

Prioritized Capital Plan

Since 2009, LOSSAN member agencies have been successful at securing state and federal rail capital grants for priority infrastructure projects. More than \$120 million in FRA grants have been awarded for preliminary engineering, environmental documentation, final design, and construction of capacity, speed and safety improvement projects along the corridor. Caltrans, Amtrak, and the LOSSAN member agencies also have a long history in funding capital improvements.

Determination of which projects to submit for consideration has been traditionally the decision of individual member agencies, depending on the priority projects identified for their particular jurisdiction. While this process has provided a prioritized list of improvements for many of the member agencies to be used in applying for funding, it has failed to present a comprehensive list of prioritized projects for the entire 351-mile LOSSAN Corridor.

The *LOSSAN Corridorwide Strategic Implementation Plan* presents the first attempt by all member agencies to develop a coordinated prioritization list based on detailed service plans under both a short-term and a long-term time frame. Detailed operations modeling, ridership, and revenue forecasts have been completed showing positive impacts for the proposed service plans. Both short- and long-term service plans depend upon a set of infrastructure improvements throughout the 351-mile corridor, many of which are not fully funded at this time. As new funding opportunities become available at the regional, state, and federal levels, it is important to have a comprehensive, prioritized plan as justification for future funding opportunities. It is therefore important to document the relative priority of projects on a corridorwide basis.

The guiding principles listed below drive the detailed project evaluation criteria and ultimately the priority project rankings:

- *Supports Corridorwide Vision*
Overall, the project supports the corridorwide vision for seamless rail travel in the corridor, and specifically additional passenger rail service to unserved or underserved markets, and better coordination and integration among services.
- *Supports a Regional Network/System Approach*
Project contributes to the ultimate goal of creating one passenger rail system/network in southern California through capacity improvements, better coordination with existing and future passenger rail systems, and benefits other services such as freight.
- *Rail Operational Improvements:*
Project provides additional opportunities to increase service in the corridor through capacity improvements; project improves operators' ability to consistently adhere to schedules or reduce travel time; provides additional customer amenities.

Two main quantitative rail operations evaluation criteria were developed in order to apply these guiding principles (Table 15). These are the impacts on passenger train delay caused by either other passenger trains or freight trains and the increase in the number of trains/level of service. Both compare the short-term service plan for 2014 and the long-term service plan for 2030. In addition, three qualitative criteria were developed: the stage of development of the project, the required level of environmental analysis required, and the level of community support for the project. These

criteria also are detailed in Table 15. These criteria were applied to a specific corridor *segment*, not to individual projects, which corresponded to segments of the corridor planned to have specific increases in services (e.g., Oceanside to San Diego). Therefore, all projects in a given corridor segment receive the same ranking. Three informational criteria were developed and also shown in Table 15; however, these are not included in the segment rankings.

There are two additional criteria that also are important and should be considered as funding opportunities arise:

- *Geographic Equity*
Provide consideration for equity among the corridor segments.
- *Funding Source*
Which project is ultimately selected in a call for projects is dependent on the primary requirements for the specific funds (e.g., freight benefit, intercity benefit, or commuter benefit or projects which need construction funds only).

Applying these criteria resulted in the segment rankings shown in Table 16. Overall, four of the top five ranked segments are in the LOSSAN North section of the corridor. The segment between Oceanside and San Diego in San Diego County also is in this first tier of segments.

The same segment scores are shown for individual projects in Table 17. Individual projects are not shown in overall rank order in order to remain flexible in terms of future funding opportunities. The detailed scores for both the segments and the individual projects, where applicable, are provided in Appendix C.

Table 15: Project Evaluation Criteria

<i>Criteria</i>	<i>Specific Measure</i>	<i>Description</i>
Rail Operations	Impact on Train Delay	Change in train delay associated with passenger trains held by other passenger trains or freight trains (cumulative minutes per weekday). A greater positive impact on delay receives a higher ranking.
Rail Operations	Level of Service	Percentage increase in the number of trains, both passenger and freight, proposed between 2014 to 2030 service plans. A high percentage increase receives a higher ranking.
Qualitative	Project Readiness	Stage of project ¹ : 1=Planning 2=Preliminary Engineering/ Environmental 3=Final Design
Qualitative	Required Environmental Document	Level of Environmental Analysis needed ¹ : 0=EA/EIR/EIS 1=Categorical Exclusion
Qualitative	Level of Community Support	Level of public/community support for project ¹ : 0=Significant Opposition 1=Little/moderate level of Opposition 2=No Opposition
Informational	Geographic Region	County
Informational	Project Cost	Total project cost (\$millions)
Informational	Amount of additional track	Amount of track added by project (miles)
¹ Project receives these points depending upon the specific criteria.		

