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: 1/17/2018

TCIF # (Segment): 2 Other Project Identifier (EA, Project #, PPNO, etc): PPNO: 0241B

Project Title: Richmond Rail Connector Project

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

Location: County: Contra Costa City: Richmond

Project Description: Constructed at-grade connector track and related signal improvements between BNSF Railway Company and Union Pacific Railroad Company main line tracks.

B. Contact Information

Implementing Agency: BNSF Railway Company Caltrans District Numb 75

Contact Person: Walter N. Smith, P.E. Phone: 916-654-5739

Email Address: walter.smith1@bnsf.com

C. Cost	Adopted Program Amount ($)	Current Approved Amount ($)	Actual Expended Amount ($)	Net Difference (Dollars)
Environmental				
Total Amount		$300,000	$1,000,728	-$700,728
Design				
Total Amount		$550,000	$142,766	$407,234
Right of Way				
Total Amount		$4,590,000	$4,187,643	$402,357
Construction				
TCIF	$74,000,000	$10,880,000	$9,554,598	$64,445,402
Local				
Federal		$6,330,000	$6,328,059	$1,941
Other				
Totals	$74,000,000	$22,650,000	$21,213,794	$1,436,206

D. Schedule	Adopted Program Date	Current Approved Date	Actual Begin/End Date	Net Difference (Months)
Environmental Phase				
Begin	11/01/10	11/01/10		0
End	02/01/12	02/01/13	02/01/13	0
Design (PS&E) Phase				
Begin	11/01/10	11/01/10		0
End	01/01/12	02/01/13	02/01/13	0
Right of Way Phase				
Begin	06/01/11	06/01/11		0
End	08/01/12	06/01/13	06/30/13	1
Construction Phase				
Begin	09/01/12	12/31/13	12/13/13	0
End	09/01/14	10/31/15	10/31/16	12
Closeout Date				
Begin	10/01/14	10/01/14	11/01/17	0
End	10/01/15	10/01/15	12/01/17	24

E. Amendments

List approved amendments

Amendment #	CTC Meeting	Summary of Changes (Scope, Cost, Schedule)
TCIF-P-1213-64	11-Jun-13	Amended Project Baseline Agreement

F. Project Benefits*

Describe and compare project benefits with those included in the approved Baseline Agreement.

Outcomes	Adopted Program	Current Approved	Actual
Safety	X	X	X
Congestion Reduction (Annual Impacts)	X	X	X
Emissions Reduction (Annual Impacts)	X	X	X
Financial Benefits (Cumulative)	X	X	X
*See attachment (Page 4)			

G. Differences/Variances

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

Proposed schedule to begin constuction was delayed due to amendments to original project baseline and delay in CTC allocation of TCIF funds.

H. Lessons-Learned/Best Practices

Describe lessons-learned and best practices for future projects.

Certification Signature

Implementating 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.

Walter N. Smith, P.E.
BNSF Railway Company
Project Manager

(Signature) Project Manager — Date: 01/19/2018

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.

Betty Miller
(Print Name) TCIF Division Program Coordinator/Project Manager

(Signature) TCIF Division Program Coordinator/Project Manager — Date: 01/22/2018

The TCIF Program Lead from the California Department of Transportation has reviewed the information contained in the report and concurs with the approval.

Tony Cano
(Print Name) TCIF Program Lead

(Signature) TCIF Program Lead — Date: 2/2/18

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

Updated: January 12, 2018

Trade Corridor Improvement Fund
Project Benefits Form
Exhibit C

Project Title: Richmond Rail Connector

Project Category: Rail

Project Type: Construct an at-grade rail to rail connector, from BNSF to UP

Outputs: Construction of one at-grade rail connector, eliminating 1.7 miles of train travel through the City of Richmond.

Outcomes:

Outcome	Performance Measure				
Safety	9 Grade crossing impacted with fewer train/vehicle interactions, resulting in fewer grade crossing accidents annually				
		Fatal	Injury	PDO	Total
	Base (Current)	0.019802	0.025213	0.071001	0.116016
	Alternative (Built)	0.00352	0.004444	0.012519	0.020483
	FRA Gradedec.net - Summary of Predicted Annual Accidents				
	.....	Base Year (2011)	Actual* (2016) Built	Benefits (2030) Built	
Congestion Reduction (Annual Impacts)	Automobiles Impacted	240,056	107,390	618,434	Autos not Impacted
	Automobile Wait Time (Hrs)	19,856	4,745	32,658	Hrs savings in wait time
	Trucks Impacted	62,020	41,943	105,128	Trucks not Impacted
	Truck Wait Time (Hrs)	7,802	5,272	13,226	Hrs savings in wait time
	.....				
Emissions Reduction (Annual Impacts)	HC (tons) Autos	0.33	0.10	0.58	Reduced HC (tons)
	CO_2 (tons) Autos	105.94	30.76	179.57	Reduced CO2 (tons)
	NOx (tons) Autos	0.99	0.81	1.68	Reduced NOx (tons)
	HC (tons) Trucks	0.11	0.09	0.18	Reduced HC (tons)
	CO_2 (tons)Trucks	88.74	72.90	150.42	Reduced CO2 (tons)
	NOx (tons) Trucks	0.12	0.10	0.20	Reduced NOx (tons)
	NOx (tons) Locomotives	1.51	1.29	3.21	Reduced HC (tons)
	PM10 (tons) Locomotives	0.04	0.04	0.09	Reduced CO2 (tons)
	HC (tons) Locomotives	0.07	0.06	0.15	Reduced NOx (tons)
	.....	(Benefits based on 1.5% annual traffic growth)			
Financial Benefits (Cumulative)	Vehicle Wait Times Savings	$15,486,855			
	Vehicle Fuel Cost Savings	$2,021,572			
	Vehicle Emissions Savings	$151,824			
	(4% Discount Rate)				

* 2016 Results were lower than estimated due to an economic downturn, which resulted in lower traffic volumes

The actual 2016 data had three factors that reduced the net benefit from the originally predicted,

1) shorter average train length
2) less volume of trains
3) reduced average train tonnage

Because there are three factors changing simultaneously, the relationship isn't linear, as one would expect. Average train length, train volumes, and average tonnage were all significantly lower in 2016 than predicted would occur in 2016, thus the calculated savings was also significantly lower. However, there is still a reduction in number of motor vehicles delayed by trains, and the project still provided a public benefit in terms of reduced vehicle wait times, reduced highway congestion, and reduced air emissions.