ROAD REPAIR AND ACCOUNTABILITY ACT OF 2017
PROJECT BASELINE AGREEMENT
LOSSAN Intermodal Improvement Program

Resolution TCEP-P-2021-07B
(will be completed by CTC)

1. FUNDING PROGRAM

- ☐ Active Transportation Program
- ☐ Local Partnership Program (Competitive)
- ☐ Solutions for Congested Corridors Program
- ☐ State Highway Operation and Protection Program
- ☒ Trade Corridor Enhancement Program

2. PARTIES AND DATE

2.1 This Project Baseline Agreement (Agreement) for the *LOSSAN Intermodal Improvement Program*, effective on, June 23, 2021 (will be completed by CTC), is made by and between the California Transportation Commission (Commission), the California Department of Transportation (Caltrans), the Project Applicant, *San Diego Association of Governments*, and the Implementing Agency, *San Diego Association of Governments and North County Transit District*, sometimes collectively referred to as the "Parties".

3. RECITAL

3.2 Whereas at its December 2, 2020 meeting the Commission approved the Trade Corridor Enhancement Program, and included in this program of projects the *LOSSAN Intermodal Improvement Program*, the parties are entering into this Project Baseline Agreement to document the project cost, schedule, scope and benefits, as detailed on the Project Programming Request Form attached hereto as Exhibit A and the Project Report attached hereto as Exhibit B, as the baseline for project monitoring by the Commission.

3.3 The undersigned Project Applicant certifies that the funding sources cited are committed and expected to be available; the estimated costs represent full project funding; and the scope and description of benefits is the best estimate possible.

4. GENERAL PROVISIONS

The Project Applicant, Implementing Agency, and Caltrans agree to abide by the following provisions:

4.1 To meet the requirements of the Road Repair and Accountability Act of 2017 (Senate Bill [SB] 1, Chapter 5, Statutes of 2017) which provides the first significant, stable, and on-going increase in state transportation funding in more than two decades.

4.2 To adhere, as applicable, to the provisions of the Commission:

- ☐ Resolution *Insert Number* , "Adoption of Program of Projects for the Active Transportation Program", dated
- ☐ Resolution *Insert Number* , "Adoption of Program of Projects for the Local Partnership Program", dated
- ☐ Resolution *Insert Number* , "Adoption of Program of Projects for the Solutions for Congested Corridors Program", dated
- ☐ Resolution *Insert Number* , "Adoption of Program of Projects for the State Highway Operation and Protection Program", dated
- ☒ Resolution G-20-77, "Adoption of Program of Projects for the Trade Corridor Enhancement Program", dated December 2, 2020

4.3 All signatories agree to adhere to the Commission's Trade Corridor Enhancement Program, Guidelines. Any conflict between the programs will be resolved at the discretion of the Commission.

4.4 All signatories agree to adhere to the Commission's SB 1 Accountability and Transparency Guidelines and policies, and program and project amendment processes.

4.5 The Implementing Agency agrees to secure funds for any additional costs of the project, as set forth more specifically in section 5.3.

4.6 The Implementing Agency agrees to report to Caltrans on a quarterly basis, as set forth more specifically in section 5.3.; after July 2019, reports will be on a semi-annual basis on the progress made toward the implementation of the project, including scope, cost, schedule, outcomes, and anticipated benefits.

4.7 Caltrans agrees to prepare program progress reports on a quarterly basis; after July 2019, reports will be on a semi-annual basis and include information appropriate to assess the current state of the overall program and the current status of each project identified in the program report.

4.8 The Implementing Agency agrees to submit a timely Completion Report and Final Delivery Report as specified in the Commission's SB 1 Accountability and Transparency Guidelines, as set forth more specifically in section 5.3.

4.9 All signatories agree to maintain and make available to the Commission and/or its designated representative, all work related documents, including without limitation engineering, financial and other data, and methodologies and assumptions used in the determination of project benefits during the course of the project, and retain those records for four years from the date of the final closeout of the project. Financial records will be maintained in accordance with Generally Accepted Accounting Principles.

4.10 The Transportation Inspector General of the Independent Office of Audits and Investigations has the right to audit the project records, including technical and financial data, of the Department of Transportation, the Project Applicant, the Implementing Agency, and any consultant or sub-consultants at any time during the course of the project and for four years from the date of the final closeout of the project, therefore all project records shall be maintained and made available at the time of request. Audits will be conducted in accordance with Generally Accepted Government Auditing Standards.

5. SPECIFIC PROVISIONS AND CONDITIONS

5.1 Project Schedule and Cost
See Project Programming Request Form, attached as Exhibit A.

5.2 Project Scope
See Project Report or equivalent, attached as Exhibit B. At a minimum, the attachment shall include the cover page, evidence of approval, executive summary, and a link to or electronic copy of the full document.

5.3 Other Project Specific Provisions and Conditions

A. Implementing Agency for the following projects will be the San Diego Association of Governments Control Point (CP) San Onofre to
CP Pulgas Double Track Project Phase 2
San Dieguito Double Track Project Phase 1
Del Mar Bluffs Stabilization Project Phase 5
Implementing Agency for the following projects will be the North County Transit District
CP Broadway to CP Gaslamp Track Signalization and Platform Project

B. In the event of a cost overrun the State will cover a share proportionate to the State contribution of the Trade Corridor Enhancement Program (TCEP) funding identified in the Project Programming Request form attached to this baseline agreement. (For example, if the State/Regional TCEP funding share was a 40/60 ratio, the State may fund no more than 40 percent of the cost overrun.)

Attachments:

Exhibit A: Project Programming Request Form
Exhibit B: Project Report

SIGNATURE PAGE
TO
PROJECT BASELINE AGREEMENT

LOSSAN Intermodal Improvement Program

Resolution TCEP-P-2021-07B

6/8/2021

Hasan Ikhrata — Date

Executive Director, San Diego Association of Governments

Project Applicant

6/8/2021

Hasan Ikhrata — Date

Executive Director, San Diego Association of Governments

Implementing Agency

6/9/2021

Matthew Tucker — Date

Executive Director, North County Transit District

Implementing Agency

6-11-2021

Gustavo Dallarda — Date

District Director

California Department of Transportation

Michael D. Keever for

6/22/21

Toks Omishakin — Date

Director

California Department of Transportation

07/16/21

Mitchell Weiss — Date

Executive Director

California Transportation Commission

EXHIBIT A

STATE OF CALIFORNIA • DEPARTMENT OF TRANSPORTATION

PROJECT PROGRAMMING REQUEST (PPR)

PRG-0010 (REV 08/2020)

PPR ID
ePPR-6066-2020-0008 v3

Amendment (Existing Project) ☒ YES ☐ NO					Date	06/07/2021 12:19:20
Programs ☐ LPP-C ☐ LPP-F ☐ SCCP ☒ TCEP ☐ STIP ☐ Other						
District	EA	Project ID	PPNO	Nominating Agency		
75		0019000029	2190	San Diego Association of Governments		
County	Route	PM Back	PM Ahead	Co-Nominating Agency		
San Diego				Caltrans HQ		
				MPO	Element	
				SANDAG	Rail	
Project Manager/Contact			Phone	Email Address		
Angela Anderson			619-699-6934	angela.anderson@sandag.org		

Project Title

San Onofre to Pulgas Double Track Phase 2

Location (Project Limits), Description (Scope of Work)

In Camp Pendleton along the LOSSAN corridor, from MP 216.5 to MP 218.1, construct 1.6 miles of additional second main track capacity adjacent to the main track, including new bridges at MP 217.3 and MP 218.

Component	Implementing Agency
PA&ED	San Diego Association of Governments
PS&E	San Diego Association of Governments
Right of Way	San Diego Association of Governments
Construction	San Diego Association of Governments

Legislative Districts					
Assembly:	75,76,77,78,79	Senate:	36,39	Congressional:	50,51,52

Project Milestone	Existing	Proposed
Project Study Report Approved	01/14/2008	
Begin Environmental (PA&ED) Phase	11/30/2009	11/30/2009
Circulate Draft Environmental Document Document Type CE	05/01/2011	03/01/2011
Draft Project Report	03/01/2011	02/16/2021
End Environmental Phase (PA&ED Milestone)	03/31/2012	03/31/2012
Begin Design (PS&E) Phase	10/30/2018	10/30/2018
End Design Phase (Ready to List for Advertisement Milestone)	05/01/2020	09/01/2021
Begin Right of Way Phase	02/23/2013	10/30/2018
End Right of Way Phase (Right of Way Certification Milestone)	05/01/2021	09/01/2021
Begin Construction Phase (Contract Award Milestone)	09/01/2021	01/01/2022
End Construction Phase (Construction Contract Acceptance Milestone)	09/30/2023	07/01/2024
Begin Closeout Phase	10/01/2023	07/01/2024
End Closeout Phase (Closeout Report)	09/30/2024	01/01/2025

EXHIBIT A

STATE OF CALIFORNIA • DEPARTMENT OF TRANSPORTATION

PROJECT PROGRAMMING REQUEST (PPR)

PRG-0010 (REV 08/2020)

PPR ID
ePPR-6066-2020-0008 v3

Date 06/07/2021 12:19:20

Purpose and Need

Project Benefits:
The project will provide a location for freight and passenger trains to meet and pass, resulting in an increase in the number of daytime freight trains into and out of San Diego providing increased goods movement. The project will also improve passenger train headways and on-time performance by providing operational flexibility.

Purpose and Needs:
This segment of the corridor serves as a vital link for passenger and freight movements in San Diego County. Currently there is only a single track which causes train delays due to wait times for trains traveling in the opposite direction. This project would eliminate the existing 1.6 mile long single track bottleneck between CP Don and CP Los Pulgas, support current and future growth in LOSSAN corridor rail service demand, and increase system capacity and operational efficiency.

Outputs/Outcomes:
IR/MT Miles of New Track Miles 1.6

NHS Improvements ☐ YES ☒ NO	Roadway Class NA	Reversible Lane Analysis ☐ YES ☒ NO

Inc. Sustainable Communities Strategy Goals ☐ YES ☒ NO Reduce Greenhouse Gas Emissions ☒ YES ☐ NO

Project Outputs

Category	Outputs	Unit	Total
Intercity Rail/Mass Trans	Miles of new track	Miles	1.6

STATE OF CALIFORNIA • DEPARTMENT OF TRANSPORTATION

PROJECT PROGRAMMING REQUEST (PPR)

PRG-0010 (REV 08/2020)

PPR ID
ePPR-6066-2020-0008 v3

Date 06/07/2021 12:19:20

Additional Information

The purpose of the LOSSAN-SD Intermodal Improvement Program is to implement key capital improvements along the San Diego Subdivision of the Los Angeles-San Diego-San Luis Obispo (LOSSAN) Rail Corridor to facilitate additional freight trips from the Port of San Diego to points state- and nation-wide. The LOSSAN Rail Corridor is of state and national importance as the only viable freight rail connection for the San Diego Region. The U.S. Department of Defense has identified this corridor as part of the Strategic Rail Corridor Network (STRACNET) for its importance in providing access to the Marine Corps Base Camp Pendleton and the Port of San Diego. These improvements have been determined as to not only accommodate additional freight rail service but future expansions of the Corridor's commuter and intercity passenger rail services.

This project is part of a larger program of improvements in the LOSSAN-SD Intermodal Improvement Program, which includes the following projects: San Onofre to Pulgas Double Track Phase 2, San Dieguito Double Track Phase 1, Del Mar Bluffs Phase 5, and Broadway to Gaslamp Track Signalization and Platform. The performance measures noted below are for the entire LOSSAN-SD Intermodal Improvement Program of projects.

The railroad right-of-way (ROW) is subject to the jurisdiction of the Federal Surface Transportation Board (STB). The project falls under the STB ruling which stipulates that State and Local environmental regulation has been found to be preempted by federal statute (49 U.S.C. 10501(b)) for railroad projects when the tracks are used for interstate freight transport. Therefore, the project is not subject to CEQA. The STB ruling is based on the premise that projects that improve railroad reliability and capacity on tracks used for interstate commerce are not subject to regulatory compliance with state and local regulations due to the interstate commerce clause in the United States Constitution. The proposed improvements are for the purpose of improving railroad reliability and capacity of the LOSSAN Corridor, which is used to transport interstate freight.

TCEP guidelines allow supplemental funding only for state-sponsored projects – this project was originally allocated STIP IIP funding for improvements to the intercity rail corridor sponsored by the state.

Following the release of TCEP award recommendations, due to COVID and the abundance of work happening concurrently in the rail corridor, SANDAG and NCTD learned more as projects moved through the development process. This created the need to look at the entire program of projects to more efficiently schedule work for individual projects within the corridor and help expedite project delivery.

STATE OF CALIFORNIA • DEPARTMENT OF TRANSPORTATION

PROJECT PROGRAMMING REQUEST (PPR)

PRG-0010 (REV 08/2020)

PPR ID
ePPR-6066-2020-0008 v3

Performance Indicators and Measures						
Measure	**Required For**	**Indicator/Measure**	**Unit**	**Build**	**Future No Build**	**Change**
Congestion Reduction	TCEP	Daily Vehicle Hours of Travel Time Reduction	Hours	0	350	-350
	TCEP	Daily Truck Trips	# of Trips	0	197	-197
	TCEP	Daily Truck Miles Traveled	Miles	0	38,960	-38,960
Throughput	TCEP	Change in Truck Volume That Can Be Accommodated	# of Trucks	0	0	0
	TCEP	Change in Rail Volume That Can Be Accommodated	# of Trailers	219,000	0	219,000
			# of Containers	0	0	0
	TCEP	Change in Cargo Volume That Can Be Accommodated	# of Tons	5,321,700	5,321,700	0
			# of Containers	0	0	0
System Reliability	TCEP	Truck Travel Time Reliability Index	Index	0	0	0
	TCEP	Daily Vehicle Hours of Travel Time Reduction	Hours	0	350	-350
Velocity	TCEP	Travel Time or Total Cargo Transport Time	Hours	0	0	0
	Optional	Average Peak Period Weekday Speed for Rail Facility	Miles per Hour	41	41	0
Air Quality & GHG	LPPF, LPPC, SCCP, TCEP	Particulate Matter	PM 2.5 Tons	6	5	1
			PM 10 Tons	18	5	13
	LPPF, LPPC, SCCP, TCEP	Carbon Dioxide (CO2)	Tons	96,539	266,647	-170,108
	LPPF, LPPC, SCCP, TCEP	Volatile Organic Compounds (VOC)	Tons	7	12	-5
	LPPF, LPPC, SCCP, TCEP	Sulphur Dioxides (SOx)	Tons	0	3	-3
	LPPF, LPPC, SCCP, TCEP	Carbon Monoxide (CO)	Tons	15	181	-166
	LPPF, LPPC, SCCP, TCEP	Nitrogen Oxides (NOx)	Tons	391	308	83
Safety	LPPF, LPPC, SCCP, TCEP	Number of Non-Motorized Fatalities and Non-Motorized Serious Injuries	Number	0	0	0
	LPPF, LPPC, SCCP, TCEP	Number of Fatalities	Number	3.3	4.9	-1.6
	LPPF, LPPC, SCCP, TCEP	Fatalities per 100 Million VMT	Number	1.5	0	1.5
	LPPF, LPPC, SCCP, TCEP	Number of Serious Injuries	Number	6.22	42.34	-36.12
	LPPF, LPPC, SCCP, TCEP	Number of Serious Injuries per 100 Million VMT	Number	24	145	-121
	Optional	Number of Property Damage Only and Non-Serious Injury Collisions	Number	11	79	-68
Economic Development	LPPF, LPPC, SCCP, TCEP	Jobs Created (Direct and Indirect)	Number	1,648	0	1,648

STATE OF CALIFORNIA • DEPARTMENT OF TRANSPORTATION

PROJECT PROGRAMMING REQUEST (PPR)

PRG-0010 (REV 08/2020)

PPR ID
ePPR-6066-2020-0008 v3

Performance Indicators and Measures						
Measure	**Required For**	**Indicator/Measure**	**Unit**	**Build**	**Future No Build**	**Change**
Cost Effectiveness	LPPF, LPPC, SCCP, TCEP	Cost Benefit Ratio	Ratio	2.3	0	2.3

EXHIBIT A

STATE OF CALIFORNIA • DEPARTMENT OF TRANSPORTATION

PROJECT PROGRAMMING REQUEST (PPR)

PRG-0010 (REV 08/2020)

PPR ID
ePPR-6066-2020-0008 v3

District	County	Route	EA	Project ID	PPNO
75	San Diego			0019000029	2190

Project Title

San Onofre to Pulgas Double Track Phase 2

Existing Total Project Cost ($1,000s)									
Component	Prior	21-22	22-23	23-24	24-25	25-26	26-27+	Total	Implementing Agency
E&P (PA&ED)									San Diego Association of Governmen
PS&E	1,744							1,744	San Diego Association of Governmen
R/W SUP (CT)									San Diego Association of Governmen
CON SUP (CT)									San Diego Association of Governmen
R/W									San Diego Association of Governmen
CON		33,793						33,793	San Diego Association of Governmen
TOTAL	1,744	33,793						35,537	
Proposed Total Project Cost ($1,000s)									Notes
E&P (PA&ED)									
PS&E	1,744							1,744	
R/W SUP (CT)									
CON SUP (CT)									
R/W									
CON		33,793						33,793	
TOTAL	1,744	33,793						35,537	

Fund #1:	IIP - Public Transportation Account (Committed)								Program Code
Existing Funding ($1,000s)									30.20.020.720
Component	Prior	21-22	22-23	23-24	24-25	25-26	26-27+	Total	Funding Agency
E&P (PA&ED)									Caltrans HQ
PS&E	1,177							1,177	$1177 PSE voted 08/15/18
R/W SUP (CT)									
CON SUP (CT)									
R/W									
CON		28,863						28,863	
TOTAL	1,177	28,863						30,040	
Proposed Funding ($1,000s)									Notes
E&P (PA&ED)									
PS&E	1,177							1,177	
R/W SUP (CT)									
CON SUP (CT)									
R/W									
CON		28,863						28,863	
TOTAL	1,177	28,863						30,040	

EXHIBIT A

STATE OF CALIFORNIA • DEPARTMENT OF TRANSPORTATION

PROJECT PROGRAMMING REQUEST (PPR)

PRG-0010 (REV 08/2020)

PPR ID
ePPR-6066-2020-0008 v3

Fund #2:	State SB1 TCEP - Trade Corridors Enhancement Account (Committed)								Program Code
Existing Funding ($1,000s)									20.30.210.310
Component	Prior	21-22	22-23	23-24	24-25	25-26	26-27+	Total	Funding Agency
E&P (PA&ED)									
PS&E	567							567	state share
R/W SUP (CT)									
CON SUP (CT)									
R/W									
CON		4,930						4,930	
TOTAL	567	4,930						5,497	
Proposed Funding ($1,000s)									Notes
E&P (PA&ED)									$567,000 for PS&E is FY 2021 TCEP funding.
PS&E	567							567	
R/W SUP (CT)									
CON SUP (CT)									
R/W									
CON		4,930						4,930	
TOTAL	567	4,930						5,497	

EXHIBIT A

STATE OF CALIFORNIA • DEPARTMENT OF TRANSPORTATION

PROJECT PROGRAMMING REQUEST (PPR)

PRG-0010 (REV 08/2020)

PPR ID
ePPR-6066-2020-0006 v4

Amendment (Existing Project) ☒ YES ☐ NO				Date	06/07/2021 12:20:05
Programs ☐ LPP-C ☐ LPP-F ☐ SCCP ☒ TCEP ☐ STIP ☐ Other					
District	EA	Project ID	PPNO	Nominating Agency	
75		0021000174	LP003	San Diego Association of Governments	
County	Route	PM Back	PM Ahead	Co-Nominating Agency	
San Diego				Caltrans HQ	
				MPO	Element
				SANDAG	Rail
Project Manager/Contact			Phone	Email Address	
Angela Anderson			619-699-6934	angela.anderson@sandag.org	

Project Title

San Dieguito Double Track Phase 1

Location (Project Limits), Description (Scope of Work)

This project is Phase 1 of the San Dieguito River Double Track project. Phase 1 will provide a second main track from CP Valley (MP 242.2) to the north end of the existing San Dieguito Lagoon trestle bridge (MP 243.0), adding 0.8 miles of double track. Signal work will be required beyond the construction limits on either end of the project, estimated to be between MP 241.1 to 243.9. When combined with existing double track south of Solana Beach Station (MP 241.8) and the addition of a new crossover this second track will provide a freight passing area north of the San Dieguito River. A freight passing track is required at this location to increase freight capacity in San Diego per the April 2020 Draft "Freight Pathing between CP Atwood and the Port of San Diego and passenger service extensions south of San Diego" study commissioned (Freight Pathing Study) by BNSF and NCTD and prepared by DB Engineering & Consulting.

Component	Implementing Agency
PA&ED	San Diego Association of Governments
PS&E	San Diego Association of Governments
Right of Way	San Diego Association of Governments
Construction	San Diego Association of Governments

Legislative Districts					
Assembly:	77,78	Senate:	39	Congressional:	49,52

Project Milestone	Existing	Proposed
Project Study Report Approved		
Begin Environmental (PA&ED) Phase	01/01/1900	12/01/2012
Circulate Draft Environmental Document Document Type FONSI	01/01/1900	05/05/2015
Draft Project Report	01/01/1900	07/31/2020
End Environmental Phase (PA&ED Milestone)	01/01/1900	01/05/2016
Begin Design (PS&E) Phase	08/15/2020	07/01/2021
End Design Phase (Ready to List for Advertisement Milestone)	11/30/2020	07/31/2022
Begin Right of Way Phase	08/15/2020	07/01/2021
End Right of Way Phase (Right of Way Certification Milestone)	11/30/2020	07/30/2022
Begin Construction Phase (Contract Award Milestone)	01/30/2021	03/31/2023
End Construction Phase (Construction Contract Acceptance Milestone)	01/30/2023	08/31/2025
Begin Closeout Phase	02/01/2023	09/01/2025
End Closeout Phase (Closeout Report)	02/01/2024	03/01/2026

EXHIBIT A

STATE OF CALIFORNIA • DEPARTMENT OF TRANSPORTATION

PROJECT PROGRAMMING REQUEST (PPR)

PRG-0010 (REV 08/2020)

PPR ID
ePPR-6066-2020-0006 v4

Date 06/07/2021 12:20:05

Purpose and Need

The primary purpose of Phase 1 of the Full Project is to provide a second main track to allow 4,000-foot long daytime freight trains to make passes with commuter trains without further delay to the current schedule. This can be done by eliminating 0.8 miles of a single-track bottleneck in the Solana Beach and Del Mar segments of the San Diego Subdivision of the LOSSAN Corridor.

There is a need for daytime track for freight trains to make passes with commuter trains that was identified in the Freight Pathing Study in order to increase freight capacity and maintain operational flexibility. This report states that the addition of a secondary track north of the San Dieguito River would allow additional freight trips to be made throughout the day by providing the flexibility for passenger trains to pass the freight at the San Dieguito location.

The additional passing track also helps to increase freight and passenger service south of the Santa Fe Depot and facilitates the Near, Mid, and Long-term goals for the Corridor. This Phase 1 of the Full Project is a critical link in achieving these near, mid, and long-term goals.