Table 16: Summary Ranking of Corridor Bottleneck Segments

Ref. No.	Corridor Segment	County	Impact on Train Delay ¹	Level of Service ¹	Qualitative ²	Average Ranking	Overall
6	Moorpark to Chatsworth	Ventura	2	1	2	1.7	1
8	Chatsworth to Burbank Airport	Los Angeles	1	8	1	3.3	2
5	East Ventura to Moorpark	Ventura	5	4	10	6.3	3
15	Oceanside to San Diego	San Diego	3	7	9	6.3	3
4	Goleta to East Ventura	Ventura	13	5	2	6.7	5
2	San Luis Obispo to Goleta	Santa Barbara	4	10	7	7.0	6
9	Burbank Airport to LA Union Station (LAUS)	Los Angeles	7	12	2	7.0	6
10	LAUS to Fullerton ³	Los Angeles	12	3	10	8.3	8
12	Orange to Laguna Niguel	Orange	14	9	2	8.3	8
3	Goleta to East Ventura	Santa Barbara	11	5	10	8.7	10
1	San Luis Obispo to Goleta	San Luis Obispo	10	10	8	9.3	11
14	Laguna Niguel to Oceanside	San Diego	9	14	6	9.7	12
13	Laguna Niguel to Oceanside	Orange	6	14	10	10.0	13
Segments with no planned capacity projects							
7	Moorpark to Chatsworth	Los Angeles	8	1	0		
11	Fullerton to Orange	Orange	15	13	0		
¹ Ranking is based on 1=greatest change / 14=least change. ² Qualitative Ranking is an average of (1) Project Readiness, (2) Required Environmental Document, and (3) Community Support. Based on 1=highest in qualitative benefits / 14=lowest. ³ Metrolink territory only, River Subdivision.							

Table 17: Summary Evaluation of Corridorwide Projects

Project	County	Total Cost (\$millions)	Additional Track (miles)	Evaluation of Corridor Bottleneck Segment		
				Impact on Train Delay ¹	Level of Service ¹	Qualitative Ranking ²
CTC Installation	San Luis Obispo	\$30	N/A	10	10	8
Grover Beach Second Platform and Track	San Luis Obispo	\$75	3.5	10	10	8
CTC Installation (Island)	Santa Barbara	\$30	N/A	4	10	7
North Goleta Station and Siding	Santa Barbara	\$10	0.25	4	10	7
Extension of Waldorf Siding	Santa Barbara	\$25	1.0	4	10	7
Extension of Devon Siding	Santa Barbara	\$15	1.0	4	10	7
Extension of Capitan Siding	Santa Barbara	\$15	1.7	4	10	7
Construction and Extension of Ortega Siding	Santa Barbara	\$20	2.0	11	5	10
Seacliff Siding Extension	Ventura	\$18	1.4	13	5	2
Seacliff Curve Realignment	Ventura	\$10	N/A	13	5	2
Montalvo Wye Second Track	Ventura	\$55	1.25	13	5	2
East Ventura Station Improvements	Ventura	\$5	N/A	13	5	2
CP Las Posas to MP 423 Second Main Track	Ventura	\$57	3.5	5	4	10
Leesdale Siding Extension	Ventura	\$15	2.0	5	4	10
Oxnard to Camarillo Second Main Track	Ventura	\$15	5.0	5	4	10
Oxnard Station Second Platform	Ventura	\$20	N/A	5	4	10
Santa Susana Siding Extension, Simi Valley Station	Ventura	\$40	1.6	2	1	2
CP Raymer to CP Bernson Second Main Track	Los Angeles	\$71	6.5	1	8	1
CP Raymer Universal Crossover	Los Angeles	\$5	N/A	1	8	1
Van Nuys North Platform	Los Angeles	\$40	N/A	1	8	1
Burbank Junction Track Realignment	Los Angeles	\$9	N/A	7	12	2
Union Station Run-Through Tracks	Los Angeles	\$640	1.5	12	3	10
Anaheim Canyon Station Double Track	Orange	\$30	0.2	N/A	N/A	N/A
Irvine 3rd Main Track Extension	Orange	\$75	8.5	14	9	2
Laguna Niguel-San Juan Capistrano Passing Siding	Orange	\$30	1.8	6	14	10
Serra Siding Extension	Orange	\$15	1.0	6	14	10

Table 17: Summary Evaluation of Corridorwide Projects

Project	County	Total Cost (\$millions)	Additional Track (miles)	Evaluation of Corridor Bottleneck Segment		
				Impact on Train Delay ¹	Level of Service ¹	Qualitative Ranking ²
CP Songs to CP "Trestles" Double Track	San Diego	\$38	0.8	9	14	6
San Onofre to Pulgas Double Track	San Diego	\$66	5.8	9	14	6
Eastbrook to Shell Double Track	San Diego	\$45	0.6	9	14	6
Carlsbad Village Double Track	San Diego	\$45	1.1	3	7	9
CP Ponto to CP Swami Double Track	San Diego	\$63	3.5	3	7	9
CP Cardiff to CP Craven Double Track	San Diego	\$78	1.5	3	7	9
San Dieguito Bridge Double Track	San Diego	\$110	1.1	3	7	9
Sorrento to Miramar Double Track (Phase 2)	San Diego	\$120	1.8	3	7	9
CP Tecolote to CP Friar Double Track	San Diego	\$44	0.9	3	7	9

¹. Ranking is based on 1=greatest change / 14=least change.

