 transportation system would perform with the 2045 socioeconomic conditions forecasted in OCP-2018. This analysis is used to determine if the projects and programs proposed in the 2045 Preferred Plan are supporting the LRTP goals. Note that the 2045 No-Build and 2045 Preferred Plan both assume that, by 2045, Caltrans will have converted all freeway carpool lanes to tolled express lanes that require vehicles with fewer than three persons to pay a fee to access the lane(s).

Goal 1: Deliver on Commitments

The cornerstone of the LRTP is the delivery of the voter-approved OC Go programs and fulfilling OCTA’s responsibility for delivering safe and reliable transit service. Therefore, this goal is achieved by prioritizing the voter-approved OC Go programs and safe and reliable transit service in the 2045 Preferred Plan.

Goal 2: Improve System Performance

The Preferred Plan successfully addresses system performance by improving travel time reliability and reducing the time spent in congestion by 30 percent. This provides for faster and safer travel for all forms of transportation on our roads and freeways.

Performance Metrics – Improve System Performance				
Performance Measure	Unit	2045 No-Build	2045 Preferred Plan	% Change (2045 Preferred - 2045 No-Build)
Daily Vehicle Hours of Delay	Vehicle-Hours	454,000	316,000	-30%
Delay as Percent of Travel Time	Percent	18%	14%	--
Freeway Average Speed				
Peak Period				
AM Peak	Miles/Hour	40	42	5%
PM Peak		38	40	5%
PM Peak		41	43	5%
Arterial Average Speed				
Peak Period				
AM Peak	Miles/Hour	25	27	8%
PM Peak		25	26	4%
PM Peak		26	27	4%
Managed Lane Average Speed				
Peak Period	Miles/Hour	49	61	24%
Average Travel Time				
Transit	Minutes	63	60	-5%
Automobile		14	14	0%

Goal 3: Expand System Choices

By investing in transit, active transportation, and mobility integration, the Preferred Plan provides a combination of services that effectively expand system choices and reduce the number of drive-alone trips, resulting in a 12 percent increase in non-single occupant vehicle (non-SOV) trips.

Performance Metrics – Expand System Choices				
Performance Measure	Units	2045 No-Build	2045 Preferred Plan	% Change (2045 Preferred - 2045 No-Build)
Total Number of Daily Trips	Person-Trips	17,600,000	17,700,000	0%
Daily Transit Trips	Person-Trips	138,000	185,000	34%
Non-SOV Mode Share	Percent	51%	57%	--
Average Bus Headways	Minutes	36.8	35.2	--
Revenue Service Hours (All Transit)	Hours	1,651,000	2,061,000	25%
Revenue Service Hours (Frequent Transit Service ¹)	Hours	74,000	688,000	828%
Households with Access to High-Capacity Transit Stops	Households	73,000	259,000	254%
Microtransit Service Area	Square Miles	7	112	1,437%
Multimodal/Rideshare Facilities	Facilities	28	67	--
Bikeways (Class, I, II, III, IV)	Miles	1,238	2,045	65%
Jobs Accessible:				
By Transit within 30 minutes	Jobs	71,000	79,000	11%
By Automobile within 30 minutes		1,366,000	1,640,000	20%
Key Destinations Accessible:				
By Transit within 30 minutes	Destinations	70	80	8%
By Automobile within 30 minutes		1,200	1,420	19%
Average Household Spending on Transportation as a Percent of Income	Percent	-- ²	↓2% vs. No-Build ²	--

Notes:

- ¹ Includes OC Streetcar
- ² Future household income information unavailable; assumed to be constant for 2045 No-Build and 2045 Preferred.