NHS Improvements ☐ YES ☒ NO	Roadway Class NA	Reversible Lane Analysis ☐ YES ☒ NO

Inc. Sustainable Communities Strategy Goals ☒ YES ☐ NO Reduce Greenhouse Gas Emissions ☒ YES ☐ NO

Project Outputs

Category	Outputs	Unit	Total
Rail/ Multi-Modal	Miles of new track	Miles	0.8

STATE OF CALIFORNIA • DEPARTMENT OF TRANSPORTATION

PROJECT PROGRAMMING REQUEST (PPR)

PRG-0010 (REV 08/2020)

PPR ID
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Date 06/07/2021 12:20:05

Additional Information

The purpose of the LOSSAN-SD Intermodal Improvement Program is to implement key capital improvements along the San Diego Subdivision of the Los Angeles-San Diego-San Luis Obispo (LOSSAN) Rail Corridor to facilitate additional freight trips from the Port of San Diego to points state- and nation-wide. The LOSSAN Rail Corridor is of state and national importance as the only viable freight rail connection for the San Diego Region. The U.S. Department of Defense has identified this corridor as part of the Strategic Rail Corridor Network (STRACNET) for its importance in providing access to the Marine Corps Base Camp Pendleton and the Port of San Diego. These improvements have been determined as to not only accommodate additional freight rail service but future expansions of the Corridor's commuter and intercity passenger rail services.

This project is part of a larger program of improvements in the LOSSAN-SD Intermodal Improvement Program, which includes the following projects: San Onofre to Pulgas Double Track Phase 2, San Dieguito Double Track Phase 1, Del Mar Bluffs Phase 5, and Broadway to Gaslamp Track Signalization and Platform. The performance measures noted below are for the entire LOSSAN-SD Intermodal Improvement Program of projects.

The railroad right-of-way (ROW) is subject to the jurisdiction of the Federal Surface Transportation Board (STB). The project falls under the STB ruling which stipulates that State and Local environmental regulation has been found to be preempted by federal statute (49 U.S.C. 10501(b)) for railroad projects when the tracks are used for interstate freight transport. Therefore, the project is not subject to CEQA. The STB ruling is based on the premise that projects that improve railroad reliability and capacity on tracks used for interstate commerce are not subject to regulatory compliance with state and local regulations due to the interstate commerce clause in the United States Constitution. The proposed improvements are for the purpose of improving railroad reliability and capacity of the LOSSAN Corridor, which is used to transport interstate freight.

Following the release of TCEP award recommendations, due to COVID and the abundance of work happening concurrently in the rail corridor, SANDAG and NCTD learned more as projects moved through the development process. This created the need to look at the entire program of projects to more efficiently schedule work for individual projects within the corridor and help expedite project delivery.

STATE OF CALIFORNIA • DEPARTMENT OF TRANSPORTATION

PROJECT PROGRAMMING REQUEST (PPR)

PRG-0010 (REV 08/2020)

PPR ID
ePPR-6066-2020-0006 v4

Performance Indicators and Measures						
Measure	**Required For**	**Indicator/Measure**	**Unit**	**Build**	**Future No Build**	**Change**
Congestion Reduction	TCEP	Daily Vehicle Hours of Travel Time Reduction	Hours	0	350	-350
	TCEP	Daily Truck Trips	# of Trips	0	197	-197
	TCEP	Daily Truck Miles Traveled	Miles	0	38,960	-38,960
Throughput	TCEP	Change in Truck Volume That Can Be Accommodated	# of Trucks	0	0	0
	TCEP	Change in Rail Volume That Can Be Accommodated	# of Trailers	219,000	0	219,000
			# of Containers	0	0	0
	TCEP	Change in Cargo Volume That Can Be Accommodated	# of Tons	5,321,700	5,321,700	0
			# of Containers	0	0	0
System Reliability	TCEP	Truck Travel Time Reliability Index	Index	0	0	0
	TCEP	Daily Vehicle Hours of Travel Time Reduction	Hours	0	350	-350
Velocity	TCEP	Travel Time or Total Cargo Transport Time	Hours	0	0	0
	Optional	Average Peak Period Weekday Speed for Rail Facility	Miles per Hour	41	41	0
Air Quality & GHG	LPPF, LPPC, SCCP, TCEP	Particulate Matter	PM 2.5 Tons	6	5	1
			PM 10 Tons	18	5	13
	LPPF, LPPC, SCCP, TCEP	Carbon Dioxide (CO2)	Tons	96,539	266,647	-170,108
	LPPF, LPPC, SCCP, TCEP	Volatile Organic Compounds (VOC)	Tons	7	12	-5
	LPPF, LPPC, SCCP, TCEP	Sulphur Dioxides (SOx)	Tons	0	3	-3
	LPPF, LPPC, SCCP, TCEP	Carbon Monoxide (CO)	Tons	15	181	-166
	LPPF, LPPC, SCCP, TCEP	Nitrogen Oxides (NOx)	Tons	391	308	83
Safety	LPPF, LPPC, SCCP, TCEP	Number of Non-Motorized Fatalities and Non-Motorized Serious Injuries	Number	0	0	0
	LPPF, LPPC, SCCP, TCEP	Number of Fatalities	Number	3.3	4.9	-1.6
	LPPF, LPPC, SCCP, TCEP	Fatalities per 100 Million VMT	Number	1.5	1.5	0
	LPPF, LPPC, SCCP, TCEP	Number of Serious Injuries	Number	6.22	42.34	-36.12
	LPPF, LPPC, SCCP, TCEP	Number of Serious Injuries per 100 Million VMT	Number	24	145	-121
	Optional	Number of Property Damage Only and Non-Serious Injury Collisions	Number	11	79	-68
Economic Development	LPPF, LPPC, SCCP, TCEP	Jobs Created (Direct and Indirect)	Number	1,648	0	1,648

STATE OF CALIFORNIA • DEPARTMENT OF TRANSPORTATION

PROJECT PROGRAMMING REQUEST (PPR)

PRG-0010 (REV 08/2020)

PPR ID
ePPR-6066-2020-0006 v4

Performance Indicators and Measures						
Measure	**Required For**	**Indicator/Measure**	**Unit**	**Build**	**Future No Build**	**Change**
Cost Effectiveness	LPPF, LPPC, SCCP, TCEP	Cost Benefit Ratio	Ratio	2.3	0	2.3

EXHIBIT A

STATE OF CALIFORNIA • DEPARTMENT OF TRANSPORTATION

PROJECT PROGRAMMING REQUEST (PPR)

PRG-0010 (REV 08/2020)

PPR ID
ePPR-6066-2020-0006 v4

District	County	Route	EA	Project ID	PPNO
75	San Diego			0021000174	LP003

Project Title

San Dieguito Double Track Phase 1

Existing Total Project Cost ($1,000s)								
Component	Prior	21-22	22-23	23-24	24-25	25-26	26-27+	Total	Implementing Agency
E&P (PA&ED)									San Diego Association of Governmen
PS&E	4,234							4,234	San Diego Association of Governmen
R/W SUP (CT)									San Diego Association of Governmen
CON SUP (CT)									San Diego Association of Governmen
R/W	1,250							1,250	San Diego Association of Governmen
CON	56,329							56,329	San Diego Association of Governmen
TOTAL	61,813							61,813	
Proposed Total Project Cost ($1,000s)									Notes
E&P (PA&ED)									
PS&E	4,234							4,234	
R/W SUP (CT)									
CON SUP (CT)									
R/W	1,250							1,250	
CON			56,329					56,329	
TOTAL	5,484		56,329					61,813	

Fund #1:	State SB1 TCEP - Trade Corridors Enhancement Account (Committed)								Program Code
Existing Funding ($1,000s)									20.30.210.310
Component	Prior	21-22	22-23	23-24	24-25	25-26	26-27+	Total	Funding Agency
E&P (PA&ED)									
PS&E									state share
R/W SUP (CT)									
CON SUP (CT)									
R/W									
CON	7,683							7,683	
TOTAL	7,683							7,683	
Proposed Funding ($1,000s)									Notes
E&P (PA&ED)									
PS&E									
R/W SUP (CT)									
CON SUP (CT)									
R/W									
CON			7,683					7,683	
TOTAL			7,683					7,683	

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PROJECT PROGRAMMING REQUEST (PPR)

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Fund #2:	Other Fed - FTA 5307/5337 (Committed)								Program Code
	Existing Funding ($1,000s)								20.30.010.300
Component	Prior	21-22	22-23	23-24	24-25	25-26	26-27+	Total	Funding Agency
E&P (PA&ED)									
PS&E	4,234							4,234	FTA Funding
R/W SUP (CT)									
CON SUP (CT)									
R/W	1,250							1,250	
CON	25,801							25,801	
TOTAL	31,285							31,285	
	Proposed Funding ($1,000s)								Notes
E&P (PA&ED)									
PS&E	4,234							4,234	
R/W SUP (CT)									
CON SUP (CT)									
R/W	1,250							1,250	
CON			25,801					25,801	
TOTAL	5,484		25,801					31,285	

Fund #3:	State SB1 TCEP - Trade Corridors Enhancement Account (Committed)								Program Code
	Existing Funding ($1,000s)								20.30.210.320
Component	Prior	21-22	22-23	23-24	24-25	25-26	26-27+	Total	Funding Agency
E&P (PA&ED)									
PS&E									regional share
R/W SUP (CT)									
CON SUP (CT)									
R/W									
CON	22,845							22,845	
TOTAL	22,845							22,845	
	Proposed Funding ($1,000s)								Notes
E&P (PA&ED)									
PS&E									
R/W SUP (CT)									
CON SUP (CT)									
R/W									
CON			22,845					22,845	
TOTAL			22,845					22,845	

EXHIBIT A

STATE OF CALIFORNIA • DEPARTMENT OF TRANSPORTATION

PROJECT PROGRAMMING REQUEST (PPR)

PRG-0010 (REV 08/2020)

PPR ID
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Amendment (Existing Project) ☒ YES ☐ NO				Date	06/07/2021 12:18:32
Programs ☐ LPP-C ☐ LPP-F ☐ SCCP ☒ TCEP ☐ STIP ☐ Other					
District	EA	Project ID	PPNO	Nominating Agency	
75		0021000173	T0015	San Diego Association of Governments	
County	Route	PM Back	PM Ahead	Co-Nominating Agency	
San Diego				Caltrans HQ	
				MPO	Element
				SANDAG	Rail
Project Manager/Contact			Phone	Email Address	
Alexandra DeVaux			619-595-5613	Alexandra.DeVaux@sandag.org	

Project Title

Del Mar Bluffs Phase 5

Location (Project Limits), Description (Scope of Work)

In the City of Del Mar from MP 244.1 near Coast Boulevard to MP 245.7 at Carmel Valley Road on the San Diego Subdivision of the Los Angeles-San Diego-San Luis Obispo (LOSSAN) Corridor. Stabilize eroding areas of the Del Mar Bluffs. Stabilization efforts planned include installation of piles, lagging and retaining walls, drainage improvements and piped outlets to the beach, and other stabilization and erosion control measures on the upper bluffs.

Component	Implementing Agency
PA&ED	San Diego Association of Governments
PS&E	San Diego Association of Governments
Right of Way	San Diego Association of Governments
Construction	San Diego Association of Governments

Legislative Districts					
Assembly:	78	Senate:	39	Congressional:	49

Project Milestone	Existing	Proposed
Project Study Report Approved	04/03/2019	
Begin Environmental (PA&ED) Phase	08/16/2020	01/14/2020
Circulate Draft Environmental Document Document Type CE	08/16/2020	04/01/2021
Draft Project Report	08/16/2020	06/01/2021
End Environmental Phase (PA&ED Milestone)	08/16/2020	06/02/2021
Begin Design (PS&E) Phase	08/16/2020	06/02/2021
End Design Phase (Ready to List for Advertisement Milestone)	06/15/2021	08/30/2022
Begin Right of Way Phase	08/16/2020	08/16/2020
End Right of Way Phase (Right of Way Certification Milestone)	06/15/2021	06/15/2021
Begin Construction Phase (Contract Award Milestone)	12/15/2021	03/30/2023
End Construction Phase (Construction Contract Acceptance Milestone)	12/15/2022	03/30/2025
Begin Closeout Phase	12/16/2022	04/01/2025
End Closeout Phase (Closeout Report)	12/16/2023	03/03/2026

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Purpose and Need

The primary purpose of the project is to protect the trackbed, improve service reliability, and avoid potential disruptions in rail service by stabilizing areas with risk of slope failure and improving drainage to control storm water that can erode the bluffs. This stabilization project is needed to maintain the continued viability of the LOSSAN Corridor. Safe and reliable operation requires protecting the Del Mar Bluffs from erosion.

NHS Improvements ☐ YES ☒ NO	Roadway Class NA	Reversible Lane Analysis ☐ YES ☒ NO

Inc. Sustainable Communities Strategy Goals ☐ YES ☒ NO Reduce Greenhouse Gas Emissions ☐ YES ☒ NO

Project Outputs

Category	Outputs	Unit	Total
Rail/ Multi-Modal	Miles of rehabilitated track	Miles	1.6

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PROJECT PROGRAMMING REQUEST (PPR)

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PPR ID
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Additional Information

The purpose of the LOSSAN-SD Intermodal Improvement Program is to implement key capital improvements along the San Diego Subdivision of the Los Angeles-San Diego-San Luis Obispo (LOSSAN) Rail Corridor to facilitate additional freight trips from the Port of San Diego to points state- and nation-wide. The LOSSAN Rail Corridor is of state and national importance as the only viable freight rail connection for the San Diego Region. The U.S. Department of Defense has identified this corridor as part of the Strategic Rail Corridor Network (STRACNET) for its importance in providing access to the Marine Corps Base Camp Pendleton and the Port of San Diego. These improvements have been determined as to not only accommodate additional freight rail service but future expansions of the Corridor's commuter and intercity passenger rail services.

This project is part of a larger program of improvements in the LOSSAN-SD Intermodal Improvement Program, which includes the following projects: San Onofre to Pulgas Double Track Phase 2, San Dieguito Double Track Phase 1, Del Mar Bluffs Phase 5, and Broadway to Gaslamp Track Signalization and Platform. The performance measures noted below are for the entire LOSSAN-SD Intermodal Improvement Program of projects.

The railroad right-of-way (ROW) is subject to the jurisdiction of the Federal Surface Transportation Board (STB). The project falls under the STB ruling which stipulates that State and Local environmental regulation has been found to be preempted by federal statute (49 U.S.C. 10501(b)) for railroad projects when the tracks are used for interstate freight transport. Therefore, the project is not subject to CEQA. The STB ruling is based on the premise that projects that improve railroad reliability and capacity on tracks used for interstate commerce are not subject to regulatory compliance with state and local regulations due to the interstate commerce clause in the United States Constitution. The proposed improvements are for the purpose of improving railroad reliability and capacity of the LOSSAN Corridor, which is used to transport interstate freight.

Following the release of TCEP award recommendations, due to COVID and the abundance of work happening concurrently in the rail corridor, SANDAG and NCTD learned more as projects moved through the development process. This created the need to look at the entire program of projects to more efficiently schedule work for individual projects within the corridor and help expedite project delivery.

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PROJECT PROGRAMMING REQUEST (PPR)

PRG-0010 (REV 08/2020)

PPR ID
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Performance Indicators and Measures						
Measure	**Required For**	**Indicator/Measure**	**Unit**	**Build**	**Future No Build**	**Change**
Congestion Reduction	TCEP	Daily Vehicle Hours of Travel Time Reduction	Hours	0	350	-350
	TCEP	Daily Truck Trips	# of Trips	0	197	-197
	TCEP	Daily Truck Miles Traveled	Miles	0	38,960	-38,960
Throughput	TCEP	Change in Truck Volume That Can Be Accommodated	# of Trucks	0	0	0
	TCEP	Change in Rail Volume That Can Be Accommodated	# of Trailers	219,000	0	219,000
			# of Containers	0	0	0
	TCEP	Change in Cargo Volume That Can Be Accommodated	# of Tons	5,321,700	5,321,700	0
			# of Containers	0	0	0
System Reliability	TCEP	Truck Travel Time Reliability Index	Index	0	0	0
	TCEP	Daily Vehicle Hours of Travel Time Reduction	Hours	0	350	-350
Velocity	TCEP	Travel Time or Total Cargo Transport Time	Hours	0	0	0
	Optional	Average Peak Period Weekday Speed for Rail Facility	Miles per Hour	41	41	0
Air Quality & GHG	LPPF, LPPC, SCCP, TCEP	Particulate Matter	PM 2.5 Tons	6	5	1
			PM 10 Tons	18	5	13
	LPPF, LPPC, SCCP, TCEP	Carbon Dioxide (CO2)	Tons	96,539	266,647	-170,108
	LPPF, LPPC, SCCP, TCEP	Volatile Organic Compounds (VOC)	Tons	7	12	-5
	LPPF, LPPC, SCCP, TCEP	Sulphur Dioxides (SOx)	Tons	0	3	-3
	LPPF, LPPC, SCCP, TCEP	Carbon Monoxide (CO)	Tons	15	181	-166
	LPPF, LPPC, SCCP, TCEP	Nitrogen Oxides (NOx)	Tons	391	308	83
Safety	LPPF, LPPC, SCCP, TCEP	Number of Non-Motorized Fatalities and Non-Motorized Serious Injuries	Number	0	0	0
	LPPF, LPPC, SCCP, TCEP	Number of Fatalities	Number	3.3	4.9	-1.6
	LPPF, LPPC, SCCP, TCEP	Fatalities per 100 Million VMT	Number	1.5	1.5	0
	LPPF, LPPC, SCCP, TCEP	Number of Serious Injuries	Number	6.22	42.34	-36.12
	LPPF, LPPC, SCCP, TCEP	Number of Serious Injuries per 100 Million VMT	Number	24	145	-121
	Optional	Number of Property Damage Only and Non-Serious Injury Collisions	Number	11	79	-68
Economic Development	LPPF, LPPC, SCCP, TCEP	Jobs Created (Direct and Indirect)	Number	1,648	0	1,648

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PROJECT PROGRAMMING REQUEST (PPR)

PRG-0010 (REV 08/2020)

PPR ID
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Performance Indicators and Measures						
Measure	**Required For**	**Indicator/Measure**	**Unit**	**Build**	**Future No Build**	**Change**
Cost Effectiveness	LPPF, LPPC, SCCP, TCEP	Cost Benefit Ratio	Ratio	2.3	0	2.3

EXHIBIT A

STATE OF CALIFORNIA • DEPARTMENT OF TRANSPORTATION

PROJECT PROGRAMMING REQUEST (PPR)

PRG-0010 (REV 08/2020)

PPR ID
ePPR-6066-2020-0002 v4

District	County	Route	EA	Project ID	PPNO
75	San Diego			0021000173	T0015

Project Title

Del Mar Bluffs Phase 5

Existing Total Project Cost ($1,000s)								
Component	Prior	21-22	22-23	23-24	24-25	25-26	26-27+	Total	Implementing Agency
E&P (PA&ED)	3,073							3,073	San Diego Association of Governmen
PS&E	3,774							3,774	San Diego Association of Governmen
R/W SUP (CT)									San Diego Association of Governmen
CON SUP (CT)									San Diego Association of Governmen
R/W	188							188	San Diego Association of Governmen
CON		58,161						58,161	San Diego Association of Governmen
TOTAL	7,035	58,161						65,196	
Proposed Total Project Cost ($1,000s)									Notes
E&P (PA&ED)	3,073							3,073	
PS&E	3,774							3,774	
R/W SUP (CT)									
CON SUP (CT)									
R/W		188						188	
CON			58,161					58,161	
TOTAL	6,847	188	58,161					65,196	

Fund #1:	State SB1 TCEP - Trade Corridors Enhancement Account (Committed)								Program Code
Existing Funding ($1,000s)									20.30.210.310
Component	Prior	21-22	22-23	23-24	24-25	25-26	26-27+	Total	Funding Agency
E&P (PA&ED)									
PS&E									
R/W SUP (CT)									
CON SUP (CT)									
R/W									
CON		5,000						5,000	
TOTAL		5,000						5,000	
Proposed Funding ($1,000s)									Notes
E&P (PA&ED)									State Share
PS&E									
R/W SUP (CT)									
CON SUP (CT)									
R/W									
CON			5,000					5,000	
TOTAL			5,000					5,000	

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Fund #2:	State SB1 TCEP - Trade Corridors Enhancement Account (Committed)								Program Code
Existing Funding ($1,000s)									20.30.210.320
Component	Prior	21-22	22-23	23-24	24-25	25-26	26-27+	Total	Funding Agency
E&P (PA&ED)									
PS&E									
R/W SUP (CT)									
CON SUP (CT)									
R/W									
CON		31,200						31,200	
TOTAL		31,200						31,200	
Proposed Funding ($1,000s)									Notes
E&P (PA&ED)									Regional Share
PS&E									
R/W SUP (CT)									
CON SUP (CT)									
R/W									
CON			31,200					31,200	
TOTAL			31,200					31,200	

Fund #3:	Federal Disc. - SOGR (Committed)								Program Code
Existing Funding ($1,000s)									20.XX.400.300
Component	Prior	21-22	22-23	23-24	24-25	25-26	26-27+	Total	Funding Agency
E&P (PA&ED)									
PS&E									
R/W SUP (CT)									
CON SUP (CT)									
R/W									
CON		11,500						11,500	
TOTAL		11,500						11,500	
Proposed Funding ($1,000s)									Notes
E&P (PA&ED)									Federal Railroad Administration Funds
PS&E									
R/W SUP (CT)									
CON SUP (CT)									
R/W									
CON			11,500					11,500	
TOTAL			11,500					11,500	

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Fund #4:	Other State - Transit and Intercity Rail Capital Program (TIRCP) (Committed)								Program Code
	Existing Funding ($1,000s)								20.30.207.811
Component	Prior	21-22	22-23	23-24	24-25	25-26	26-27+	Total	Funding Agency
E&P (PA&ED)									
PS&E	3,774							3,774	
R/W SUP (CT)									
CON SUP (CT)									
R/W									
CON		1,126						1,126	
TOTAL	3,774	1,126						4,900	
	Proposed Funding ($1,000s)								Notes
E&P (PA&ED)									California State Transportation Agency
PS&E	3,774							3,774	
R/W SUP (CT)									
CON SUP (CT)									
R/W									
CON			1,126					1,126	
TOTAL	3,774		1,126					4,900	

Fund #5:	Other State - State EEM (Committed)								Program Code
	Existing Funding ($1,000s)								20.30.207.811
Component	Prior	21-22	22-23	23-24	24-25	25-26	26-27+	Total	Funding Agency
E&P (PA&ED)	3,073							3,073	
PS&E									
R/W SUP (CT)									
CON SUP (CT)									
R/W									
CON									
TOTAL	3,073							3,073	
	Proposed Funding ($1,000s)								Notes
E&P (PA&ED)	3,073							3,073	Natural Resources Agency Grant
PS&E									
R/W SUP (CT)									
CON SUP (CT)									
R/W									
CON									
TOTAL	3,073							3,073	

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PROJECT PROGRAMMING REQUEST (PPR)

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PPR ID
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Fund #6:	FTA Funds - 5337 (Committed)								Program Code
Existing Funding ($1,000s)									FTA-TRANSIT
Component	Prior	21-22	22-23	23-24	24-25	25-26	26-27+	Total	Funding Agency
E&P (PA&ED)									North County Transit District
PS&E									
R/W SUP (CT)									
CON SUP (CT)									
R/W	188							188	
CON		9,335						9,335	
TOTAL	188	9,335						9,523	
Proposed Funding ($1,000s)									Notes
E&P (PA&ED)									Federal Transit Administration Funding
PS&E									
R/W SUP (CT)									
CON SUP (CT)									
R/W		188						188	
CON			9,335					9,335	
TOTAL		188	9,335					9,523	

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PROJECT PROGRAMMING REQUEST (PPR)

PRG-0010 (REV 08/2020)

PPR ID
ePPR-6066-2020-0005 v4

Amendment (Existing Project) ☒ YES ☐ NO				Date	06/07/2021 12:17:22
Programs ☐ LPP-C ☐ LPP-F ☐ SCCP ☒ TCEP ☐ STIP ☐ Other					
District	EA	Project ID	PPNO	Nominating Agency	
75		0021000175	T0016	San Diego Association of Governments	
County	Route	PM Back	PM Ahead	Co-Nominating Agency	
San Diego				Caltrans HQ	
				MPO	Element
				SANDAG	Rail
Project Manager/Contact			Phone	Email Address	
Tim DeWitt			619-699-1935	tim.dewitt@sandag.org	

Project Title

Broadway to Gaslamp Track Signalization and Platform

Location (Project Limits), Description (Scope of Work)

The Project involves the signalization of a 0.8-mile stretch of BNSF track from the Broadway crossing near Santa Fe Depot (MP 267.7) to the 5th Avenue crossing (MP268.5) in Downtown San Diego. Three new control points would be required for the new signalization. Positive Train Control (PTC) would be extended to cover this new service territory. Right of Way acquisition, or lease of BNSF property, as well as additional trackwork, crossing improvements, and landscaping are also included in the Project. It also involves the construction of a new siding and station platform between 1st 5th Avenues to alleviate a track capacity bottleneck at the Santa Fe Depot for freight trains passing through the station by terminating commuter trains at the new platform instead of the Depot.

