



Strategic Plan



**Fiscal Year
2023**



Transportation Corridor Agencies

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TCA Leadership



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Costa Mesa



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Mission Viejo



John Taylor
San Juan Capistrano



David Penaloza
Santa Ana



Donald P. Wagner
County of Orange
3rd District



Lisa Bartlett
County of Orange
5th District



Ryan Chamberlain
Ex-Officio Member
Caltrans District 12

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Rancho Santa Margarita



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Austin Lumbard
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3rd District



Doug Chaffee
County of Orange
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Lisa Bartlett
County of Orange
5th District



Ryan Chamberlain
Ex-Officio Member
Caltrans District 12

Executive Summary



Comprised of the Foothill/Eastern Transportation Corridor Agency and San Joaquin Hills Transportation Corridor Agency, the Transportation Corridor Agencies (TCA) symbolize the forethought, self-determination, self-reliance and innovation that bolstered Orange County and make it a highly sought-after place to live, work, visit and play.

Recognizing mobility — the movement of people and goods — is transportation’s essential function and critical to the health of a region. More than 30 years ago, Orange County’s elected leaders and business community made the decision to control the county’s future locally and ensure its system of highways supported, both, the immediate needs for congestion relief and the future demands of a burgeoning economy.

The County of Orange and 18 of its cities, representing more than half of the county’s jurisdictions, joined together to create a multifaceted approach to providing mobility for drivers traveling to, through and within the county. This unique approach resulted in the creation of TCA and established its business model as a means to expand available sources of transportation funding and provide a mechanism to ensure continued investments are made to the transportation system.

Through TCA, the county’s visionary leadership and innovation have delivered “first of its kind” solutions for financing, representative governance, environmental stewardship and mobility that have set high standards for other regions, states and agencies to emulate.

Today, with more than 3 million residents, Orange County is the second most densely populated county in the state, residing in the middle of a transportation rich region that encompasses high travel patterns among the counties of San Diego, Los Angeles, Riverside and San Bernardino. The 420 lane miles and 51 center-lane miles of highway that TCA constructed and operates equate to 20% of the county’s highway network, carrying more than 300,000 trips per day. The Agencies’ utilization of variable time-of-day pricing is a globally-proven, effective solution for managing demand that allows the throughput of State Routes (SR) 73, 133, 241 and 261 to support 40% of all peak period trips in the southern portion of the county.

Both Agencies are on firm financial footing with strong reserves, solid traffic and revenue forecasts that have been consistently recognized by Wall Street’s independent rating agencies, as well as investors. The Agencies’ financial approach and debt management policies have resulted



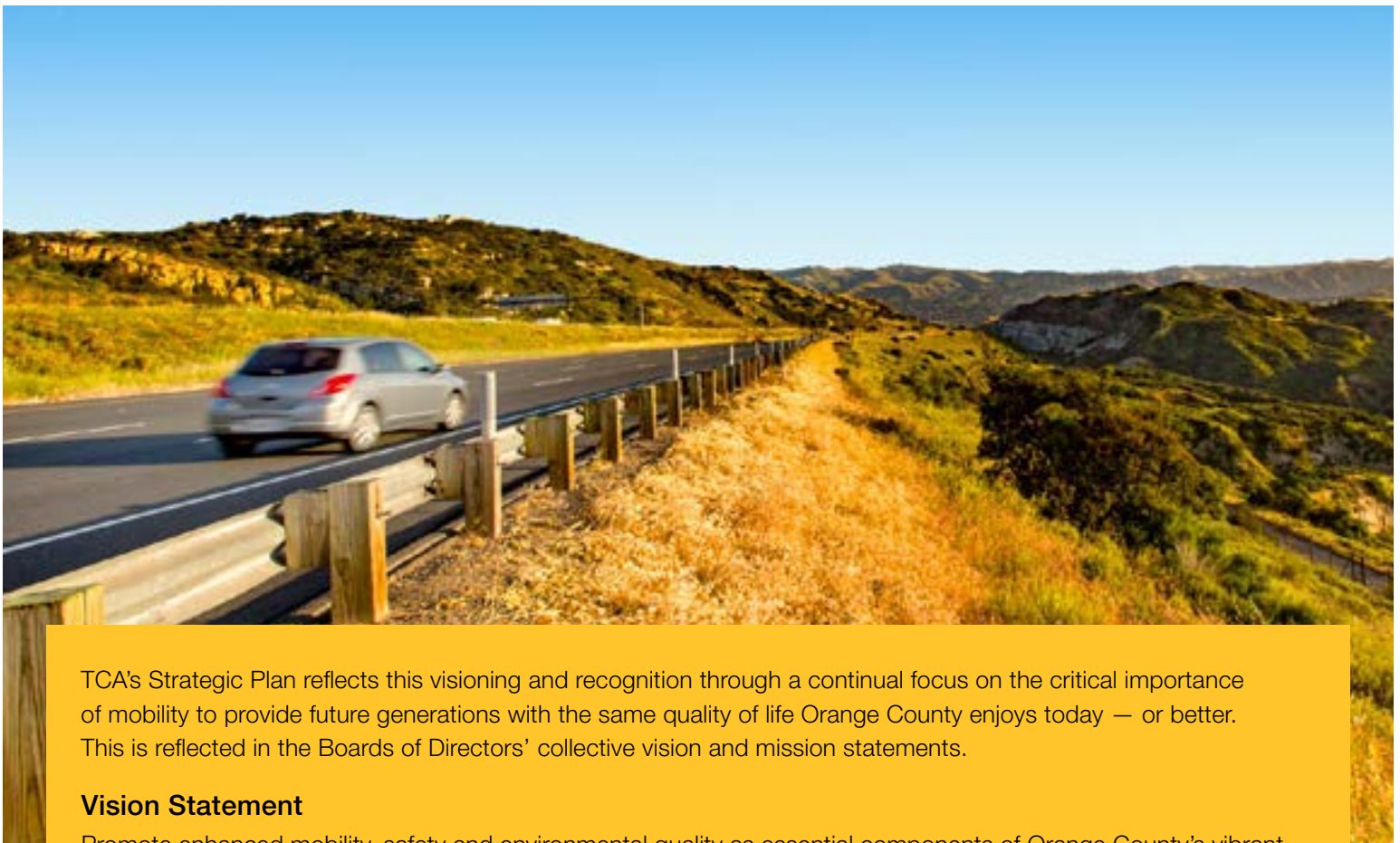
in more than \$700 million in savings in just the last few years. The approach and savings have supported resiliency through the global pandemic and continued advancement of capital projects.

Staff continually optimizes operations and manages expenditures to reduce costs per transaction and enhance project/program delivery while seeking to improve the Agencies' stellar approach to customer service, which consistently receives an "A" rating from accountholders, occasional users and those customers who received a violation.

The combination of innovation, maturity, steadfastness and successful financial outcomes has created an opportunity

for the Boards of Directors to develop plans for the Agencies' continued focus on the movement of people and goods, as well as incorporating strategies that result in the reduction of debt service. As TCA's current Boards of Directors look to the future of the county with increased population, homes, jobs and travel demand, protecting and enhancing the quality of life enjoyed by residents and travelers necessitates similar visioning to what was done some 30 years ago.

Today's visioning efforts include recognition that state-level policy approaches and consumer perspectives have changed significantly and that innovation in the form of new technologies and service solutions provide new opportunities to support enhanced mobility.



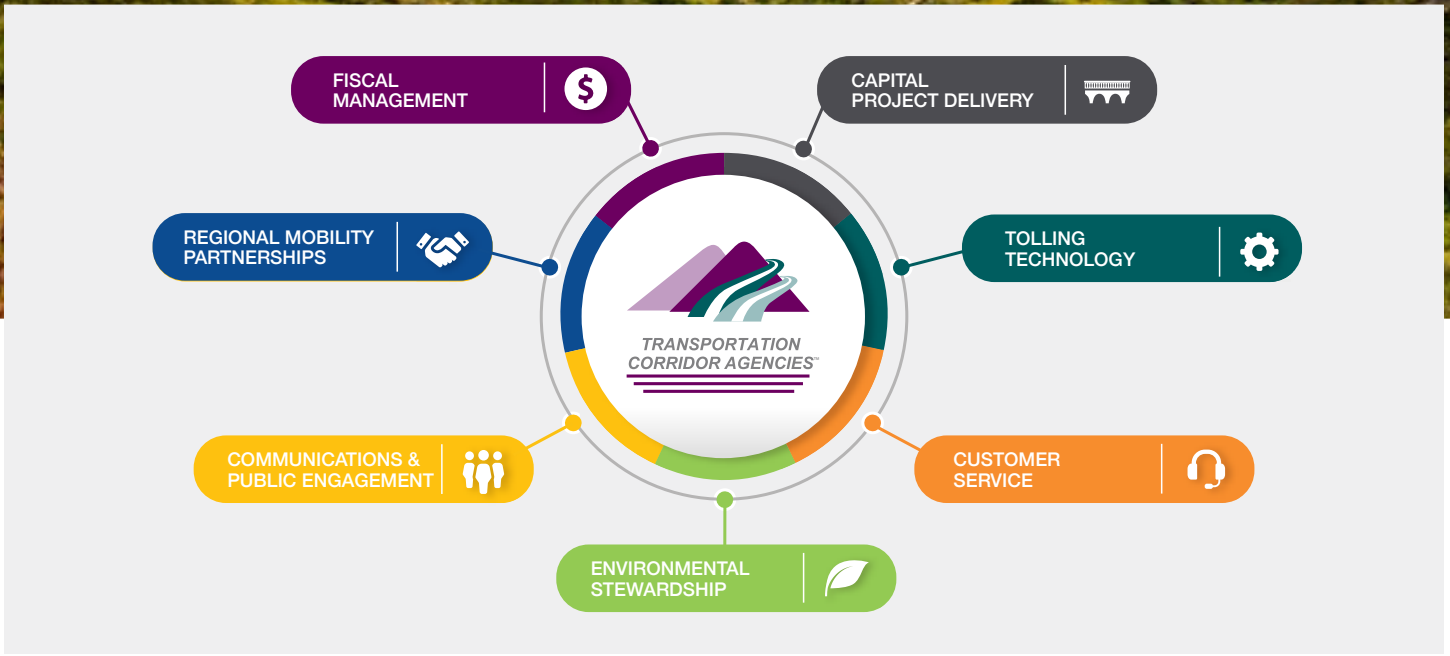
TCA's Strategic Plan reflects this visioning and recognition through a continual focus on the critical importance of mobility to provide future generations with the same quality of life Orange County enjoys today — or better. This is reflected in the Boards of Directors' collective vision and mission statements.

Vision Statement

Promote enhanced mobility, safety and environmental quality as essential components of Orange County's vibrant economy and quality of life that benefit all residents and road users.

Mission Statement

Implement and operate a highway network of congestion free travel alternatives with a focus on customer service, innovation and self-reliant financial approaches while considering regional transportation needs and opportunities.



The Strategic Plan is comprised of seven areas of focus, noted below with a brief statement highlighting key outcomes. The listing order of the areas does not convey any priority as they are interconnected parts of the comprehensive approach that supports the Agencies' continued success. As noted during the Boards' adoption, all the areas are essential and will receive equal consideration in the development of expenditure plans.

- **Fiscal Management** — Fiscal prudence has been and remains the foundation for all the Agencies' approaches and activities. Protecting the ability to fund operations, the adopted Capital Improvement Plan (CIP) projects and programs while positioning future Boards of Directors to take advantage of debt reduction and early paydown opportunities are captured in the plan.
- **Environmental Stewardship** — Continuing the Agencies' legacy of leadership and evaluating opportunities to explore hybrid recreational uses and expanded partnerships with the environmental community are important for balancing transportation needs.
- **Customer Service** — Planning for the investments necessary to support the Agencies' 2.1 million accountholders and millions of users while recognizing changes in customer perspectives and service models are essential to TCA's continued success.

- **Tolling Technology** — Retaining TCA's role as an industry thought leader and innovator is important for reducing costs, enhancing driver communications and increasing ridership during the plan's 2029 horizon and beyond.
- **Communications & Public Engagement** — Ensuring the public receives and consumes accurate and timely information regarding the Agencies' plans, projects and activities is critical to future and allowing staff resources to focus on the mission and goals.
- **Capital Project Delivery** — Delivery of the Agencies' CIP for existing facilities to address increased demand while keeping toll rates low is a key strategy for the Boards of Directors. Project considerations for innovative technologies that enhance safety, increase efficiency and reduce capital expenditures while aligning with statewide environmental objectives for zero-emission vehicles are core to the Agencies' approach.
- **Regional Mobility Partnerships** — Continued recognition that Orange County's success in transportation has been achieved through a collective approach and that the state's policy perspective for mobility improvements is to limit expansion of unmanaged highway facilities, creates an opportunity for the Boards of Directors to consider transportation project funding requests from their respective Member Agencies.



This Executive Summary includes brief fact sheets documenting the goal and objectives for each of these focus areas as well as the activities staff will pursue in support of the desired outcomes over the seven-year plan horizon. More descriptive verbiage is included in the full Strategic Plan as adopted by both Boards of Directors.

The approach to the Agencies' strategic planning process is to use a seven-year rolling window to align with Capital Improvement Plan project planning and delivery and in recognition of the changes in policy, innovation and Board priorities over time as well as actual financial outcomes.

The future for TCA — one year out, seven years out and even further — is very bright thanks to its long history of visionary leadership, dedication to improving mobility and commitment to innovation. The themes of forethought, self-determination and self-reliance have always and will always be central to all the Agencies do. We will drive forward using the Strategic Plan as a roadmap in serving the Boards of Directors, the community and the region.

