



February 6, 2023

A handwritten signature in blue ink, appearing to read "Darrell E. Johnson", is positioned in the upper right area of the document.

To: Regional Transportation Planning Committee
From: Darrell E. Johnson, Chief Executive Officer
Subject: Interstate 405 Improvement Project Update

Overview

The Orange County Transportation Authority is currently underway with the implementation of the Interstate 405 Improvement Project. This report provides a project update.

Recommendation

Receive and file as an information item.

Background

The Orange County Transportation Authority (OCTA), in cooperation with the California Department of Transportation and the cities of Costa Mesa, Fountain Valley, Huntington Beach, Seal Beach, and Westminster, is implementing the Interstate 405 (I-405) Improvement Project between State Route 73 (SR-73) and Interstate 605 (I-605) (Project). The Project will add one general purpose lane in each direction from Euclid Street to I-605, consistent with Measure M2 Project K, and will add an additional lane in each direction that will combine with the existing high-occupancy vehicle lane to provide dual express lanes in each direction of I-405 from SR-73 to I-605, otherwise known as the 405 Express Lanes.

On November 14, 2016, the OCTA Board of Directors (Board) awarded the design-build (DB) contract to OC 405 Partners (OC405), a joint venture. OCTA executed the DB contract with OC405 and issued Notice to Proceed (NTP) No. 1 on January 31, 2017. NTP No. 1 was a limited NTP for mobilization, design, and administrative activities. On July 26, 2017, the Transportation Infrastructure Finance and Innovation Act (TIFIA) loan agreement was executed between OCTA and the United States Department of Transportation (USDOT). On July 27, 2017, OCTA issued NTP No. 2 to OC405. NTP No. 2 was a full NTP for all activities, including construction.

Discussion

The Project is over 90 percent complete from a DB perspective. A number of activities are ongoing as construction work continues to advance. The following provides a more detailed status of Project activities.

Financing and TIFIA Loan

In July 2017, OCTA executed a TIFIA loan agreement with the USDOT's Build America Bureau (Bureau) for up to approximately \$629 million. In October 2020, OCTA staff received Board approval to pursue a reset of the interest rate on the TIFIA loan. After approximately one year of working with the Bureau, OCTA successfully executed a new TIFIA loan agreement with the Bureau on September 9, 2021, establishing OCTA as the first agency to close a rate reset loan for a TIFIA loan that had been drawn upon. As part of the new TIFIA loan, the interest rate was reset from 2.91 percent to 1.95 percent. The lower interest rate will result in a net present value savings of approximately \$158 million. In December 2022, OCTA received the full disbursement from the Bureau as requested by OCTA.

Tolling Contracts

In early 2018, the Board selected Kapsch TrafficCom USA, Inc., (Kapsch) to provide toll lanes system integration services for design, installation, operation, and maintenance of the electronic toll and traffic management (ETTM) system on both the 405 and 91 Express Lanes. Kapsch is currently under contract and is working closely with the design-builder to deliver fully functional express lanes upon opening in late 2023. Kapsch has received approval for the ETTM infrastructure final design to be used for the 405 Express Lanes, including equipment types and configurations. Kapsch continues to coordinate with the design-builder's construction activities related to ETTM site infrastructure and turnover of areas of the Project for Kapsch to install their equipment. The Traffic Operations Center (TOC) will be located at OCTA's Santa Ana Bus Base and will be staffed by Kapsch for 405 Express Lanes operations. The TOC improvements at the Santa Ana Bus Base are complete and ready for Kapsch to occupy and prepare for installation and testing of the 405 Express Lanes.

In late 2021, the Board selected WSP USA Services, Inc., (WSP) to provide back-office system and customer service center operations for the 405 Express Lanes. Over the past several months, WSP has continued the development of project documentation and held multiple workshops with OCTA staff to review the functional requirements of the back-office system. These workshops will continue over the next several months along with the development of system documentation. Additionally, WSP continues to provide input on the design and required equipment for the Customer Service and Operations Center (CSOC).

Also in late 2021, the Board authorized the Chief Executive Officer to negotiate and execute a lease with C.J. Segerstrom & Sons for the 405 Express Lanes CSOC. The lease was executed in February 2022. The CSOC will house both a customer service walk-up center, as well as the call center and other support for the 405 Express Lanes. This location is separate from the TOC location as it needs to be readily accessible to the public for customer and motorist service purposes. Construction on the tenant improvements continues and is expected to be completed in April 2023.