Component	Implementing Agency
PA&ED	North San Diego County Transit District
PS&E	North San Diego County Transit District
Right of Way	North San Diego County Transit District
Construction	North San Diego County Transit District

Legislative Districts					
Assembly:	78	Senate:	39	Congressional:	51,52

Project Milestone		Existing	Proposed
Project Study Report Approved		10/01/2012	
Begin Environmental (PA&ED) Phase		03/01/2020	03/01/2020
Circulate Draft Environmental Document	Document Type CE	05/01/2021	05/01/2021
Draft Project Report		07/01/2021	07/01/2021
End Environmental Phase (PA&ED Milestone)		08/01/2021	08/01/2021
Begin Design (PS&E) Phase		09/01/2021	09/01/2021
End Design Phase (Ready to List for Advertisement Milestone)		09/01/2022	03/01/2023
Begin Right of Way Phase		09/01/2021	09/01/2021
End Right of Way Phase (Right of Way Certification Milestone)		09/01/2022	09/01/2022
Begin Construction Phase (Contract Award Milestone)		05/01/2023	09/01/2023
End Construction Phase (Construction Contract Acceptance Milestone)		05/01/2025	10/01/2025
Begin Closeout Phase		06/01/2025	10/02/2025
End Closeout Phase (Closeout Report)		06/01/2026	04/01/2026

EXHIBIT A

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PROJECT PROGRAMMING REQUEST (PPR)

PRG-0010 (REV 08/2020)

PPR ID
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Date 06/07/2021 12:17:22

Purpose and Need

The purpose of the project is to provide more available freight windows, additional passing siding track, and a special events platform to service passenger trains south of Santa Fe Depot to access densely attended downtown areas such as Petco Park, the Convention Center, the Gaslamp Quarter, and other area attractions. MTS Trolley services run parallel in this area but are at capacity for these special venues. Supporting NCTD Coaster service will assist in relieving the excess passenger demand.

The Project is also the first big step in making freight upgrades at the 22nd Street Yard and providing future passenger service to National City. See Figure below from the April draft of the CP Atwood to National City Feasibility Study.

NHS Improvements ☐ YES ☒ NO	Roadway Class NA	Reversible Lane Analysis ☐ YES ☒ NO

Inc. Sustainable Communities Strategy Goals ☒ YES ☐ NO Reduce Greenhouse Gas Emissions ☒ YES ☐ NO

Project Outputs

Category	Outputs	Unit	Total
Rail/ Multi-Modal	New stations	EA	1
Rail/ Multi-Modal	Grade separations/ rail crossing improvemnets	EA	2
Rail/ Multi-Modal	Miles of rehabilitated track	Miles	0.8

STATE OF CALIFORNIA • DEPARTMENT OF TRANSPORTATION

PROJECT PROGRAMMING REQUEST (PPR)

PRG-0010 (REV 08/2020)

PPR ID
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Date 06/07/2021 12:17:22

Additional Information

The purpose of the LOSSAN-SD Intermodal Improvement Program is to implement key capital improvements along the San Diego Subdivision of the Los Angeles-San Diego-San Luis Obispo (LOSSAN) Rail Corridor to facilitate additional freight trips from the Port of San Diego to points state- and nation-wide. The LOSSAN Rail Corridor is of state and national importance as the only viable freight rail connection for the San Diego Region. The U.S. Department of Defense has identified this corridor as part of the Strategic Rail Corridor Network (STRACNET) for its importance in providing access to the Marine Corps Base Camp Pendleton and the Port of San Diego. These improvements have been determined as to not only accommodate additional freight rail service but future expansions of the Corridor's commuter and intercity passenger rail services.

This project is part of a larger program of improvements in the LOSSAN-SD Intermodal Improvement Program, which includes the following projects: San Onofre to Pulgas Double Track Phase 2, San Dieguito Double Track Phase 1, Del Mar Bluffs Phase 5, and Broadway to Gaslamp Track Signalization and Platform. The performance measures noted below are for the entire LOSSAN-SD Intermodal Improvement Program of projects.

The railroad right-of-way (ROW) is subject to the jurisdiction of the Federal Surface Transportation Board (STB). The project falls under the STB ruling which stipulates that State and Local environmental regulation has been found to be preempted by federal statute (49 U.S.C. 10501(b)) for railroad projects when the tracks are used for interstate freight transport. Therefore, the project is not subject to CEQA. The STB ruling is based on the premise that projects that improve railroad reliability and capacity on tracks used for interstate commerce are not subject to regulatory compliance with state and local regulations due to the interstate commerce clause in the United States Constitution. The proposed improvements are for the purpose of improving railroad reliability and capacity of the LOSSAN Corridor, which is used to transport interstate freight.

This project will be delivered using the Design-Build delivery method. The NCTD is the implementing agency for all phases of this project in an effort to expedite project delivery and coordination with BNSF.

This project is anticipated to Advertise, Bid, and Award Construction Contract September 2023
Construction Notice to Proceed (CNTP) October 2023

Following the release of TCEP award recommendations, due to COVID and the abundance of work happening concurrently in the rail corridor, SANDAG and NCTD learned more as projects moved through the development process. This created the need to look at the entire program of projects to more efficiently schedule work for individual projects within the corridor and help expedite project delivery.

STATE OF CALIFORNIA • DEPARTMENT OF TRANSPORTATION

PROJECT PROGRAMMING REQUEST (PPR)

PRG-0010 (REV 08/2020)

PPR ID
ePPR-6066-2020-0005 v4

Performance Indicators and Measures						
Measure	**Required For**	**Indicator/Measure**	**Unit**	**Build**	**Future No Build**	**Change**
Congestion Reduction	TCEP	Daily Vehicle Hours of Travel Time Reduction	Hours	0	350	-350
	TCEP	Daily Truck Trips	# of Trips	0	197	-197
	TCEP	Daily Truck Miles Traveled	Miles	0	38,960	-38,960
Throughput	TCEP	Change in Truck Volume That Can Be Accommodated	# of Trucks	0	0	0
	TCEP	Change in Rail Volume That Can Be Accommodated	# of Trailers	0	0	0
			# of Containers	219,000	0	219,000
	TCEP	Change in Cargo Volume That Can Be Accommodated	# of Tons	5,321,700	5,321,700	0
			# of Containers	0	0	0
System Reliability	TCEP	Truck Travel Time Reliability Index	Index	0	0	0
	TCEP	Daily Vehicle Hours of Travel Time Reduction	Hours	0	350	-350
Velocity	TCEP	Travel Time or Total Cargo Transport Time	Hours	0	0	0
	Optional	Average Peak Period Weekday Speed for Rail Facility	Miles per Hour	41	41	0
Air Quality & GHG	LPPF, LPPC, SCCP, TCEP	Particulate Matter	PM 2.5 Tons	6	5	1
			PM 10 Tons	18	5	13
	LPPF, LPPC, SCCP, TCEP	Carbon Dioxide (CO2)	Tons	96,539	266,647	-170,108
	LPPF, LPPC, SCCP, TCEP	Volatile Organic Compounds (VOC)	Tons	7	12	-5
	LPPF, LPPC, SCCP, TCEP	Sulphur Dioxides (SOx)	Tons	0	3	-3
	LPPF, LPPC, SCCP, TCEP	Carbon Monoxide (CO)	Tons	15	181	-166
	LPPF, LPPC, SCCP, TCEP	Nitrogen Oxides (NOx)	Tons	391	308	83
Safety	LPPF, LPPC, SCCP, TCEP	Number of Non-Motorized Fatalities and Non-Motorized Serious Injuries	Number	0	0	0
	LPPF, LPPC, SCCP, TCEP	Number of Fatalities	Number	3.3	4.9	-1.6
	LPPF, LPPC, SCCP, TCEP	Fatalities per 100 Million VMT	Number	1.5	1.5	0
	LPPF, LPPC, SCCP, TCEP	Number of Serious Injuries	Number	6.22	42.34	-36.12
	LPPF, LPPC, SCCP, TCEP	Number of Serious Injuries per 100 Million VMT	Number	24	145	-121
	Optional	Number of Property Damage Only and Non-Serious Injury Collisions	Number	11	79	-68
Economic Development	LPPF, LPPC, SCCP, TCEP	Jobs Created (Direct and Indirect)	Number	1,648	0	1,648

STATE OF CALIFORNIA • DEPARTMENT OF TRANSPORTATION

PROJECT PROGRAMMING REQUEST (PPR)

PRG-0010 (REV 08/2020)

PPR ID
ePPR-6066-2020-0005 v4

Performance Indicators and Measures						
Measure	**Required For**	**Indicator/Measure**	**Unit**	**Build**	**Future No Build**	**Change**
Cost Effectiveness	LPPF, LPPC, SCCP, TCEP	Cost Benefit Ratio	Ratio	2.3	0	2.3

EXHIBIT A

STATE OF CALIFORNIA • DEPARTMENT OF TRANSPORTATION

PROJECT PROGRAMMING REQUEST (PPR)

PRG-0010 (REV 08/2020)

PPR ID
ePPR-6066-2020-0005 v4

District	County	Route	EA	Project ID	PPNO
75	San Diego			0021000175	T0016

Project Title

Broadway to Gaslamp Track Signalization and Platform

Existing Total Project Cost ($1,000s)								
Component	Prior	21-22	22-23	23-24	24-25	25-26	26-27+	Total	Implementing Agency
E&P (PA&ED)									North San Diego County Transit Dist
PS&E	5,388							5,388	North San Diego County Transit Dist
R/W SUP (CT)									North San Diego County Transit Dist
CON SUP (CT)									North San Diego County Transit Dist
R/W	293							293	North San Diego County Transit Dist
CON			33,180					33,180	North San Diego County Transit Dist
TOTAL	5,681		33,180					38,861	
Proposed Total Project Cost ($1,000s)									Notes
E&P (PA&ED)									
PS&E	5,388							5,388	
R/W SUP (CT)									
CON SUP (CT)									
R/W	293							293	
CON			33,180					33,180	
TOTAL	5,681		33,180					38,861	

Fund #1:	State SB1 TCEP - Trade Corridors Enhancement Account (Committed)								Program Code
Existing Funding ($1,000s)									20.30.210.310
Component	Prior	21-22	22-23	23-24	24-25	25-26	26-27+	Total	Funding Agency
E&P (PA&ED)									Caltrans HQ
PS&E									
R/W SUP (CT)									
CON SUP (CT)									
R/W									
CON			33,180					33,180	
TOTAL			33,180					33,180	
Proposed Funding ($1,000s)									Notes
E&P (PA&ED)									State Share
PS&E									
R/W SUP (CT)									
CON SUP (CT)									
R/W									
CON			33,180					33,180	
TOTAL			33,180					33,180	

STATE OF CALIFORNIA • DEPARTMENT OF TRANSPORTATION

PROJECT PROGRAMMING REQUEST (PPR)

PRG-0010 (REV 08/2020)

PPR ID
ePPR-6066-2020-0005 v4

Fund #2:	Other Fed - FTA 5307/5337 (Committed)								Program Code
	Existing Funding ($1,000s)								20.30.010.300
Component	Prior	21-22	22-23	23-24	24-25	25-26	26-27+	Total	Funding Agency
E&P (PA&ED)									
PS&E	388							388	
R/W SUP (CT)									
CON SUP (CT)									
R/W	293							293	
CON									
TOTAL	681							681	
	Proposed Funding ($1,000s)								Notes
E&P (PA&ED)									Federal Transit Administration
PS&E	388							388	
R/W SUP (CT)									
CON SUP (CT)									
R/W	293							293	
CON									
TOTAL	681							681	

Fund #3:	Other State - Transit and Intercity Rail Capital Program (TIRCP) (Committed)								Program Code
	Existing Funding ($1,000s)								30.20.020.000
Component	Prior	21-22	22-23	23-24	24-25	25-26	26-27+	Total	Funding Agency
E&P (PA&ED)									
PS&E	5,000							5,000	
R/W SUP (CT)									
CON SUP (CT)									
R/W									
CON									
TOTAL	5,000							5,000	
	Proposed Funding ($1,000s)								Notes
E&P (PA&ED)									LOSSAN Corridor TIRCP
PS&E	5,000							5,000	
R/W SUP (CT)									
CON SUP (CT)									
R/W									
CON									
TOTAL	5,000							5,000	

Project Study Report

CP San Onofre to CP Pulgas Double Track Project Phase 2

Camp Pendleton

(MP 216.5 to MP 218.0)

San Diego Association of Governments - www.sandag.org

February 16, 2021

CP San Onofre to CP Pulgas
Double Track Project Phase 2
Camp Pendleton
(MP 216.5 to MP 218.0)

Prepared by: _____ Date 2/16/21
David Berryman, P.E.
RailPros Inc.

Reviewed by: _____ Date 2/16/21
Chris Hahn, P.E.
HNTB Corporation

Approved by: _____ Date 2/16/21
Tim DeWitt, P.E.
San Diego Association of Governments

Revision Log

PSR Revision Log			
Prepared By	**Company**	**Date**	**Comments**
Chris Coffman	RailPros Inc.	January 14, 2008	Rev 0
Lawrence Meeker	HNTB Corp	September, 2011	Rev 1 Project divided into two phases
Chris Coffman	RailPros Inc.	July 2, 2012	Rev 2 per NCTD Comments
Chris Coffman	HNTB Corp	March 25, 2015	Rev 3 Update per 100% Design Submittal
Ken Coop	Railpros Inc.	September 29, 2017	Rev 4 Update Escalation
Blake Loftus/ David Berryman	Railpros Inc.	July 7, 2020	Rev 5 Update Funding, Cost Estimate, and Schedule for TCEP application
Blake Loftus/ David Berryman	Railpros, Inc.	February 16, 2021	Rev 6 for TCEP Funding agreement

Additional Review By

Bruce Smith PE	SANDAG	February 16, 2021	
Scott Shroyer, PE	NCTD	February 16, 2021	

Project Description

The project will provide approximately 1.6 miles of new second main track adjacent to the existing main track between CP Don (MP 216.5) and CP Pulgas (MP 218.1) and build new bridges at MP 217.32 and MP 218. There is existing double track located both north and south of the proposed project limits. When the Project is completed, the result will be a 16.1 mile stretch of continuous double track from CP SONGS (MP 209.2) to CP East Brook, (MP 225.3). Signal work will be required between MP 215 and MP 220.

Figure 1: Photo of Existing Br. 218 constructed in 1913 (currently being replaced by NAVFAC)

Project Location

The proposed project is located in the County of San Diego within the U.S. Marine Corps Base, Camp Pendleton and is part of the San Diego Subdivision of the Los Angeles-San Diego-San Luis Obispo (LOSSAN) Corridor (Figure 2). The project is within the existing North County Transit District (NCTD) railroad right-of-way.

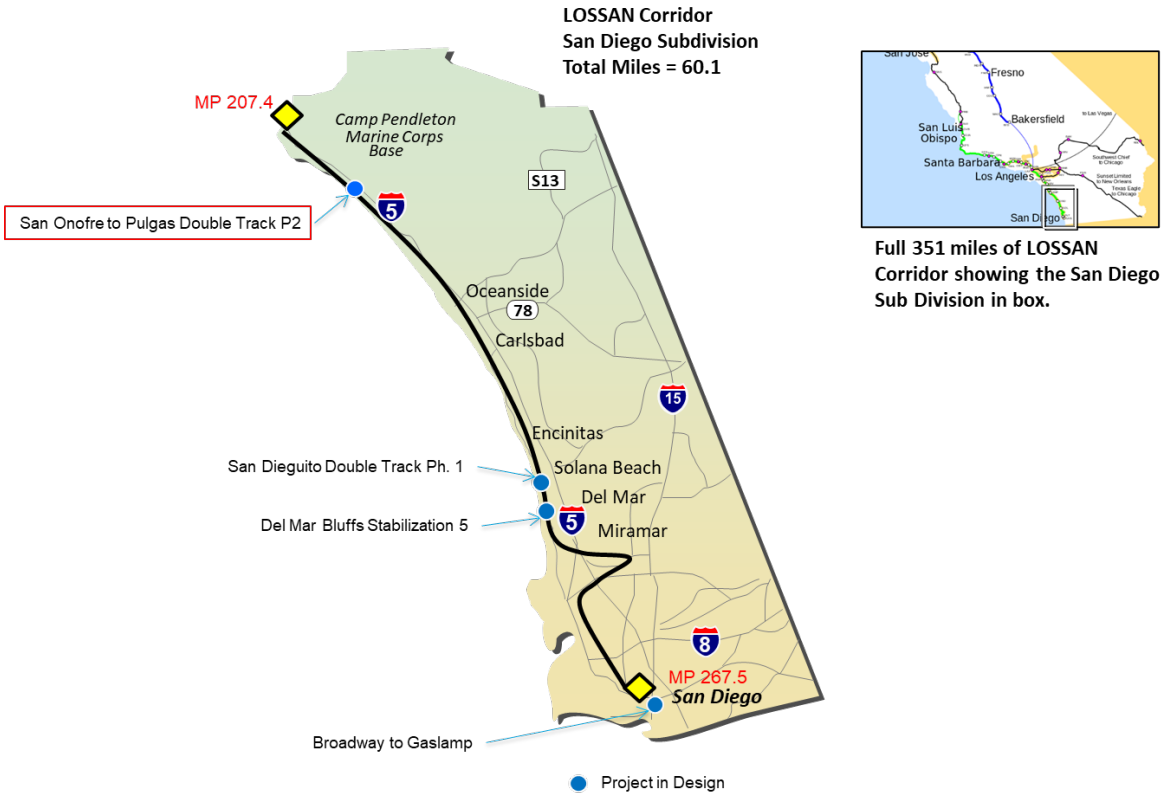


Figure 2: LOSSAN TCEP Corridor Project Locations

Project Purpose and Need

The primary purpose of the project is to eliminate the existing 1.6 mile long single track bottleneck between CP Don (MP 216.5) and CP Pulgas (MP 218.1). Currently, this segment of single track requires trains to layover during certain times of the day to allow for other trains to pass. This reduces the overall capacity of the system, resulting in increased travel time, delays to other trains, and limits the number of daytime freight trains that can be moved through the corridor.

The Project is necessary to support current and future growth in rail service demand through the LOSSAN Corridor while maintaining safety. Without increasing the amount of double track on the Corridor, increases in train service and goods movements will be more difficult and less safe to achieve.

It is an objective for SANDAG, NCTD, Amtrak, Metrolink, and BNSF to increase the efficiency of this rail corridor not only to accommodate existing train volumes, but also to provide for future demand for rail services on the corridor. Double tracking this segment directly supports this objective.

The proposed project is consistent with key regional and corridor plans including SANDAG's Regional Transportation Plan, the LOSSAN Program Environmental Impact Report / Environmental Impact Statement by Caltrans and the Federal Railroad Administration, and the SANDAG LOSSAN Infrastructure Development Plan.

Current Rail Service

The following companies/agencies provide rail service on this portion of the LOSSAN corridor:

BNSF Railway
The BNSF Railway (BNSF) operates freight rail service throughout the San Diego portion of the LOSSAN corridor, seven days per week. Typically, four (4) to six (6) freight trains per day are operated. The BNSF freight service is both local and national in scope; with the LOSSAN corridor connecting to the entire North American rail network. The current constrained railroad capacity at this location negatively impacts BNSF's ability to conduct their goods movement services.

Metrolink
The Southern California Regional Rail Authority (SCRRA) operates *Metrolink* commuter services between Oceanside and Los Angeles and between Oceanside and Riverside, providing 16 trains per day Monday through Friday, 10 trains per day on Saturday, and 8 trains per day on Sunday.

Amtrak
Amtrak operates 26 *Pacific Surfliner* trains per day.

Project Benefits

In accordance with the 2020 Freight Pathing Study (prepared by DB Engineering) and in an effort to increase freight movement through the Corridor, several freight train meets are planned in the vicinity of CP Don, the current northern end of the single track segment. (See chart below). This is also consistent with the 2018 LOSSAN Infrastructure Development Plan.

Adding a second track from CP Don south to CP Pulgas will allow for freight and passenger trains to make passes without stopping in the current single-track bottleneck. The second track results in an increased capacity to move freight into and out of San Diego. The chart below is taken from the DB Freight Pathing Study and depicts 4 freight/ passenger train meet locations that will no longer require layover post project.

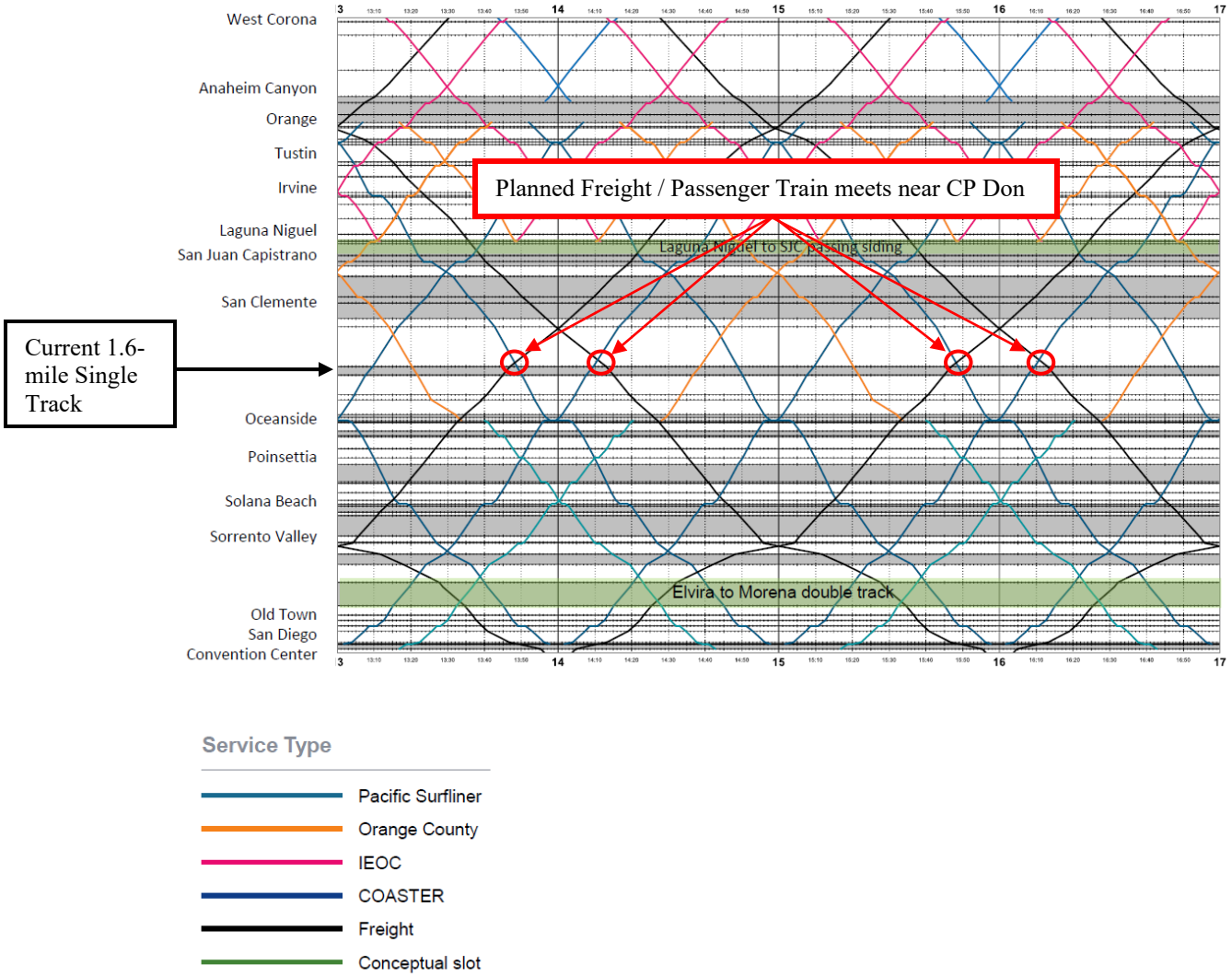


Figure 3: Proposed train movement chart per 2020 DB Freight Pathing Study

This project, when combined with other currently proposed double track projects in the LOSSAN Infrastructure Development Plan, will result in a synergistic improvement in goods movement and passenger service that is greater than the sum of the independent benefits of each project.