Moving forward together,

Samuel Johnson
Chief Executive Officer

Fiscal Management

Fiscal Years 2023–2029



Goal

Continue to fulfill the Agencies' commitment to maintaining a long-term sustainable financial position.

Objectives

- Conduct financial planning that supports Agencies' Capital Improvement Plan, debt management strategy and other initiatives while maintaining strong credit ratings.
- In accordance with Agencies' Debt Management Policies, monitor economic environment and look for opportunities to further enhance the Agencies' strong finances.
- Develop cashflow scenarios that include opportunities for the early pay down of bonds per call provisions and strategic plans' horizon years.
- Recommend the establishment of policies that support the Boards of Directors' strategic priorities.
- Continue to provide for transparency through annual audits, transactional data and debt fact sheets to promote investor, Board and public confidence.

Activities

- Recommend adoption of liquidity policies in support of the Agencies' emergency reserve and credit rating strategy, and other financial policies such as maintaining the Agencies' fully funded pension liabilities.
- Produce annual updates to seven-year cash flow projections to include CIP, other agency initiatives and debt management.
- Execute steps necessary to allow Board approval of approximately \$600 million in early debt paydown as follows:
 - San Joaquin Hills: FY25, FY26 and FY27
 - Foothill/Eastern: FY23, FY24, and FY28
- Work with the Communications team to prepare debt fact sheets providing accurate information on the Agencies' financial strength.

Environmental Stewardship

Fiscal Years 2023–2029



Goal

Continue to advance the Agencies' legacy of environmental stewardship and innovative leadership to protect and support Orange County's natural environment and threatened species for future generations.

Objectives

- Support TCA's lands management program incorporating:
 - Environmentally friendly methods including use of nontoxic materials for weed abatement.
 - Implementing measures to support environmental sustainability and resilience for ongoing and future CIPs.
- Evaluate opportunities to implement or support relevant, beneficial conservation programs or activities utilizing TCA's Habitat Conservation Fund.

Activities

- Continue active management of more than 2,000 acres of conservation lands and environmental programs.
- Advance the site plan and process for recreational and mitigation purposes at the Saddle Club Preservation Property.
- Reestablish educational tours for Orange County teachers and students, and work to develop periodic content for distribution.
- Incorporate additional wildlife fencing along sections of The Toll Roads when improvements are made to the extent feasible.
- Continue discussions with member cities, regional partners and environmental coalition members to identify solutions and opportunities to improve and conserve the environment, including:
 - Hybrid uses that support improved environmental outcomes and social/recreational uses
 - Establishment of habitat for urban farms
 - Enhanced support for wildlife migratory paths
 - Creation, restoration and/or preservation of resilient habitats
- Initiate planning for long-term management to comply with resource agency permit requirements and perpetual protections of habitat and wildlife, while incorporating opportunities for self-funded future enhancements.

Customer Service

Fiscal Years 2023–2029



Goal

Maintain high levels of customer satisfaction, convenience and operational efficiencies by leveraging new and emerging technologies and service models.

Objectives

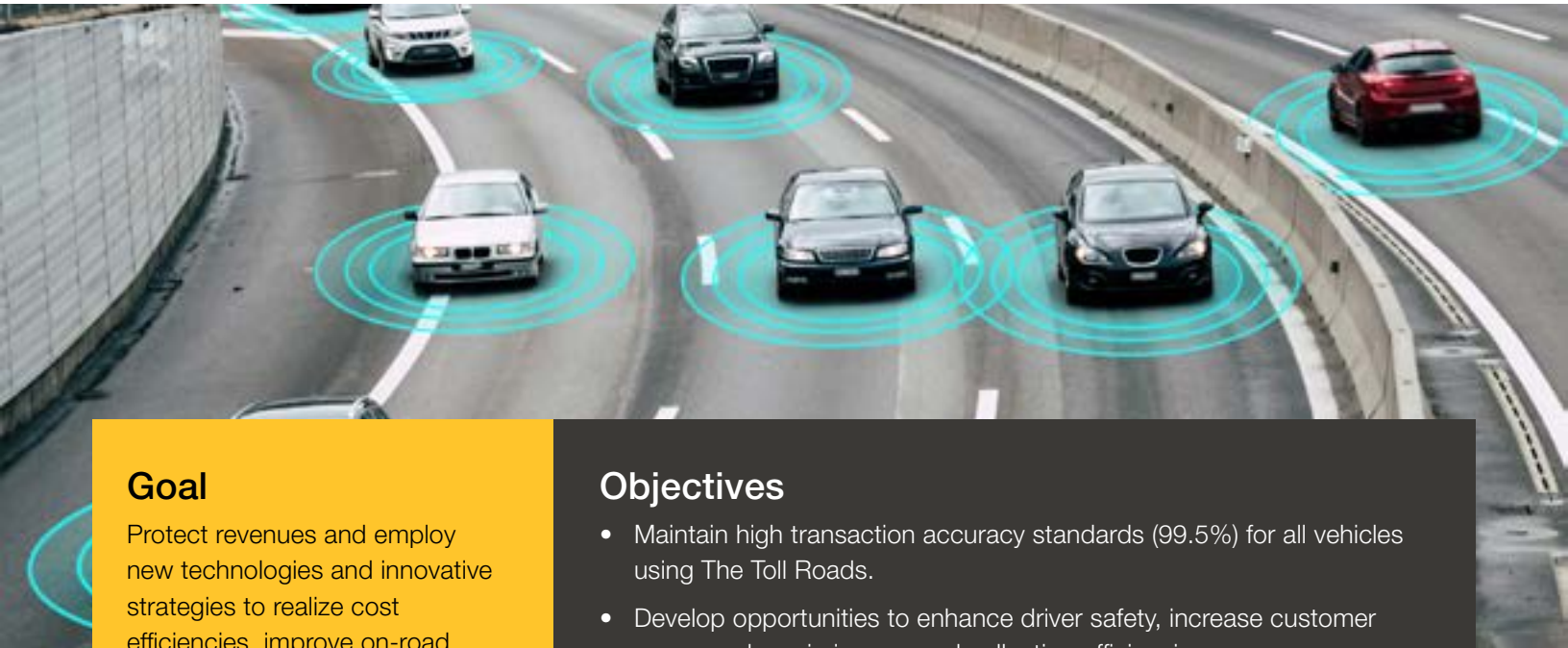
- Maintain “A” rating in customer satisfaction and Net Promoter Score of 70+ across all customer types.
- Retain and/or reduce per transaction costs for toll operations.
- Increase customer convenience through expanded payment options, third-party models and expanded interoperability.
- Improve revenue recovery and account resolution for unpaid tolls and penalties.

Activities

- Make investments to enhance and/or upgrade key customer facing systems including:
 - Telephone and automated voice response system
 - TheTollRoads.com
 - The Toll Roads app
- Leverage partnership with PayNearMe to expand payment locations and tools for all customer types.
- Support emerging Mobility as a Service (MaaS) and connected vehicle imbedded solutions through continued expansion of fleet accounts with private companies (Innovator Fleet Accounts).
- Expand efforts to resolve delinquent accounts (Resolutions Plus Program) and evaluate use of third-party collections service provider.
- Reconsider building rehabilitation plans considering reduced space requirements.
- Ensure operating practices and approaches to penalty mitigation are effective.
- Explore partnerships with other agencies, Caltrans and the California Transportation Commission to leverage TCA’s existing systems and reduce costs through road user charge pilots.

Tolling Technology

Fiscal Years 2023–2029



Goal

Protect revenues and employ new technologies and innovative strategies to realize cost efficiencies, improve on-road communications and enhance safety and mobility.

Objectives

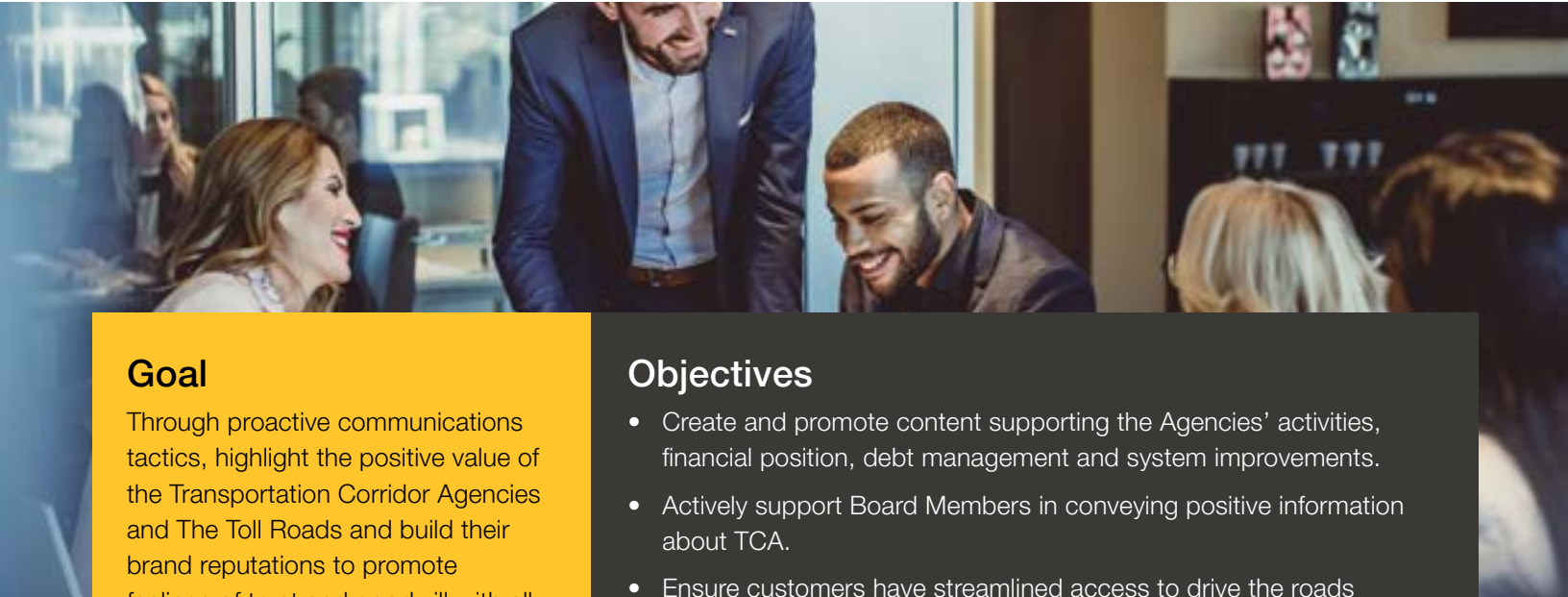
- Maintain high transaction accuracy standards (99.5%) for all vehicles using The Toll Roads.
- Develop opportunities to enhance driver safety, increase customer usage and maximize on-road collection efficiencies.
- Take advantage of emerging technologies to achieve economies of scale.
- Leverage advanced in-vehicle communication technologies to reduce operating costs and enhance on-road communications with customers.

Activities

- Enhance safety by evaluating wrong-way driver detection options that can be integrated with an overall wrong-way driver prevention/alert solution.
- Explore alternative technologies like Bluetooth Beacons as an option for increased customer convenience.
- Continue Cloud migration strategy to reduce capital and operational costs while increasing scalability and flexibility.
- Conduct pilots to evaluate integrating roadside systems with connected vehicle technology to facilitate direct communication with drivers and elimination of transponder distribution.
- Research trip-based pricing capabilities to increase road usage for short off-peak trips while meeting revenue needs.
- Pilot use of Blockchain Distributed Ledger platform as more efficient interface model to support:
 - Interoperability at state, regional and national levels
 - Mobility as a Service (MaaS) concept with third-party account providers
- Complete assessment of current system and advances in on-road toll collection systems to develop schedule for improvements and/or replacement of roadside system.

Communications & Public Engagement

Fiscal Years 2023–2029



Goal

Through proactive communications tactics, highlight the positive value of the Transportation Corridor Agencies and The Toll Roads and build their brand reputations to promote feelings of trust and goodwill with all stakeholder groups.

Objectives

- Create and promote content supporting the Agencies' activities, financial position, debt management and system improvements.
- Actively support Board Members in conveying positive information about TCA.
- Ensure customers have streamlined access to drive the roads with ease, establish accounts, manage accounts, pay tolls and resolve violations.
- Provide the public with information related to Board and Committee Meetings to promote transparency.

Activities

- Elevate Public Awareness — Identify topics and messages and express them in as many mediums as possible using short-form storytelling and community engagement to convey messages in ways that are quick and easy to consume.
- Reinvigorate Branding and Communications — Employing emotional and behavior-based communications styles, leverage channels that are pitched, created and/or controlled to humanize the Agencies by authentically associating names, faces and stories with their brands.
- Expand Partnerships — Empower partners with the positive, informative content needed to accurately and passionately convey the Agencies to their members and the public.
- Champion the Bright Future — Relentlessly generate and disseminate a plethora of content about the Agencies' positive projects and initiatives, including:
 - Adopted Strategic Plans
 - Financial strength
 - Debt management successes
 - Environmental leadership
 - Capital Improvement Plan
 - Stellar customer service
- Highlight the Vibrant Past — Creatively capture, memorialize and share the Agencies' history of self-reliance via video and communications capsule for future generations and Boards so that the past is not lost with the passage of time and to reinforce the Agencies' unique credibility.

Capital Project Delivery

Fiscal Years 2023–2029



Goal

Support regional mobility by utilizing innovative approaches and partnerships to develop and implement the Boards' Capital Improvement Plan (CIP), incorporating forward-looking solutions for safety, demand management and environmental stewardship.