In December 2022, a request for proposals was issued for traffic and revenue services for the 405 Express Lanes. These services include providing opening day toll rate schedules, post-opening day monitoring and support, and a short-term forecast. The opening day toll rate schedules will be provided to the Board approximately 90 days prior to opening the facility.

Design

The final design is substantially complete at this time. The DB process allows for design refinements, and that process will continue throughout the remainder of construction.

Right-of-Way (ROW) Acquisition

Construction of the Project impacts 288 properties, including 179 residential properties, 71 commercial/industrial properties, 37 public properties, and one railroad property. There are 287 properties identified as partial acquisitions and one property identified as a full acquisition at the owner's request. The ROW required to construct the Project is comprised of a combination of fee acquisitions, permanent easements, temporary construction easements, permanent and temporary ground lease reductions, and access control rights. This ROW is required for roadway and bridge construction, soundwalls and retaining walls, drainage systems, and for the installation of above ground and underground facilities, including electrical, telecommunication, water, sewer, gas, and storm drain systems.

The ROW acquisition program is on schedule. Since July 2020, OCTA has had possession of the required property rights for all 288 property impacts, which retired a significant risk to OCTA. The overall ROW process continues as OCTA works with certain property owners to finalize remaining agreements on costs related to certain acquisitions. As this is a DB project, minor additional ROW needs may become necessary in the future as construction continues. Of the 288 total properties impacted, 288 offers were presented and the ROW is in OCTA's possession for construction. There were 60 resolutions of necessity (RON) approved by the Board and no additional RONs are anticipated.

Utility Relocations

There are currently 143 utilities that require relocation to accommodate the Project. OCTA has been coordinating with 24 impacted utility owners to identify and resolve conflicts and relocation issues. To date, OCTA has executed 92 percent of the necessary utility relocation agreements and is in the process of finalizing the remaining utility agreements. There are a handful of remaining potential utility relocation risks, including Southern California Edison (SCE) facilities, as well as a system of overhead and underground facilities in the City of Seal Beach belonging to Frontier Communications, for which staff continues to develop and implement mitigation plans, as utilities are a shared risk between OCTA and OC405. Many critical utility relocations that had previously been considered to pose some risk, such as facilities owned by Frontier Communications, Chevron USA, Crimson Pipeline, Southern California Gas Company, and SCE have been successfully completed. OCTA continues to take an active role in coordinating utility relocations with both OC405 and utility owners, including coordinating construction schedules to ensure that utility construction activities are completed in a timely manner to mitigate any potential risks to the Project schedule.

Roadway and Wall Construction

OC405 began construction in March 2018. Initial construction activities included restriping portions of the freeway and setting up concrete barriers on the outside of the freeway to protect work areas for activities, such as tree removals and grading. These initial construction activities are complete. Clearing and grubbing, including tree and ground cover removal, and rough grading activities are also substantially complete at this time.

Significant roadway construction activities, including installation of drainage systems, retaining walls and soundwalls, and paving operations began in earnest in 2019, and will continue through the end of the Project. Construction has been initiated on all Orange County Flood Control District facilities, which require improvements associated with the Project, including the Bixby, East Garden Grove Wintersburg, Fountain Valley, Gisler, Greenville Banning, Milan, Montecito, Newland, Ocean View, and Santa Ana River channels. Work on these flood control facilities is at various stages of construction and a majority of the work was completed last year. Additionally, over 95 percent of the retaining walls and soundwalls needed for the Project are currently complete. Paving operations are approximately 90 percent complete with significant paving scheduled for completion in the first half of this year. Lastly, over 95 percent of the ramps being reconstructed as part of the Project are complete.

Bridge Construction

Bridges that are being replaced as part of the Project are being reconstructed in either one or two stages. Bridges being built in one stage are closed to traffic on both sides of I-405 during demolition and reconstruction of that bridge, and traffic is detoured to other adjacent bridges crossing the freeway. The first one-stage bridge completed was the Slater Avenue bridge, which opened to traffic in fall 2019. Opening the Slater Avenue bridge allowed for demolition and construction activities to commence on Bushard Street and Talbert Avenue. The Bushard Street bridge was completed and opened to traffic in October 2020, and the Talbert Avenue bridge construction was completed and opened to traffic in April 2021. After the opening of the Talbert Avenue bridge, demolition and construction activities were able to commence on Ward Street, which is anticipated to open to traffic this spring. Further north within the Project limits, the McFadden Avenue bridge was opened to traffic in October 2020, and the Edinger Avenue bridge was also opened to traffic in December 2021. Opening of the Edinger Avenue bridge allowed for demolition and construction activities to recently commence on the Newland Street bridge, which was the last full bridge to be demolished as part of the Project. Lastly, the Edwards Street bridge was opened to traffic in September 2021. Opening the Edwards Street bridge allowed for demolition and construction activities to commence on Springdale Street.