The proposed project is consistent with key regional and corridor plans including SANDAG's Regional Transportation Plan, LOSSAN Infrastructure Development Plan, and the LOSSAN Program Environmental Impact Report / Environmental Impact Statement by Caltrans and the Federal Railroad Administration.

Scope of Work

The remaining scope of work for this project includes final design, bidding, and construction as described below.

Final Design / Pre-Construction / IFB

- Incorporate any SOP Phase 1 Project as-built information relevant to Phase 2
- Incorporate any Red Beach Bridge Project as-built information relevant to Phase 2
- Incorporate Positive Train Control into signal design.
- Compile Invitation For Bid (IFB) Design Documents
- Solicit Bids for the Project.
- Obtain Camp Pendleton Access Permit.
- Obtain Caltrans Encroachment Permit.
- Obtain CPUC GO 88-B approval.
- Perform pre-construction environmental surveys to satisfy permit conditions.
- Constructability review.
- Risk Assessment.
- Award and manage the Construction Contract.

The project construction includes:

- Clearing, grading, earthworks, track work, drainage structures, bridges, retaining walls, signals, ROW signage and miscellaneous demolition
- Modifications to the railroad signal system
- Construct retaining walls to contain proposed improvements within the existing railroad right-of-way
- Construct new single-track bridge adjacent to existing BR. 217.3 (Las Pulgas Road Underpass – See Figure 3 below).
- Construct new retaining wall/headwall to accommodate new second main track at existing BR 216.9 arch culvert
- Construct new single-track bridge adjacent to existing BR. 218 (Las Flores Creek Overpass)
- Extend three drainage culverts at MP 217. 3, 217.7 and 218.1
- Relocate cellular communications tower at MP 217.35
- On-site environmental mitigation as required by the approved permits

Figure 4: Las Pulgas Road bridge at MP 217.3

Adjacent Projects

San Onofre to Pulgas Phase 1:
The San Onofre to Pulgas Phase 1 Project has constructed 4.2 miles of double track directly adjacent to the north end of this Project (San Onofre to Pulgas Phase 2). San Onofre to Pulgas Phase 1 was completed in August 2015. The San Onofre to Pulgas Phase 2 Project will tie in directly to the south end of the Phase 1 Project.

NAVFAC Red Beach Bridge Replacement:
Naval Facilities Engineering Command (NAVFAC) Camp Pendleton are replacing the existing arch bridge "Red Beach Bridge", located within the project limits at Milepost (MP) 218.0 with a new steel and concrete bridge. This will provide a new span for the east or ML1 track with a widened tank and landing craft undercrossing for use by Camp Pendleton. The Red Beach Bridge Replacement Project must be completed by NAVFAC prior to construction of the western span of Bridge 218.0 in the San Onofre to Pulgas Phase 2 Project. The Red Beach Bridge Replacement Project began construction in March 2018 and is scheduled for completion in December 2021. Progress is shown in the following photo.

Figure 5: Current construction progress on NAVFAC bridge 218.0 replacement.

Project Management Responsibilities

Project management will be performed by SANDAG. SANDAG will use existing on-call engineering and environmental services contracts to expedite delivery of design IFB documents, and encroachment permitting on the project. As has been done on previous projects, SANDAG will design and construct the improvements under a memorandum of understanding with NCTD. SANDAG will work cooperatively with the environmental resource agencies and other stakeholders, Caltrans and NAVFAC, in delivering this project.

Project Schedule

Milestone

Begin Environmental (PA&ED) Phase	Nov 2009
Circulate Draft Environmental Document	March 2011
End Environmental Phase (PA&ED Milestone)	March 2012
Begin Final Design (PS&E) Phase	March 2012
Design Interim Completion	February 2015
NAVFAC Red Beach Bridge Final Design	October 2017
Final Updates to Environmental Permits	January 2019
Begin Update to Final Design for Red Beach Bridge	December 2019
End Final Design/ IFB Package & Advertise	September 2021
Award Construction Contract	January 2022
End Construction / Begin Closeout Phase	July 2024
End Project Closeout (Closeout Report)	December 2024

Environmental Clearance

Regarding CEQA, the railroad right-of-way (ROW) is subject to the jurisdiction of the federal Surface Transportation Board (STB). It has been determined that the San Onofre to Pulgas Double Track project falls under the Surface Transportation Board (STB) ruling which stipulates that State and Local environmental regulation has been found to be preempted for railroad projects constructed within rail right of way when the tracks are used for interstate freight transport. Therefore, the project is not subject to CEQA. The STB ruling is based on the premise that projects that improve railroad reliability and capacity on tracks used for interstate commerce are not subject to regulatory compliance with state and local regulations due to the interstate commerce clause in the United States Constitution. The proposed improvements are for improving railroad reliability and capacity of the LOSSAN Corridor, which is used to transport interstate freight. All the proposed improvements will occur within the existing railroad right-of-way that's located within Camp Pendleton (federal property). Regardless of the STB preemption, on February 22, 2013, CEQA findings were made by the State of California, San Diego Regional Water Quality Control Board approval of the 401 Certification for the project. The CEQA findings made determined that the project is statutorily exempt from CEQA pursuant to Public Resources Code Section 21100 et seq., 21080(b) (10), and California Code of Regulations, Title 14, Section 15275(a)). These sections state that CEQA does not apply to mass transit projects that institute or increase passenger or commuter service on rail lines.

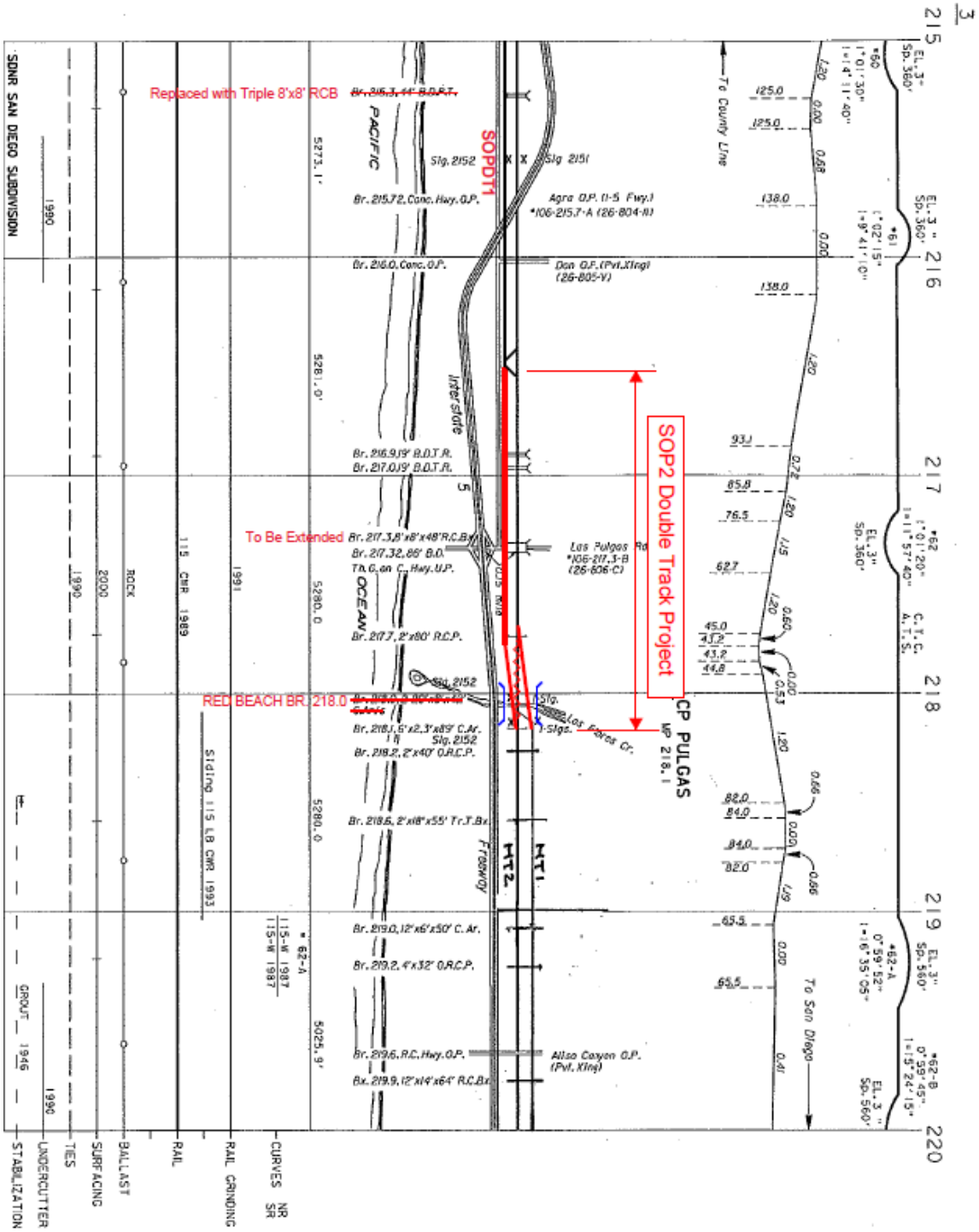
For NEPA compliance, the project is subject to the requirements of the U.S. Army Corps of Engineers (ACOE) for waters of the United States. As such, the NEPA compliance documentation and determination was previously made per the ACOE approved 404 Nationwide Permit on March 4, 2013 for the project.

Project Funding

SANDAG has funded the Project through completion of Final Design, and partial funding for construction, as follows:

Project Phase	Funding Source	Funding Amount
Final Design	Prop 1B (State)	$1,177,000
Final Design (programmed not allocated)	TCEP	$567,000
Construction (programmed not allocated)	STIP-IIP (State)	$28,863,000
Construction (programmed not allocated)	TCEP	$4,930,000
Total		**$35,537,000**

Track Chart MP 215 to MP 220



Project Cost Estimate

San Onofre to Pulgas Phase 2

PROJECT COST ESTIMATE — **Design Level:** **100%**

Revised: 07/07/20 — **Estimated By:** **BL**

Item	Quantity	Unit	Unit Price	Amount*	Subtotal
ENVIRONMENTAL					
Agency Design Admin-SANDAG	0.00%	x	CCE	$ -	
Agency Program Mgmt-SANDAG	0.00%	x	CCE	$ -	
Agency Design Admin-NCTD	0.00%	x	CCE	$ -	
Design-Preliminary to 30%	0.00%	x	CCE	$ -	
Independent Peer Reviews	0.00%	x	CCE	$ -	
DED Clearance	0.00%	x	CCE	$ -	
FED Clearance	0.00%	x	CCE	$ -	
Total	**0.00%**			**ENVIRONMENTAL TOTAL**	**$ -**
DESIGN					
Agency Design Admin-SANDAG	2.00%	x	CCE	$ 490,325	
Agency Program Mgmt-SANDAG	0.50%	x	CCE	$ 122,581	
Agency Design Admin-NCTD	1.00%	x	CCE	$ 245,162	
Design-30% to 60%	0.00%	x	CCE	$ -	
Design-60% to Final PS&E, Bid Support	2.61%	x	CCE	$ 640,693	
Independent Peer Reviews	1.00%	x	CCE	$ 245,162	
Total	**7.11%**			**DESIGN TOTAL**	**$1,743,924**
RIGHT OF WAY					
Property Acquisition	0	SF	$1.91	$ -	
Easements	1	LS	$0	$ -	
Right of Way Contingency	50%			$ -	
				RIGHT OF WAY TOTAL	**$0**
CONSTRUCTION CONTRACT ESTIMATE					
Construction Contract	1	LS	$88,800	$ 88,800	
Site Civil	1	LS	$922,550	$ 922,550	
Track	1	LS	$2,946,015	$ 2,946,015	
Signals & Communications	1	LS	$1,988,589	$ 1,988,589	
Structure	1	LS	$11,263,624	$ 11,263,624	
Culverts and Drainage	1	LS	$632,024	$ 632,024	
Site Mitigation & Erosion Control	1	LS	$985,149	$ 985,149	
Signs	1	LS	$31,894	$ 31,894	
				Base Construction Estimate (BCE)	$18,858,644
Contractor Mobilization	10.0%	X	BCE	$ 1,885,864	
Bonds and Insurance	0.0%	X	BCE	$ -	
Time Related Overhead (Per Caltrans Contract)	0.0%	X	BCE	$ -	
Construction Contingency	20%	X	BCE	$ 3,771,729	
				CONSTRUCTION CONTRACT ESTIMATE (CCE)	**$24,516,238**
ANCILLARY CONSTRUCTION COSTS					
Agency Construction Admin. (SANDAG)	3%	x	CCE	$ 735,487	
Agency Construction Prog. Mgmt. (SANDAG)	0.5%	x	CCE	$ 122,581	
Agency Construction Admin. (NCTD)	1%	x	CCE	$ 245,162	
Design Support During Construction	5.0%	x	CCE	$ 1,225,812	
Construction Management	15%	x	CCE	$ 3,677,436	
CM - Bio Monitoring During Construction	1%	x	$110	$ 245,162	
CM - Cultural Monitoring During Construction	1.5%	x	$150	$ 367,744	
NCTD Signal & PTC	1.25%	x	CCE	$ 306,453	
Flagging Services / Ballast Stabilizer	5.5%	x	CCE	$ 1,348,393	
Busing Passengers	2	AWW	$85,000	$ 170,000	
Total	**34.44%**			**ANCILLARY CONSTRUCTION COSTS**	**$8,444,230**
TOTAL PROJECT COST ESTIMATE (2020 Dollars)					**$34,704,392**

COST ESCALATION				
Year of Expenditure	Annual %	Cumulative Escalation	Expenditures**	TOTAL Escalation
FY20 - 50% Design Progress	0.0%	0.0%	$ -	
FY21 - Final Design Completed	0.0%	0.0%	$ -	$ -
FY22 - 1st Year Construction	0.0%	0.0%	$ 15,656,222	$ -
FY23 - 2nd Year Construction	4.4%	4.4%	$ 15,656,222	$ 688,874
FY24 - Closeout (5% Constr.)	4.3%	8.7%	$ 1,648,023	$ 143,378
FY25	5.0%	14.1%		
	Project Estimate without Escalation		$34,704,392	
		Estimated Escalation		$ 832,252
		PROJECT COST IN YEAR OF EXPENDITURE DOLLARS		**$ 35,536,644**

District 75 – San Diego County - LOSSAN – MP 241.1/MP 243.9
February/2021

Project Study Report
San Dieguito Double Track Phase 1

On Route LOSSAN Corridor and Interstate 5 North Coast Corridor, City of Solana Beach and City of Del Mar, San Diego

Between MP 241.1, Solana Beach

And MP 243.9, Del Mar

APPROVAL RECOMMENDED:

Patricia M. McMoll

Patricia McMoll, PE, Project Design Manager

APPROVED:

Angela N Anderson

Angela Anderson, PE, SANDAG Project Manager

02/16/2021

Date

Vicinity Map

This project study report has been prepared under the direction of the following registered civil engineer. The registered civil engineer attests to the technical information contained herein and the engineering data upon which recommendations, conclusions, and decisions are based.

David Berryman — 2/16/21

REGISTERED CIVIL ENGINEER — *DATE*

REGISTERED PROFESSIONAL ENGINEER
David Berryman
No. C59949
Exp. 6/30/22
CIVIL
STATE OF CALIFORNIA

RAILPROS

Prepared by RailPros, Inc.

Contents

1. INTRODUCTION

The San Dieguito Double Track Phase 1 (SDDT1) located in the San Diego County segment of the LOSSAN Corridor, will provide a second main track from CP Valley (MP 242.2) to the north of the San Dieguito River Bridge (approximate MP 242.9), adding approximately 0.7-0.8 miles of double track. Signal work will be required beyond the construction limits on either end of the project, estimated to be between MP 241.1 to MP 243.9. When combined with existing double track south of Solana Beach Station (MP 241.8) and the addition of a new crossover this second track will provide an area for freight and passenger trains to make passes north of the San Dieguito River. Additional double track is required at this location to increase freight capacity in San Diego per the April 2020 Draft "Freight Pathing between CP Atwood and the Port of San Diego and passenger service extensions south of San Diego" study commissioned (Freight Pathing Study) by BNSF and NCTD and prepared by DB Engineering & Consulting, referred to as "Freight Pathing Study" herein.

SDDT1 was included in a Trade Corridor Enhancement Program (TCEP) application in Summer 2020. In December 2020, the California Transportation Commission (CTC) approved to award final design and construction funds for the SDDT1 Project.

Project Limits	*District 75- San Diego County-LOSSAN* *Begin MP 241.1 /End MP 243.9*	
Number of Alternatives	*7*	
Programmable Project Alternative	2	
	Current Cost Estimate:	**Escalated Cost Estimate:**
Capital Outlay PA&ED (Completed)	NA	NA
Capital Outlay PS&E	$4,234,000	$4,409,500
Capital Outlay Construction	$56,316,000	$57,403,500
Capital Outlay Right-of-Way	NA	NA
Funding Source	*Trade Corridor Enhancement Program - TCEP*	
Funding Year	2023	
Type of Facility	*Installation of second main railroad track.*	
Number of Structures	*Three (3) Retaining Walls* *One (1) Concrete Box Culvert*	
Anticipated Environmental Determination or Document	NEPA FONSI	
Legal Description	*San Dieguito Double Track Phase 1*	

2. BACKGROUND

There is currently a single-track bottleneck at the southern portion of the Solana Beach segment of the LOSSAN Corridor and the northern portion of the Del Mar segment. San Dieguito Double Track Phase 1 and Phase 2 were developed to eliminate the single-track bottleneck by providing a second track through this area. Phase 1 will double track the portion of the bottleneck north of the San Dieguito River. Phase 2, currently not funded for construction,

will replace the aging San Dieguito River timber bridge with a double track bridge, provide a special events platform for direct access to the Fairgrounds and Racetrack, and double track south of the San Dieguito River.

A concept level Project Study Report for Phase 1 and 2 constructed concurrently was completed in January 2008. The design of Phase 1 and 2 has progressed intermittently as funding has become available. The Alternatives Analysis was completed in December 2012, the 30% design was completed in November 2013, the 60% design was completed in March 2016, and the most recently funded 90% design was completed in January 2020. Environmental clearance for Phase 1 and 2 was obtained through a NEPA FONSI in December 2015, and environmental permits for Coastal Consistency, Army Corps of Engineer Section 404, and Regional Water Quality Control Board Section 401 were issued and obtained in 2017.

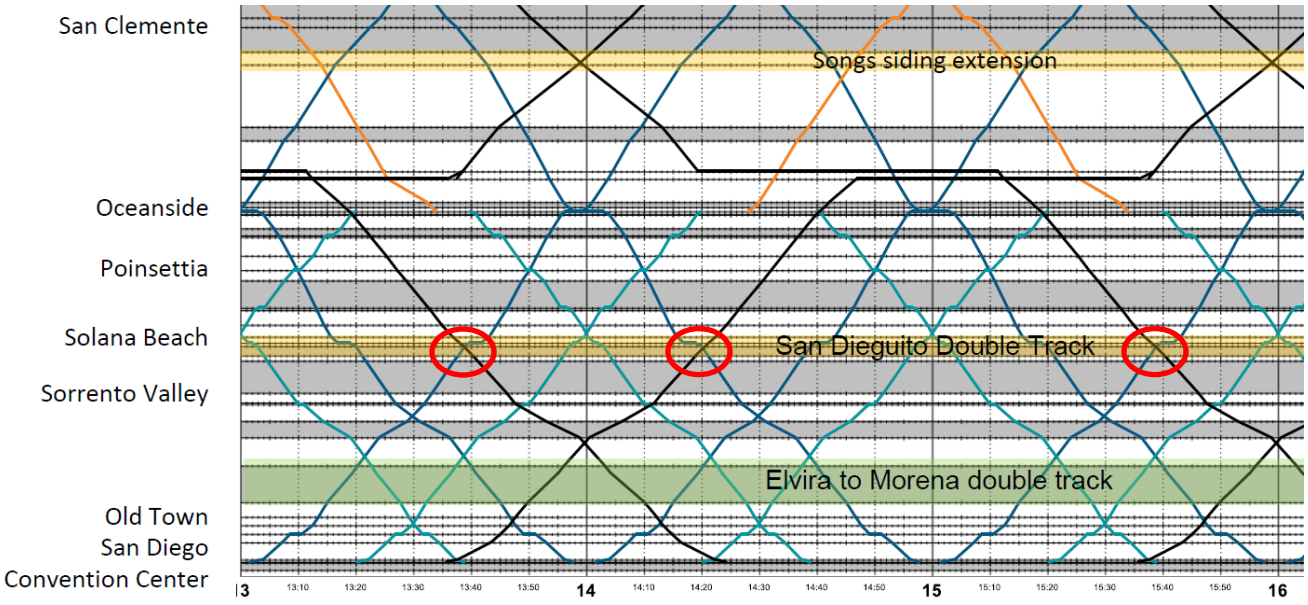
BNSF and NCTD commissioned the Freight Pathing study for the corridor, which identified this project as a key project to increasing freight capacity in San Diego. The draft report was submitted in April 2020. In May 2020, discussions began with key stakeholders including NCTD, BNSF, Caltrans, and CalSTA, regarding implementation of the project and funding through the TCEP grant. Funding to construct both Phase 1 and Phase 2 was not available through the TCEP grant so the Phase 1 double track is being advanced to provide the double track passing area north of the San Dieguito River.

3. PURPOSE AND NEED

Purpose:
The primary purpose of SDDT1 is to provide a second main track to allow daytime freight trains and commuter trains to make passes without further delay to the current schedule. This can be done by eliminating the single-track bottleneck between the Solana Beach and Del Mar segments of the San Diego Subdivision of the LOSSAN Corridor.

Need:
There is a need for daytime track for freight trains to make passes with commuter trains that was identified in the Freight Pathing Study in order to increase freight capacity and maintain operational flexibility. This report states that the addition of a secondary track north of the San Dieguito River would allow additional freight trips to be made throughout the day by providing the flexibility for passenger and freight trains to make passes at the San Dieguito location.

The chart below was taken from the Freight Pathing Study. It shows proposed increased freight movements and identifies San Dieguito as a location to optimize operations by adding the secondary track. The circled locations are passes that could be made at San Dieguito if a second track were in place.



Legend

- Pacific Surfliner (Amtrak)
- COASTER
- Freight

The additional passing track also helps to increase freight and passenger service south of the Santa Fe Depot and facilitates the Near, Mid, and Long-term goals for the Corridor.