Objectives

- Deliver planned near-term system improvement projects as identified in the adopted CIP within Board approved budgets and expected schedules.
- Update traffic studies to support the timing and development of future projects.
- Research planning studies and pilot innovative/emerging technologies to enhance toll road safety, promote environmental initiatives and reduce capital investments for throughput improvements.
- Develop innovative approaches and partnerships to enhance and streamline project delivery.

Activities

- Advance the design and construction phases for the:
 - 241/91 Express Connector Project
 - Catalina View Project
 - Loma Segment Project
- Conduct periodic traffic studies to proactively assess congestion hot spots in order to identify system improvement needs and recommendations for the Boards' strategic plans and CIP.
- Develop work plans and efforts in collaboration with California Department of Transportation (Caltrans), academic institutions and private industry to evaluate emerging technologies and service models for beneficial application to TCA facilities and ridership.
- Execute studies, outreach and/or pilots to assess:
 - Connected and autonomous vehicle technologies for enhanced safety, throughput and spatial efficiency opportunities.
 - Dynamic inductive charging solutions and third-party utility services to support state initiatives and increased ridership.
 - Technical capabilities and transportation network company interest in using toll plaza as autonomous vehicle layover stations.
 - Toll plaza reuse concepts, such as allowing drive-up kiosk type services.
- Evaluate use of Construction Management/General Contractor (CM/GC) and other innovative contracting models to reduce change order and schedule risks.
- Engage in discussions with Caltrans to develop and implement agreements to enhance project delivery and streamline approval process for improvements to TCA facilities.

Regional Mobility Partnerships

Fiscal Years 2023–2029



Goal

Continue supporting the mobility needs of South Orange County for the movement of goods and people by considering Member Agency partnership requests for transportation related improvements.

Objectives

- Position TCA to consider Member Agency requests for funding support of regional mobility improvements where other local funding sources are insufficient.
- Ensure any proposed project and funding support is in alignment with Board priorities and regional efforts and/or programs.

Activities

- Develop methodology for receipt and evaluation of funding requests from TCA Member Agencies in order to advise the Boards on opportunities that meet the Agencies' stated goals and priorities.
- Align and collaborate with other funding agencies.
- Define process for evaluating and ranking project funding requests based on:
 - Regional benefit for mobility improvements and usage of TCA facilities
 - Assessment of impacts to TCA revenues and financial needs

Fiscal Year 2023 Strategic Plan



Overview

The Transportation Corridor Agencies (TCA) are a Joint Powers Authorities (JPA) consisting of two separate and distinct agencies, the Foothill/Eastern Transportation Corridor Agency (F/ETCA) and the San Joaquin Hills Transportation Corridor Agency (SJHTCA), that operate within Orange County “for the purposes of planning, financing, constructing, maintaining, managing and operating thoroughfares and bridges” (CA Government Code Sec. 66484.3) within the area of benefit in the eastern and southern portions of the county.

With 51 miles accommodating over 300,000 daily trips, TCA has achieved broad community and motorist acceptance. TCA built the first and largest toll road system in California and as the system has grown and improved since the JPA’s inception in 1986, the world of public transportation financing has fundamentally shifted from public roads financed exclusively by gasoline taxes and local transportation sales taxes to incorporate managed lanes and other priced facilities as both a financing and congestion relief measure. Once tolled facilities were an anomaly in California; now they are a common infrastructure and road financing practice.

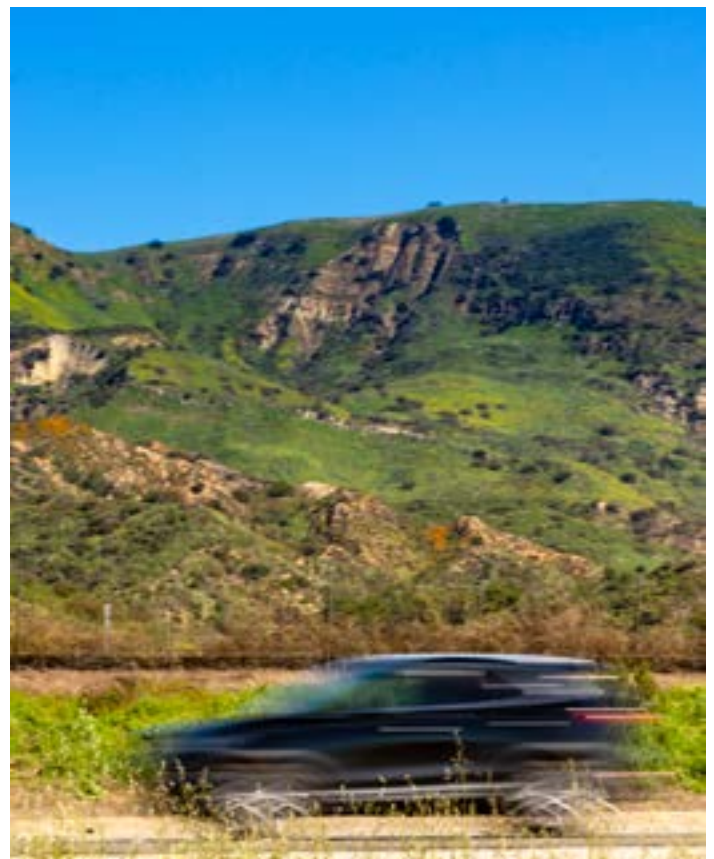
Legislative Authority

In 1984, the California Legislature passed Assembly Bill (AB) 2431, which enabled the County of Orange and cities from a designated area of benefit to form TCA “for the purposes of planning, financing, constructing, maintaining, managing and operating thoroughfares and bridges.” Subsequently, the F/ETCA and SJHTCA were formed and the County of Orange and every Member City passed an ordinance to approve the use of amalgamated development impact fees (DIFs) as a funding mechanism for TCA.

Later, in 1987, Senate Bills (SB) 1413 and 1415 were signed into law to provide TCA with tolling authority. Over the course of the last thirty years, TCA has built 420 lane

miles that account for 20% of Orange County’s highway system. All of this was done through an innovative public-private partnership and financing model.

TCA’s powers and authority come from four sources: (1) the JPA Act, which generally authorizes the formation of Joint Powers Authorities; (2) TCA’s enabling legislation, AB 2431, Government Code Sec. 66484.3, which was specifically enacted and amended for the purpose of authorizing the County of Orange and cities within the areas of benefit, through TCA, to take actions necessary for the construction of major thoroughfares and bridges in the county, including issuing bonds and imposing DIFs; (3) the El Dorado Toll Tunnel Authority Act, which allowed for the imposition of tolls on new transportation facilities; and (4) the Marks-Roos Local Bond Pooling Act of 1984 (“Marks-Roos Act”), Government Code Sec. 6584.



TCA Joint Boards of Directors

TCA's two Boards of Directors consist of elected officials from each of its 17 Member Cities and the County of Orange. The Boards of Directors meet jointly to facilitate mutually beneficial deliberations, however, all decisions are made through separate votes, reflecting the Agencies' distinct responsibilities and authorities. A small staff jointly manages daily operations and facilitates the priorities of both Boards.

SJHTCA Members

The SJHTCA oversees the operation of the 73 Toll Road, which stretches 15 miles from Newport Beach to San Juan Capistrano in southwest Orange County.

- | | |
|------------------|--|
| 1. Aliso Viejo | 9. Newport Beach |
| 2. Costa Mesa | 10. San Juan Capistrano |
| 3. Dana Point | 11. Santa Ana |
| 4. Irvine | 12. County of Orange,
3rd District |
| 5. Laguna Hills | 13. County of Orange,
5th District |
| 6. Laguna Niguel | 14. Caltrans District 12
(Ex-Officio) |
| 7. Laguna Woods | |
| 8. Mission Viejo | |

F/ETCA Members

The F/ETCA oversees the operation of the 133, 241 and 261 Toll Roads, which link the 91 Freeway near the Orange County/Riverside County border to Interstate 5 (I-5) in Irvine and to communities in South Orange County

- | | |
|---------------------------|--|
| 1. Anaheim | 10. Tustin |
| 2. Dana Point | 11. Yorba Linda |
| 3. Irvine | 12. County of Orange,
3rd District |
| 4. Lake Forest | 13. County of Orange,
4th District |
| 5. Mission Viejo | 14. County of Orange,
5th District |
| 6. Orange | 15. Caltrans District 12
(Ex-Officio) |
| 7. Rancho Santa Margarita | |
| 8. San Juan Capistrano | |
| 9. Santa Ana | |

Background

Thirty years ago, through visionary leadership, Orange County made the decision to safeguard its future and not let it be driven by or dependent upon actions outside the county. The County of Orange and 18 cities devised a plan to support the future by ensuring the county would have

efficient and sustainable solutions for its transportation needs. This vision was brought to life through the creation of TCA.

When TCA was formed in the 1980s, an exploding population in the region, worsening traffic congestion and shrinking transportation funds were the reality. The visionary leadership of the era, both elected policy makers and the savvy business community, saw that with increasing population within and around the county there was a critical need and an opportunity to provide for Orange County's economic future and quality of life. Central to the future they envisioned was a reliable highway network capable of moving people and goods within and through the county. With fewer state and federal dollars available to fund transportation projects, the leaders recognized risk and not wanting to leave Orange County's future to chance they took the positions of self-determination and self-reliance. These positions have allowed the county to thrive and become an economic powerhouse and one of the most desirable places to live in the state, while also having the second highest density, with over 3 million residents.

The focus on transportation was paramount and pivotal in the county's history. This is evident in not only recognizing the origins of TCA but also other transportation agencies, including Caltrans District 12, which is the only legislatively mandated district in the state. The combined capabilities of these agencies have contributed greatly to Orange County's success and positioned it well for the future. The creation of TCA was the lynchpin of the plan and growing the county's funding pot for transportation by using state legislation to establish a public agency with locally elected governance and unique authorities to develop revenues and deliver highway projects. Innovation was key to the plan, using both a first-of-its-kind financing approach – that would leverage private investor capital without the impact of a profit motive or any responsibility for taxpayers to carry risk if revenues fall short – and the design-build contracting model for expedited delivery of the roads.

The executed plan utilized non-recourse toll revenue bonds and DIFs to construct 420 lane miles of highways with no dependency on other local, state or federal sources. The resulting initial construction of State Routes (SR) 73, 133, 241 and 261 (collectively known as The Toll Roads) equates to 20% of the entire county's highway network and carries over 300,000 trips daily that otherwise could not be absorbed by adjacent highways (I-5, I-405 and SR 55) or arterials.

The plan was also very proactive and future thinking, as most of The Toll Roads system was constructed in advance of land development. This proactive construction approach was key in reducing expenditures, as the cost of delivering highway infrastructure is always increasing. Initial construction of The Toll Roads consisted of creating its skeletal system, which was key to ensuring near-term traffic forecasts were met while also leaving a large median for future improvements, providing the ability to accommodate continued growth in traffic demand as funding supported it.

Strong fiscal management has always been key to accomplishing the Agencies' purpose of supporting the movement of people and goods. The proactive approach of greenfield road construction has undeniably proven its success for Orange County and as a business "startup" TCA experienced challenges that are typical of the tolling industry. The reality of projecting the rate and timing of land development; forecasting travel demand and traffic patterns; and weathering economic cycles are all part of a toll agency's maturation and success. The Agencies' financial diligence carried them through these challenges and allowed them to take advantage of strengthening opportunities along the way.

The Great Recession was a significant milestone in the Agencies' history. The lessons learned to date regarding actual development, the stresses placed on revenue and the opportunity presented for low interest rates provided a sound adjustment point that the Boards of Directors used



to create an extremely strong foundation for the future. The refinancing that took place in 2013 for the F/ETCA and 2014 for the SJHTCA utilized lower, fixed-rate debt and modest projections of land use to put the Agencies on strong paths that focused on:

- Minimizing annual debt profile and revenue needs
- Keeping toll rates as low as possible to benefit drivers and attract traffic from other roads
- Protections from future economic downturns
- Supporting potential needs for capital improvements

This foundation created the initial environment for the Agencies' financial position to thrive and a platform that has continued to improve. The approach to debt management and toll rate setting has been exceptionally strong, allowing the Boards of Directors to continually take steps to enhance their respective financial profiles. Strong overall management has resulted in several ratings upgrades and provided for bond refunding transactions that have reduced debt service payments by more than \$700 million since 2017 without extending any bond maturity dates. The savings and approach to fiscal and operational management have strengthened the Agencies, further improving ratings and increasing reserves for Capital Improvement Plan projects and economic protections.

In addition to capital delivery and fiscal management, the Agencies' approach to operations management has been an essential component of their success. Again, innovation proved instrumental in providing the approach and tools used to control costs and deliver effective services. Beginning with the active support for statewide interoperability in the 1990s, recognition of the "customer" has been core to TCA, as demonstrated through its established trademark, FasTrak®. FasTrak became the brand for all California toll agencies to use in communicating a customer's ability to have an account with a single toll agency and pay for tolls on any tolled bridge, lane or road in the state.

The Agencies' use of innovation to manage costs is also represented by the 2014 conversion to all-electronic tolling. The elimination of on-road cash collection and transition of toll attendant jobs to customer service agents created significant long-term cost savings and safety benefits, coupled with an approach to increased customer convenience through payment options. Cost savings and customer appeal continued to play a role in creating the tolling industry's first mobile app and championing the adoption of "6C" (International Organization for



Standardization 18000-63) as the state’s open standard for tolling. The adoption of 6C allowed TCA and others among the state’s 12 toll agencies to convert from hardcase transponders to sticker transponders, saving millions of dollars per year in transponder costs.

The continual approach to managing “seconds and cents” while delivering high quality customer service is a foundational approach to TCA’s operations that has resulted in extremely low per-transaction costs. The Agencies’ expertise and approach have also resulted in a partnership with the San Bernardino County Transportation Authority (SBCTA) to leverage TCA’s back-office systems and customer service operations to support SBCTA’s plans for future express lane facilities.