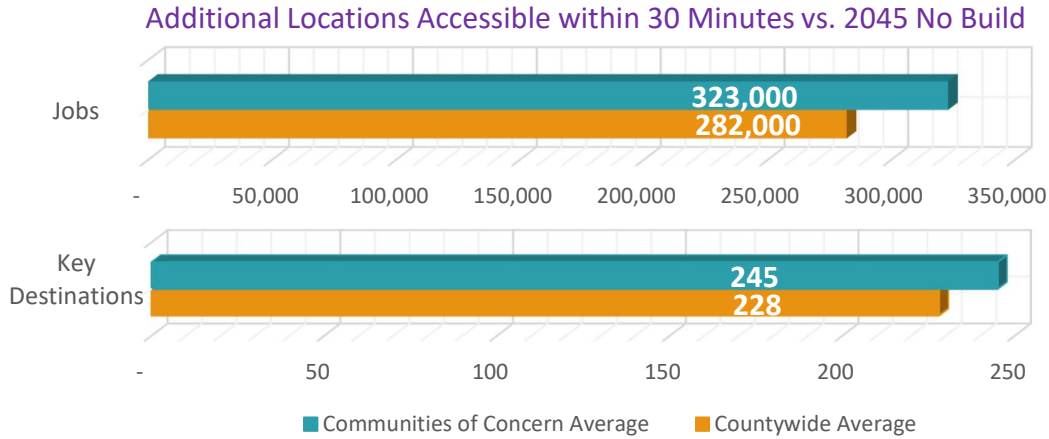
Goal 4: Support Sustainability

Although the Preferred Plan includes roadway and freeway improvements that are generally thought to increase how much people drive, vehicle miles traveled (VMT) only increased by less than one percent. With more people choosing travel modes other than driving, and by allowing vehicles to travel at more efficient speeds, greenhouse gas and smog forming emissions are reduced, which supports a more sustainable system. Additionally, by elevating maintenance and resiliency priorities, the Preferred Plan provides for improved pavement conditions on Orange County roadways.

Performance Metrics – Support Sustainability			
Performance Measure	2045 No-Build	2045 Preferred Plan	% Change (2045 Preferred - 2045 No-Build)
Vehicle Miles Traveled per Capita	23.2	23.2	--
Greenhouse Gas Emissions (CO ₂ e lbs/day) from vehicles	41,500,000	40,400,000	-3%
Criteria Pollutant Emissions (lbs/day) from vehicles			
Reactive Organic Gases (ROG)	1,200	1,100	-8%
Nitrogen Oxides (NO _x)	4,200	4,000	-3%
Carbon Monoxide (CO)	98,100	94,900	-3%
Sulfur Oxides (SO _x)	400	400	0%
Particulate Matter – 10 micrometers (PM ₁₀)	3,810	3,870	2%
Particulate Matter – 2.5 micrometers (PM _{2.5})	1,240	1,260	1%
Average Arterial Pavement Condition (PCI)	77.9	86.0	--
Jobs Created or Supported by Transportation Investment	--	745,000	--

Equitable Access Analysis

In addition to reporting on the specific LRTP goals, equity was also analyzed by assessing access to jobs and key destinations that serve essential needs. The results were compared between the County as a whole and the Communities of Concern within Orange County. Access for Orange County households showed an improvement over the 2045 No-Build conditions. However, accessibility improved even more within the communities of concern. The results show access to jobs and key destinations increases by approximately 15% and 7% more than the county average, respectively. OCTA’s future planning efforts will focus on maintaining this positive trend.



Project List

Below is a detailed listing of the projects and programs included in the 2045 Preferred Plan.