Freight service goals

- Identify freight paths from CP Atwood to the Port of San Diego that are compatible with passenger operations
  - **Near-term** up to 2 freight trains per day / direction[1]
  - **Mid-term** at least 2 freight trains per day / direction[1]
  - **Long-term** at least 8 freight trains per day / direction[1]

SDDT1 is a critical link in achieving these near, mid, and long-term goals.

4. DEFICIENCIES

There is currently a 1.1-mile single track segment of the LOSSAN corridor in the City of Del Mar and the City of Solana Beach that restricts rail capacity and operational flexibility. Passenger trains moving in the same direction cannot pass slower moving freight trains and trains moving in the opposite direction must wait for the oncoming train to clear the single tracked area before proceeding. Providing a second track for passing north of the San Dieguito River would provide increased operational flexibility for freight movements during the day.

5. CORRIDOR AND SYSTEM COORDINATION

The San Diego Subdivision of the LOSSAN Corridor operates freight service and goods movements through BNSF Railway and passenger service through NCTD's Coaster and Amtrak's Pacific Surfliner rail service. The proposed project is consistent with key regional and corridor plans including San Diego Forward: The Regional Plan for San Diego (2015) and the Infrastructure Development Plan for the LOSSAN Rail Corridor in San Diego County (2018).

SANDAG has been coordinating with key stakeholders, including NCTD, BNSF, Caltrans, and CalSTA, on the project to provide a freight passing area that is consistent with the Freight Pathing Study. All stakeholders involved have a vested interest in increasing freight capacity in San Diego and in Southern California.

To implement the project SANDAG and NCTD have a Memorandum of Understanding (MOU 18) in place outlining roles and responsibilities for development and implementation of capital projects in the LOSSAN Corridor.

It is the objective of SANDAG and project stakeholders to improve reliability and increase capacity for these services to keep up with demand.

6. ALTERNATIVES

6A. Viable Alternatives

Two viable alternatives have been identified for SDDT1. The operational, environmental, cost, and constructability aspects of these alternatives are currently being reviewed for final selection. It is noted that the final alignment may include a merging of the two viable alternatives.

1) The first viable alternative for this Phase 1 project is to install a second main track from CP Valley south to the north abutment of the proposed future double track San Dieguito River Bridge and includes installation of a crossover south of Loma Santa Fe Drive to be able to utilize the existing double track between Loma Santa Fe and CP Valley as a passing track. This alternative also includes widening of the Solana Beach trench to accommodate a second track, installation of a box culvert at Stevens Creek that can accommodate a second track, and widening of the existing single track berm through the San Dieguito lagoon, down to the north end of the proposed future bridge where a turnout would transition the railway to a single track over the existing bridge. This option would provide for a portion of the track in the San Dieguito lagoon to be shifted east to its ultimate alignment when Phase 2 is implemented.

   This alternative provides a passing track which can allow freight and passenger trains to make passes north of the lagoon. This preferred alternative allows for minimal service interruptions while Phase 2 is constructed at some future date.

2) The second viable alternative for the Phase 1 project is similar to the preferred viable alternative with the exception that the second track would extend to the north end of the existing bridge instead of the northern abutment of the proposed future bridge. This alternative would also involve temporary widening of the existing berm between the existing and future bridge abutments to accommodate the second track. This alternative would allow for removal of a portion of the existing berm near Stephens Creek and restoration of the lagoon in this area.

   This would provide a longer passing track however, the additional double track between the north ends of the existing and proposed future bridges would be removed when Phase 2 is constructed. Potential service interruptions and relocation of the turnout would be required during Phase 2 construction if this alternative is implemented.

6B. Rejected Alternatives

1) The first rejected alternative is to construct Phase 1 and Phase 2 concurrently. Construction funding for this alternative is not available at this time.

2) The second rejected alternative is to install a crossover immediately south of Loma Santa Fe drive and install second main track from CP Valley south to Via De La Valle, without entering the San Dieguito Lagoon area. This alternative does not provide a suitable length of passing track.

3) The third rejected alternative is to install a second main track from CP Valley south to the new proposed San Dieguito River Bridge. This alternative does not provide a suitable length of passing track.

4) The fourth rejected alternative is to install second main track from CP Valley south to the existing San Dieguito River Bridge. This alternative does not provide a suitable length of passing track.

7. COMMUNITY INVOLVEMENT

As part of the development of the Phase 1 and 2 design the following presentations have been made to stakeholder entities regarding the project. Similar presentations will be made to update stakeholders once funding is allocated to separate the project into the proposed phased approach.

- Scoping Meeting with City of Del Mar Representatives in January 2013.
- Multiple Technical Working Group Meetings with City of Del Mar Representatives.
- San Dieguito Lagoon Committee Public Presentation in January 2013.
- San Dieguito River Park Public Presentation in February 2013.
- NCTD Board Presentation in March 2013.
- Del Mar Mayor and Council Member Briefing in June 2013.

- Open House Public Meeting in the City of Del Mar in October 2013.
- Del Mar City Council Public Presentation in February 2013, November 2013, and December 2014.
- 22nd District Agricultural Association (operators of the Del Mar Fairgrounds) Presentation in June 2014.
- Open House Public Meeting in Solana Beach in November 2014.
- Various Del Mar Citizens Ad Hoc Committee meetings in 2013 and 2014.
- Del Mar Ad Hoc Committee Liaison presentations in February 2016.
- Del Mary Mayor briefing in February 2016.
- Del Mar Sea Level Rise Committee presentation in February 2016.

8. ENVIRONMENTAL COMPLIANCE

Key Environmental Constraints

Biological Resources

Eighteen vegetation communities and land covers were mapped in the study area: alkali meadow, Diegan coastal sage scrub, southern coastal bluff scrub, southern willow scrub, eucalyptus woodland, *Arundo*-dominated riparian, coastal and valley freshwater marsh, southern coastal salt marsh, brackish water estuary, beach, intertidal beach, saltpans, sandbar, mud flats, non-native vegetation, non-native grassland, disturbed habitat, and urban/developed. Several of these vegetation communities and land covers are typically associated with areas of U.S. Army Corps of Engineers (USACE) jurisdiction pursuant to the federal Clean Water Act, including alkali meadow, coastal and valley freshwater marsh, southern coastal salt marsh, brackish water estuary, beach, intertidal beach, saltpans, sandbar, and mud flats.

The vegetation communities considered to be a High Constraint include the following: alkali meadow, coastal and valley freshwater marsh, southern coastal bluff scrub, southern coastal salt marsh, and southern willow scrub. The vegetation communities considered to be a Moderate Constraint include Diegan coastal sage scrub, *Arundo*-dominated riparian, mud flats, brackish water estuary, saltpans, and sandbar. Note that these have been rated as moderate in relationship to the high level of constraint associated with the previously listed habitat types; however, even these "moderate" constraint vegetation communities are considered sensitive by the Resource Agencies and may be afforded protection under the Clean Water Act and/or Endangered Species Act. The vegetation communities considered to be a Low Constraint include the following: eucalyptus woodland, non-native vegetation, non-native grassland, disturbed habitat, and urban/developed. A Qualified Biologist will be required to be on-site to monitor construction activities within or adjacent to waters of the United States and/or State to ensure compliance with RWQCB Clean Water Act Section 401 Certification.

Sensitive Wildlife Species

Bird species present the primary wildlife-related constraints in the study area. In 2012, wildlife biologist John Konecny conducted focused surveys for the Ridgway's rail (*Rallus obsoletus*

levipes) (RIRA)[1], Belding's Savannah sparrow (*Passerculus sandwichensis beldingi*) (BSS), western snowy plover (*Charadrius alexandrines nivosus*) (WSP), and California least tern (*Sternula antillarum browni*) (CLT). The RIRA and CLT are listed as endangered species by the U.S. Fish and Wildlife Service (USFWS) and the California Department of Fish and Wildlife (CDFW). The WSP is listed as a threatened species by the USFWS. The BSS is listed as an endangered species by CDFW. No RIRA was detected during six focused surveys in 2012. In its present condition, the study area provides very little habitat for this species. Coastal salt marsh habitat is present on the north side of the San Dieguito River between the tracks and Camino Del Mar and to the east of Jimmy Durante Boulevard. RIRA has never been detected in the study area during broader RIRA surveys conducted throughout the species' range by the USFWS (Zembal et al. 2018).

The 45 pairs of RIRA detected in the San Dieguito Lagoon area during the 2012 range-wide surveys were all located in the east end of the lagoon, at or upstream of El Camino Real. In 2018, 31 pairs and 11 advertising males were detected in the San Dieguito Lagoon inland of El Camino Real. CLTs were observed foraging in the open water of the San Dieguito River between the tracks and Jimmy Durante Boulevard in April and May of 2012. These may have been courting individuals from another nesting site. No CLT nested at San Dieguito in 2012. CLT undoubtedly nested in the area historically but have not been present in the ten years prior to the surveys, probably due to the amount of urbanization and disturbance. No other CLTs were observed in the survey area, neither foraging or on the ground.

Two WSPs were observed on the beach, west of the tracks, in March 2012, and four WSPs were observed in March 2013. Wintering WSP typically leave southern California in mid to late March for northern breeding locations. These individuals were likely wintering birds or migrating individuals. Like the CLT, WSP undoubtedly bred in this area historically, but have not recently, probably due to urbanization and disturbance. No other WSP was observed during the remaining seven surveys.

Two BSS territories were detected in the coastal salt marsh west of the tracks in March 2012, and three BSS territories were detected west of the tracks in March 2013. There is very little BSS habitat in the reach of the river between the Jimmy Durante Bridge and the downstream side of the tracks. In addition to the protection afforded to RIRA, CLT, WSP, and BSS pursuant to the federal and state Endangered Species Acts and/or Coastal Act, virtually all nesting bird species are protected by the federal Migratory Bird Treaty Act.

The Project site contains potential nesting habitat for BSS and potentially foraging habitat for CLT. Other bird species that are not listed in the federal or state Endangered Species Acts also may nest within the study area, and these birds would be protected by the Migratory Bird Treaty Act. Because federally listed wildlife (bird) species have been observed in or near the project area but have not been detected nesting in the project area, sensitive wildlife species are considered to represent a moderate constraint and a Qualified Biologist will be required to be on-site to monitor construction activities within or adjacent to waters of the United States and/or State to ensure compliance with RWQCB Clean Water Act Section 401 Certification.

[1] The American Ornithologists' Union now recognizes the light-footed clapper rail as Ridgway's rail (*Rallus obsoletus levipes*)

Cultural Resources
The area surrounding the mouth of the San Dieguito River is a particularly sensitive area with respect to the potential presence of cultural resources. One site, CABSDIB10940, is identified as a prehistoric burial site located west of the study area. Monitoring of geotechnical borings conducted in the project area did not reveal evidence of buried archaeological sites. It was determined that the majority of railroad Bridge 243.0 was constructed in 1916, with some possible rebuilding in 1926 and 1927.

The bridge was evaluated for National Register of Historic Places (NRHP) eligibility pursuant to Section 106 of the National Historic Preservation Act by ASM Affiliates. That evaluation also addressed potential California Register of Historic Places (CRHP) eligibility. ASM Affiliates has recommended that the bridge is not eligible for listing on either the NRHP or the CRHP. The California's State Historic Preservation Office (SHPO) issued a statement of concurrence on May 21, 2015.

Based on the absence of observed archaeological resources within the project area, archaeological resources are assessed as having a low constraint. Given the proximity of the cultural resource (CABSDIB10940) to the study area and the overall cultural resource sensitivity of the area, however, cultural resources monitoring during construction is recommended as a mitigation measure.

Because the San Dieguito River Bridge 243.0 is not eligible for listing on the NRHP or the CRHP, the potential historical significance of the bridge is considered a low constraint.

Paleontological Resources
The potential presence of paleontological resources in certain locations within the project site has the potential to constrain construction activities in terms of time and cost. A moderate constraint is identified for this issue.

Coastal Zone
The California Coastal Commission (Commission) found that the impacts on coastal resources from not carrying out the project would be more significant and adverse than impacts stemming from the project's location within wetlands and endangered species and habitat area (ESHA), which would be addressed by the avoidance, minimization, and mitigation measures incorporated into the project. The Commission concluded that the project would, on balance, be more protective of significant coastal resources, consistent with Coastal Act Section 30007.5. As such, it is consistent with Chapter 3 and in a letter dated June 9, 2017, the Commission concurred with the Consistency Certification CC-0001-17.

Stormwater
The incorporation of best management practices (BMPs) during construction activities will be necessary to ensure compliance with federal effluent limitations. The designer shall also evaluate and include permanent BMP solutions as part of the project design.

Environmental Clearance

NCTD's railroad right-of-way is subject to the jurisdiction of the federal Surface Transportation Board (STB). Projects that improve railroad reliability and capacity associated with interstate commerce are not subject to regulatory compliance with state and local regulations. It was determined that environmental review and regulatory permitting for the project is subject to federal-level regulations only.

Early Resource Agency informal consultation was initiated with respect to the proposed project and how the project may affect, and/or be affected by various federal regulations (e.g., Clean Water Act provisions). As part of this consultation, the SANDAG project team conducted site visits in 2013 with representatives of the USACOE, the USFWS, California Coastal Commission, and RWQCB as well as meetings during the 10% design phase. Due to the project's location within Waters of the U.S. and in the coastal zone, and unavoidable temporary impacts to Waters of the U.S., implementation of the project requires regulatory permitting by the USACOE, California Coastal Commission, and RWQCB.

The Phase 1 and Phase 2 projects are subject to and have obtained approval for the following documentation and permits. These approvals will be reviewed and may be amended as needed to advance Phase 1:

- Documentation required for compliance with the National Environmental Policy Act (NEPA).
  - **Finding of No Significant Impact (FONSI) January 2016**
- California Coastal Commission – Coastal Consistency Certification (pursuant to the federal Coastal Zone Management Act).
  - **Certification No. CC-001-17 Approved 6/7/2017**
- USACOE – Clean Water Act Section 10 and Section 404 Permit.
  - **Individual Permit SPL-2016-00825-WSZ; Issued: October 11, 2017, Expires: 8/1/2027**
- RWQCB – Clean Water Act Section 401 Water Quality Certification.
  - **No. R9-2017-0033; Issued: October 12, 2017, Expires: 10/12/2022**
- USFWS – Informal Consultation between the FRA and USFWS.
  - **No action required.**
- U.S. Coast Guard – Bridge Permit (Section 9BRivers and Harbors Act of 1899 and General Bridge Act of 1946).
  - **Not applicable to this project.**

Environmental Mitigation

The environmental permits were based on Phase 1 and Phase 2 projects being built concurrently and the mitigation requirements for Phase 1 being constructed in advance are being negotiated and determined with the resource agencies as design of Phase 1 progresses.

9. FUNDING, PROGRAMMING AND ESTIMATE

Funding

This project was approved for award of Trade Corridor Enhancement Program (TCEP) funding for construction in the amount of $30.528 million at the December 2020 CTC meeting. NCTD has committed matching funds in the amount of $5.5 million for design and obtaining easements as well as $25.8 million for Construction.

Programming

TCEP	Fiscal Year Estimate								
20.XX.###.###	Prior	20/21	21/22	22/23	23/24	24/25	25/26	Future	Total
Component	In thousands of dollars ($1,000)								
PA&ED Support									
PS&E Support									
Right-of-Way Support									
Construction Support									
Right-of-Way									
Construction				30,528					**30,528**
Total				**30,528**					**30,528**

NCTD Matching Funds (CMAQ)	Fiscal Year Estimate								
20.XX.###.###	Prior	20/21	21/22	22/23	23/24	24/25	25/26	Future	Total
Component	In thousands of dollars ($1,000)								
PA&ED Support									
PS&E Support			4,250						**4,250**
Right-of-Way Support									
Construction Support									
Right-of-Way			1,250						**1,250**
Construction				25,801					**25,801**
Total			**5,500**	**25,801**					**31,306**

Estimate

The major construction costs associated with this Phase 1 project are the utility relocation, site civil and grading, trackwork, signaling and communication, retaining walls, Stevens Creek culvert, landscaping and irrigation, pollution control & SWPPP, utilities, and mobilization and demobilization. The construction costs are roughly based on the 90% design estimate for the Phase 1 and 2 concurrently, with associated changes involved in the advanced implementation of Phase 1. Soft costs for the project for both construction phase and design phase are based on percentages of this construction cost per experience with similar projects in this corridor.

The summary of the major costs for the estimate are as follows:

Task	Estimate
Construction Cost	
Utilities	$675,000
Site Civil and Grading	$8,732,000
Pollution Control and SWPPP	$1,309,000
Retaining Walls	$4,393,000
Stevens Creek Culvert	$1,857,000
Trackwork	$7,946,000
Signaling and Communication	$5,515,000
Landscaping and Irrigation	$1,429,000
Mobilization and Demobilization	$3,186,000
Contingency	$6,371,000
Ancillary Construction Costs	$11,803,000
Environmental Mitigation	$1,850,000
Temporary Access Easements	$1,250,000
Cost Escalation	$1,087,500
Construction Subtotal	$57,403,500
Design	
Final Design (PS&E)	$3,406,000
Environmental Permit Updates	$828,000
Cost Escalation	$175,500
Design Subtotal	$4,409,500
Project Total	**$61,813,000**

This provides a total project estimate of $61,813,000 in the year of expenditure. For further breakdown on the cost estimate see the table below:

SDDT Phase 1 (MP241.8 to MP243)

PROJECT COST ESTIMATE — **Design Level: 60%**

Revised: 7/7/20 — **Estimated By: BL, TM, AA, DB**

Item	Quantity	Unit	Unit Price	Amount	Subtotal
DESIGN					
Agency Design Admin. (SANDAG)	2.00%	x	CCE	$ 828,266	
Agency Program Management (SANDAG)	0.50%	x	CCE	$ 207,066	
Agency Design Admin.(NCTD/MTS)	0.50%	x	CCE	$ 207,066	
Alternative Analysis & Environmental	0.00%	x	CCE	$ -	
Design - Preliminary to 30%	0.00%	x	CCE	$ -	
Design - 30% to 60% and Permits	2.00%	x	CCE	$ 828,266	
Design -Final PS&E	4.00%	x	CCE	$ 1,656,532	
Independent Peer Reviews	0.50%	x	CCE	$ 207,066	
Design Soft Costs	***9.50%***			**DESIGN TOTAL**	**$ 3,934,263**
COMMUNICATIONS					
Communications	1	LS	$ 250,000	$ 250,000	
				COMMUNICATIONS TOTAL	**$ 250,000**
LEGAL					
Legal	1	LS	$ 50,000	$ 50,000	
				LEGAL TOTAL	**$ 50,000**
RIGHT OF WAY					
Temporary Construction Easement	1	LS	$ 1,000,000	$ 1,000,000	
Slope Easements					
				RIGHT OF WAY TOTAL	**$ 1,000,000**
RIGHT OF WAY SUPPORT					
Right of Way Support	1	LS	$ 250,000	$ 250,000	
				RIGHT OF WAY SUPPORT TOTAL	**$ 250,000**
CONSTRUCTION CONTRACT ESTIMATE					
(using Jan. 2020 HNTB Estimate)					
Utilities	1	LS	$ 674,950	$ 674,950	
Site Civil	1	LS	$ 8,731,955	$ 8,731,955	
Polution Control & SWPPP	1	LS	$ 1,309,210	$ 1,309,210	
Structural - Retaining Walls	1	LS	$ 4,393,405	$ 4,393,405	
Stevens Creek Culvert - Bridge 242.8	1	LS	$ 1,857,231	$ 1,857,231	
Trackwork	1	LS	$ 7,945,572	$ 7,945,572	
Signaling and Communication	1	LS	$ 5,515,062	$ 5,515,062	
Landscape and Irrigation	1	LS	$ 1,428,994	$ 1,428,994	
				Base Construction Cost (BCE)	$ 31,856,380
General					
Contractor Mobilization	7.5%	x	BCE	$ 2,389,228	
Contractor Demobilization	2.5%	x	BCE	$ 796,409	
Construction Contingency	20%	x	BCE	$ 6,371,276	
				CONSTRUCTION CONTRACT ESTIMATE (CCE)	**$ 41,413,293**
ANCILLARY CONSTRUCTION COSTS					
Agency Construction Admin. (SANDAG)	2.5%	x	CCE	$ 1,035,300	
Agency Construction Prog. Mgmt. (SANDAG)	0.5%	x	CCE	$ 207,100	
Agency Construction Admin. (NCTD/MTS)	1.0%	x	CCE	$ 414,100	
Design Support During Construction	4.5%	x	CCE	$ 1,863,600	
Construction Management	15.0%	x	CCE	$ 6,212,000	
RR Flagging	5%	x	CCE	$ 2,070,665	
Construction Soft Costs	***28.5%***		**ANCILLARY CONSTRUCTION COSTS**		**$11,802,765**
OFF-SITE ENVIRONMENTAL MITIGATION				**50% Will Be Paid through EMP Funding**	
Tidal Wetlands Permanent Impact Mitigation	1.85	AC	1,000,000	$ 1,850,000	
Other					
				OFF-SITE ENVIRONMENTAL MITIGATION TOTAL	**$1,850,000**
TOTAL Soft Costs	***38.0%***				
TOTAL PROJECT COST ESTIMATE					**$60,550,321**

COST ESCALATION - See Note				
Year of Expenditure	CCE Annual Escalation	CCE Cumulative Escalation	Expenditure per Year	Escalation Subtotals
FY20	0.0%	0.0%	$ -	
FY21 - Design	0.0%	0.0%	$ 5,484,263	$ 175,496
FY22 - Year 1 Construction (60%)	0.0%	0.0%	$ 33,039,635	$ -
FY23 - Year 2 Construction (35%)	4.4%	4.4%	$ 19,273,120	$ 848,017
FY24 - Closeout (5%)	4.3%	8.7%	$ 2,753,303	$ 239,537
		Project Estimate without Escalation	$60,550,321	
		Estimated Escalation		$ 1,263,051
		PROJECT COST IN YEAR OF EXPENDITURE DOLLARS		**$ 61,813,372**

10. DELIVERY SCHEDULE

Project Milestones		Milestone Date (Month/Day/Year)
PROGRAM PROJECT	M015	12/2/20
BEGIN ENVIRONMENTAL	M020	NA
PA & ED (FRA FONSI)	M200	12/5/15
PROJECT PS&E	M380	7/31/22
RIGHT OF WAY CERTIFICATION	M410	7/30/22
READY TO LIST	M460	10/31/22
AWARD	M495	3/31/23
APPROVE CONTRACT	M500	7/30/23
CONTRACT ACCEPTANCE	M600	8/31/25
END PROJECT EXPENDITURES	M800	12/31/25
FINAL PROJECT CLOSEOUT	M900	1/31/26

11. RISKS

The major risks to the project include:

- Additional ground improvements may be required to mitigate for settlement.
- Utility relocation and coordination may require more effort than anticipated.
- Environmental mitigation for phasing the project may be more than anticipated.
- Cost Estimates are based on predicted escalation over the next several years. The actual escalation may be different than anticipated.
- Coordination with resource agencies regarding permit amendments may require more effort and take longer than anticipated.
- Limited construction staging may lead to increased project costs.
- Actual temporary easement costs may exceed estimated costs.
- Removing private encroachments in ROW within project limits may cause delays.
- Unsuitable material may be encountered during excavation that could increase costs.
- Unidentified utilities may be encountered that could increase costs.
- Bird nesting may delay construction.
- Environmental permitting amendments may result in additional mitigation.

The recommended contingency based on estimated costs and probability for risk is $6,462,500. The Project Development Team is actively attempting to mitigate the identified risks as the project progresses. This is tracked through a comprehensive Risk Matrix (or Register). As risks are mitigated through the course of the design they will be retired from the risk register. For further information and identified risks and contingency recommendations, see Attachment B.