Another noteworthy accomplishment area in the Agencies’ history is their award-winning environmental programs. From TCA’s onset, the Boards of Directors understood the importance of environmental stewardship in promoting Orange County’s quality of life and protecting the natural environment. The comprehensive planning and approach to protecting habitat and animal species includes significant investments in biological species protections, mitigation banks, wildlife undercrossings and wildlife safety fencing, all of which have provided the gold standard for others to emulate nationally and internationally. The Agencies’ environmental investments, which have gone above basic approaches for mitigation, and the resulting recognition have created a long-lasting legacy for the Agencies and Orange County.

Orange County’s amazing legacy of vision, self-determination and self-reliance that lead to TCA’s delivered successes in advancing mobility through strong fiscal, operational and environmental management, provides a model for current Boards of Directors. Current policy makers face a challenge similar to the Agencies’ early leaders in looking at transportation as a component of Orange County’s quality of life. However, they have an advantage in that they stand on the shoulders of those past leaders and can leverage the practical asset that TCA has become to support current visions for the future.

Strategic Plan Introduction

The information in this plan is reflective of the Boards of Directors adoption of the Agencies’ mission, goals and objectives and highlights their direction to staff on the activities that should be undertaken through the plan’s horizon (2022-2029). It is anticipated that the Strategic Plan will receive periodic updates to keep in line with guidance from the Boards of Directors; Agency financial positions and capabilities; transportation needs within South Orange County; and the rapidly changing technological and policy environment for mobility.

The Agencies’ purpose in advancing the movement of goods and people, their history of successes and current financial position create an ideal environment for strategic planning and revisiting the vision for Orange County’s transportation needs — and TCA’s role in supporting that vision. Whereas the county’s original visionaries and leaders had to focus heavily on attracting investors and creating revenues to repay loans, current Boards of Directors are in the position of protecting revenues and leveraging them to support the Agencies’ continued mobility efforts.

The fiscal, operational and environmental management approaches that have created the foundation for today’s visioning remain at the forefront of how the Agencies operate, with an increased focus and recognition on innovation, statewide policy efforts and opportunities to further reduce debt through early paydown considerations.

These aspects are captured in the Agencies’ Vision and Mission statements noted below. The Vision Statement reflects what residents, visitors and travelers see and experience today — that Orange County is a great place to live, work and play — and the desire to carry it forward. The ability of future generations to enjoy the same experience cannot be left to chance and requires current visionaries, both elected and business leaders, to think about that future as their predecessors once did.



Vision Statement

Promote enhanced mobility, safety and environmental quality as essential components of Orange County's vibrant economy and quality of life that benefit all residents and road users.

TCA's role in supporting that vision is grounded in its function and legislative authority for delivery and operations of surface transportation, its history of successes and recognition of the current financial, technological and policy environment for transportation.

Mission Statement

Implement and operate a highway network of congestion-free travel alternatives with a focus on customer service, innovation and self-reliant financial approaches while considering regional transportation needs and partnership opportunities.

Developing plans to follow through on TCA's mission begins with assessing the current climate for transportation while noting what has and hasn't changed over the Agencies' history.

Current Transportation Climate

The following brief statements provide the context of the policy and technical climate in which the Strategic Plan was developed.

- Environmental concerns, both from an emissions and footprint perspective, are the driving priority of statewide policies pertaining to transportation. Extraordinary efforts and investments are being made, coupled with legislation and policy to advance clean air goals and to protect biological functions of native habitats and watersheds. Perceptions are that the State has increased its recognition of transportation infrastructure as a utility and its policies are seeking to limit the impacts of induced demand that can be coupled with unmanaged capacity additions, such as general-purpose lanes. Past approaches of expanding state highways are no longer the first consideration for improving the movement of people and goods.
- While technology has been a driving force in most industries for several decades now, large-scale beneficial applications for transportation have only been gaining significant steam over the last decade or so. Prior to this time, relevant technical advances were primarily within siloed systems, traffic detection, satellite positioning, traffic lights/ramp meters and within vehicles themselves. Transportation engineers, planners and traffic operators now see a world where these elements work in a potentially self-managed ecosystem where elements are aware of each other, communicate and through machine learning provide industry professionals greater abilities for decision making or through artificial intelligence make decisions on their own.
- The concepts of connected and autonomous vehicles carry with them goals of increased safety and zero fatalities, priority goals for every transportation agency. The ability these technologies have for increasing throughput via improved longitudinal and lateral spatial efficiency is of keen interest for minimizing transportation's environmental footprint. Significant investments continue to be made in both the public and private sector to advance the underlying technologies, study their projected benefits and plan for their incorporation in a variety of applications.

- Driven by environmental concerns, national security interests and rapidly improving capabilities, electric vehicles are positioned to comprise most new vehicle sales in the state and will be required of all manufacturers by 2035. Auto manufacturers appear well positioned for aggressive production timelines, but key to attaining the benefits offered is charging infrastructure. Broad based approaches to addressing the need for charging infrastructure that would support vehicle sales are being developed and implemented. Some of which have the added benefits of reduced demands on natural resources and increased customer convenience.
- Notwithstanding the state's enactment of SB 1 (The Road Repair and Accountability Act of 2017) and the recent passing of the federal Infrastructure Investment and Jobs Act, sustainable revenues for surface transportation investment and maintenance remain a challenge both in California and nationally. California and several other states are exploring user fees, similar to a tolling business model, as long-term solutions.

Most of these statements identify significant changes to considerations for transportation visioning versus what existed in the 1980s and 1990s. Environmental policy and technology are playing a big role in guiding transportation efforts with ripple effects resulting in innovative services and forecasted changes in vehicle ownership. However, challenges with funding have remained a constant since the Agencies' beginning.

As the Agencies look to their mission for improving mobility, recognition of the following is important:

- Use of tolling is a proven and effective demand management tool.
- Continued advancements in technology will enhance safety and could provide increased throughput without significant capacity additions.
- Transportation agencies can play a role in supporting the acceleration of electric vehicle adoption.
- Outside funding for Orange County's transportation needs will continue to be limited.

Ensuring that the county's transportation system remains viable necessitates that the Boards of Directors continue the important themes of the original leaders: self-determination and self-reliance.





Strategic Planning Areas

The Agencies' vision, mission, values, goals, objectives and specific activities provide a roadmap for progress and clear direction to staff. Delivery of the Boards of Directors' adopted mission requires consideration of the climate for transportation improvements and review of various management areas to delineate and execute responsibilities. The Strategic Plan includes seven areas that consider these aspects to identify respective goals and objectives. These considerations also include current debt structures and cash reserve obligations; Capital Improvement Plan needs maintenance of tolling systems; operating costs, trends and efficiencies; prioritized use of excess revenues; and communicating with the public.

Aspects noted in each area may change with periodic updates, Board perspectives and as the Agencies continue to mature, but intrinsic to every plan and effort are our core values.

TCA Values

- Advance regional mobility solutions
- Embrace fiscal responsibility
- Provide superior service to customers and the community
- Encourage innovative thinking and solutions
- Champion environmental stewardship
- Cultivate effective communication
- Promote a positive workplace

The Strategic Plan includes the following seven focus areas. The listing order of the areas does not convey any priority as they are interconnected parts of the comprehensive approach that supports the Agencies' continued success. As noted during the Boards' adoption, all the areas are essential and will receive equal consideration in the development of expenditure plans.

- Fiscal Management
- Environmental Stewardship
- Customer Service
- Tolling Technology
- Communications and Public Engagement
- Capital Project Delivery
- Regional Mobility Partnerships

Fiscal Management



When TCA was formed in the mid-eighties to support the movement of people and goods and provide the critical transportation infrastructure needed to support Orange County's future, it was during a time of inadequate federal and state funding, requiring an approach of self-reliance. The solution was to fund development of The Toll Roads with non-recourse toll revenue bonds that would be paid back through the collection of tolls and DIFs rather than relying on guarantees from government tax sources. In supporting this approach, the Agencies have employed strong financial management to develop and maintain a solid long-term financial position.

Over the Agencies' lifespan, the typical maturation process for a "green field" toll road development has strengthened the Agencies' financial prowess, making it a global model

for others to emulate. The realities of land development and multiple economic fluctuations have created opportunities for both Boards of Directors to institute debt management, investment and toll rate setting policies that ensure fiscal responsibility while supporting goals for mobility and protections against unforeseen impacts.

The Agencies' strong finances are due to the financial discipline conveyed through these policies that have been implemented and refined over recent years. The approach to fiscal management and the resulting financial positions have provided the opportunity to continue the Agencies' focus on supporting the mobility needs of South Orange County, implementing its Capital Improvement Plan and other initiatives included in the Strategic Plan.

Goals and Objectives

As the Boards of Directors make decisions about priorities during the next seven years, it is important to consider the effect of the decisions on the Agencies' long-term finances. The history of strong financial management and the need to maintain that strength to provide future Boards of Directors financial flexibility is the basis for the Fiscal Management goal and objectives.

Goal

Continue to fulfill the Agencies' commitment to maintaining a long-term sustainable financial position.

Objectives

- Conduct financial planning that supports Agencies' Capital Improvement Plan, debt management strategy and other initiatives while maintaining strong credit ratings.
- In accordance with Agencies' Debt Management Policies, monitor economic environment and look for opportunities to further enhance the Agencies' strong finances.
- Develop cashflow scenarios that include opportunities for the early pay down of bonds per call provisions and strategic plans' horizon years.
- Recommend the establishment of policies that support the Boards of Directors' strategic priorities.
- Continue to provide for transparency through annual audits, transactional data and debt fact sheets to promote investor, Board and public confidence.

The Fiscal Management plan for the next seven years focuses on providing the continued financial strength needed to fund Strategic Plan initiatives and maintain a long-term financially stable position. In accordance with the Agencies' Debt Management Policies and self-reliance approach, **the strategic plan does not assume any extensions of bond maturity dates, issuance of new debt or dependency on local sales taxes or state/federal sources to fund initiatives.** Most initiatives are funded from the Agencies' unrestricted cash, while some operational initiatives are funded with current year toll revenues in accordance with bond indenture flow of funds. Unrestricted cash results from the required surplus generated each year in accordance with bond indenture debt service coverage requirements and maintenance of strong credit ratings. This required flow of funds is described more fully in the financial framework section of this document.

The strong credit ratings that the F/ETCA and SJHTCA have earned following debt restructurings in 2013 and 2014, respectively, have allowed the Agencies to strategically refund bonds and realize cashflow savings of more than \$700 million net of cost without extending bond maturity dates. The savings have contributed to the strong liquidity and unrestricted cash available to fund Capital Improvement Plan projects and other initiatives, including early debt paydown while also further bolstering credit ratings.

The Agencies' Fiscal Management plan for the next seven years continues this successful approach and **recommends that, combined, the Agencies pay down approximately \$600 million in early bond principal payments that will save the Agencies approximately \$670 million in interest.**

Policies that support the Agencies' strong finances and continued transparency through annual audits and materials that provide factual data sources to discourage misinformation about the Agencies' finances are also key components of the Strategic Plan.

Financial Framework

The Agencies' financial framework is graphically depicted in Exhibit A (page 24) at the end of this section and based on the flow of funds in accordance with the bond indentures. The bond indentures are the legal documents associated with the Agencies' bond issuances and include information about bond interest rates, payments, maturities, call provisions and other legal provisions including bond covenants. In simplified terms, annual revenues pay annual operating expenses and debt service (annual interest and principal on the bonds). Restricted bond indenture reserves have also been set aside and are currently filled to the required amounts. These restricted indentured reserves are mostly debt service reserves that would only be used if the Agencies were not able to make annual debt payments. The Agencies' forecasts do not anticipate needing to use these funds, so the restricted reserves will remain in place until the bonds are paid off.

Typical of toll revenue bonds, the Agencies' bond indenture covenants require that annual net revenues after operating costs exceed annual debt service payments. This requires the Agencies to generate excess revenue every year. This "surplus revenue" is deposited into the Agencies' unrestricted cash, creating financial stability (i.e., liquidity) which is a key observation point for credit ratings. Maintenance of the Agencies' strong credit ratings requires higher debt service coverage than the minimum ratios to demonstrate this stability and is important to entities who have outstanding bonds and their investors.

The unrestricted cash accumulated over the last several years provides additional liquidity. The Agencies were very fortunate to have a strong financial position and liquidity available to address the economic challenges of the pandemic. This cash was available to support the temporary loss in revenue while maintaining strong credit ratings.

The Agencies' commitment to financial responsibility includes continually pursuing opportunities to enhance revenues and reduce operating costs, along with strategies for managing and reducing debt. Looking for ways to be more efficient and financially responsible is an important part of TCA's financial framework.



Debt Structures and Long-term Revenue Forecasts

Each Agency has several series of bonds outstanding with various maturity dates through 2050 (SJHTCA) and 2053 (F/ETCA). **Both Agencies have all fixed rate debt; all payments are known and scheduled so that annual payments are in line with Traffic and Revenue (T&R) forecasts.** The debt was restructured in 2013 (F/ETCA) and 2014 (SJHTCA) based on conservative T&R forecasts that were designed to withstand economic cycles and assume very small 2% toll rate increases based on average inflation assumptions over the life of the bonds. The Agencies have adopted toll policies to reflect these small annual toll rate increases that amount to pennies and are designed to attract traffic to The Toll Roads and off congested alternatives while meeting the long-term bond payment obligations.