Bushard Street, Edinger Avenue, Edwards Street, McFadden Avenue, Newland Street, Slater Avenue, Springdale Street, Talbert Avenue, and Ward Street are all one-stage bridges.

Bridges being built in two stages maintain traffic on a portion of the bridge while the new bridge is being constructed. Significant bridge construction progressed at the two-stage bridges at the Bolsa Avenue, Brookhurst Street, Goldenwest Street, and Warner Avenue bridges. The Magnolia Street bridge was the first two-stage bridge to be fully opened to traffic in May 2021. Opening the Magnolia Street bridge allowed for demolition and construction activities to commence on the Warner Avenue bridge. The Bolsa Chica Road bridge was the second two-stage bridge to be fully opened to traffic in December 2021. The Fairview Road bridge also fully opened to traffic in May 2022, and the Westminster Boulevard bridge fully opened in August 2022. The first halves of the new Bolsa Avenue and Goldenwest Street bridges opened last year, and the full bridges are anticipated to be opened early this year. The last two-stage bridge to start construction was at Brookhurst Street. The first half of the Brookhurst Street bridge was opened to traffic in February 2022 and construction continues on the second half of the new bridge.

Lastly, the Heil pedestrian overcrossing bridge was demolished in late 2020, and the new pedestrian bridge was opened in August 2022.

Following is a tabular summary of the completed and anticipated openings of the Project’s 18 bridges that cross over the freeway and require replacement:

Overcrossing Bridge	Number of Stages	Anticipated Opening Date	
Bolsa Chica Road	Two	Open	
Springdale Street	One		June 2023
Westminster Boulevard	Two	Open	
Edwards Street	One	Open	
Goldenwest Street	Two		March 2023
Bolsa Avenue	Two		April 2023
McFadden Avenue	One	Open	
Edinger Avenue	One	Open	
Newland Street	One		July 2023
Heil Avenue (pedestrian)	One	Open	
Magnolia Street	Two	Open	
Warner Avenue	One		May 2023
Bushard Street	One	Open	
Slater Avenue	One	Open	
Brookhurst Street	Two		May 2023
Talbert Avenue	One	Open	
Ward Street	One		April 2023
Fairview Road	Two	Open	

In addition to the bridge replacements noted above, the widening of four existing freeway bridges and construction of three new on-ramp bridges continued over Beach Boulevard, Bolsa overhead railroad crossing, Harbor Boulevard, Santa Ana River, and an old United States Navy railroad crossing. Lastly, the construction of the new connector between the medians of I-405 and SR-73 that will connect the 405 Express Lanes to SR-73 commenced last year.

Looking ahead, the the first half of 2023 will remain busy related to bridge, wall, paving, and tolling work.

Project Challenges

As would be expected on a project of this magnitude, certain challenges have been encountered, including the following:

- Oversight and approvals from many different agencies and third parties
- Cost and availability of construction resources and materials in this active construction market

- Dispute resolution and change management
- Minimizing impacts and disruptions to the public
- Timely performance of third-party utility work
- Project schedule impacts and mitigations

Additionally, in September 2019, there was a discovery of archaeological resources within the Project site. Additional discoveries have impacted construction intermittently since that time. OCTA continues to follow established state procedures for this type of discovery, and is working with the responsible parties to ensure appropriate and respectful procedures are followed. This discovery and subsequent discoveries have impacted construction at a specific location; however, construction at that location has since resumed.

OCTA has worked closely with its partners and OC405 to mitigate schedule delays when identified. Significant schedule mitigations have been implemented during the course of construction. These include expediting construction of several key bridges and extended overnight and daytime freeway lane closures to take advantage of the significantly reduced traffic volumes on the freeway at certain times in the past two years related to the coronavirus (COVID-19) pandemic. The objectives of the schedule mitigations are to minimize schedule delay impacts while balancing the minimization of traffic impacts.