12. EXTERNAL AGENCY COORDINATION

This project has been identified as a priority to increase freight capacity in Southern California by BNSF. SANDAG is actively pursuing funding opportunities and coordinating with various agencies, described below, to implement this project in a timely fashion.

Federal Railroad Administration

Lead Agency on NEPA FONSI documentation, may require notification of the phasing of this previously cleared project.

The project requires the following coordination:

US Army Corps of Engineers
Amendment to the Approved Clean Water Act Section 404 Permit

US Fish and Wildlife Service
Potential amendment to the Approved Endangered Species Act Section 7 Consultation

California Coastal Commission
Amendment to the Approved Federal Coastal Consistency Certification

California Public Utilities Commission
GO 88-B Modification of an Existing Rail Crossing Approval

Regional Water Quality Control Board
Amendment to the Approved Clean Water Act Section 401 Permit

Local Agency
Cooperative Agreements with City of Del Mar

Local Agency
Agreements with City of Solana Beach

Local Agency
MOU 18 Agreement with NCTD

13. PROJECT REVIEWS

Scoping team field review SANDAG, NCTD, Fairgrounds, and HNTB Date 06/07/2019
Program Manager *David Berryman* Date 07/30/2020
Project Manager *Angela Anderson* Date 07/30/2020
Corridor Director *Bruce Smith* Date 07/30/2020
Constructability Review *Steve Hoyle* Date 07/30/2020
NCTD Director of Rail (Safety & Ops) *Stephen Fordham* Date 07/30/2020

14. PROJECT PERSONNEL

San Dieguito Double Track			
Name	**Title**	**Agency/Firm**	**Office**
Anderson, Angela, PE	Project Manager	SANDAG	(619) 699-6934
Berryman, David, PE	Program Manager	RailPros	(760) 484-2270
Greer, Kieth	Senior Regional Planner	SANDAG	(619) 699-7390
Goldinez, Ralph	Flagging	Bombardier	(760) 975-9692
Hoyle, Steve	Construction Manager	SANDAG	(760) 430-2008
Jackson, Tedi	Senior Public Outreach Officer	SANDAG	(619) 595-5313
Johnson, Michael	NCTD Operations Director	NCTD	(760)967-2818
Lathers, Erich	Environmental Technical Advisor	BRG	(619) 298-7127
Loofbourrow, Sean	Safety Office Manager	NCTD	(760) 967-2827
Martinez, Beth	Environmental Consultant	HELIX, Environmental	(760) 201-9374
McColl,Tricia, PE	Group Director - Rail	HNTB	(619) 684-6562
Mena, Jesus, PE	Construction Manager	SANDAG	(760) 576-9445
Pesce, Tim	Environmental Planner	SANDAG	(619) 595-5374
Ruelas, Ramon, PE	Principal Construction Engineer	SANDAG	(619) 699-6944
Shaw, Gina, PE	Design Project Manager	HNTB	(619) 684-6568
Shroyer, Scott, PE	Senior Rail Engineer	NCTD	(760) 967-2849
Smith, Bruce, PE	Corridor Director	SANDAG	(619) 699-1907
Welling, Alex	Communication	SANDAG	(619) 699-1918

15. ATTACHMENTS

List attachments with the number of pages, such as:

A. Location map (1)
B. Risk Register
C. Preferred Alternative Concept Drawing
D. Freight Pathing Study

Project Study Report
Del Mar Bluffs Stabilization Project 5

On Route LOSSAN Corridor and Interstate 5 North Coast Corridor
City of Del Mar, San Diego

Between MP 244.1, Coast Blvd, City of Del Mar

And MP 245.7, S. Camino Del Mar, City of Del Mar

APPROVAL RECOMMENDED:

Patricia McColl

Patricia McColl, PE
Project Design Manager

2-17-2021
Date

APPROVED:

Alexandra DeVaux

Alexandra DeVaux, PE
SANDAG Project Manager

02/17/2021
Date

Vicinity Map

This project study report has been prepared under the direction of the following registered civil engineer. The registered civil engineer attests to the technical information contained herein and the engineering data upon which recommendations, conclusions, and decisions are based.

David Berryman — 2/17/21

REGISTERED CIVIL ENGINEER — *DATE*

RAILPROS

Prepared by RailPros, Inc.

REGISTERED PROFESSIONAL ENGINEER
David Berryman
No. 59949
Exp. 6/30/20
CIVIL
STATE OF CALIFORNIA

Revision Log

PSR Revision Log			
Prepared By	**Company**	**Date**	**Comments**
Blake L./ David B.	RailPros Inc.	April 3, 2019	Rev 0
Blake L./ David B.	RailPros Inc.	January 13, 2020	Rev 1 Project estimate revised to reflect current project conditions and recent corridor bids.
Blake L./ David B.	RailPros Inc.	April 10, 2020	Rev 2 Update Scope and estimate to current scope per discussions with Del Mar Working Group. Transition to revised Caltrans PSR Format
Blake L./ David B.	RailPros Inc	February 16, 2021	Rev 3 Update for TCEP Funding Agreement

Additional Review By

Bruce Smith PE	SANDAG	February 16, 2021	
Scott Shroyer	NCTD	February 16, 2021	

Table of Contents

1. INTRODUCTION

This Del Mar Bluffs Stabilization Project 5 (DMB5) is an on-going effort to maintain a stable trackbed along the coastal bluffs and protect the railroad from bluff retreat, landslides, and seismic events by bringing the tracks into conformance with current design standards for seismic and slope stability. This project involves stabilization of areas along the 1.6 mile segment of the Los Angeles-San Diego-San Luis Obispo (LOSSAN) Rail Corridor in the City of Del Mar, California. The existing single-track railroad runs on a terrace atop the 50' to 70' high coastal bluff. Stabilization of the bluffs is anticipated to include the installation of piles, lagging and retaining walls, drainage improvements and pipe outlets to the beach, and other stabilization and erosion control measures on the upper bluffs required to meet LOSSAN Design Criteria.

The project is currently funded through PA&ED by a California Natural Resources Agency grant in the amount of $3,473,000. Funding is being sought to finalize the design and construct the project. If funding is obtained, it is anticipated that the project will complete design and permitting in the summer of 2022, begin construction in the spring of 2023, and complete construction in the spring of 2025. The current total project estimate is $65,200,000 in year of expenditure. Please see table below for more information.

Project Limits	District 11-San Diego County-LOSSAN MP 244.1 – MP 245.7	
	Current Cost Estimate:	**Escalated Cost Estimate:**
Capital Outlay PA&ED (Funded)	$3,473,000	$3,473,000
Capital Outlay PS&E	$3,650,000	$3,930,000
Capital Outlay Construction	$48,723,000	$57,880,400
Capital Outlay Right-of-Way	$0	$0
Funding Source	*TBD*	
Funding Year	2021	
Type of Facility	*Existing Single Track Railroad*	
Number of Structures	258 New Piles, 245 Retrofit piles, 1600 feet of seawalls 5 New Storm Drains with outlets to the beach Subdrain Network 3 New Drainage Channels	
Anticipated Environmental Determination or Document	Categorical Exclusion	
Legal Description	*Del Mar Bluffs Stabilization Project 5 (DMB5)*	

2. BACKGROUND

The single track railroad was originally constructed on the Del Mar Bluffs in 1912. New track material was installed prior to implementing the Coaster service commuter rail in 1995. Currently the distance from the centerline of the track to the edge of the bluff ranges from 15 feet to 70 feet throughout the project area. It has been reported that the average rate of bluff retreat is 6 inches per year, with some years having more or less retreat than others. As the bluff retreats additional stabilization measures are required.

The LOSSAN corridor is the only viable freight and passenger rail line leading from San Diego to the remainder of the country. The potential loss of service could have significant regional economic impacts (see Section 3). Over the last two winters there have been several slides on the bluff face, which have attracted public media attention. These include heavy storms over Thanksgiving weekend 2019 which lead to erosion close to the tracks requiring emergency repair. Currently NCTD, SANDAG, the City of Del Mar, and other state and local government agencies are participating in a working group to address funding and future plans for the Del Mar portion of the LOSSAN corridor.

Previous stabilization efforts have been performed through implementation of drainage improvements and installation of piles along the bluff top. These repairs were performed as part of the Del Mar Bluffs Stabilization Projects 1, 2, 3 and 4 between the years 2001 and 2020. This project, DMB5 is intended to continue the effort of stabilizing the bluffs and maintain the safety and viability of the LOSSAN corridor through Del Mar.

3. PURPOSE AND NEED

Purpose:
The primary purpose of the project is to stabilize the trackbed and protect it from landslides, and rapid erosion due to large storm events and seismic activity. This will help protect service reliability and avoid potential disruptions in rail service by minimizing the risk of slope failure and erosion encroachment near the tracks.

Need:
This stabilization project is needed to protect against bluff retreat and provide continued safe and reliable operation of the LOSSAN Corridor. Based on recent bluff retreat there is a need to review bluff conditions and reprioritize stabilization efforts as part of this project.

This Project will reduce the risk of, deep seated slope failure beneath the tracks along the Del Mar Bluffs and avoid the associated shut down in rail service between San Diego and the rest of the LOSSAN Corridor. The project will increase safety and service reliability to passengers and freight by minimizing the chances of track damage caused by slope failure. Public Safety will also be increased by lowering the chances of landslides onto the beach and conveying stormwater more effectively.

In addition to safety and reliability benefits, the LOSSAN Corridor supports the economy of the San Diego region. Reducing the risk of rail service closures ensures continued economic benefits to the region.

On May 28, 2019 a Grand Jury Report was issued regarding the bluffs and determined the following:

- The loss of freight rail traffic would have a major financial impact on the economy of San Diego County and the Port of San Diego.
- The loss of passenger service on railroads would have a significant financial impact on the economy of San Diego.
- The loss of passenger service would have a substantial adverse impact on Interstate 5 traffic as well as surrounding surface streets. Some passengers would need to be bussed around the failure location, while others would be forced into their cars and drive on local streets and highways.

A Benefit-Cost Analysis performed by a SANDAG economist for a State of Good Repair grant application submitted December 9, 2019 estimates that a 6-month closure of the Del Mar portion of the railroad would cost the region approximately $173 million, and a 12-month closure would cost approximately $310 million in travel delay costs, increased freight shipping costs, emergency bluff repairs, and a bus bridge detour around the failed bluffs.

The project also benefits the environment, specifically air quality, by reducing the chances of a long-term corridor shutdown due to a major slide, and thereby avoiding an increase in greenhouse gases from the increased truck and passenger traffic on Interstate 5 that would ensue as a result of the shutdown. The following are the findings regarding increased traffic as a result of a shutdown:

- Trucking the freight on Interstate 5 would increase congestion and greenhouse gasses. It would require 488 additional 25-ton truck trips to ship the freight currently transported on the railroad.

- An average of 11,600 weekday passengers utilize rail in San Diego.

- Of the 11,600 daily passengers in San Diego, approximately 5,500 pass through Del Mar daily. Assuming half would utilize the bus bridge and half would drive personal vehicles a shut down of the Del Mar portion of the railroad would add 2,750 vehicles and 69 bus trips to the surrounding roads.

Passenger and goods movement on the LOSSAN Corridor are expected to increase significantly in upcoming years. The travel demands that will accompany the population growth, together with the increased goods movement through the corridor necessitate improvements proposed by this project.

4. DEFICIENCIES

Photo 1: Aerial View of Coaster on bluffs next to a bluff slide December 2018. (Union-Tribune Photo Gibbins)

It has been approximately 20 years since a full geotechnical study was performed on the bluffs. During the past 20 years there have been significant changes in bluff topology. Design standards have also changed. A new geotechnical study is being performed as part of this project to review current geology and analyze conditions based on updated design standards. The study will provide recommendations for stabilization against failure from seismic and other natural events and maintain trackbed stability. Drainage recommendations that meet updated standards will be provided as well.

Photo 2: Aging Drainage Structure to be Replaced.

In addition to seismic and slope failure concerns, the large storm events that occurred during the winters of 2018/2019 and 2019/2020 have led to multiple bluff slides and train service interruption. The bluffs are a receiving point for significant storm water runoff coming from Del Mar hill. A new Drainage study is being performed as part of this project to identify deficient areas and provide design upgrade recommendations to safely convey surface runoff to the beach without eroding the face of the bluff.

Photo 3: Bluff Slide Thanksgiving 2019 Resulting from Surface Drainage over Bluffs.

5. CORRIDOR AND SYSTEM COORDINATION

It is the objective for SANDAG and NCTD to improve reliability of existing freight and passenger rail services. Stabilizing the Del Mar Bluffs directly supports this objective. The proposed project is consistent with key regional and corridor plans including the SANDAG 2050 Regional Transportation Plan (RTP) and the LOSSAN Program Environmental Impact Report / Environmental Impact Statement by Caltrans and the Federal Railroad Administration (Record of Decision 2009).

SANDAG and NCTD have a Memorandum of Understanding (MOU 18) in place outlining roles and responsibilities for development and implementation of capital projects in the LOSSAN corridor. NCTD implemented Del Mar Bluffs Stabilization Project 1. SANDAG implemented Projects 2, 3 and 4, and will implement Projects 5 and 6.

6. ALTERNATIVES

6A. Viable Alternatives

Alternatives to improve track stability have been analyzed over the past 20 years. Options for improving stability include repair of existing facilities, stabilization at the bluff toe, stabilization of the bluff face, bluff top stabilization, and drainage improvements.

The stabilization methods investigated for bluff toe, bluff top, and bluff face stabilization are soldier pile walls, soil cement buttresses, and soil nail reinforcement. See discussions on each stabilization method below:

- Soldier Pile Walls – This method of stabilization was found to be a viable option at all stabilization areas and involves the installation of vertical piles with a connecting grade beam at the top. The piles are generally anticipated to be 30 to 36 inch diameter cast in drilled hole (CIDH) piles with a steel beam. Piles are typically 10’ on center and in locations where there is sufficient soil bearing on all sides of the pile. As erosion occurs and the piles are exposed, lagging can be installed between the piles to sufficiently support new soil and maintain stability for the track bed. Tiebacks will be incorporated into deeper piles that may have to support lagging walls. Smaller soldier pile walls are also viable alternatives at the bluff top to support drainage features and at the bluff toe to protect from erosion.

- Soil Cement Buttress – This method of stabilization was found viable at approximately three stabilization areas and involves removal of potentially unstable material and replacement with manufactured soil cement. The soil cement could be capped with native soil held in place with pipe and board

walls. A shotcrete facing could be installed at the toe of the slope to control wave erosion.

- Soil Nail Reinforcement – This method of stabilization was deemed a viable alternative for most of the stabilization areas. This method involves using steel bars to anchor the bluff face to competent formational material by drilling holes 20 to 50 feet into the bluff and grouting high strength steel bars in place. Typically a shotcrete facing is applied to soil nail reinforcement but for this project it is anticipated that the top of the grouted steel bars would be backfilled with native soils. This method was selected for use around drainage outlets.

Sea Walls have also been investigated as potential methods to protect the bluffs. Toe protection would address the rising sea levels and extend the useful life of the current trackbed stabilization. Bluff toe protection is a feasible means of protecting the base of the bluffs from erosion and can be more readily removed if the tracks are relocated in the future. Toe protection (Seawalls) provides longer term preservation and stability of the bluffs and track structure and can reduce the rate of bluff retreat towards the tracks. Seawalls are envisaged at locations where piles are installed for trackbed stabilization, to prevent the lower portions of the piles becoming exposed and destabilized. The sea walls could be soldier pile walls, soil cement buttress, soil nail reinforcement, or cast-in-place concrete. The sea walls would protect the bluff from rising sea levels and continued erosion at the base of the bluffs.

The bluff top soldier pile retaining walls, bluff toe soldier pile retaining walls, repair of existing facilities, and drainage improvements have been selected as the preferred methods of stabilization for this project. Soldier pile retaining walls were selected as the method of stabilization for the bluff top because this method of stabilization can be performed from the NCTD Right of Way and has been successfully implemented at various areas in earlier stabilization efforts Del Mar Bluffs Stabilization Projects 1 and 3. The soldier pile retaining walls were also deemed viable at all locations. Using this option would decrease design requirements and increase construction productivity. Drainage improvements and repair of existing facilities will also be implemented to convey water safely off of the bluffs and slow the rate of erosion at the bluff face. Bluff toe soldier pile retaining walls will be constructed to slow the rate of erosion from wave action.

As part of the PA&ED phase of the project that is currently in progress further geotechnical analysis is being performed to determine the exact design of the soldier piles as well as other potential bluff stabilization innovations.

Previous efforts to analyze the alternative stabilization methods include the Del Mar Bluffs Geotechnical study dated January 2001, the Del Mar Bluff Stabilization Project 1 Drainage Report dated September 2001, the Del Mar Bluffs Stabilization Project 2

Supplemental Geotechnical Evaluation dated June 2003, Del Mar Bluffs Stabilization Project 2 Evaluation of Existing Seawalls dated June 2004, and the Del Mar Bluffs Stabilization Project 3 Type Selection Report dated March 2010. These documents can all be found on SANDAG's website at the following web address:

https://keepsandiegomoving.com/Lossan-Group/del-mar-bluffs-docs.aspx

Additional documents analyzing alternatives and potential stabilization options include the Del Mar Bluffs Geotechnical Study Part 2 Conceptual Repair Alternatives dated January 2001, Del Mar Bluffs Stabilization Project 2 Constraints Analysis dated March 2003, and the Del Mar Bluffs Stabilization Project 3 Geotechnical Evaluation Update dated April 2010.

6B. Rejected Alternatives

Bluff toe and bluff face stabilization in the forms of Soil Cement Buttresses, Soil Nail Reinforcement, and Concrete Walls were not selected as part of this project. These methods could potentially alter the appearance of the bluffs and are difficult to remove in the future if the tracks are relocated from the bluff. Since these are not the Least Damaging Practicable Alternatives environmental approval of these options is not anticipated.

6C. Long Term Alternatives

SANDAG's regional plan includes building a tunnel East of the existing alignment to remove the tracks from the bluffs at some time in the future. The current estimates for this tunnel are $2.5 – 3.5 Billion, refer to PSR dated March 2020.

7. COMMUNITY INVOLVEMENT

As part of the Del Mar Bluffs Stabilization Project 4 (DMB4) the following presentations have been made to Stakeholder entities regarding the proposed repairs and future stabilization of the bluffs. A similar approach will be taken towards outreach for the Del Mar Bluffs Stabilization Project 5 as design progresses:

- May 2018 – Presented design and aesthetic alternatives to the Del Mar Design Review Board for input. Suggestions were incorporated into the design
- September 2018 – Update to the City of Del Mar Council regarding preliminary design to receive feedback.
- February 2019 – Updated the City of Del Mar Council on long term plans (DMB5, DMB6, Tunnel).
- April 2019 – Presented Long Term Options to Torrey Pines Planning Board for DMB4, DMB5, DMB6.
- June 2019 – Presented Long Term Options to Del Mar Rotatory Club on DMB4, DMB5, DMB6.

- February 2020 – Update to the City of Del Mar Council prior to beginning construction on scope and potential impacts of DMB4.
- August 2020 – Updated Surfrider Foundation on Long Term Plans (DMB5, DMB6, Tunnel)

Additional outreach and Community involvement regarding the overall Del Mar Bluff Stabilization effort includes:

- Updates to SANDAG Transportation Committee & Board of Directors as well as NCTD BOD on DMB projects, which include representatives from Del Mar City Council:
  - November 15, 2018 – NCTD Board of Directors
  - February 21, 2019 – NCTD Board of Directors
  - March 15, 2019 – SANDAG Transportation Committee
  - December 12, 2019 – NCTD Board of Directors
  - December 13, 2019 – SANDAG Board of Directors

- Local, State, and Federal representatives take part in the Del Mar Bluffs working group, which meets quarterly
  - January 21, 2020
  - April 23, 2020

8. ENVIRONMENTAL COMPLIANCE

A Categorical Exclusion for repairs within an existing Right of Way applies to this project. Potential environmental permits for this project are discussed in Section 12. Environmental mitigation as part of this project is anticipated as it may impact coastal resources and/or jurisdictional drainages. Mitigation requirements will be finalized with external permitting agencies during the permitting process.

9. FUNDING, PROGRAMMING AND ESTIMATE

Funding

To date $3,073,300 in funding has been allocated by the California Natural Resources Agency for the PA&ED (preliminary) phase of this project and $3,774,000 in TIRCP funding has been allocated for PS&E (final design).

TCEP funding for construction was programmed at the December 2020 CTC meeting. FRA and FTA matching funds have been committed for the construction.

To date the project is fully funded through construction.

Programming

CA Natural Resources Agency	Fiscal Year Estimate								
20.XX.###.###	Prior	20/21	21/22	22/23	23/24	24/25	25/26	Future	Total
Component	In thousands of dollars ($1,000)								
PA&ED Support	3,073								3,073
PS&E Support									
Right-of-Way Support									
Construction Support									
Right-of-Way									
Construction									
Total	3,073								3,073

TIRCP	Fiscal Year Estimate								
20.XX.###.###	Prior	20/21	21/22	22/23	23/24	24/25	25/26	Future	Total
Component	In thousands of dollars ($1,000)								
PA&ED Support									
PS&E Support		3,774							3,774
Right-of-Way Support									
Construction Support									
Right-of-Way									
Construction									
Total		3,774							3,774

NCTD (FTA)	Fiscal Year Estimate								
20.XX.###.###	Prior	20/21	21/22	22/23	23/24	24/25	25/26	Future	Total
Component	In thousands of dollars ($1,000)								
PA&ED Support									
PS&E Support									
Right-of-Way Support									
Construction Support									
Right-of-Way			188						188
Construction				9,335					9,335
Total			188	9,335					9,523

TCEP	Fiscal Year Estimate								
20.XX.###.###	Prior	20/21	21/22	22/23	23/24	24/25	25/26	Future	Total
Component	In thousands of dollars ($1,000)								
PA&ED Support									
PS&E Support									
Right-of-Way Support									
Construction Support									
Right-of-Way									
Construction				36,200					36,200
Total				36.200					36,200

FRA	Fiscal Year Estimate								
20.XX.###.###	Prior	20/21	21/22	22/23	23/24	24/25	25/26	Future	Total
Component	In thousands of dollars ($1,000)								
PA&ED Support									
PS&E Support									
Right-of-Way Support									
Construction Support									
Right-of-Way									
Construction				11,500					11,500
Total				11,500					11,500

Estimate

The scope used for this estimate was developed by estimating bluff retreat levels through the year 2050, using an average of 6” per year, and determining quantities of piles, installation of tiebacks at existing piles, and lagging based geotechnical recommendations to install piles whenever the bluffs will be within 21 feet of the tracks. Lagging and installation of tiebacks was similarly estimated when the erosion would reach the pile line.

Grading and drainage quantities are based on reviews of the bluffs performed during past projects.

The mobilization and demobilization, contingency, and ancillary construction costs were estimated as percentages of the Construction Cost Estimate based on experience with similarly projects on the LOSSAN corridor. The escalation was estimated based on Caltrans Construction Cost Index, as found at the link below:

https://www.transnettrip.com/TrendsRisksIssues/Construction.aspx

Summary of the Cost Estimate is as follows for Construction:

Task	Estimate
Erosion Control / Bluff Grading and Landscaping	$2,980,000
Drainage	$7,098,450
Bluff Stabilization	$16,897,000
Mobilization & Demobilization	$2,697,600
Contingency	$6,743,900
Ancillary Construction Costs	$11,880,800
Environmental Mitigation	$425,000
Cost Escalation	$9,157,650
Total	**$57,880,400**

The Design, Right of Entry permits, and Environmental mitigation were estimated as percentages of the Construction Cost Estimate based on experience with similar projects on the LOSSAN Corridor. A summary of these costs are as follows:

Task	Estimate
Design (PA&ED and PS&E)	$6,846,400
ROE Permits	$187,500
Cost Escalation	$281,400
Total	**$7,315,300**

This provides a total project estimate of **$65,195,700** in the year of expenditure. For further breakdown of the cost estimate, see table below.