The long-term T&R forecasts have been updated as part of recent bond refunding transactions and consider impacts from the COVID-19 pandemic. While the Agencies may have opportunities to modify toll policies in future strategic plan cycles, the current strategic plan horizon is still early in the long-term forecast and debt obligation span, so it will be important to stay on track with financial policies and maintain financial discipline that will provide flexibility for future Boards of Directors in meeting financial obligations.



Early Paydown of Bonds Through Strategic Plan Horizon

A key objective for both Boards of Directors in adopting the Strategic Plan is **to provide opportunities for future Boards of Directors to strategically pay down some bonds early.** When considering early paydown of bonds, call provisions and available cash must be considered. Each Agency has various bonds that become callable over the next seven years. Based on cashflow forecasts and bond call provisions, the following early bond paydown opportunities have been included in this plan.

SJHTCA

Series 2014B junior lien bonds of approximately \$294 million are callable beginning January 15, 2025. Based on cashflow forecasts, \$200 million of these bonds are recommended for early paydown on January 15, 2025, with the balance of \$94 million split over the following two fiscal years. **The early paydown of bonds on this proposed schedule will save the Agency approximately \$300 million in interest.**

F/ETCA

The first recommendation for early paydown is the series 2013B-3 senior lien term rate bonds totaling \$125 million when callable on July 15, 2022.

The second series of bonds that will be callable and recommended for early paydown are \$60 million of 2013A senior lien bonds callable January 15, 2024.

The last series callable during the next seven years are the 2013B-1 senior lien term rate bonds of \$125 million, callable July 15, 2027.

If all these bonds totaling \$310 million are paid early on the associated call dates, the Agency will save over \$370 million in interest.

Both Agencies have other bonds that will become callable in future strategic planning periods and will be candidates for refunding for savings or early paydown dependent on cash flow projections.

Unrestricted Cash and Credit Considerations

Funding Capital Improvement Plan projects, other strategic initiatives and unforeseen economic impacts require use of the Agencies' unrestricted cash. As these expenditures are planned, consideration must be given to how these uses affect the Agencies' liquidity and associated credit ratings. It is critical that the Agencies retain adequate balances in unrestricted reserves to, both, meet financial obligations if they were to experience another pandemic or economic downturn and to protect and enhance the credit ratings that are essential to realizing future debt management savings. Both will be reflected in the Agencies' development and adoption of Liquidity Reserve Policies.

Another consideration for use of the Agencies' unrestricted cash relates to the government's best practice of managing pension liabilities. The Boards of Directors have included this as part of their sound fiscal management and, as of July 2019, maintain a zero balance for unfunded pension liability. Memorializing this ongoing strategy as part of the Agencies' fiscal management plan will also be addressed through the development and adoption of a Pension Liability Policy.

Liquidity Reserve Policy

Cash balances for maintaining and improving credit ratings and rainy-day funds make up the liquidity reserve. The Agencies have identified the need to delineate/establish this reserve through Board-adopted policies. The developed policies will include methodologies for calculation of reserve amounts to address these components and specifies the parameters, usage and replenishment requirements for managing the reserve. As the Agencies continue to paydown bonds through regularly scheduled payments and early bond payments, the methodology will provide for adjustments to target levels that reflect the Agencies' current operating and debt positions.

Pension Liability Policy

Maintaining the Agencies' current status of having zero unfunded pension liability is a sound government agency practice and fairly unique position. Development and adoption of a policy that uses the Agencies' unrestricted cash to retain this status will be accomplished within the Strategic Plan's horizon. If the pension obligation begins to show an unfunded balance, the policy would designate cash to pay it back down to zero.

Unrestricted Cashflow Forecasts

Unrestricted cash balances forecasted for the seven-year Strategic Plan horizon include recommendations outlined in this document and summarized below.

SJHTCA

Unrestricted cash balances as of each fiscal year end assume cash funding of the Catalina View project and annual ongoing nonoperating costs totaling \$70 million as estimated in the Capital Improvement Plan, early paydown of \$294 million of bonds as outlined above, and loan repayments to the F/ETCA of \$137 million beginning in FY25. The forecasted balances include a target liquidity reserve recommended at 10% of outstanding bonds.

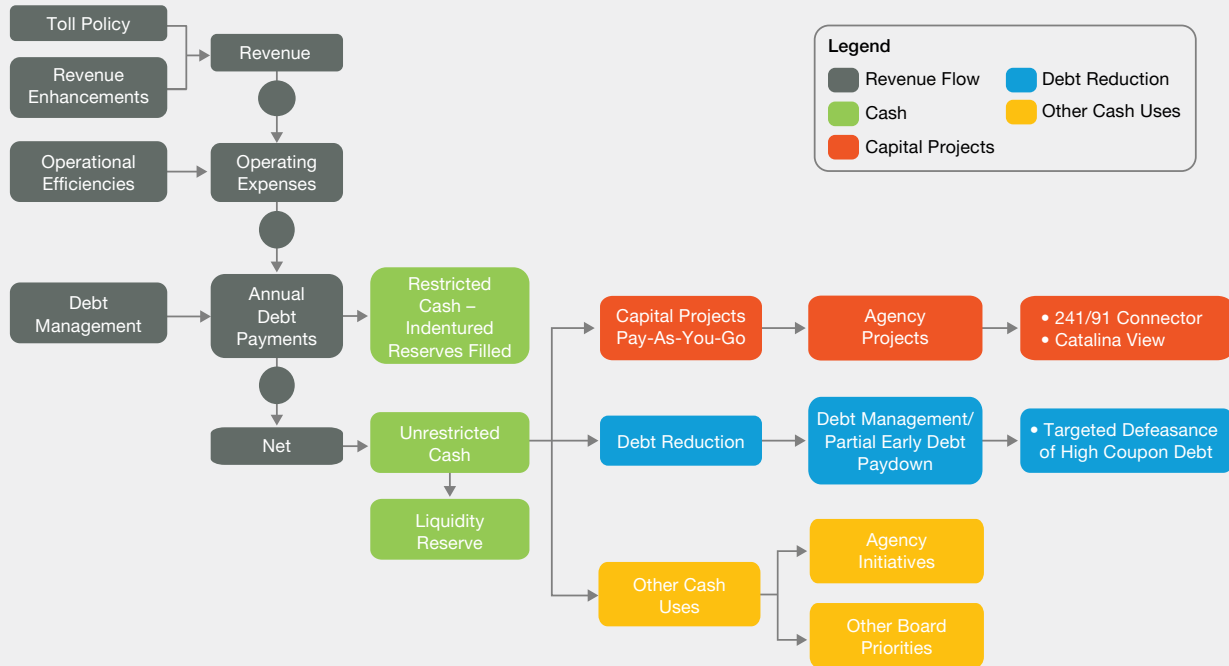
F/ETCA

Unrestricted cash balances as of each fiscal year end assume cash funding of the 241/91 Express Connector and Loma Ridge Projects and annual ongoing nonoperating costs totaling \$555 million as estimated in the Capital Improvement Plan, early paydown of \$310 million of bonds as outlined above and loan repayments from the SJHTCA of \$137 million beginning in FY25. The forecasted balances include a target liquidity reserve recommended at 10% of outstanding bonds.

	SJHTCA Unrestricted Cash Balance	F/ETCA Unrestricted Cash Balance
June 30, 2022	\$312.4M	\$487.2M
June 30, 2023	\$371.9M	\$462.4M
June 30, 2024	\$434.1M	\$536.6M
June 30, 2025	\$293.4M	\$539.5M
June 30, 2026	\$291.9M	\$601.9M
June 30, 2027	\$299.2M	\$701.8M
June 30, 2028	\$340.2M	\$691.2M
June 30, 2029	\$419.7M	\$814.2M



Financial Framework (Exhibit A)



Financial Management, Transparency and Communications

As with any organization, good tools are essential for effective management. This is especially true of the Agencies' financial management system which currently supports accounting, contract management and budgeting. A key activity during the horizon of this plan will be a consultant assessment of the current financial system and available market solutions. The results will determine the need and potential timeline for retaining, upgrading or replacing the current system.

As a continual activity in the Agencies' history and future, transparency through annual audits and disclosure of financial information on the TCA website and other financial sites will remain a focus. Staff will also work with the Boards of Directors to develop materials that provide factual data sources to discourage misinformation about the Agencies' finances and make presentations to city councils and other interested parties.

Fiscal Management Summary

The Boards of Directors' commitment to sound financial practices and supporting policies and resulting strong liquidity have provided the Agencies and future Boards of Directors with flexibility in meeting financial obligations and implementing important initiatives. The fiscal management goal and objectives support and enhance the Agencies' continued financial success by ensuring long-term stability, supporting delivery of the Boards of Directors' Capital Improvement Plans and strategic initiatives while creating opportunities for further debt reduction of \$600 million in principal and \$670 million in related interest.

Environmental Stewardship



The Agencies have a strong legacy of environmental stewardship rooted in an understanding of the needed balance between transportation and the biodiversity of the natural environment. Hallmarks of the Agencies' contributions to the protection of the county's natural environment include:

- Implementation and management of over 2,000 acres of conservation areas consisting of seventeen parcels and the establishment of a mitigation bank, one of the first of its kind in California.
- Participation in the Central/Coastal Natural Communities Conservation Plan contributing lands and nearly \$7 million to ensure the long-term management of nearly 40,000 acres as open space.
- Partnership with academia, state and federal regulatory agencies, other transportation agencies and environmental organizations to study and support collaborative efforts to advance environmental protection within Orange County.
- Construction of an extensive system of wildlife crossings, including hundreds of large diameter culverts and dedicated bridge under-crossings, to preserve and support the natural movement of mountain lions, bobcats, coyote, deer and many other wildlife species.
- Innovative establishment of the Coyote Canyon mitigation site through conversion of the Coyote Canyon Landfill, a first of its kind in the nation.

- Construction of 12 miles of wildlife protection fencing, which have been tremendously successful in eliminating animal/vehicle collisions and now serves as an international model that others seek to emulate.
- Developed wetlands and coastal sage scrub habitats as part of construction of The Toll Roads, including areas within important watersheds. These habitats include natural features that treat and improve water quality, provide refuge for wildlife species and add to Orange County's quality of life.

The Agencies' efforts have supported establishment and protection of resilient and sustainable native habitats that provide refuge for numerous biological species, including some that are protected by state and federal agencies such as the California gnatcatcher, the least Bell's vireo, the arroyo toad and a host of others. These natural habitats also assist the state with meeting air quality goals by providing carbon sequestration and act as a buffer to other developed lands.

As highlighted in the Agencies' Vision Statement, the Boards of Directors' direction is to continue supporting and further building the legacy of environmental stewardship moving forward, even beyond the horizon of this Strategic Plan.

Goal

Continue to advance the Agencies' legacy of environmental stewardship and innovative leadership to protect and support Orange County's natural environment for future generations.

Objectives

- Support TCA's lands management program that includes:
 - Utilizing environmentally friendly methods, including use of nontoxic materials for abatement of non-native, invasive species.
 - Incorporating measures to support environmental sustainability and resiliency for ongoing and future Capital Improvement Plan projects.
- Evaluate opportunities to implement or support relevant, beneficial conservation programs or activities utilizing TCA's Habitat Conservation Fund.

Activities

When planning for the next seven years, the Agencies have an opportunity to continue their legacy of environmental stewardship. The following activities will allow TCA to complete ongoing mitigation efforts and participate in additional beneficial conservation activities. A cornerstone of many of these activities is TCA's continued approach of leveraging partnerships. Building the relationships fostered with regulatory agencies and the ongoing collaboration established through the historic environmental settlement agreement, staff will work to achieve the objectives established by the Boards of Directors.

Activity #1: Continue active management of conservation lands and environmental programs

The Agencies have a well-established and cost-effective program that allows them to efficiently oversee and manage the over 2,000 acres of conservation lands under their purview. TCA's proactive management of these lands has resulted in establishing a trusted partnership with the regulatory agencies that oversee their projects and programs. There are hundreds of species that benefit from the Agencies' conservation lands management program. Going forward, staff will continue proactive land management, which includes utilizing natural approaches to removing invasive species and conducting focused surveys documenting the presence of protected species.

Over the next seven years, the Agencies will identify additional mitigation site opportunities as needed for Capital Improvement Plan projects. The mitigation needs for each planned project are developed based on the actual impacts on various habitats and the project specific mitigation ratios that are negotiated with regulatory agencies.

Activity #2: Advance evaluation, planning and implementation of recreational uses in connection with environmental projects and programs

The Boards of Directors have encouraged staff to consider and pursue more innovative and encompassing approaches to the Agencies' environmental efforts. Starting with the Saddle Club property acquired in 2017, staff is developing plans that incorporate recreational uses while meeting the principal purpose of environmental mitigation. The site is ideally located with continuity to adjacent conservation properties and its mitigation features include beautiful oak woodlands and other critical habitats. The site has historically included equestrian features, trails,





water preservation and urban farming concepts with a community garden and citrus grove that could be leveraged to provide hybrid uses of the site, as well as a model for other considerations. Staff will work to explore expanded partnerships with Member Agencies on targeted opportunities for urban farming, water protection and recreational use such as those contemplated by the Cities of Irvine and Anaheim and the County of Orange's 4th District.

Activity #3: Broaden environmental education and knowledge of TCA's contributions

The Agencies will work to reestablish educational tours and content for the public, teachers and students. In past years, the Agencies created and led several educational programs that provided a great link to local schools and a forum for TCA to tell its positive story of preserving and protecting the environment. These programs included spring tours of selected mitigation sites that were developed under the Agencies' purview.

In addition, the Agencies have supported local schools with various educational resources. Staff developed materials and sponsored a program called "Fossils in Your Backyard" for local schools highlighting the hundreds of fossils — including mammoths, whales, sabretooth lions and various dinosaurs — the Agencies discovered and protected. Staff also created an interactive website called "Bonita Creek Virtual Classroom" highlighting the wetlands along SR 73.

