

# PROJECT DELIVERY REPORT

## Trade Corridors Improvement Fund

The submitting agency will be responsible for maintaining documentation of the information entered on this report. ( **Please type your response, handwritten reports will not be accepted** )

### A. Project Information

Date: 2/23/2021

TCIF # (Segment): 35 Other Project Identifier (EA, Project #, PPNO, etc): 1200020336

Project Title: State College Boulevard Grade Separation

Delivery Report: ☐ Final- Due within six months of project becoming operable.  
☒ Supplemental - Due at the conclusion of all project activities.

Location: County: Orange City: Fullerton

Project Description: Grade separation of existing street crossing of BNSF

### B. Contact Information

Implementing Agency: City of Fullerton Caltrans District Number: 12

Contact Person: Yelena Voronel, City Engineer/Asst. Director of Public Works Phone: (714) 738-6852

Email Address: yelenav@ci.fullerton.ca.us

C. Cost				
	Adopted Program Amount (\$)	Current Approved Amount (\$)	Actual Expended Amount (\$)	Net Difference (Dollars)
<b>Environmental</b>				
Total Amount	\$5,315,000	\$305,000	\$138,658	\$166,342
<b>Design</b>				
Total Amount	\$5,315,000	\$3,595,000	\$5,524,379	-\$1,929,379
<b>Right of Way</b>				
Total Amount	\$14,889,000	\$19,092,000	\$34,386,957	-\$15,294,957
<b>Construction</b>				
TCIF	\$30,731,000	\$32,800,000	\$32,800,000	\$0
Local	\$0	\$1,282,000	\$14,006,623	-\$12,724,623
Federal	\$5,833,000	\$14,480,000	\$12,509,357	\$1,970,643
Other	\$0	\$0	\$0	\$0
Total Amount	\$36,564,000	\$48,562,000	\$59,315,980	-\$10,753,980
<b>Totals</b>	<b>\$62,083,000</b>	<b>\$71,554,000</b>	<b>\$99,365,974</b>	<b>-\$27,811,974</b>

**Comment: The Total Actual Expended Amount for Right of Way and Construction Costs include Construction Engineering/Support costs from OCTA's project management labor.**

D. Schedule				
	Adopted Program Date	Current Approved Date	Actual Begin/End Date	Net Difference (Months)
<b>Environmental Phase</b>				
Begin	04/01/05	04/01/05	04/01/05	0
End	07/01/10	04/14/11	05/25/11	-1
<b>Design (PS&amp;E) Phase</b>				
Begin	04/01/05	04/01/05	07/03/06	-15
End	03/01/13	03/01/13	05/01/13	-2
<b>Right of Way Phase</b>				
Begin	11/01/10	07/25/11	07/25/11	0
End	08/01/12	05/01/13	05/01/13	0
<b>Construction Phase</b>				
Begin	04/01/13	11/01/13	02/04/14	-3
End	01/01/16	08/01/16	03/08/18	-19
<b>Closeout Date</b>				
Begin	01/01/16	08/01/16	02/23/21	-56
End	01/01/19	08/01/19	06/25/21	-23

**E. Amendments****List approved amendments****Amendments:**

Resolution TCIF-P-1213-42, Approved 3/05/13 to approve the Program Amendment to increase TCIF funds.

Resolution TCIF-P-1213-34, Approved 5/07/13 to approve Project Baseline Agreement Amendment to revise the project schedule/cost.

Resolution TCIF-A-1213-23, Approved 6/11/13 to approve the allocation of the TCIF funds.

Resolution TCIF-AA-1819-07, Approved the deallocation in the amount of \$3,090,000 of TCIF Funds, from \$35,890,000 to \$32,800,000.