Del Mar Bluffs 5

PROJECT COST ESTIMATE — **Design Level:** **Concept**

Revised: March 05, 2020 — **Estimated By:** **BL, DB**

Item	Quantity	Unit	Unit Price	Sub Total	Amount	Totals
ENVIRONMENTAL / DESIGN ESTIMATE						
Agency Design Admin. (SANDAG)	2.50%	x	CCE		$ 910,400	
Agency Program Management (SANDAG)	0.30%	x	CCE		$ 109,300	
Agency Design Admin.(NCTD)	0.50%	x	CCE		$ 182,100	
Alternative Analysis & Environmental Clearance	3.00%	x	CCE		$ 1,092,500	
Design - Preliminary to 30%	2.00%	x	CCE		$ 728,300	
Design - 30% to 60% and Permits	2.50%	x	CCE		$ 910,400	
Design - 60% to Final PS&E	2.50%	x	CCE		$ 910,400	
Independent Peer Reviews	0.50%	x	CCE		$ 182,100	
Contingency on Environmental / Design Phase	5.00%	x	CCE		$ 1,820,900	
Sum	**18.80%**				**DESIGN TOTAL**	**$ 6,846,400**
RIGHT OF WAY						
Temporary R/W, Easements	1	Sum	$150,000		$ 150,000	
Right-of-way Contingency (10% to 35%)	25	%	R.O.W Costs		$ 37,500	
					RIGHT OF WAY TOTAL	**$ 187,500**
CONSTRUCTION CONTRACT ESTIMATE						
Erosion Control / Bluff Grading and Landscaping					**$ 2,980,000**	
Drainage					**$ 7,098,450**	
Upper Bluff Drainage Subtotal	***$3,895,250***					
Subdrain System Subtotal	***$633,200***					
Trackside Drainage Subtotal	***$1,130,000***					
Outlet Piping to Beach Subtotal	***$1,440,000***					
Bluff Stabilization - Soldier Pile Walls					**$ 16,897,000**	
					Base Construction Estimate (BCE)	$ 26,975,500
Contractor Mobilization (7.5%)	7.5%	LS	BCE		$ 2,023,200	
Contractor Demobilization (2.5%)	2.5%	LS	BCE		$ 674,400	
Construction Contingency	25%	LS	BCE		$ 6,743,900	
					Subtotal	$ 9,441,500
					CONSTRUCTION CONTRACT ESTIMATE (CCE)	**$ 36,417,000**
ANCILLARY CONSTRUCTION COSTS						
Agency Construction Admin. (SANDAG)	2.50%	x	CCE		$ 910,400	
Agency Construction Prog. Mgmt. (SANDAG)	0.30%	x	CCE		$ 109,300	
Agency Construction Admin. (NCTD)	0.50%	x	CCE		$ 182,100	
Design Support During Construction	4.00%	x	CCE		$ 1,456,700	
Construction Management	15.00%	x	CCE		$ 5,462,600	
Signal Markout	0.50%	x	CCE		$ 182,100	
Flagging Services	4.00%	x	CCE		$ 1,456,700	
Contingency on Construction Support	5.0%	x	CCE		$ 1,820,900	
Busing Passengers	4	AWW	$75,000		$ 300,000	
ANCILLARY CONSTRUCTION ESTIMATE	**31.80%**		**ANCILLARY CONSTRUCTION ESTIMATE**			**$11,880,800**
Environmental Mitigation						**$425,000**
Wetland mitigation		1	Acre	$300,000	$300,000	
Upland Mitigation		1	Acre	$125,000	$125,000	
Coastal Mitigation TBD		x	CCE		$0	
TOTAL PROJECT ESTIMATE (2019 DOLLARS)						**$55,756,700**

COST ESCALATION

Year of Expenditure / Project Phase	Annual Construction Escalation %	Cumulative Consruction Escalation from 2018	Cumalative Environ/ Design Escalation	Estimated Expenditure per year	Escalation from 2019
FY19 (7/18 through 6/19)	0.0%	0.0%	0.0%	$ -	$ -
FY20 (7/19 through 6/20) / Design Begin	7.1%	7.1%	4.0%	$ 3,516,950	$ -
FY21 (7/20 through 6/21) / Finish Design & Begin Construction	7.0%	14.1%	8.0%	$ 25,442,210	$ 3,587,400
FY22 (7/21 through 6/22) / Construction	6.6%	20.7%	12.0%	$ 21,925,260	$ 4,538,500
FY23 (7/22 through 6/23) / Complete Construction	6.3%	27.0%	16.0%	$ 4,872,280	$ 1,313,100
FY24 (7/23 through 6/24)	5.5%	32.5%	20.0%		$ -
		TOTAL COST ESCALATION			$ 9,439,000
		PROJECT ESTIMATE IN YEAR OF EXPENDITURE DOLLARS			**$ 65,195,700**

Notes: This project cost estimate assumes bluff toe protection will be permitted and the bluff face will be stabilized prior to bluff retreat requiring additional piling and lagging.

* This initial ranking of areas that may require piling is based on projected bluff retreat of 6" per year from the locations shown in the 2009 aerial view.

* Other factors need to be considered by our engineering consultants & getotech before final prioritazation of areas for piling can be made.

Project estimates were developed for repairs on areas requiring bluff top pile stabilization through the years 2050, 2075, and 2100. The estimates are shown below:

Horizon Year	Estimate
2050	$65,195,700
2075	$78,423,000
2100	$90,033,000

In light of the current difficulty in obtaining funding for stabilization of the bluffs we are proposing stabilization of areas affected by 2050 but if additional funds are available the project can easily be scaled to address areas of concern to 2100.

10. DELIVERY SCHEDULE

Project Milestones		Milestone Date (Month/Day/Year)	Milestone Designation (Target*/Actual)
PROGRAM PROJECT	M015	12/16/19	Actual
BEGIN ENVIRONMENTAL	M020	1/14/20	Actual
PA&ED	M200	6/02/21	Target
PROJECT PS&E	M380	6/30/22	Target
RIGHT OF WAY CERTIFICATION	M410	NA	
READY TO LIST	M460	8/30/22	Target
AWARD	M495	1/30/23	Target
APPROVE CONTRACT	M500	3/30/23	Target
CONTRACT ACCEPTANCE	M600	3/30/25	Target
END PROJECT EXPENDITURES	M800	9/30/25	Target
FINAL PROJECT CLOSEOUT	M900	3/30/26	Target

11. RISKS

The major risks to the project include:

- Lack of bidders causing higher than anticipated construction costs.
- Difficulties working in sensitive coastal environments.
- Access issues and environmental moratoriums.
- Unit Costs being higher than anticipated due to unforeseen material cost increases.
- Obtaining environmental clearance taking more effort and time than anticipated.
- Landslides from earthquakes, storms, or wave action erosion.
- Unforeseen flagging cost increases.
- Current COVID-19 Pandemic.

The recommended contingency based on estimated costs and probability for risk is:

- Design Contingency: $1,576,892
- Construction Support Contingency: $1,316,000
- Construction Contingency: $7,806,850

The Project Development Team is actively attempting to mitigate the identified risks as the project progresses. This is tracked through a comprehensive Risk Matrix (or Register). As risks are mitigated through the course of the design they will be retired from the risk register. For further information and identified risks and contingency recommendations, see Attachment B.

12. EXTERNAL AGENCY COORDINATION

This project has been identified as a Top 5 Priority Project for SANDAG as an organization. SANDAG is actively pursuing funding opportunities and coordinating with various agencies, described below, to implement this project in a timely fashion.

Federal Railroad Administration (FRA)
Lead Agency on NEPA Document, pending funding source determination.

Federal Transit Administration (FTA)
Potential Lead Agency on NEPA Document, pending funding source determination.

The project requires the following coordination:

US Army Corps of Engineers
A Clean Water Act Section 404 Nationwide Permit may be required

California Coastal Commission
Federal Coastal Consistency Certification

California State Parks
Right of Entry Permit

Regional Water Quality Control Board
A Clean Water Act Section 401 Water Quality Certification may be required

Local Agency
Encroachment Permit from**City of Del Mar**.

Local Agency
MOU 18 Agreement Exhibit A with **NCTD.**

13. PROJECT REVIEWS

Scoping team field review _____ Date 3/19/20
(See Scoping Team Field Review Attendance Roster Attachment C)
Program Manager _____ *David Berryman* Date 4/8/20
Project Manager _____ *Alexandra DeVaux* Date 4/9/20
Corridor Director _____ *Bruce Smith* Date 4/9/20
Constructability Review _____ *Steve Hoyle* Date 4/10/20
NCTD Director of Rail (Safety & Ops) _____ *Stephen Fordham* Date 4/10/20

14. PROJECT PERSONNEL

Name	Title	Agency/Firm	Office
Belzman, Tim	Environmental Consultant	HELIX, Environmental	(619) 462-1515
Berryman, David	Program Manager	RailPros	(760) 484-2270
DeVaux, Alexandra, PE	Project Manager	SANDAG	(619) 595-5613
Foster, Tracy	Chief Development Officer	NCTD	(760) 966-6674
Ganesan, Venky	Principal Construction Engineer	SANDAG	(619) 595-5365
Greer, Kieth	Senior Regional Planner	SANDAG	(619) 699 7390
Goldinez, Ralph	Flagging	Bombardier	(760) 975-9692
Hodges, Phil	Assistant Project Manager	RailPros	(256)390-2785
Hoyle, Steve	Construction Manager	SANDAG	(760) 430-2008
Jackson, Tedi	Senior Public Outreach Officer	SANDAG	(619) 595-5313
Kannan, Nirupa	Senior Project Manager	HNTB	(619) 684-6588
Lathers, Erich	Environmental Technical Advisor	BRG	(619) 298-7127
Loeschke, Scott	Director of Facilities	NCTD	(760) 966-6502
McColl,Tricia, PE	Group Director Rail	HNTB	(619) 684-6562 (619) 857-7897
Mena, Jesus, PE	Construction Manager	SANDAG	(760) 576-9445
Olson, Willliam David	Geotech	L&A	(858) 300-8491
Pesce, Tim	Environmental Planner	SANDAG	(619) 595-5374
Shaw, Gina, PE	Design Project Manager	HNTB	(619) 684-6568
Shroyer, Scott, PE	Senior Rail Engineer	NCTD	(760) 967-2849
Smith, Bruce, PE	Corridor Director	SANDAG	(619) 699-1907
Welling Alex	Communication	SANDAG	(619) 699-1918

15. ATTACHMENTS (Number of Pages)

A. Location map
B. Risk Matrix
C. Scoping Team Attendance Roster

Project Study Report

CP Broadway to CP Gaslamp
Track Signalization and Platform
City of San Diego
(MP 267.7 to MP 268.5)

San Diego Association of Governments - www.sandag.org

February 10, 2021

CP Broadway to CP Gaslamp
Track Signalization and Platform
City of San Diego
(MP 267.7 to MP 268.5)

Prepared by: _____ Date 3/11/21
David Berryman, P.E.
RailPros Inc.

Approved by: _____ Date 3/11/2021
Ryan Boley, P.E.
HDR

Recommended by: _____ Date 3/12/2021
Tim DeWitt, P.E.
San Diego Association of Governments

Concurrency by: _____ Date 3/15/2021
Tracey Foster
NCTD Chief Development Officer

Revision Log

Revision	Author	Organization	Date	Description
0	C. Coffman	RailPros	10/31/12	PSR Issued
1	D. Berryman	RailPros	7/7/20	PSR Updated
2	D. Berryman	Railpros	2/10/21	Updated Schedule and Funding information for TCEP Funding agreement

Current Rev.	Approved by:	Organization	Date	Signature
0	B. Smith	SANDAG		

Project Description

The Project involves the signalization of a 0.8-mile stretch of BNSF track from the Broadway crossing near Santa Fe Depot (MP 267.7) to the 5th Avenue crossing (MP268.5) in Downtown San Diego. It also involves the construction of a new siding and station platform between 1st Avenue and 5th Avenue to serve the San Diego Convention Center, the San Diego Padres' Petco Park, the Gaslamp Quarter, and other nearby attractions. Three new control points would be required for the new signalization. Positive Train Control (PTC) would be extended to cover this new service territory. Right of Way acquisition, or lease of BNSF property, as well as additional trackwork, crossing improvements, and landscaping are also included in the Project.

This Project Study Report (PSR) is an update to a 2012 draft PSR and incorporates findings from a Feasibility Study prepared by RailPros for the North County Transit District (NCTD) in 2014. From the 2012 PSR, the preferred station location was Alternative A (See Figure 1 below). This location is west of the existing BNSF track between 1st and 5th Avenues. From the 2014 Study, three alternative station designs were advanced: two in the 2012 preferred location Alternative A, and one in the Alternative D location between 5th Avenue and Park Blvd.

Figure 1 - Previously studied locations with Alternative A being the preferred

For this 2020 PSR update, the focus will be the longest platform design (850 feet) in the 2012 preferred location. This design/location is named "Alternative A5" by the 2014 Study. The concept level cost estimate for this alternative is $38.9 million in the year of expenditure. SANDAG is directly responsible for funding and implementation of the Project. Stakeholders involved in review and approval of the project design include NCTD, BNSF, and the City of San Diego.

Project Location

The Project is located in the City of San Diego between MP 267.7 to MP 268.5 on the San Diego Subdivision of the Los Angeles-San Diego-San Luis Obispo (LOSSAN) Corridor. For the station platform, this PSR studies Alternative A5, which is located between 1st Avenue and 5th Avenue on the west side of the existing BNSF Railway track.

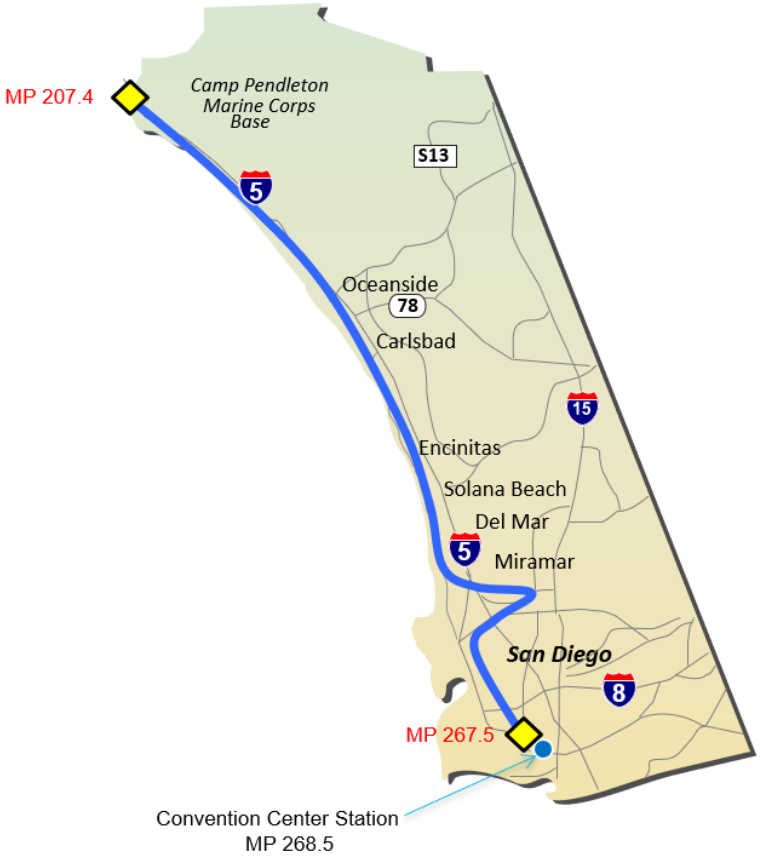


Figure 2 - Location Map

Project Background

Coaster service commenced in 1995 and has become a successful part of San Diego County's public transportation infrastructure. Service operates between the Oceanside Transit Center (MP 226.4) and the Santa Fe Depot (MP 267.5), opposite the Cruise Ship Terminal. A Convention Center station and the extension of Coaster service was included as part of the original agreement between NCTD and AT&SF (now BNSF). However, this station has not

been constructed to date. Projects such as: the Convention Center Expansion between 5th Avenue and Park Boulevard (formerly 8th Avenue), the proposed hotel on the old Campbell Shipyard site, and the Gaslamp Quarter redevelopment project have intensified development in the area, increasing demand for public transportation. The construction of the new Ballpark with its associated hotels, offices, residential and commercial development has further increased this need.

Project Study and Assessment History

NCTD (North County Transit District), CCDC (Center City Development Corporation), and JMI (JMI Realty Corp, the Ballpark Developer) contracted DMJM+HARRIS on March 4, 2002 to prepare a feasibility study to construct the new Coaster station. Due to funding constraints, the project was suspended later that year until project funding could be obtained.

In October 2012, SANDAG contracted RailPros to complete the first version of this PSR. The 2012 PSR examined four site locations for the proposed Coaster Station and determined a preferred location as discussed earlier in this report. The four locations are shown above in Figure 1. See Appendix A for Preferred Alternative narrative.

In September 2014, NCTD contracted RailPros to continue the advancement of the study and complete a feasibility study for NCTD of three new proposed station configurations. Two of the three alternatives were located at the preferred site location "Alternative A" of the 2012 PSR. See Appendix B for Preferred Alternative narrative.

In March 2020, NCTD contracted HDR to provide Preliminary Assessment and Environmental Document (PA&ED) services. That effort is running concurrent with this PSR update.

Project Purpose and Need

The proposed project is consistent with key regional and corridor plans including SANDAG's 2015 Regional Plan (2007), the 2050 Regional Transportation Plan (2011), and the LOSSAN Program Environmental Impact Report / Environmental Impact Statement.

The purpose of the project is to provide more available freight windows, additional passing siding track, and a special events platform to service passenger trains south of Santa Fe Depot to access densely attended downtown areas such as Petco Park, the Convention Center, the Gaslamp Quarter, and other area attractions. MTS Trolley services run parallel in this area but are at capacity for these special venues. Supporting NCTD Coaster service will assist in relieving the excess passenger demand.

The Project is also the first big step in providing future passenger service to National City as well as making freight upgrades at the 22nd Street Yard. See Figure below from the April draft of the CP Atwood to National City Feasibility Study.

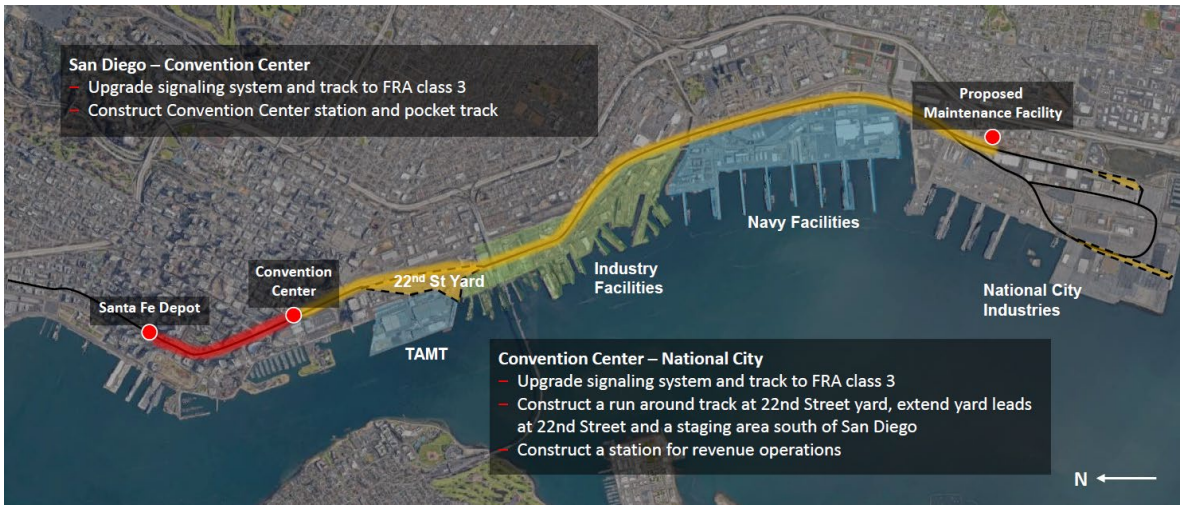


Figure 3 - Proposed South Access upgrades

For the popular downtown venues, below is a summary for each area of downtown that would be served by the new platform and passenger service.

Gaslamp Quarter

The Gaslamp Quarter is one of San Diego's primary tourist destinations. It is listed on the National Register of Historic Places, and the 94 structures identified as historically or architecturally significant now house more than 100 restaurants and nightclubs, movie theaters, stores, offices, galleries and lofts. Annual events including Mardi Gras, Taste of Gaslamp and ShamROCK draw thousands of visitors to experience the vibrant and unique atmosphere.

Convention Center

The Convention Center is one of the region's greatest economic assets. In Fiscal Year 2019, the Convention Center hosted 143 events, attracted 837,000 guests, generated $29 million in tax revenues, and put more than $1 billion of consumer spending into the local economy. The facility employs more than 560 full-time and part-time employees and supports nearly 12,500 jobs across the county. An expansion is proposed to attract more and larger conventions to San Diego, creating thousands of jobs and growing the economy.

Petco Park

Petco Park is home to the San Diego Padres. 81 regular season games are played each year from April through September. Last year the average attendance was 29,000 people per game, with a season total of nearly 2.4 million. During the off-season, Petco Park hosts concerts and other special events such as soccer, rugby, the Monster Truck show, and Supercross Motorcross.

Marina

The Marina has developed along with the adjacent Convention Center and Gaslamp Quarter. The Marina includes Seaport Village park and shopping area, hotels, the marina, the two Embarcadero Marina Parks, the San Diego Chinese Mission Historical Museum, and the Asian/Pacific Thematic Historic District, and the San Diego Children's Museum.

East Village

At 325 acres, this is downtown's largest and one of its fastest growing, and most diverse neighborhoods. As it transforms over the next 20 years, the East Village will support a wide range of interests, including: entertainment at Petco Park, events at the new Central Library, academic endeavors at San Diego City College, the New School of Architecture, San Diego Fashion Institute, two high schools, and Thomas Jefferson School of Law. To facilitate social interaction and quality of life, a new 57,000 square foot public park is located at 14th Street and Island Avenue. The park features open lawn space, a children's playground, and a cafe with public restrooms directly adjacent to the park. Additional parks are planned throughout East Village in the future.

Project Benefits

The Project will provide signalization and central control from Santa Fe Depot to the Gaslamp / Convention Center area that is currently in "dark" territory with manual, hand-throw style switches. It also provides passengers with direct Coaster service to the San Diego Convention Center, Gaslamp Quarter, Ballpark, and other areas of interest as described above.

For freight benefits, the additional passenger station and signalization to 5th Avenue will reduce the congestion at Santa Fe Depot, allowing for more opportunities for freight trains to pass through this area. The new CTC territory will remove the restricted speed requirement railroad east of CP Ash, allowing for freight trains to operate at higher speeds. The track circuits will provide increased safety and efficiency to operations and maintenance. The new passenger station between 1st and 5th Avenue will also allow freight trains to pass passenger trains at this location, alleviating the single-track bottleneck from Santa Fe Depot to the 22nd Street Yard. Additionally, during non-peak hours, the BNSF 22nd Street Yard could use the new siding to alleviate yard congestion, helping to streamline train building operations. This project is part of the LOSSAN Optimization mid-term plan, along with the CP SONGS relocation project and the San Dieguito Double Track Project, that will

ultimately allow for additional daily freight round trips during off-peak hours.

For passenger benefits, this project will eliminate the transfer from a large commuter rail (the Coaster) to a smaller light rail (the Trolley) at Santa Fe Depot. This alone provides great benefit as the transfer itself is timely (up to 15 minutes in additional time) and involves the movement of a mass of passengers across station tracks to another vehicle that is at or near capacity.