Table 4.6: 2045 Preferred Plan	
Project	Description
Local Facilities	
Master Plan of Arterial Highways (MPAH)	Coordinate with local jurisdictions to implement the MPAH
Regional Traffic Signal Synchronization Program	Coordinate with local jurisdictions to maintain and expand the Orange County signal synchronization network
Enhanced signal synchronization and integration with connected vehicles	Incorporate technologies in the signal synchronization network that further improve the efficiency and safety of roadways
Pavement Maintenance	Coordinate with local jurisdictions to maintain or improve pavement quality on Orange County roads
Local Fair Share Program	Continue to provide funding to qualifying local jurisdictions to support transportation improvements that address local needs
Active Transportation Network	Coordinate with local jurisdictions to implement and enhance regional and local bicycle and pedestrian networks
State Facilities	
I-5: SR-55 to SR-57 (Project A, Complete)	Add one managed lane in each direction
I-5: I-405 to SR-55 (Project B)	Add one general purpose lane in each direction from I-405 to Yale Avenue; add one general purpose lane in each direction from Yale Avenue to SR-55; improve merging
I-5: SR-73 to Oso Parkway (Projects C and D)	Add one general purpose lane in each direction, plus auxiliary lanes as needed and improve Avery Parkway interchange
I-5: Oso Parkway to Alicia Parkway (Projects C and D)	Add one general purpose lane in each direction, plus auxiliary lanes as needed and improve La Paz Road interchange
I-5: Alicia Parkway to El Toro Road (Project C)	Add one managed lane in each direction; add auxiliary lanes as needed
I-5: El Toro Road (Project D)	Improve access and merging in the vicinity of I-5/El Toro Road interchange
I-5: Avenida Pico to San Diego County Line	Add one managed lane in each direction
I-5: Barranca Parkway	Add southbound managed lane on-ramp and northbound managed lane off-ramp
I-5: SR-57 to SR-91	Add one managed lane in each direction
SR-22: at I-5/SR-57 (Complete)	Improve operations and merging in vicinity of I-5/SR-57 interchange
SR-55: I-405 to I-5 (Project F)	Add one general purpose lane and one managed lane in each direction and fix chokepoints; add auxiliary lanes between select on/off ramps and other operational improvements through project limits
SR-55: I-5 to SR-91 (Project F)	Add one general purpose lane in each direction and fix chokepoints from I-5 to SR-22; and other operational improvements throughout project limits
SR-57: Orangewood Avenue to Katella Avenue (Project G)	Add one northbound general-purpose lane
SR-57: Lambert Road	Improve SR-57/Lambert Road interchange
SR-57: Lambert Road to Los Angeles County Line (Project G)	Add one northbound truck climbing lane

Table 4.6: 2045 Preferred Plan

Project	Description
SR-73: I-405 to MacArthur Boulevard	Add one managed lane in each direction
SR-73: SR-133 to Newport Coast Drive	Add one toll lane in each direction
SR-91: SR-57 to SR-55 (Project I)	Improve westbound operations from Lakeview Avenue to SR-55; add one eastbound general-purpose lane from La Palma Avenue to SR-55; add one westbound general-purpose lane from La Palma Avenue to Acacia Street.
SR-91: SR-241 to SR-71 (Project J)	Add one eastbound general-purpose lane; Add one westbound general-purpose lane from Green River Road to SR-241 (Westbound Lane Complete)
SR-91: Fairmont Boulevard	Add SR-91/Fairmont Boulevard interchange and overcrossing to the north
SR-91: at SR-241	Add Express Lane Connector at SR-91/SR-241
SR-91 Express Lanes operations & maintenance	Operations & maintenance expenses for the 91 Express Lanes
SR-241: Oso Parkway to Los Patrones Parkway (Complete)	Add overcrossing and SR-241/Oso Parkway/Los Patrones Parkway interchange
SR-241: SR-133 to north of SR-261	Add one toll lane in each direction
I-405: SR-73 to I-605 (Project K)	Add one express lane in each direction and convert the existing managed lane to an express lane from SR-73 to I-605; Add one general purpose lane in each direction from Euclid Street to I-605; improve operations
I-405 Express Lanes operations & maintenance	Operations & maintenance expenses for the 405 Express Lanes
I-405: I-5 to SR-55 (Project L)	Add one general-purpose lane in each direction and add one southbound auxiliary lane from SR-133 to Irvine Center Drive
I-405: University Drive to SR-133 (Complete)	Add auxiliary lanes – University Drive to Sand Canyon Avenue and Sand Canyon Avenue to SR-133
I-605: Katella Avenue (Project M)	Improve I-605/Katella Avenue interchange
Freeway Chokepoint Safety Projects	Improve safety and supply chain efficiency on Orange County freeways
Conversion of carpool lanes to tolled Express Lanes by 2045 (Caltrans initiative)	Modify operations of carpool lanes to allow tolled access for vehicles with fewer than three passengers (vehicles with three or more persons have toll-free access)
Freeway Program Economic Uncertainties	Funding reserve to cover unforeseeable cost or revenue fluctuations
Motorist Services (Project N)	Freeway Service Patrol: assist motorists and remove congestion-causing debris
Transit	
OC Streetcar (Project S)	Implement streetcar service from Santa Ana Regional Transportation Center to Harbor Boulevard/Westminster Avenue