Restarting and enhancing these educational programs will provide a great forum for telling the Agencies' success story of protecting the natural environment, while meeting transportation and mobility needs. Balancing mobility needs, while also protecting the natural environment is an increasing focal point for the state and nation.

Activity #4: Incorporate additional wildlife fencing along The Toll Roads

In 2016, TCA completed installation of 12 miles of wildlife fence along SR 241. The fencing has worked exceptionally well in combination with the animal undercrossings that were constructed with the roads. The success of the fence in protecting wildlife and road users has generated both national and international recognition, receiving multiple awards. TCA partnered with the University of California, Davis to develop the fence program and it has been very effective protecting the four focal species: mountain lions, bobcats, coyotes and deer.

Where feasible, for upcoming projects, staff will seek opportunities to incorporate similar features, including additional fencing as projects are advanced to construction. Staff will also seek opportunities to obtain state and federal dollars or other available funding opportunities to employ environmental protections along The Toll Roads in advance of Capital Improvement Plan projects.

Activity #5: Long-term management for perpetual obligations

Some of the permits approved by the United States Fish and Wildlife Service and the California Department of Fish and Wildlife in connection with the Agencies' Capital Improvement Plan projects, carry perpetual obligations for the protection of various plant and animal species. The Agencies are required to develop plans to meet these obligations, which could be executed by future Boards of Directors should the Agencies no longer desire to directly manage the lands. In addition to the requirement, there is an opportunity to treat the Agencies' legacy of environmental stewardship in a similar manner. Significant



consideration and planning will be done over the horizon years of the Strategic Plan to accomplish both aspects and minimize costs to the Agencies.

There are a number of ongoing activities and resources required each year to fulfill land management commitments, including weed abatement for fire suppression; monitoring and removal of invasive plant species; and patrols to enforce against unlawful activities. Each conservation site has unique terms and agreements associated with the mitigation features and maintenance commitments. The annual costs of managing programs are modest compared to the significant investments required to establish non-wasting endowments. Endowment costs are significant and, as such, each commitment must have its own legal and environmental review as well as preliminary estimation of costs.

The Agencies have been successful in their role as environmental stewards and advocates, providing intangible benefits at the local, state and federal levels from positive recognition for our environmental accomplishments. This is an important consideration for future Boards of Directors in determining when a transfer of responsibilities should occur. Another aspect that will be explored under this activity is the establishment of a foundation that could accept these responsibilities and continue TCA's legacy through pursuit of external funding in various forms. Considering perspectives at the state and federal level, staff will explore opportunities for this option utilizing a more innovative funding strategy that incorporates partnerships and broader approaches to the Agencies' program noted above.

Environmental Stewardship Summary

The Boards are committed to continuing the strong legacy of sound environmental practices and award-winning approaches for the implementation and management of the Agencies' conservation lands. The planned activities include seeking opportunities to incorporate recreational uses in connection with environmental programs, leveraging successful programs by broadening education and knowledge regarding the Agencies environmental accomplishments, evaluating opportunities to implement additional wildlife fencing, and assessing options regarding long-term management of the Agencies' conservation lands and programs.

Customer Service



TCA has always recognized that achieving its mobility and financial objectives depends on attracting drivers to The Toll Roads. Constructed as “choice” facilities dictated an understanding of a customer-centric focus to managing daily operations. Over the last six years, following the conversion to all-electronic tolling and the elimination of on-road cash collection, the Agencies have made significant investments in systems, contractor performance requirements, measurement capabilities, innovative programs and offerings that have enhanced customer service.

The Agencies’ approach to customer service is a gold standard in the industry and highlights include:

- **Payment Offerings** — The Agencies provide more options for toll payment than any other toll operator in the country. From the ability for accountholders and occasional users to pay tolls electronically, through the Agencies’ website and app, to innovative partnerships with private industry that have established a national network of walk-in locations where customers can pre- or post-pay tolls, replenish their account or resolve a violation, the Agencies have recognized that consumer convenience has a strong bearing on customer satisfaction and minimizing violations.
- **Violation Processing** — The Boards of Directors have implemented policies and supported operational practices recognizing that drivers sometimes make mistakes and should be treated like upstanding customers to the extent possible. In addition to the vast array of payment offerings noted above, automatic waivers of penalties for first-time violators; online payment plans for delinquent tolls and penalties; and penalty reductions based on timely response to the Agencies’ communications and a demonstrated willingness to pay are all customer-leaning approaches employed by staff.
- **Customers Call/Contact Options** — A customer’s ability to quickly receive information, manage their account and/or resolve an issue are critical components of addressing consumer expectations. The Boards of Directors have adopted daily performance metrics (such as answering 95% of all calls within five minutes) that reflect this understanding and have proven satisfactory to customers.

These enhancements have provided tangible benefits as reflected in the following metrics:

- High levels of customer satisfaction, achieving an “A” rating and 70+ Net Promoter Score with over 96,000 surveys completed during 2021 through a 11% response rate.
- Doubling of the Agencies’ accountholder base moving from 835,511 accounts in 2015 to more than 2 million at the end of 2021.
- Processing more than 1.8 million toll payments during 2021 from non-accountholders.
- Expanded public and private partnerships with organizations such as SBCTA, Sirius XM, Verra Mobility and PayNearMe.
- Lowering per transaction operating costs to one of the best in the industry.

Moving forward, the Agencies will continue these successful operational enhancements and look for expanded and new opportunities.



Goal

Maintain high levels of customer satisfaction, convenience and operational efficiencies by leveraging new and emerging technologies and service models.

Objectives

- Maintain “A” rating in customer satisfaction and Net Promoter Score of 70+ across all customer types.
- Retain and/or reduce per transaction costs for toll operations.
- Increase customer convenience through expanded payment options, third-party models and expanded interoperability.
- Improve revenue recovery and account resolution for unpaid tolls and penalties.

Activities

TCA will pursue the following activities during the seven-year period of this plan to accomplish the noted goal and objectives.

Activity #1: System Investments

Investments to enhance and/or upgrade key customer facing systems, including telephone and automated voice response systems, TheTollRoads.com and The Toll Roads App are essential to continued success. TCA has seen its investments in these technologies pay off. Currently, more than half of customers manage their account using technology-enabled self-service. Looking ahead, the Agencies will build on this successful approach. For telephone and automated voice response systems, staff will explore the cost/benefit of upgrading to a cloud architecture, as many others have begun doing.

Features will be introduced that enable more efficient work, such as adding automatic outbound dialing capability to increase efficiencies for customer service representatives. Lastly, regarding TheTollRoads.com and The Toll Roads App, new self-help capabilities will be introduced that empower customers to do even more themselves, when it is convenient for them, including how they want to pay. Additional electronic payment types such as Apple Pay, Google Pay and Samsung Pay will be implemented to support consumer preference and increase convenience.

Customer Service will also communicate with customers using their preferred method. For some, that is text or using online chat to interact with a representative or the Agencies’ back-office systems.

Activity #2: Expanded Private Industry Partnerships

Partnerships have been part of TCA’s foundation since the beginning, especially in leveraging the capabilities of private industry. The Agencies’ future will continue to reflect this. For example, to date, a successful three-year partnership with PayNearMe has resulted in more than 200,000 payments at over 3,600 locations nationwide, totaling more than \$5 million in collected revenues. The Agencies will explore expanding this reach with additional cash payment network locations and payment methods.

The Agencies’ partnership efforts for customer service also recognize the disruptive changes and opportunities being brought through innovation and changes in consumer perspectives. We will support emerging MaaS and connected vehicle imbedded solutions through continued expansion of fleet accounts with private companies (Innovator Fleet Accounts). Today, TCA supports a variety of third-party accounts like rental fleets, truck fleets and mobile payment application providers. These third-party accounts aggregate individual toll road users into large accounts. Supporting these large, aggregated accounts enables increased account management efficiencies and

streamlined customer service delivery. Looking forward, the Agencies want to support emerging types of third-party and MaaS accounts, such as SiriusXM, who, in partnership with Visa, has been promoting a vision for making toll payments from a vehicle's dashboard. TCA also wants to be ready to support connected and autonomous vehicle fleets, particularly if consumer preferences shift toward transportation on demand rather than vehicle ownership. By staying in tune with customer preferences and supporting new forms of accounts, the Agencies will maintain, if not increase, the efficiencies of account aggregation.

Activity #3: Enhanced Account Resolution

Addressing the Agencies' business/financial priorities while taking a fair and customer leaning approach will continue to be a customer service emphasis. Efforts will be expanded to resolve delinquent accounts, evaluate use of third-party collections service providers and ensure that operating practices and approaches to penalty mitigation are effective. As highlighted earlier in this section, TCA's approaches to payments and resolution of unpaid accounts have distinguished it from its peers around the state and nation. While many peers place an inordinate focus on penalty amounts, TCA understands that the best approach is to help drivers avoid penalties and to treat them as upstanding customers as long as possible. Despite all these efforts, there is a very small subset of drivers that dictates what we spend on additional efforts pursuing unpaid tolls. TCA's Resolution Plus pilot program has been promising, having increased revenue collections by over \$480,000 in 2021. Moving forward, the Agencies will explore expanding the program to increase its impact and generate additional revenue collections that can help pay for some of these investments. As a fallback for those who would appear to be scofflaws and egregious violators, TCA will explore the idea of contracting with a third-party firm for collections.

Activity #4: Facility Improvements

Prior to the pandemic, TCA was undertaking efforts to modernize its customer service and toll operations work environment to optimize space and minimize the need for contractor provided or leased space. The changes in telework capabilities and mindsets regarding individual workspace, as well as the successful partnership with PayNearMe, warrant re-thinking of this plan to focus more on building rehabilitation. Staff will re-evaluate needs during FY23 and include any associated costs in the FY24 budget.



Activity #5: Expanded Public Partnerships

The Agencies' approach to cost and contract management, as well as the investments made in operational systems, continue to provide opportunities and benefits that other agencies can leverage, which could further reduce TCA's per transaction processing costs. Staff will explore partnerships with other agencies, Caltrans and the California Transportation Commission to leverage TCA's existing systems and reduce costs through road charge pilots as we did through the back-office agreement with SBCTA.

Customer Service Summary

The Agencies have made significant investments in systems, contractor performance requirements, measurement capabilities, innovative programs and offerings that have enhanced customer service. Moving forward, the Agencies will continue these successful operational enhancements and look for expanded and new opportunities. These activities, taken together, represent a comprehensive agenda for enhancing customer service, operational efficiencies and outstanding balance resolution that continue TCA's traditions of innovation and customer service.

Tolling Technology



The foundation for the Agencies' financial success depends on the ability to capture transactions and collect toll revenue. Significant investments have been made in the extensive technology solutions used for roadside systems that identify vehicles and their classifications; capture critical information from transponders and license plates; and package the data into transactions that are processed to ensure accurate and timely collection of revenues. TCA is recognized for having one of the most reliable and accurate roadside systems in the industry, achieving a transaction capture rate better than 99.95%. Maintaining

high levels of performance requires periodic investments in existing and replacement systems.

As was identified in the Capital Project Delivery section, planning for these investments warrants consideration of emerging technologies and innovative solutions to optimize TCA's operations and enhance service delivery to road users. Underlying technologies that support connected vehicles provide evaluation opportunities for enhanced safety, cost efficiencies, driver information and tolling strategies.

Goal

Protect revenues and employ new technologies and innovative strategies to realize cost efficiencies, improve on-road communications and enhance safety and mobility.

Objectives

- Maintain high transaction accuracy standards (99.5%) for all vehicles using The Toll Roads.
- Develop opportunities to enhance driver safety, increase customer usage and maximize on-road collection efficiencies.
- Take advantage of emerging technologies to achieve economies of scale.
- Leverage advanced in-vehicle communication technologies to reduce operating costs and enhance on-road communications with customers.



Activities

TCA will pursue the following activities during the seven-year period of this plan to accomplish the noted goal and objectives. As in other areas, innovation is front and center in terms of ways to increase efficiencies, enhance services and leverage emerging technologies.

Activity #1: Roadside System Assessment and Enhancement Planning

The Agencies' existing roadside system, power generators and uninterruptible power supplies will exceed their useful lives prior to the horizon year of the plan. This will necessitate a significant use of cash reserves and warrants careful planning and scheduling to optimize expenditures and maintain high transaction accuracy standards. Staff will work to align solutions with emerging technologies such as those related to connected vehicles as any new system will have an expected life through 2035. Staff will engage a qualified toll system consultant to perform the in-depth research and analysis required to assess the current system and existing gaps at select ramps, as well as advances in on-road toll collection systems to inform key decisions about tolling technology the Boards of Directors may consider over the next five to seven years.

Activity #2: Enhanced Safety

Tolled facilities are traditionally known as the safest roadways in the world due to demand management strategies as well as the business approach to customer service and sustainable revenue sources. While enhancing safety is always a priority consideration and addressed in Capital Improvement Plan projects, staff will work with Caltrans and the California Highway Patrol to explore the use of traditional tolling solutions and other roadside equipment to evaluate wrong-way vehicle detection solutions. Staff will pilot a low-cost radar detector in a single ramp lane using existing lane infrastructure.

Activity #3: Additional Payment Options

TCA continues to be an industry leader in customer convenience and options provided for toll payment. This stems from the recognition that making it easier to pay tolls increases customer usage and reduces violations. The Agencies will continue to receive positive returns on investments in solutions and services that provide cost effective options for customers. Staff will pilot a program that integrates Bluetooth beacons with The Toll Roads App to create a simplified payment option for customers who don't have or don't want a FasTrak account. This solution has the capability to augment the Agencies' very





successful Pay Toll program and could increase efficiencies by reducing costs associated with transponder fulfillment and violation processing.