The overall project will help promote increased ridership and result in decreased energy consumption as well as Green House Gas emissions.

Current Adjacent Projects

The City's former redevelopment agency Civic San Diego is planning to start construction of the Park Blvd at-grade crossing in 2020. This project reconfigures the BNSF main track and adds a track lead to the existing San Diego Trolley Yard south of 5th Avenue. The limits of the reconfiguration overlaps the proposed limits for the new Convention Center Station. The Alternative A5 presented in this PSR uses the proposed design for the new reconfiguration as its design basis. The two projects should be closely coordinated. Any change in the Civic San Diego project could have a significant impact to this project.

Current Rail Service

The following railroads operators use the BNSF track through the project location:

North County Transit District
NCTD operates Coaster commuter services to the Santa Fe Depot; but services do not currently extend south to the project location. The coaster service provides 22 Coaster trains per day Monday through Friday (24 during Baseball Season), along with 4 additional trains on Friday nights from April through September. NCTD operates Coaster weekend service with 12 trains per day on Saturday and 8 trains per day on Sunday. Upon completion of the project, NCTD will extend passenger service to the new station.

BNSF Railway
The BNSF Railway (BNSF) operates freight rail service through the project location, seven days per week. Typically four freight trains per day are operated. In addition, the BNSF uses the tracks south of 5th Avenue to perform yard switching and assemble freight consists. The BNSF 10th Avenue yard is located south of the project site. This BNSF serves the adjacent marine terminal and other San Diego industries.

MTS
The San Diego Trolley has a station on its own two track alignment adjacent to the project location. There is a trolley station at 5th Avenue that serves the Gaslamp Quarter, Convention

Center, and Petco Park. The Trolley maintenance yard (which also serves as an NCTD Coaster Layover Yard) is located immediately south of Park Avenue. Trolley service south of the Convention Center loop to San Ysidro and the Mexican border is currently operating at or above capacity. Additional service in this corridor is required.

Scope of Work

The Scope of Work for this project includes the following:

- Prepare design documents for bidding construction as follows:
  - Alternatives Analysis and Site Selection
  - Preliminary Engineering and Environmental Clearance
  - Property Acquisition / Lease Agreement
  - 30% Design Plan set
  - 60% Design Permit Plan set
  - 90% Design Plan set
  - 100% Bid ready Design Plan set and construction specifications

- Prepare design reports as follows;
  - Alternatives Analysis Report
  - Geotechnical Report
  - Environmental Constraints report

- Obtain environmental clearance as outlined in the Environmental Clearance section of this Project Study Report (PSR);

- Obtain permits as outlined in the Environmental Clearance section of this PSR;

The Physical Scope required to complete the project includes:

- Signalize the railroad from Santa Fe Depot to the new Gaslamp / Convention Center station
- Convert three existing hand-throw turnouts to power turnouts at south end of Santa Fe Depot
- Construct new Turnout and Universal Crossover for new siding / station track
- Construct Station Platform, Lighting, Canopies, and other Amenities
- Reconstruct one existing At-grade Crossing and construct one new At-grade Crossing (both at 5th Avenue)
- Incorporate PTC into new service territory
- Relocate utilities as necessary
- Construct various other ancillary civil, drainage, and landscaping improvements

Project Management Responsibilities

Project management will be performed by NCTD / SANDAG, who will use existing on-call engineering and environmental service contracts for program management, delivery of design, environmental clearance, and permitting on the project.

Project Schedule

Milestone	Date
Initial Studies	
Project Study Report	October 2012
NCTD Feasibility Study	September 2014
Preliminary Assessment and Environmental Document (PA&ED)	
Funding allocated for PA&ED	October 2019
Begin PA&ED / Notice to Proceed (ENTP) Issued	March 2020 (ENTP)
Circulate Draft Environmental Document	May 2021
End PA&ED	August 2021
Final Design – Plans, Specifications, and Estimate (PS&E)	
Begin Final Design (PS&E) / Notice to Proceed (DNTP) Issued	September 2021
Obtain all Environmental Permits	September 2022
End Final Design – Bid Package Ready to Advertise (RTA)	December 2022
Construction	
Funding allocated for Construction	June 2023
Advertise, Bid, and Award Construction Contract	September 2023
Construction Notice to Proceed (CNTP)	October 2023
End Construction (Construction Contract Acceptance)	October 2025
Construction Closeout and Final Project Report	April 2026

Key Environmental Constraints

Biological Resources

The study area is developed land. No native vegetation communities are located within the project footprint. Suitable habitat for special-status plant and wildlife species is not present and special-status species are not expected to occur. Due to the lack of biological resources within the study area, no biological constraints or mitigation measures are anticipated.

Cultural Resources

There is little potential for unknown, buried prehistoric archaeological materials to be present within the urbanized area because the area has been substantially disturbed during previous development.

In the unlikely event that potential historical or unique archaeological resources are encountered during construction, grading should be temporarily redirected and/or suspended. The find should be immediately evaluated by a qualified archaeologist. If the find is determined to be an historical or unique archaeological resource, work may continue in other parts of the project area while historical or unique archaeological resource mitigation takes place. Additionally, contingency funding for avoidance measures or appropriate mitigation should be available.

In the unlikely event that human remains are encountered during construction, excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent human remains shall cease until the coroner is contacted. If the remains are Native American, the coroner shall contact the Native American Heritage Commission (NAHC) within 24 hours. The NAHC shall identify the most likely descendant (MLD) of the deceased Native American(s), and the descendant may make recommendations for treating or disposing of the human remains. If no descendant is identified or if the descendant does not make a recommendation, or if acceptable disposal measures are not identified, the human remains shall be reburied on the site with appropriate dignity in an area not subject to further subsurface disturbance.

Hazardous Materials

On November 28, 2012, RailPros Environmental consultant Dudek completed a Hazardous Materials Evaluation Report for the proposed platform area. As a part of the report, an Environmental Data Resources study was performed within a 1-mile radius of the project area to assess historically recorded release cases. The report concluded that "no open soil release cases were identified within the Project Area. However, four open releases were identified adjoining the Project Area."

For the purposes of this PSR, we have assumed that a major environmental clean-up effort (an effort exceeding the Project contingency) would not be required as part of the Project.

Stormwater

The designer should examine the need for installation of permanent best management practices (BMPs) as part of the preliminary design and environmental permitting process. Temporary construction BMPs will be required during construction.

Environmental Clearance

Construction of the proposed project is not anticipated to impact biological resources as the site is disturbed and developed.

This project will follow the Federal process for environmental permitting as described under the National Environmental Policy Act (NEPA) if Federal Funding is used. Permitting may be required under the Federal Clean Water Act, Sections 402 (RWQCB) for soil disturbance more than 1 acre, as well as under the California Coastal Act.

The project will also be subject to state and local regulation as may be applicable, such as the building code and fire protection regulations.

It is anticipated that the Federal environmental document would be either an Environmental Assessment (EA) or a Categorical Exclusion (CE) prepared under the National Environmental Policy Act (NEPA) if Federal Funding is used. The federal lead agency would make the final determination and could be either the Federal Railroad Administration (FRA) or Federal Transit Administration (FTA).

The following table summarizes the approximate time frames for permitting the proposed project with Federal, State, and Local environmental agencies.

Permit or Approval	Responsible Agency	Approximate Time Frame
Federal		
NEPA	Federal lead agency USACOE or FRA/FTA* should Federal Funds be obtained	At 30% Design +12 months
Section 106 State Historic Preservation Act	SANDAG or Federal lead agency if applicable	At 30% Design +12 months
State		
Section 402 – NPDES General Construction Activity Storm Water Permit	State Water Resources Control Board	At 60% Design +3 months
Coastal Consistency	California Coastal Commission	At 60% Design +5 months
GO 88-B	California Public Utilities Commission	At 60% Design +5 months

Environmental Mitigation

The Project is not anticipated to have any temporary or permanent impacts requiring environmental mitigation.

Project Funding

This project is currently funded through PA&ED. Funding for PS&E is being coordinated locally.

Trade Corridor Enhancement Program (TCEP) funding for construction was programmed at the December 2020 CTC meeting.

Project Cost Estimate

Broadway to Gaslamp Track Signalization and Platform

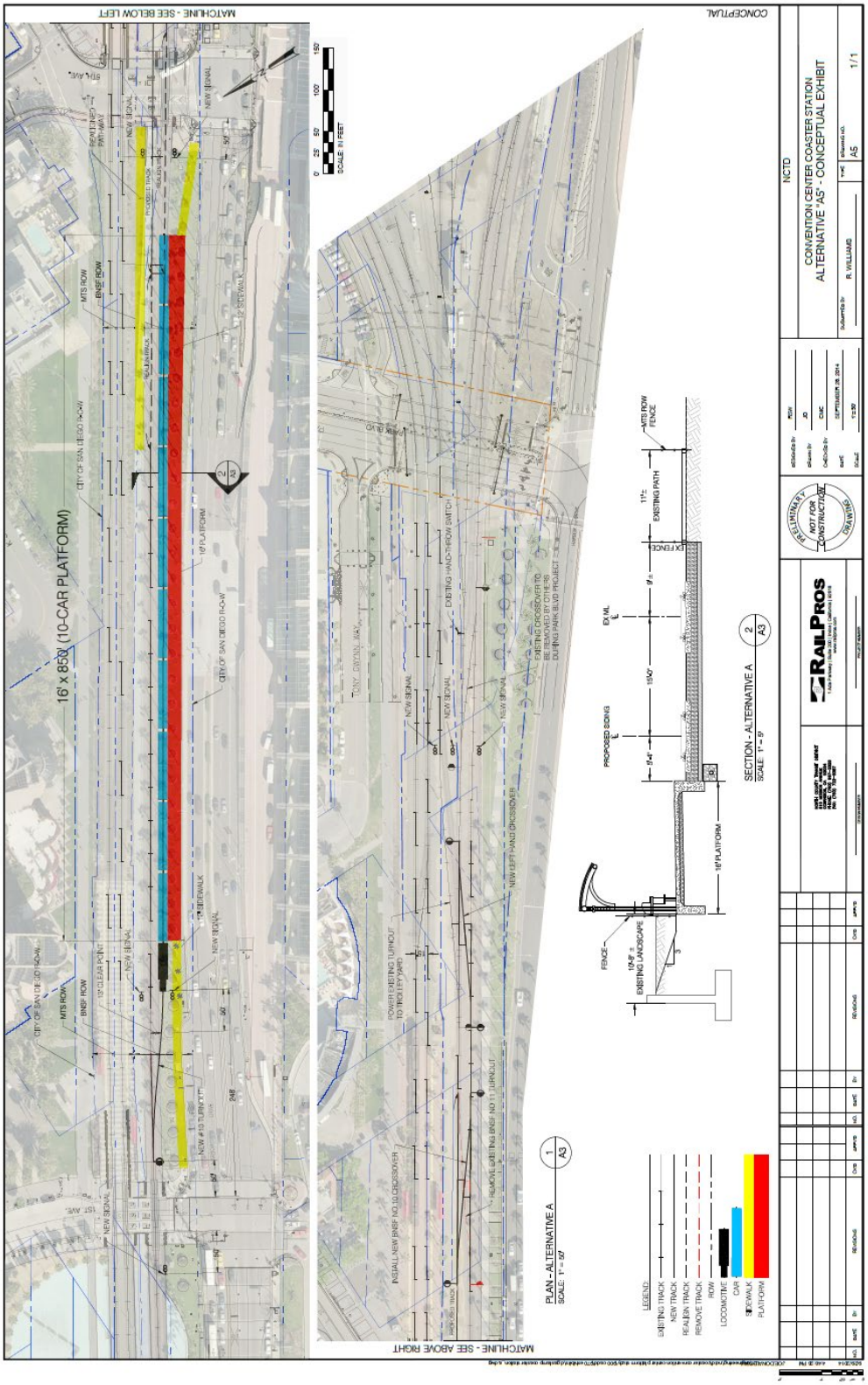
PROJECT COST ESTIMATE — **Design Level:** Concept

Revised: 7/7/20 — **Estimated By:** DJA, DB

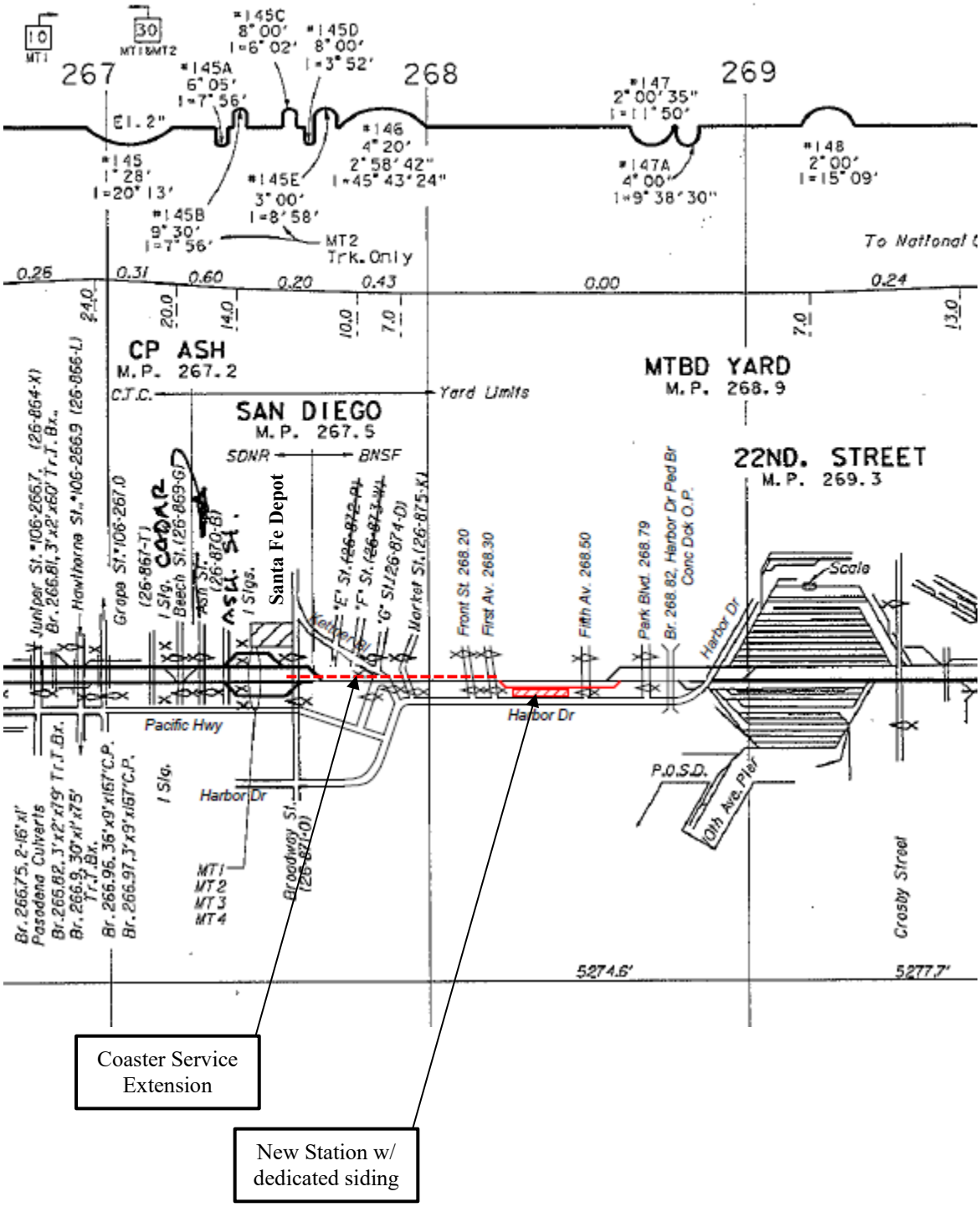
Item	Quantity	Unit	Unit Price	Amount	Subtotal
DESIGN					
Agency Design Admin. (SANDAG)	4.50%	x	CCE	$ 1,054,200	
Agency Program Management (SANDAG)	0.50%	x	CCE	$ 117,100	
Agency Design Admin.(NCTD/MTS)	1.00%	x	CCE	$ 234,200	
Alternative Analysis & Environmental	0.00%	x	CCE	$ -	
Design - Preliminary to 30%	0.00%	x	CCE	$ -	
Design - 30% to 60% and Permits	6.50%	x	CCE	$ 1,522,600	
Design - 60% to Final PS&E	6.50%	x	CCE	$ 1,522,600	
Independent Peer Reviews	1.00%	x	CCE	$ 234,200	
Design Contingency	3.00%	x	CCE	$ 702,700	
Design Soft Costs	***20.0%***				**$ 5,387,600**
RIGHT OF WAY					
Transfer City Lease	33200	SF	$3.00	$ 99,600	
NCTD Easement Lease Within 10' of BNSF CL	12600	SF	$6.00	$ 75,600	
MTS Easement	2500	SF	$6.00	$ 15,000	
Appraisals & ROW Consultant	1	LS	$50,000	$ 50,000	
Right-of-way Contingency (10% to 35%)	30	%	R.O.W Costs	$ 52,600	
RIGHT OF WAY TOTAL					**$ 292,800**
CONSTRUCTION CONTRACT ESTIMATE					
CONSTRUCTION CONTRACT ESTIMATE (CCE)					**$ 23,425,700**
ANCILLARY CONSTRUCTION COSTS					
Agency Construction Admin. (SANDAG)	4.50%	x	CCE	$ 1,054,100	
Agency Construction Prog. Mgmt. (SANDAG)	0.50%	x	CCE	$ 117,100	
Agency Construction Admin. (NCTD/MTS)	1.00%	x	CCE	$ 234,200	
Design Support During Construction	4.00%	x	CCE	$ 937,000	
Construction Management	17.00%	x	CCE	$ 3,982,300	
Flagging Services	3.0%	x	CCE	$ 464,223	
Construction Support Contingency	3.0%	x	CCE	$ 464,223	
ANCILLARY CONSTRUCTION COSTS					**$7,253,146**
Construction Soft Costs	***33.0%***				
TOTAL Soft Costs	***53.0%***				$12,933,546
TOTAL PROJECT COST ESTIMATE					**$36,359,246**

COST ESCALATION - See Note				
Year of Expenditure*	CCE Annual Escalation	CCE Cumulative Escalation	Expenditure per Year	Escalation Subtotals*
FY20	0.0%	0.0%	$ -	$ -
FY21 - Environmental Clearance	0.0%	0.0%	$ 2,840,200	$ 90,886
FY22 - Final Design	0.0%	0.0%	$ 2,840,200	$ 181,773
FY23 - Year 1 Construction (45%)	4.4%	4.4%	$ 13,805,481	$ 607,441
FY24 - Year 2 Construction (45%)	4.3%	8.7%	$ 13,805,481	$ 1,201,077
FY25 - Closeout (10%)	5.0%	13.7%	$ 3,067,885	$ 420,300
TOTAL COST ESCALATION				$ 2,501,477
PROJECT COST IN YEAR OF EXPENDITURE DOLLARS				**$ 38,860,723**

Project Concept Exhibit



Track Charts



Appendix A
Original 2012 PSR – Preferred Alternative A Narrative

Figure: Alternative Site Locations

Concept Alternative A

This alternative would be constructed between 1st Avenue and 5th Avenue. The south end of the platform would be constructed at least 150 feet from the edge of 5th Avenue to ensure that future train consists with two locomotives at the south end of the train (such as Metrolink trains) could also use the platform if required. The platform would be constructed on the west side of the track, offset from the existing track alignment and would be the SANDAG standard 16 foot width. The platform can be constructed to accommodate any of the three lengths proposed for consideration by NCTD in 2012. These are 6-car service with length of at least 510 feet (Alternative A1), an 8-car service with a length of at least 680 feet (Alternative A2), or a 10-car service with a length of at least 850 feet (Alternative A3). Walkways would be constructed to connect the platform to both 5th Avenue and 1st Avenue. This will provide convenient access to Petco Park, the Gaslamp Quarter, the Convention Center, and nearby hotels and attractions.

Construction of the Platform and facilities will require all property to be acquired or leased from the BNSF. This site will require removal of approximately 12 feet of width of landscaping currently being used as decorative green space in order to construct the platform and walkways. A potential benefit to this site is the opportunity to connect the project to the proposed CCDC 4th Avenue/Convention Center Pedestrian Bridge. The CCDC Project proposes construction of a pedestrian bridge over the proposed location of Alternative A to

allow grade separated pedestrian access from 4th Avenue directly to the Convention Center. The location of Alternative A has adequate space to expand the station to add pedestrian stairways and ADA ramps to connect to the pedestrian bridge. This would provide a direct path from the station to the doors of the Convention Center.

The BNSF line is single track at this location. While NCTD Coaster trains are parked at the station, BNSF freight traffic would not be able to pass the site. However, switching for the BNSF 10th street could continue south of 5th Avenue. As part of the agreement with BNSF to construct the station, SANDAG will need to negotiate how to reschedule the evening freight that passes through the site at 7:00pm on Monday through Saturday.

Conclusions for Alternative A:
Alternative A was found to be viable; and is considered the preferred alternative based on functionality and access to the Convention Center, Gaslamp District, and Petco Park. Advantages include adequate space to construct all three station lengths examined (6-car, 8-car, and 10-car), adequate space for standard 16 foot platform width, pedestrian access to both 1st Avenue and 5th Avenue, and future connectivity to CCDC proposed 4th Ave./Convention Center Pedestrian Bridge. Disadvantages include slightly higher cost of construction, unloading train blocking freight through traffic, and impacts to existing landscaping.

Appendix B
2014 Convention Center Feasibility Study
Preferred Alternative A5 Narrative

The general concept for this alternative is very similar to Alternative A4. Like Alternative A4, the platform would be constructed between 1st Avenue and 5th Avenue, beginning at least 310 feet south of 1st Avenue and the proposed siding would be accessed on the north end by a proposed No. 10 power turnout 50 feet south of 1st Avenue.

This alternative differs on the south end where, rather than turning back onto the BNSF mainline before 5th Avenue, the siding would continue across 5th Avenue, providing an effective double track. In order to accommodate a second track, portions of the existing mainline, from about 375 feet north of 5th Avenue to about 175 feet north of 5th Avenue, would be realigned to the east and new track would extend from the realigned BNSF mainline across 5th Avenue and join the existing BNSF 2nd track roughly where it comes off the mainline at the existing No. 11 turnout. The new BNSF mainline track crossing at 5th Avenue would be roughly 15 feet east of the existing track crossing and remain west of the MTS tracks. The existing BNSF mainline track would be realigned to the west through the crossing and would join the new siding track roughly 175 feet north of 5th Avenue. The realignment of the existing BNSF mainline track through the crossing would be minor and would not significantly increase the length of the crossing. The existing No. 11 turnout would be replaced by a new No. 10 power crossover to allow access to and from the new BNSF mainline track and, subsequently, the MTS yard. The existing No. 11 crossover to the south, allowing access back and forth between the BNSF mainlines and yard tracks would be upgraded to a signalized power crossover.

This double track alternative would allow a platform that can accommodate up to 10 cars with a length of at least 850 feet. The 16 foot wide, NCTD preferred standard platform would be constructed on the west side of the proposed siding track. Walkways would be constructed to connect the platform to both 5th Avenue and 1st Avenue. The location of the proposed platform and its facilities would require majority of the property to be acquired or leased from BNSF. The new BNSF mainline track alignment will require acquiring or leasing some property from MTS and the addition of a track through the crossing may also require property to be acquired from the City. This site would require removal of approximately 28 feet of landscaping, currently being used as a decorative green space in order to construct the platform and walkways.

In addition to the benefits detailed in the discussion of Alternative A4, this double track alternative provides the greatest operational benefit and would provide excellent access to and from the station, both tracks and the BNSF and MTS yards.

Modifications to the crossing at 5th Avenue would need to account for and preserve, or adequately replace, the safety measures previously implemented to qualify for a Quiet Zone.