Table 4.6: 2045 Preferred Plan

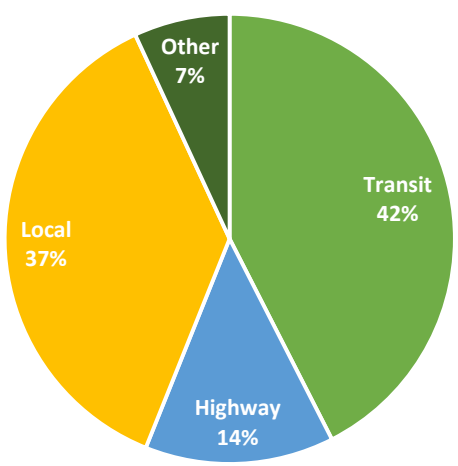
Project	Description
OC Bus and OC ACCESS	Zero-emission bus fleet by 2040; Increase to 1.926 million revenue vehicle hours of service – includes: <ul style="list-style-type: none"> • Making Better Connections recommendations • Main Street BRAVO! • Expanded Main Street BRAVO! • Expanded Beach Boulevard BRAVO! • Lincoln Avenue/La Palma Avenue BRAVO! • Chapman Avenue BRAVO! • McFadden Boulevard/Bolsa Avenue BRAVO! • Westminster Avenue/17th Street/Bristol Street high-capacity transit • Bristol Street/State College Boulevard high-capacity transit • South Harbor Boulevard high-capacity transit • North Harbor Boulevard high-capacity transit • I-5 BRT • SR-55 BRT
Mobility Accessibility Programs (Project U)	Expand mobility choices for seniors and persons with disabilities <ul style="list-style-type: none"> • Senior Mobility Program • Senior Non-Emergency Medical Transportation Program • Fare Stabilization Program
Community-Based Circulators (Project V)	Work with local jurisdictions to maintain successful community circulator projects and potentially provide grant opportunities for expanded or new services
Safe Transit Stops (Project W)	Continue to improve the top 100 busiest transit stops to enhance customer experience
Reduced or fare-free transit service	Continue and potentially expand programs to reduce transit fares
Transit Security & Operations Center	New operations center for transit and emergency security functions
Microtransit service	Expand service (e.g., OC Flex) in suitable areas
Metrolink Service	Increase service to 86 weekday trains through coordinated improvements with the Southern California Regional Rail Authority
Anaheim Canyon Station improvements (Project R, Complete)	Add a second passenger platform, new amenities, new second track, and improvements to at-grade crossings at La Palma Avenue and Tustin Avenue
Placentia Metrolink Station (Project R)	New rail station in the City of Placentia
OC Rail Maintenance Facility (Project R)	A new rail maintenance facility that allows for expanded transit services to meet the needs of a growing population and to support employment growth and sustainability objectives
Grade Separations	LOSSAN rail corridor bridge and underpass projects at: <ul style="list-style-type: none"> • 17th Street • State College Boulevard • Santa Ana Boulevard • Ball Road • Grand Avenue • Main Street • Orangethorpe Avenue
Transportation Demand Management (TDM) Strategies	
Vanpool & Rideshare Programs	Continue and potentially expand vanpool and rideshare programs
Mobility Hubs Network	Coordinate with partners to implement and operate a network of mobility hubs

Table 4.6: 2045 Preferred Plan	
Project	Description
Remote Work Incentive Program	Reduce trips and vehicle miles traveled through an incentive-based program
Additional TDM Initiatives	Continue to explore and develop additional TDM strategies
Other	
Environmental Cleanup Program	Transportation-related water quality program (Project X)
Environmental Mitigation Program	Environmental mitigation for the OC Go freeway program (Projects A - M)
Adaptation & Resiliency Initiatives	Continue to explore and develop adaptation and resiliency initiatives including, but not limited to, addressing concerns with coastal rail infrastructure
Electric Vehicle Charging Infrastructure	Coordinate implementation of publicly accessible electric vehicle charging stations that accounts for equity and infrastructure needs
Debt Service	Payments against bonding
Notes:	
BRT = Bus Rapid Transit	SR-22 = State Route 22
I-405 = Interstate 405	SR-55 = State Route 55
I-5 = Interstate 5	SR-57 = State Route 57
I-605 = Interstate 605	SR-71 = State Route 71
	SR-73 = State Route 73
	SR-91 = State Route 91
	SR-133 = State Route 133
	SR-241 = State Route 241
	SR-261 = State Route 261
	LOSSAN = Los Angeles – San Diego – San Luis Obispo

