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: 9/21/2018

TCIF # (Segment): 99 Other Project Identifier (EA, Project #, PPNO, etc): TCIFL-5133(039)

Project Title: Raymond Avenue Grade Separation

Delivery Report: [X] 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, Principal Civil Engineer 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)
Environmental				
Total Amount	$0	$0	$1,125,462	-$1,125,462
Design				
Total Amount	$5,370,000	$5,370,000	$4,061,944	$1,308,056
Right of Way				
Total Amount	$34,901,000	$34,901,000	$32,128,624	$2,772,376
Construction				
TCIF	$11,890,000	$11,890,000	$9,432,729	$2,457,271
Local	$7,042,000	$7,042,000	$15,668,922	-$8,626,922
Federal	$0	$0	$0	$0
Other	$52,987,000	$52,987,000	$54,835,414	-$1,848,414
Total Amount	$71,919,000	$71,919,000	$79,937,065	-$8,018,065
Totals	**$112,190,000**	**$112,190,000**	**$117,253,095**	**-$5,063,095**

D. Schedule	Adopted Program Date	Current Approved Date	Actual Begin/End Date	Net Difference (Months)
Environmental Phase				
Begin	02/10/09	02/10/09	02/10/09	0
End	11/16/09	11/16/09	11/16/09	0
Design (PS&E) Phase				
Begin	03/30/10	03/30/10	03/30/10	0
End	12/14/12	12/14/12	03/01/13	2
Right of Way Phase				
Begin	12/11/11	12/11/11	11/01/10	-11
End	07/31/13	07/31/13	07/31/13	0
Construction Phase				
Begin	07/29/14	07/29/14	03/27/14	-4
End	07/15/18	07/15/18	05/14/18	-2
Closeout Date				
Begin	07/15/18	07/15/18	05/14/18	-2
End	07/15/21	07/15/21	N/A	-

E. Amendments
List approved amendments

Amendment:

Resolution TCIF-A-1314-11, Approved 01/29/14 to the allocation amount of $11,890,000 to the project.

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 5.0 hours of daily delay for trucks in 2030, a 118% 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 5.0 hours of daily delay for trucks in 2030, a 118% 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.	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.	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 45.5 hours and this is expected to increase to 99.4 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 45.5 hours and this is expected to increase to 99.4 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 (0.53 kg/day) CO Emission Benefits (7.56 kg/day) Nox Emission Benefits (0.49 kg/day) PM Emission Benefits (0.04 kg/day)	ROG Emission Benefits (0.53 kg/day) CO Emission Benefits (7.56 kg/day) Nox Emission Benefits (0.49 kg/day) PM Emission Benefits (0.04 kg/day)	The actual benefits cannot be comparable since emissions data from the Air Quality Management District (AQMD) change over time. However AQMD has acknowledged that grade separation projects provide regional air quality benefits.

G. Differences/Variances

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

The actual environmental expenditures exceeded the budgeted amount was due to unanticipated costs related to federalizing the project to replace local funds with federal funds. 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.

H. Lessons-Learned/Best Practices

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 accordance with the CTC approved scope, cost, schedules, and benefit information in the Baseline Agreement.

Yelena Voronel
(Print name) Project Manager

Yvoronel 9/21/18
(Signature) Project Manager 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.

Deborah Turner
(Print Name) TCIF Division Program Coordinator/Project Manager

D Turner 10/16/2018
(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 concurs with the approval.

Antonio Cano
(Print Name) TCIF Program Lead

10/22/18
(Signature) TCIF Program Lead Date

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