Risks Remaining

Many of the Project risks that were realized during the design phase and the first 90 percent of construction have since been retired. However, there are risks for the remaining construction moving forward. The COVID-19 pandemic continues to be a risk as the effects and duration of the pandemic remain unknown. OCTA, its partners, and OC405 remain vigilant in taking the appropriate safety measures to minimize impacts to the workforce and construction progress. Additional archaeological discoveries also continue to be a risk as excavation in certain areas of the Project will continue to take place this year. OCTA has taken a proactive approach with the appropriate stakeholders to minimize impacts if there are future discoveries. The timely relocation of utilities is always a risk and the team will remain very focused on these efforts. Construction labor and materials availability is a risk that has been increasing recently. From a tolling standpoint, the coordination near the end of the Project when Kapsch will be installing and testing the tolling equipment, concurrent with the completion of construction by OC405, is key to remaining on schedule. Coordination efforts to plan for this timeframe at the end of the Project are ongoing and have been effective to date. Lastly, WSP's development of the tolling back-office system is also key to remaining on schedule for opening of the 405 Express Lanes in late 2023.

Project Cost and Schedule

The overall Project cost is \$2,080,234,000. The Project milestones for substantial completion and opening of the 405 Express Lanes remain on schedule and are planned for late 2023.

Public Outreach

In 2022, the outreach team conducted five virtual meetings with communities along the Project corridor to share major construction activities, closures and detours, and the 405 Forward business outreach program. The team participated in six community events, including the City of Fountain Valley's Summer Fest, the City of Westminster's Fall Festival, and the City of Santa Ana's National Night Out.

The team continued to implement the Project's Diversity, Equity, and Inclusion Plan, which utilizes a variety of tools to reach our diverse communities within the Project corridor. The plan is reviewed quarterly and includes maintaining Project helplines staffed by Spanish and Vietnamese speaking specialists, sharing social media posts in Spanish and Vietnamese to advertise those helplines, updating Spanish and Vietnamese information on Project collateral and the website, and proactively providing in-language information to local businesses and 17 community-based organizations in underserved areas.

Throughout the year, the outreach team responded to nearly 1,500 comments and questions from the public. These calls, emails, and social media inquiries continued to focus on construction activities, Project schedule, upcoming closures and detours, and maintenance requests. Additionally, the outreach team supported the technical team with right-of-way coordination and facilitated the claims process with the contractor.

Also, as part of the public awareness campaign, the outreach team consistently engaged with key stakeholders prior to major construction activities. Those stakeholders included emergency service providers in each corridor city, South Coast Plaza, OC Fair and Event Center, Westminster Mall, MemorialCare Orange Coast Medical Center, Bella Terra, and local school districts.

The outreach team used print and digital communication methods to showcase key Project milestones and share major activities, and closures and detours during 2022. The team sent more than 500 email alerts to our databases, which contain approximately 13,500 total contacts, and more than 95,500 flyers were developed and canvassed to addresses in the Project corridor. These notifications alerted the community to activities such as paving, striping and utility work, and ramp and bridge construction, as well as wall work.

The outreach team continued to employ tools such as geo-targeted or location-based ads and social media, which continued to be beneficial, cost-effective methods for communicating major Project milestones and activities. In 2022, the outreach team reached nearly 1.2 million Facebook, Twitter, and Instagram users combined and nearly 1.2 million mobile device users with geo-targeted ads. The outreach team analyzed monthly metrics and tailored strategies and content to make the best use of resources, as well as made posts more engaging and more discoverable.

These efforts combined to drive traffic to the Project website, updated daily, which hosts resources such as links to the latest virtual meetings, email alerts, and social media feeds, as well as a sortable list of project closures and detours. The closure list was updated daily, which allowed users and especially first responders, to learn about key activities at every major interchange along the Project corridor.

The team continues to evaluate how best to serve the public in the final year of construction. In addition to highlighting Project milestones such as upcoming bridge openings, the outreach team will also share the status of activities for the remaining bridges under construction and provide updates on the 405 Express Lanes infrastructure construction. The outreach and marketing teams will also continue collaborating on Express Lanes marketing efforts.

Summary

Construction continues to advance. Currently, construction, utility relocations, tolling elements, public outreach, and other activities are in process to continue the construction phase of the Project.

Attachment

None.

Prepared by:

Jeff Mills, P.E.
Senior Program Manager
(714) 560-5925

Approved by:

James G. Beil, P.E.
Executive Director, Capital Programs
(714) 560-5646