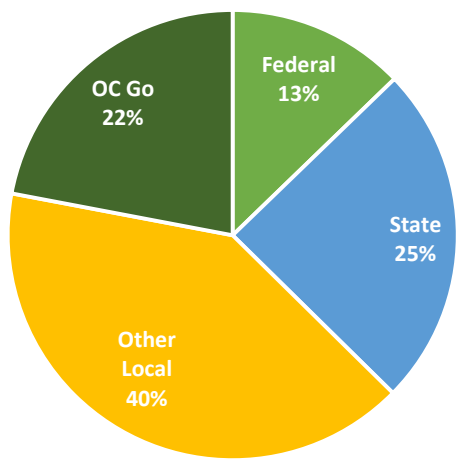
Financial Forecast

Total expenditures to implement the 2045 Preferred Plan are projected to be approximately \$57.3 billion. The forecasted transportation revenues between 2023 and 2045 are estimated at \$52.4 billion. This results in a shortfall of approximately \$4.9 billion. To address this shortfall, the Short-Term Action Plan, outlined in the next section, recommends a strategy be developed to identify funding sources that can offset the 2041 sunset of the OC Go sales tax revenues and meet the long-term funding needs of the 2045 Preferred Plan.

Expenditures by Type
Total (in millions) = \$57,291

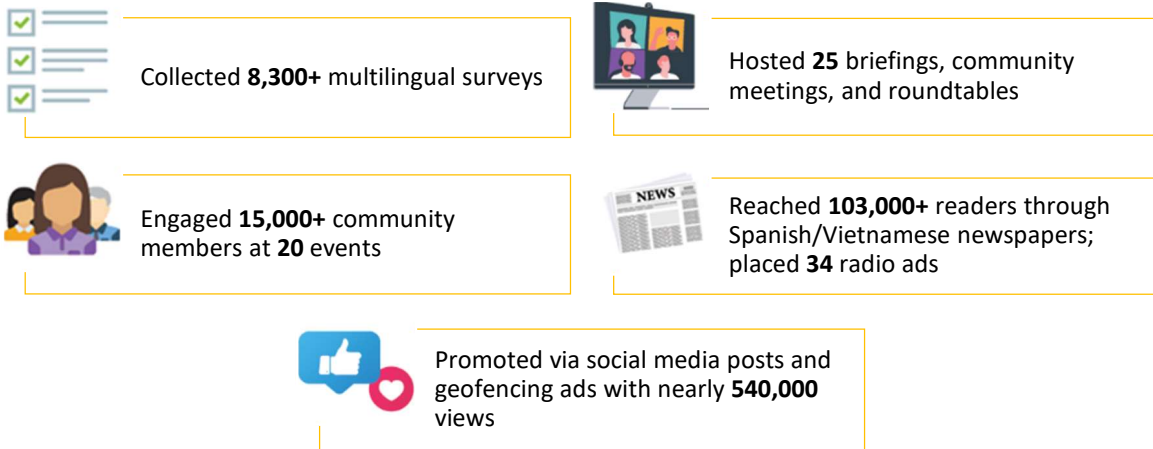


L RTP Funding by Source
Total (in millions) = \$52,425



Public & Stakeholder Engagement

A two-phase outreach effort was conducted in fall 2021 and concluded in winter 2023. These efforts are summarized below.



Phase Two focused on gathering feedback on the strategies and findings reported in the LRTP. A summary of the Phase Two survey is provided below, which shows that a significant majority of participants either agreed or strongly agreed with all seven statements.