**F. Project Benefits****Describe and compare project benefits with those included in the approved Baseline Agreement.**

Outcomes	Adopted Program	Current Approved	Actual
Safety	Grade separations completely separate automobiles and other traffic from trains, eliminating the potential for a grade crossing collision.	Grade separations completely separate automobiles and other traffic from trains, eliminating the potential for a grade crossing collision.	By eliminating the at grade crossing, trains are no longer interacting with vehicles, pedestrians and bicyclists. The project has eliminated: 1) Pedestrians walking across tracks 2) Emergency vehicle delays 3) Potential for train/vehicle collisions
Velocity	With the construction of the grade separation, vehicles traveling would be able to maintain a more consistent speed within this segment of the roadway because the delay and conflict associated with the at-grade crossing would be eliminated.	With the construction of the grade separation, vehicles traveling would be able to maintain a more consistent speed within this segment of the roadway because the delay and conflict associated with the at-grade crossing would be eliminated.	Since trains are no longer interacting with vehicles, railroad and vehicle velocities have improved by eliminating delays and potential train/vehicle collisions.
Throughput	The Annual Average Daily Traffic will increase from 23,100 to 30,500 in 2030. Current at-grade crossing is forecasted to cause 7.0 hours of daily delay for trucks in 2030, a 129% increase of the existing condition. Grade separation will eliminate conflict.	The Annual Average Daily Traffic will increase from 23,100 to 30,500 in 2030. Current at-grade crossing is forecasted to cause 7.0 hours of daily delay for trucks in 2030, a 129% increase of the existing condition. Grade separation will eliminate conflict.	Since trains are no longer interacting with vehicles, trucks throughput has improved by eliminating delays at grade crossing.
Reliability	The reliability of travel and goods movement at or near at-grade rail crossings is influenced by two factors: delay and safety. Delay due to the at-grade crossing would be eliminated and the separation of the railway from the roadway would improve safety resulting in increased reliability, as well as increase emergency service response time eliminating the conflict.	The reliability of travel and goods movement at or near at-grade rail crossings is influenced by two factors: delay and safety. Delay due to the at-grade crossing would be eliminated and the separation of the railway from the roadway would improve safety resulting in increased reliability, as well as increase emergency service response time eliminating the conflict.	Since trains are no longer interacting with vehicles, goods movement reliability has improved by eliminating delays and potential train/vehicle collisions.

Congestion Reduction	The existing total traffic delay (vehicle-hours/day) due to the rail crossing is 61.4 hours and this is expected to increase to 140.4 in 2030. The grade separation would eliminate the delay due to the rail crossing.	The existing total traffic delay (vehicle-hours/day) due to the rail crossing is 61.4 hours and this is expected to increase to 140.4 in 2030. The grade separation would eliminate the delay due to the rail crossing.	Since trains are no longer interacting with vehicles, congestion is reduced since vehicle delays at the grade crossing is eliminated.
Emissions Reductions	ROG Emission Benefits (0.16 kg/day) CO Emission Benefits (2.34 kg/day) Nox Emission Benefits (0.15 kg/day) PM Emission Benefits (0.01 kg/day)	ROG Emission Benefits (0.16 kg/day) CO Emission Benefits (2.34 kg/day) Nox Emission Benefits (0.15 kg/day) PM Emission Benefits (0.01 kg/day)	Railroad grade separation project currently provides air pollution reductions when compared to the no-build scenario. Benefit values are reconfirmed by AQMD. See attachment, OCTA Grade Separation Project AQ Assessment 9-29-20 from AQMD.

#### **G. Differences/Variations**

***Describe differences/variations (if any) and reason for, between approved scope, cost, schedule, and actual.***

The bid advertisement date and subsequent construction start date were delayed due to buy America issues and approval of the construction and maintenance agreement with Burlington Northern Santa Fe Railway. The construction start date and completion date were further delayed due to untimely completion of advanced utility relocations by various utility companies for the project. The actual right-of-way expenditures exceeded the budgeted amount was due to additional property acquisitions needed for the project. In addition, the cost of the relocation of existing utilities including the associated design exceeded the budgeted amount was due to expected conditions. The actual amount for construction exceeded the budgeted amount was due to various construction change orders to address utility conflicts and design changes, as well as the discovery of contaminated materials for the project.