Activity #4: Cloud Migration and Blockchain

Leveraging commodity-like technology platforms for hardware, software and services is a core strategy to keeping the Agencies' limited technology staff focused on adding value through innovation and cyber-security posture. Continuing with a cloud migration strategy will reduce capital and operational costs while increasing scalability and flexibility and enable the Agencies to take advantage of the economies of scale provided by sharing space and capabilities in a large data center. Staff will evaluate moving some of the roadside and back-office transaction processing functions to the cloud over the next five to seven years.

As tolled facilities continue to expand with increased consumer expectation for seamless travel and payment, TCA will need to explore more effective solutions to support interoperability. Additionally, as changes in vehicle ownership models occur and micro-mobility solutions continue to expand, service offerings that provide one-stop reservation and payment capabilities will address consumer demand. Service providers will seek integrated options for payments for transportation related services, a concept known as Mobility as a Service (MaaS), which cannot be easily achieved through current system design approaches.

Blockchain platforms provide a secure way of authenticating information, identities and transactions, and are used to create secure records that can be updated in real time. Staff will evaluate ways to leverage a Blockchain platform to support interoperability at state, regional and national levels to reduce software maintenance costs and make large inter-agency data transfers more efficient. The same technology can be used to facilitate data exchanges with MaaS account providers that require alternative solutions to manage the large volume of transponders, license plates and transactions associated with tolling accounts.

Activity #5: Connected Vehicle Research and Pilots

Connected Vehicle technology enables “network like” communications with roadside equipment for transmitting messages and identifying vehicles. The Agencies can leverage Connected Vehicle technology to enhance communications with drivers and replace current methods for vehicle detection and identification. Using these in-vehicle systems for real time communication of road hazards, toll rates, etc. will eliminate the need for large roadside signs and provide a way to tailor specific messages to groups of customers and potential customers. The inherent network capabilities of the technology will enhance detection and identification of vehicles on The Toll Roads by capturing the Vehicle Identification Number or other unique identifier that is broadcast from Connected Vehicles. This will reduce transponder distribution costs and costs associated with identifying vehicle owners. Staff will evaluate integrating roadside systems with Connected Vehicle technology to facilitate enhanced communications and improve vehicle detection and identification.

Activity #6: Pricing Strategies for Increased Usage

Staff will also assess technical solutions and pricing strategies that create opportunities for increased usage of The Toll Roads while aligning with financial objectives. Making short, off-peak trips more attractive to customers can increase road usage for short and long trips. Staff will research trip-based pricing technology and solutions to evaluate opportunities to enhance the value proposition for customers through emerging technologies like connected vehicles and traditional deployments of roadside equipment.

Tolling Technology Summary

TCA's Boards of Directors have been forward-thinking, thoughtful innovators which has resulted in TCA having a world-class toll system and being recognized as an industry leader in leveraging new technologies. Continuing to invest in toll system enhancement planning, safety, innovative payment options and emerging technologies will enable the Agencies to continue that legacy.

Communications & Public Engagement



Essential to the Agencies' continued success in all areas of the Strategic Plan is the ability to broadly and effectively communicate the efforts and accomplishments to the general public, Member Agency councils and other elected officials at the local, state and federal levels. During the last few years, TCA's Communications and Public Engagement plans, strategies and initiatives have been highly effective in providing accurate and timely information and generating positive outcomes. From traditional, behavior-based communications that seek to increase ridership, revenue and support the Capital Improvement Plan to community-based marketing plans that helped drivers with the transition to sticker transponders to the emotional communications style adopted early in the pandemic when the community was asked to stay home and off the roads,

the Agencies have emerged as a leader in modern public-sector communications and public engagement. The Agencies' ability to pivot around evolving communications trends and audience preferences utilizing a commitment to innovation, technology and novel ways to tell the Agencies' many stories is providing desired outcomes.

In FY21 and FY22, the Agencies' Communications efforts focused on being proactive, sharing accurate information and taking pride in accomplishments. These efforts will be continued and elevated to be more active and appeal to the current generation of drivers and information consumers.

The Communications and Public Engagement plan is based on the following goal and objectives:

Goal

Through proactive communications tactics, highlight the positive value of TCA and The Toll Roads and build their brand reputations to promote feelings of trust and goodwill with all stakeholder groups.

Objectives

- Create and promote content supporting the Agencies' activities, financial position, debt management and system improvements.
- Actively support Board Members in conveying positive information about TCA.
- Ensure customers have streamlined access to drive the roads with ease, establish accounts, manage accounts, pay tolls and resolve violations.
- Provide the public with information related to Board and Committee Meetings to promote transparency.





Activities

The Agencies will utilize both emotional communications and traditional, behavior-based communications approaches to further increase effectiveness with focus on:

- **Content creation and continuing to tell the Agencies' stories** — Staff will identify topics/messages and express them in as many mediums as possible.
- **Short-form story telling** — Today's consumers have access to ever increasing amounts of information and desire/require content that is quick and easy to consume. Like other successful brands, TCA will steer away from long-form content and move toward short-form content like videos, slide shows, illustrations, animations, gifs and memes.
- **Owned and earned media** — Both communications agencies and in-house departments are shifting away from paid media (marketing) and toward owned and earned media (websites, blogs, social media, news articles). Staff will leverage channels they pitch, create and/or control as cost-effective and timely approaches to sharing information.
- **Humanize the brands** — The Agencies will take steps to form and strengthen human connections. It's emotional and authentic when audiences associate names, faces and personal stories with the Agencies and The Toll Roads, it fosters trust and connections that help create loyalty and feelings of goodwill and support the sharing of accurate information.

TCA will use these approaches in pursuing the following activities during the seven-year period of the plan to accomplish the noted goals and objectives. As in other areas, innovation is front and center in terms of ways to create content, convey positive information, educate and empower drivers and promote transparency.

Activity #1: TCA rebranding and communications plan

The TCA brand will be refreshed with a modern and forward-thinking look and feel and communications plan that touts the Boards of Directors' adopted strategic plans, financial strength, debt management, environmental programs and Capital Improvement Plan projects.

The plan will include an increased public education campaign about the Agencies' successful history and forward-looking plans; a new website; and increased Chair and Board Member participation in speaker's bureau and communications content.

Activity #2: Communicate the Agencies' strong financial health and proven debt management

In-house staff will continue to directly produce a continuous steady stream of informative and positive financial news highlighting debt management, debt reductions and execution of early pay downs as approved by the Boards of Directors. Content would be produced for all audiences – those with in-depth financial knowledge and the layperson.

Activity #3: Enhanced communications for projects and programs

The Agencies will employ new techniques to communicate information about TCA projects by establishing the project as a character and telling its story through all available mediums allowing the public to follow along every step of the way. Quick and frequent communications content will be supported by longer form content. A weekly photo and film library will be populated, and feature stories will be written about the people involved in the project.



Activity #4: Increase awareness of the Agencies’ environmental programs

Increasing awareness of the Agencies’ successful and award-winning environmental efforts is an opportunity that staff will pursue. To appeal to current audiences and highlight TCA’s alignment with Sacramento’s thoughts on balancing transportation and the natural environment, staff will continue current environmental communications efforts and look for opportunities to enhance them. For each environmental site, staff will create a highly produced, beautifully captured, voiceover video that tells the unique story of each site and the key wildlife protected within.

Activity #5: Use new media to tell timeless stories

Staff will continue efforts to humanize the Agencies by sharing the unique and engaging stories of Board Members, staff and drivers. Concepts such as “Ask Us Anything” videos, quarterly video newsletters, periodic podcasts and increased Board Member participation in presentations at events, chambers and other venues will be used to put people in front of “text.”

Activity #6: TCA time capsule

Staff will capture the history of the Agencies and memorialize it for future generations and future Boards of Directors so that TCA’s success story and contributions to Orange County are not lost with the passage of time. The time capsule will be a living, dynamic thing that is continually edited and updated, because, after all, future projects, initiatives and successes will eventually be a thing of the past.

Communications and Public Engagement Summary

In recent years, the Agencies have emerged as a leader in modern public-sector communications and public engagement thanks to efforts focused on being proactive, sharing accurate information and taking pride in accomplishments. During the seven-year period of the Strategic Plan, these efforts will be continued and elevated to be more active and appeal to the current generation of drivers and information consumers using different communications styles and trends based on the needs of the topic, messages and audience.

Capital Project Delivery



TCA has successfully advanced mobility in South Orange County through the delivery of surface transportation facilities. The Agencies' 30-year history has provided for the construction of 420 lane miles of state highways (SRs 73, 133, 241 and 261) and Los Patrones Parkway, a five-mile county arterial. As the Agencies look to the future, improvements to their existing facilities are core to increasing throughput while also continuing the use of pricing as an effective demand management tool.

Evolution of transportation policies, consumer expectations and innovative technologies and services are providing TCA's Boards of Directors with significantly more tools and perspectives to consider in advancing mobility than previously existed. While the Agencies' original plans for using space available in the medians of The Toll Roads are still the primary near-term option for increasing throughput, longer term consideration must be given to technological advances that have the potential to accomplish the same goal with reduced capital investments.

Emerging technologies also provide pathways to the continued overarching goal to consistently explore safety

enhancements and the current policy perspectives on environmental outcomes. The concepts of zero fatalities and zero emissions are extremely prevalent in California, as well as other states and countries, bolstered by the Governor's executive order for new passenger vehicle sales. TCA has a longstanding track record in both safety and environmental stewardship and its active support in exploring these technologies creates alignment with Sacramento policymakers and enhances the Agencies' partnership with Caltrans.

Over the next seven years, TCA has a unique opportunity to continue the legacy of improving mobility using this combination of implementing the Capital Improvement Plan and incorporating research, evaluation and pilots of emerging technologies. The Agencies will take a proactive approach to study, pilot and incorporate these new concepts to enhance its system, continue the legacy of environmental stewardship and potentially reduce capital investments.

The Capital Project Delivery strategic plan is based on the following goal and objectives:

Goal

Support regional mobility by utilizing innovative approaches and partnerships to develop and implement the annual Board-adopted Capital Improvement Plan and incorporate forward-looking solutions for safety, demand management and environmental stewardship.

Objectives

- Deliver planned near-term system improvement projects as identified in the adopted Capital Improvement Plan within Board-approved annual budgets and expected project schedules.
- Update traffic studies to support the timing and development of future projects.
- Research, study and pilot innovative/emerging technologies to enhance The Toll Roads safety, promote environmental initiatives and reduce capital investments for throughput improvements.
- Develop innovative approaches and partnerships to enhance and streamline project delivery.

Activities

The planned activities to support the Capital Project Delivery goal and objectives are presented below. The opportunity to improve mobility is based on a clear understanding of both the reasons for the program and the activities to accomplish the program. The primary focus around projects included in the Capital Improvement Plan is to provide improvements at specific locations within TCA's existing highway system based upon the need to maintain free flowing traffic conditions while increasing utilization.

In addition to Capital Improvement Plan projects, the overarching trends within transportation are resulting in a shift toward emerging technologies that provide improved efficiencies as well as utilizing existing infrastructure to provide increased throughput without adding more pavement. The timing of significant adoption and the extent of technology-driven improvements will continue to evolve, but the trend toward increased technology within the mobility industry is very apparent and should be viewed as a journey rather than a destination. The shift toward connected, autonomous, shared and electric (CASE) vehicles will continue with technological advances and service models over the next seven years. These changes will result in increasing opportunities to provide both safety and capacity enhancements, as well as options to support increased adoption of electric vehicles. Since the timing and impact of technology changes are rapidly evolving, the Agencies will take a proactive approach to efforts that provide mobility benefits.

To prepare for and understand potential needs and benefits for investments in technology-driven improvements, the Agencies will identify specific opportunities and develop work plans outlining opportunities to engage in research, studies and pilot programs. The Agencies will work with other government, academic and private organizations to identify and pursue funding opportunities that support these efforts.

In addition, the Agencies will identify ways to enhance and streamline the project delivery process. This will include learning from delivery models and structures being utilized by peer agencies and developing agreements with Caltrans to implement enhancements that will improve the timeliness of project development.

Activity #1: Deliver the Board-adopted Capital Improvement Plan

Each of the planned projects in the Capital Improvement Plan will provide traffic congestion relief and help maintain free flow conditions on The Toll Roads while absorbing traffic from non-tolled facilities.

- **SR 241/91 Express Connector Project** — The F/ETCA's 241/91 Express Connector Project is TCA's largest planned Capital Improvement Plan project, with an anticipated total investment of \$380 million and projected economic benefits of approximately \$590 million. The project involves the construction of a median-to-median connector directly linking the 241 Toll Road and the 91 Express Lanes in the median of SR 91 and requires extensive coordination with Caltrans Districts 8 and 12, the Orange County Transportation Authority (OCTA) and Riverside County Transportation Commission (RCTC) to ensure seamless operation between facilities. Once completed, the project will provide enhanced safety and significant travel time savings for drivers within the SR 91.
- **SR 241 Loma Segment Improvements** — The F/ETCA's 241 Loma Segment Improvements Project will upgrade a six-mile segment of SR 241 (between SR 133 and SR 261) at an estimated cost of \$77 million. Based on forecasted traffic growth, this project will improve peak period travel for commuters headed to and from job centers such as the Irvine Spectrum.
- **SR 73 Catalina View Improvements** — The SJHTCA's 73 Catalina View Improvements Project will better traffic flow at the mainline toll point. The project will provide improvements from Laguna Canyon Road to Newport Coast Drive, with an estimated cost of \$37 million. The project will address recurring congestion during the morning and afternoon peak periods without employing increased toll rates to manage demand. Updates to existing traffic studies and environmental documentation will commence in 2022.