PHASE TWO SURVEY STATEMENTS	Strongly Agree / Agree	Neutral	Disagree / Strongly Disagree
1. The LRTP should include transportation options that support equitable mobility solutions for all.	78%	15%	7%
2. Orange County would benefit from transportation solutions that provide alternatives to driving alone.	76%	16%	8%
3. Improving the efficiency and safety of roads and freeways is becoming more important as an alternative to major widening projects	76%	15%	9%
4. Orange County’s many diverse communities require a wide variety of transportation options to address local mobility needs.	78%	15%	7%
5. A variety of solutions should be studied to reduce threats like wildfires, flooding, coastal erosion, and extreme heat on transportation infrastructure.	78%	13%	9%
6. It’s important to continue programs that maintain infrastructure, signal synchronization, transit accessibility, senior mobility, Metrolink service, and other programs.	78%	14%	8%
7. Monitoring developing technologies and services to identify opportunities that demonstrate a benefit to the transportation system should be a priority.	78%	15%	7%

A Living Document

Orange County’s LRTP is updated every four years to adapt to changing conditions and includes a Short-Term Action Plan that advances the LRTP Preferred Plan strategies. Additionally, OCTA maintains a Conceptual Projects listing that identifies projects that require further development before being included in the Preferred Plan.

Short-Term Action Plan

OCTA has identified several short-term activities that are outlined in the table below. These are intended to support the Preferred Plan and development of the next LRTP.

Short-Term Action Plan	
Activity	Description
Orange County Planning Activities	
Coordination with Local Partner Agencies	Continue dialogue with local jurisdictions – the California Department of Transportation (Caltrans) District 12, TCA, local transit operators, and other local agencies as needed to further intra-county connectivity.
Diversity, Equity, and Inclusion	Explore opportunities to improve equity-related analyses in OCTA planning processes.
Long-Term Transportation Funding Strategy	Develop and recommend strategies for securing funds for addressing transportation needs beyond the 2041 sunset of the OC Go sales tax.
Corridor Studies and Improvements	Conduct studies evaluating the feasibility of multimodal corridor enhancements.
OC Transit Vision Update	Update the long-term transit vision for Orange County.
Transit Chokepoints Study	Evaluate locations and sources of transit service delays and recommend improvements to routing and scheduling, as well as capital improvements such as transit signal priority.
Transit Support Services	Establish a long-term plan for Orange County transit supportive services, such as OC Flex, vanpools, and park-and-rides.
OC Metrolink Vision	Develop a long-term Metrolink operations vision for Orange County.
Coastal Infrastructure Study	Study sustainable solutions for infrastructure along Orange County’s southern coast.
Managed Lane Studies	Coordinate with Caltrans District 12 on the I-5 Managed Lanes Project from Red Hill to the Los Angeles County Line. Explore additional operational enhancements to the high-occupancy vehicle network and potential expansion of priced managed lanes on SR-91 and SR-57.
Future of the Toll Roads	Coordinate with Caltrans District 12 and TCA to plan for toll road improvements and operational approaches on the Toll Road corridors related to the State assuming full control of the facilities beyond 2045 including identifying traffic modeling approach for future transportation planning analyses.
Freeway Chokepoints	Study and develop projects to improve freeway safety and system efficiency.
Signal Synchronization	Support local initiatives to maintain signal synchronization corridors countywide and study opportunities for integrating advanced technologies.
Transportation Demand Management (TDM)	Study opportunities for new or expanded TDM projects.