Furthermore, pavement of Acacia Avenue between Commonwealth and Orangethorpe Avenues has been severely damaged during project's construction. Prior to construction of the State College GS project, Acacia Avenue was in fair condition and was not planned for pavement reconstruction within 5 years of project construction. However, the excessive traffic that was detoured onto Acacia Avenue, due to the closure of State College Boulevard, accelerated and contributed to the further deterioration of the roadway, produced poor driving conditions, and necessitated immediate measures for pavement rehabilitation to be completed as a part of the State College Grade Separation project. The ADT was 8,800 vehicles in 2015; 14,616 in February 2017; 8,017 in May 2019; and 7,861 in October 2019. The increase in the ADT during construction was approximately 5,816 additional vehicles per day.

City's project management staff evaluated the scope of work included in the Contract Change Order (CCO) No. 065 for compliance with Section 16 of LAPM and concluded that said scope of work fully relates to the damage caused by the project and is eligible for reimbursement as participating construction expenditures based on the following criteria:

- Work was located within project limits as defined in the project authorization document and is on a properly designated route. Per Traffic Impact Analysis, Acacia Avenue was temporarily converted from a pre-construction two-lane road to a four-lane road to handle the additional traffic volume during State College Boulevard Grade Separation construction closure. This work was included in the approved PS&E package.
  - Work is not over and above amount programmed. There is TCIF funding savings in the total amount of \$3,090,000 thus
- Therefore, it was determined that a minimal cost supporting the replacement of the surface asphalt layer damaged by and during construction phase shall be contributed by the project.

The TCIF Baseline Agreement Scope was developed and signed in 2008 before design began. The Scope description is general and only describes the main component of the project. It does not include other components, including stage construction, detours, construction area signs, etc., which are necessary to build the project; thus, the extent of damage of Acacia Avenue caused by the State College Grade Separation project was not known nor estimated at that time. Although, construction change orders including Acacia Avenue minimal pavement rehabilitation became necessary due to delays, unforeseen conditions, and impacts (damage) that are typical for project of such magnitude, City of Fullerton and OCTA's staff administered project's construction in a most responsible and efficient manner, which resulted in TCIF funding saving in the total amount of \$3,090,000 (deallocation from \$35,890,000 to \$32,800,000 by Amendment Resolution TCIF-AA-1819-07).

#### ***Describe lessons-learned and best practices for future projects .***

Additional effort should have been expended during the design phase to minimize right-of-way takes during construction to reduce costs and avoid project delays. Also, additional effort should have been expended to identify all impacted utilities and to coordinate with utility companies as early as possible to relocate their facilities in advance of the construction phase. Design support is important during construction to identify and address design issues in a timely manner to reduce construction costs.

## Certification Signature

### Implementing Agency

I hereby certify to the best of my knowledge and belief, the information in this report is a true and accurate record. The work was performed in

Yelena Voronel

(Print name) Project Manager



(Signature) Project Manager

2/23/2021

Date

### Caltrans

The TCIF Division Program Coordinator and/or the Project Manager from the California Department of Transportation has reviewed the information contained in this report and has verified the information presented is correct.

Trina Luo

(Print Name) TCIF Division Program Coordinator/Project Manager



7/29/2021

(Signature) TCIF Division Program Coordinator/Project Manager

Date

The TCIF Program Lead from the California Department of Transportation has reviewed the information contained in the report and found that the information reported for the TCIF funds is accurate.

Gretchen Chavez

(Print Name) TCIF Program Lead



7/29/21

(Signature) TCIF Program Lead

Date

Distribution: 1) Local Agency, 2) Division Program Coordinator/Project Manager, 3) TCIF Program Lead, 4) CTC