As TCA develops plans for these and other projects, staff will work to ensure alignment with statewide and Member Agency efforts to support active transportation and enhanced safety at interchanges.

Activity #2: Conduct Periodic Traffic Studies

According to the Center for Demographic Research's projections, Orange County's population and housing are expected to grow 9% and employment by 12% by 2045. To proactively plan and implement future Capital Improvements Plan projects, the Agencies will continue to monitor and conduct traffic studies of locations along The Toll Roads where congestion is observed. Since traffic growth can vary from year to year and is affected by cyclical economic trends as well as changes to locations and densities of development, there is an ongoing need to monitor and update long term traffic projections.

Activity #3: Research, Studies and Pilot Programs

Emerging technologies and innovative services have the potential to support mobility goals for safety and throughput; achieve environmental policy objectives; and support/foster consumer changes in vehicle ownership. These have significant implications on and present opportunities for the Agencies to consider how their facilities are improved and operated. The advancement toward transportation industry visions for CASE vehicles warrant the Boards of Directors' consideration as part of their Capital Improvement Plan as enhanced safety, increased throughput, environmental benefits, consumer choice and fiscal management all support the Boards of Directors' mission and vision for Orange County.

While the pace of progression toward market saturation and full realization of CASE vehicles can be debated, the underlying technologies are advancing rapidly and commercially available today. The rate of technological advancement combined with typical timelines for development and construction of Capital Improvement Plan projects dictate that transportation agencies understand and plan for the beneficial disruptions to traditional transportation planning, project delivery and operations. These advancements also have the potential to enhance the Agencies' approach to revenue collection, customer service and driver communications as discussed in other areas of the Strategic Plan.

Increased understanding of this changing landscape and planning for how emerging technologies and solutions will impact/benefit TCA will be accomplished via active engagement in research, studies and pilot activities over the next seven years. Specifically, TCA will undertake efforts to partner with Caltrans, academia and private industry in the following areas:





- **Connected and Autonomous Vehicles** — State transportation agencies, private industry and the academic community have cited that these technologies have the potential to save many of the 40,000 lives lost annually to traffic fatalities in the US. The ability of vehicles to understand, communicate and interact with other vehicles and roadway infrastructure is creating a path toward achieving this goal. Creating an infrastructure environment that leverages and supports this ability requires consideration in the planning and construction of improvements to TCA's facilities. In addition to the safety benefits, underlying technologies such as Adaptive Cruise Control and Dynamic Steering/Lane Keeping have the potential to increase throughput with reduced investments in roadway expansions which could provide significant savings for the Agencies' Capital Improvement Plan.
- **Electric Vehicle Charging Infrastructure** — California and the automobile industry have set ambitious goals to focus on production of zero emission vehicles, abandoning internal combustion engines, in support of environmental policies. The primary target for achieving this policy objective is the conversion to electric vehicles. While the industry's ability to manufacture electric vehicles is not a concern, underlying issues exist with consumer perceptions of range anxiety and convenience, charging infrastructure and non-renewable resource dependency. Innovative solutions are being developed that utilize inductive charging (stationary and dynamic) that mitigate these issues. Several companies are currently piloting programs in Sweden, Italy and Israel to provide dynamic in-road, inductive charging. In addition, there are ongoing pilot programs in Michigan, including a one-mile pilot of technology in Detroit. As these solutions rely on roadway infrastructure, transportation agencies are necessary partners.

Exploring the application of this solution in partnership with Caltrans aligns with TCA's legacy of environmental stewardship and has the potential to attract drivers.

- **Shared Vehicles** — Industry experts and Transportation Network Companies (TNCs), like Uber and Lyft, believe that consumer demand is shifting toward reductions in vehicle ownership and increased reliance on their services as a cheaper alternative. This change creates increased opportunities for fleet partnerships and, when combined with the areas above, presents an opportunity to leverage the Agencies' toll plazas in an operational model that increases ridership. While the comprehensive nature of CASE vehicles presents a longer timeline, it is important to recognize that ride-hailing services (such as WayMo) have been operating in Phoenix since 2018. TCA would seek partnerships with academia to develop and evaluate use-case scenarios and solicit interest from TNCs.
- **Toll Plaza Reuse** — The Agencies' 10 mainline toll plazas represent significant investments in assets and right of way that have been underutilized since the conversion to all-electronic tolling in 2014. These assets provide opportunities to explore other concepts in addition to CASE vehicles that could serve as an alternative or enhancement. This includes solar power generation through embedded roadway panels that leverage the physical footprint of the toll plazas. Another less technology focused approach will be consideration of kiosk type services that could increase customer value or ridership of the roads.

Conducting research and pilot programs are prudent methods for TCA to ensure proper planning for any capital investment and to prepare and position the Agencies to take full advantage of the potential safety and mobility benefits of emerging technologies and innovative solutions.

The timeframe for reaching large scale benefits is not precise, but technology is moving at a rapid pace, and it is prudent to begin planning and studying how the Agencies should prepare and adjust for the changes. The Boards have also directed staff to explore other sources of fundings to support this area. Staff will be working with state and federal offices to identify and pursue grant opportunities and will also incorporate private industry contributions through public-private partnership arrangements for pilots.

Activity #4: Enhancing Project Delivery

Effective and timely delivery of the Boards' Capital Improvement Plan is important for providing mobility enhancements on schedule and within budget. For the slate of projects identified above and those in the future, staff will take steps to assess and incorporate management approaches that improve project delivery. Staff will assess alternative delivery methods and enhanced partnership approaches with Caltrans District 12.

Evaluate Alternative Project Delivery Models

The Agencies constructed The Toll Roads utilizing an innovative project delivery model that maintained project costs by mitigating change order and schedule impacts resulting in delivery of roads under budget and ahead of schedule. The original construction of The Toll Roads was completed using the design-build delivery model, a method new to California in the 1990s. As the Agencies advance their Capital Improvement Plan, staff will evaluate the use of alternative delivery models such as design-build as well as newer models including Construction Management/General Contractor (CM/GC) and others that achieve desired outcomes. While design-build is typically best suited for large-scale projects, other models that engage the construction contractor during design provide opportunities to reduce the number and cost of change orders during construction and help mitigate schedule risks for the construction phase.

Enhanced Caltrans Partnership

The Agencies have established a very strong partnership over the years with Caltrans and, together, TCA and Caltrans have successfully delivered the original construction of The Toll Roads, as well as multiple improvement projects such as the Oso Parkway Bridge Project at the southerly terminus of SR 241. With a focus on continuous improvement, staff will engage Caltrans District 12 to discuss and evaluate opportunities to streamline and enhance the partnership.



Potential outcomes of this effort could result in more shared ownership in developing plans and delivery of TCA projects. Agreements, such as the one that exists between the San Diego Association of Governments (SANDAG) and Caltrans District 11, have a unique cooperative partnership that allow the two agencies to increase their effectiveness and streamline project delivery. While this project delivery approach has worked well for San Diego, TCA and Caltrans District 12 staff will need to evaluate the elements of the SANDAG/Caltrans District 11 program to identify features that can be utilized for benefit of the TCA project delivery and partnership.

Capital Project Delivery Summary

The Boards of Directors' commitment to maintaining free flow traffic conditions on The Toll Roads is supported by the implementation of Capital Improvement Plan projects including the SR 241/91 Express Connector Project, the SR 241 Loma Segment improvements and the SR 73 Catalina View improvements. Additional planned activities to support mobility on the system include conducting periodic traffic studies and a forward-thinking approach including research, studies and pilot programs regarding emerging and innovative technologies. The Boards of Directors have also expressed support regarding the evaluation of alternative contracting approaches for project delivery and seeking opportunities to enhance the Agencies' partnership with Caltrans.

Regional Mobility Partnerships



As noted throughout the Strategic Plan, partnering is core to the Agencies' approach for advancing mobility. The success of Orange County's transportation system is directly attributable to this approach in the perspectives of self-reliance and growing the potential funding for highways and roads. These perspectives will continue with the recognition that California's approach to surface transportation does not place the construction or expansion of highways as the first consideration for improving mobility, especially when it comes to unmanaged capacity. While consideration for mass transit is a priority in Sacramento and TCA's roads can play a role to support this goal, TCA's mission is more aptly aligned with the innovation aspects noted earlier and the more surgical approach of providing improvements to existing county/local roads.

Historically, TCA has had to focus on, first, building The Toll Roads and the associated infrastructure and, then, improving the existing system by adding capacity and modernizing where and when feasible. Additionally, TCA has prioritized paying debt service and maintaining financial strength, especially during difficult financial climates. Through partnerships and resources, TCA may be able to support the region by potentially "filling-the-gap" in Member Agencies' funding resources.

TCA has been and will continue to be a strong collaborative partner in serving the mobility needs of South Orange County. At the same time, the Boards of Directors expect

partners to deliver equally constructive collaboration as TCA provides. Advancing this dimension of the Strategic Plan must be grounded in true partnership that benefits all parties involved.

The financial strengths of the Agencies and projected cash flows have allowed the Boards of Directors to engage in discussions and consider regional mobility partnerships, where TCA could augment other funding sources to assist in delivering projects. As demonstrated in its partnership with Rancho Mission Viejo and the County of Orange with more than \$90 million in financial incentives being provided by the F/ETCA for the construction of Los Patrones Parkway, TCA has the ability to support its Member Agencies in advancing mobility improvements. These future considerations may allow the Boards of Directors to make decisions that support transportation enhancements that benefit the region.

The careful, conservative and deliberate approach that will be put in place is only to position the Agencies for what they "may" be capable of doing. The goal, objectives and activities noted as occurring during the seven-year Strategic Plan only provide a method for future consideration and do not stand as any commitment of future actions by either Board of Directors. Any next formative steps would require further discussions and Board decisions regarding the topic of regional mobility partnerships.

Goal

Continue supporting the mobility needs of South Orange County for the movement of goods and people by considering formal funding requests received from Member Agency partners for transportation related improvements.

Objectives

- Position TCA to consider Member Agency requests for additional funding support of regional mobility improvements where other funding sources are insufficient.
- Ensure any proposed project and funding support is in alignment with Board priorities and regional efforts and/or programs.

Activities

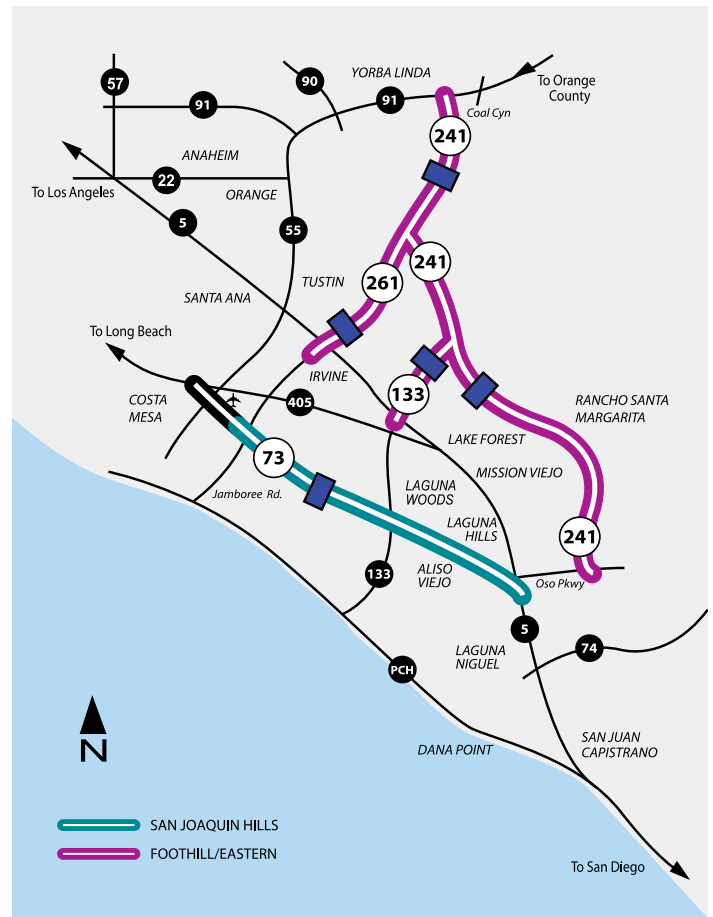
The Boards of Directors have asked staff to develop draft policies and procedures that would provide for their consideration of formal funding requests from Member Agency partners. If the resulting products are approved by the Boards of Directors, the outcome would allow the Agencies to receive requests, then staff would evaluate the requests and provide a recommendation to the Boards of Directors on whether they should consider supporting the request. The decision to support or forgo a request will remain at the sole discretion of the Boards of Directors.

To support the possible future consideration by the Boards of Directors, staff will work to complete the following activities:

- Develop a methodology for receipt and evaluation of funding requests from TCA Member Agencies to advise the Boards of Directors on opportunities that meet the Agencies' stated fiscal management plan and strategic goals and priorities.
- Collaborate with other funding agencies to establish alignment with existing programs and project evaluation results.
- Define process for evaluating project funding requests based on:
 - Formal funding request submission and support letters from project stakeholders
 - Regional benefit for mobility improvements and usage of TCA facilities
 - Assessment of impacts to TCA revenues and financial needs

Regional Mobility Partnerships Summary

TCA will continue to be a strong collaborative partner in serving the mobility needs of South Orange County while considering formal funding requests received from Member Agency partners for transportation related improvements as the Boards of Directors see appropriate. The Boards of Directors have also asked staff to develop draft policies and procedures that would provide for their consideration of formal funding requests from Member Agency partners. The decision to support or forgo a request will remain at the sole discretion of the Boards of Directors.





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