Short-Term Action Plan	
Activity	Description
Mobility Hubs	Develop a concept of operations for a future demonstration project to be pursued with public and private partners.
Active Transportation Investments	Continue evaluating Orange County’s Active Transportation needs, develop long-term plans, and implement programs that address data collection, data management, and safety education.
Complete Streets	Analyze the Master Plan of Arterial Highways (MPAH) for opportunities to reallocate excess capacity in support of active transportation and transit.
Sustainable Transportation Strategies	Study potential for a mitigation program designed to offset vehicle miles traveled (VMT) induced by transportation and land-use projects within Orange County.
Electric Vehicle Charging Infrastructure	Develop a strategy for Orange County’s electric vehicle charging infrastructure to ensure equitable and affordable access as the electric vehicle fleet rapidly grows.
Joint Development Studies	Evaluate opportunities for joint developments at OCTA transit terminals to improve transit facilities and connectivity with employment/housing.
Asset Management	Monitor maintenance needs for existing and new facilities and equipment. Update fleet plans to address zero-emission bus requirements.
Adaptation Planning	Study infrastructure needs and develop recommendations.
Traffic Model Update	Update the Orange County Traffic Analysis Model (OCTAM) to incorporate the latest socioeconomic data.
Regional Planning Activities	
Coordination with Regional Partner Agencies	Continue the dialogue with the Southern California Association of Governments (SCAG), San Diego Association of Governments (SANDAG), County Transportation Commissions, South Coast Air Quality Management District, Caltrans, and other regional agencies as needed to further inter-county connectivity.
Trade Corridors/Goods Movement	Coordinate with partner agencies to plan for projected growth in regional goods movement.
2024 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS)	Participate in the development of the 2024 RTP/SCS and initiate dialogue with SCAG and local jurisdictions.
2028 Olympics	Coordinate with Los Angeles County Metropolitan Transportation Authority (Metro) on preparations for the 2028 Olympics.
Metro Countywide Express Lanes Strategic Plan	Continue the dialogue with Metro and appropriate agencies to identify impacts and opportunities for connectivity with Orange County’s transportation network.
San Diego’s I-5 High Occupancy Toll Lane Project	Continue the dialogue with SANDAG and appropriate agencies to identify impacts and opportunities for connectivity with Orange County’s transportation network.
West Santa Ana Branch/ Pacific Electric Right-of-Way	Continue dialogue with Metro and appropriate agencies to identify impacts to, and opportunities for, connectivity between the Los Angeles and Orange County transportation network.
Gold Line Eastern Extension – Phase 2	Continue the dialogue with Metro and appropriate agencies to identify impacts and opportunities for connectivity with Orange County’s transportation network.

Short-Term Action Plan	
Activity	Description
Emerging Issues	
Monitor Technology	Monitor developing technologies and their potential impacts on transportation (e.g., autonomous and connected vehicles, remote work trends, vertiports, and air taxis).
Connected Infrastructure Needs Assessment	Study infrastructure needs and identify opportunities to implement and/or complement emerging transportation technologies.
State and Federal Regulation	Monitor State and federal legislation/regulations/policies.
State and Federal Funding	Identify strategies and opportunities to access and leverage State and federal funding.
Transportation Outreach and Education	
Diversity, Equity, and Inclusion	Provide all members of the public with equal opportunities to provide input into OCTA planning efforts.
Active Transportation Safety	Seek opportunities to enhance public outreach and education related to active transportation safety.
Transit Use and Trip Planning	Explore new approaches to increase the use of modes other than single-occupant vehicles, including enhanced transit and active transportation facilities, public education, and incentives.

Conceptual Project List

Several transportation concepts and projects have been identified in the table below that support the LRTP goals, but require more research, development, funding, and/or public input. Through additional development, they may be considered for inclusion in future Preferred Plan scenarios.

Conceptual Project List
Local Facility
Crown Valley Parkway – I-5 to Greenfield Drive Lane Additions beyond MPAH
Cabot Road – Paseo De Colinas to Camino Capistrano Lane Additions beyond MPAH
Pedestrian Bridge Improvements in the Anaheim Resort Area
Harbor Boulevard – Warner Avenue to 17th Street Lane Additions beyond MPAH
Laguna Canyon Road – El Toro Road to Canyon Acres Drive
MPAH Complete Streets Assessment – Reuse of Excess Capacity
State Facility
Ortega Highway – Operational Improvements
I-5 – Avenida Pico to Avenida Vaquero Truck Lane
Additional Freeway Chokepoint Relief & System Management Projects (TBD)
Direct access ramps (TBD) – Managed Lane and High-Capacity Transit Support
SR-73, SR-261, SR-241 North – Buildout to Planned Capacity – TCA Project
SR-73/Glenwood Drive Intersection Improvement – TCA Project
SR-133/Great Park Boulevard Interchange – City of Irvine Project
SR-55/Meats Avenue Interchange
SR-55 – Extend Managed Lanes to Southern Terminus

Conceptual Project List

Transit
Enhanced East/West OCTA transit service connecting ARTIC mobility hub to areas of high employee and visitor travel demand
California High-Speed Rail
New Southern OC Metrolink Station
Metrolink Expansion (SCRRA vision to increase above 86-weekday trains)
Other
Goods Movement – Supply Chain Resiliency

TBD – To be determined