². Average ranking of projects in the particular corridor bottleneck segment. Based on 1=highest in qualitative benefits / 14=lowest.

N/A: not applicable.

				Minutes of Delay		Number of Trains		Qualitative Measures						
				Total										
Ref. No.	Corridor Segment	County	Change in Delay (Minutes)	Rank in Delay Improvement	Increase in No. of Trains	% Increase	Rank in Volume Increase	# Miles of Additional Track	Project Readiness	Required Environmental Document	Community Support	Total Project Score	Ave. Segment Rank	Segment Ranking
1	San Luis Obispo to Goleta	San Luis Obispo	0:00:10	10	6	50.0%	10						3.50	8
	CTC Installation							na	1	1	2	4		
	Grover Beach 2nd Platform & Extension of 2nd Track							3.5	1	1	1	3		
2	San Luis Obispo to Goleta	Santa Barbara	0:08:31	4	6	50.0%	10						3.60	7
	Island CTC Installation							na	1	1	2	4		
	North Goleta Station and Siding							0.3	2	1	2	5		
	Extension of Waldorf Siding							1.0	1	0	2	3		
	Extension of Devon Siding							1.0	1	0	2	3		
	Extension of Capitan Siding							1.7	1	0	2	3		
3	Goleta to East Ventura	Santa Barbara	-0:00:21	11	12	66.7%	5						3.00	10
	Construction and extension of Ortega Siding							2.0	2	0	1	3		
4	Goleta to East Ventura	Ventura	-0:06:03	13	12	66.7%	5						4.00	2
	Seacliff Siding Extension							1.4	2	1	2	5		
	Seacliff Curve Realignment							na	2	1	2	5		
	2nd Main Track at Montalvo Wye							1.3	1	1	1	3		
	East Ventura Station Modifications							na	1	1	1	3		
5	East Ventura to Moorpark	Ventura	0:06:39	5	18	75.0%	4						3.00	10
	CP Las Posas to MP 423 2nd Main Track							3.5	1	1	1	3		
	Leesdale Siding Extension							2.0	1	1	2	4		
	Oxnard to Camarillo 2nd Main Track							5.0	1	1	1	3		
	Oxnard Station Second Platform							na	1	1	0	2		
6	Moorpark to Chatsworth	Ventura	0:21:27	2	28	87.5%	1						4.00	2
	Extension of Santa Susanna Siding through Simi Valley							1.6	1	1	2	4		
7	Moorpark to Chatsworth (No identified projects)	Los Angeles	0:00:38	8	28	87.5%	1							
8	Chatsworth to Burbank Airport	Los Angeles	0:28:49	1	22	57.9%	8						5.00	1
	CP Raymer to CP Bernson 2nd Main Track							6.5	2	1	2	5		
	Universal Crossovers at CP Raymer							na	2	1	2	5		
	Van Nuys Station 2nd Platform							na	2	1	2	5		
9	Burbank Airport to LAUS	Los Angeles	0:04:29	7	40	47.6%	12						4.00	2
	Burbank Junction Curve Realignment							na	1	1	2	4		
10	LAUS to Fullerton (SCAX Territory Only - River Sub)	Los Angeles	-0:00:40	12	43	75.4%	3						3.00	10
	LAUS Run Thru Tracks							1.5	2	0	1	3		
11	Fullerton to Orange (No identified projects)	Orange	-0:07:36	15	25	42.4%	13							
12	Orange to Laguna Niguel	Orange	-0:07:01	14	39	50.6%	9						4.00	2
	Anaheim Canyon Station Double Track (Olive Subdivision)							0.2	2	1	2	5		
	Irvine 3rd Main Track Extension							8.5	1	1	1	3		
13	Laguna Niguel to Oceanside	Orange	0:04:51	6	16	36.4%	14						3.00	10
	Laguna Niguel to SJC Passing Siding							1.8	2	1	1	4		
	Serra Siding Extension							1.0	1	0	1	2		
14	Laguna Niguel to Oceanside	San Diego	0:00:20	9	16	36.4%	14						3.67	6
	2nd Main Track Extension north of CP Songs							0.8	1	0	1	2		
	CP San Onofre to CP Pulgas Double Track							5.8	2	0	2	4		
	CP Eastbrook to CP Shell Double Track							0.6	2	1	2	5		
15	Oceanside to San Diego	San Diego	0:08:39	3	36	58.1%	7						3.17	9
	Carlsbad Village Double Track							1.1	2	1	1	4		
	CP Ponto to CP Swami Double Track							3.5	1	1	0	2		
	CP Cardiff to CP Craven Double Track							1.5	3	1	1	5		
	San Dieguito Bridge Double Track							1.1	2	0	0	2		
	Sorrento to Miramar Phase 2 Double Track							1.8	2	0	1	3		
	CP Tecolote to CP Friar Double Track							0.9	1	1	1	3		

Note: Areas shaded in red show segments where delay increases. The reason for the increase is the projects identified for the segment were not sufficient to meet the overall increase in service levels. Options include additional capacity, reduction in service levels, or changes in dispatc