

# Ventura | Santa Barbara Rail Study

Final Report

*March 2008*



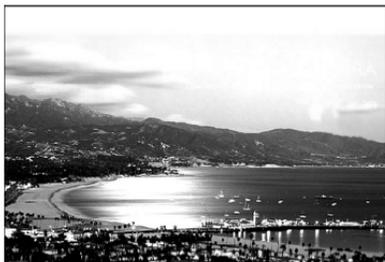
Prepared for |  
Southern California  
Association of  
Governments



Prepared by |  
Sharon Greene +  
Associates



sharon greene +  
associates



In association with |  
PB and  
InfraConsult LLC.



 InfraConsult LLC



## Table of Contents

<b>ES 1</b>	<b>EXECUTIVE SUMMARY.....</b>	<b>ES-1</b>
<b>1.</b>	<b>INTRODUCTION.....</b>	<b>1</b>
<b>2.</b>	<b>OVERVIEW OF EXISTING CONDITIONS IN THE UNION PACIFIC COAST LINE.....</b>	<b>2</b>
2.1	Description of the Project Area.....	2
2.2	Current Infrastructure Conditions.....	3
2.3	Existing Freight and Passenger Rail Service Levels.....	4
2.4	Freight Operational Issues.....	5
2.5	Existing Commuter Bus Service between Ventura and Santa Barbara.....	5
<b>3.</b>	<b>REVIEW OF PREVIOUS STUDIES AND EXISTING DOCUMENTS.....</b>	<b>5</b>
3.1	LOSSAN North Corridor Strategic Plan.....	7
3.2	101-In-Motion Study.....	12
3.3	Pacific Surfliner Route FY 2006-07 Business Plan.....	14
3.4	SCRRA Strategic Assessment.....	14
3.5	Ventura County Congestion Management Plan.....	16
3.6	California 20-Year Rail Plan.....	16
<b>4.</b>	<b>EXISTING AND PROPOSED CAPITAL PROJECTS AND SERVICE ENHANCEMENTS ..</b>	<b>18</b>
4.1	Capital Projects.....	18
4.2	Planned, Programmed, and Proposed Service Increases.....	20
<b>5.</b>	<b>KEY OPERATIONAL, FINANCIAL, AND INSTITUTIONAL CONCERNS.....</b>	<b>21</b>
5.1	Key Operational Issues.....	22
5.2	Key Financial Issues.....	22
5.3	Key Institutional Issues.....	23
<b>6.</b>	<b>POTENTIAL INTERREGIONAL RAIL SERVICE OPTIONS.....</b>	<b>23</b>
<b>7.</b>	<b>SERVICE OPTION 1 ISSUES AND OPTIONS.....</b>	<b>26</b>
<b>8.</b>	<b>POTENTIAL FUTURE MODIFICATIONS.....</b>	<b>39</b>
8.1	Phase 2 Service Modification.....	39
8.2	Phase 3 Service Modifications.....	41
8.3	Longer Term Options for Future Consideration.....	43
<b>9.</b>	<b>PROPOSED NEXT STEPS/RECOMMENDATIONS.....</b>	<b>46</b>
	<b>APPENDIX A: SUMMARY ISSUES CHECKLISTS.....</b>	<b>A-1</b>
	<b>APPENDIX B: SUMMARY OF ACE AND VRE FUNDING OPTIONS.....</b>	<b>B-1</b>

## Table of Figures

Figure 1: The Union Pacific Railroad Coast Line: Goleta to Los Angeles Segment.....	3
Figure 2: Capital Improvements Associated with the Potential Ventura / Santa Barbara Interregional Rail Service Implementation Option.....	45





## Table of Tables

Table 1: Infrastructure Projects Identified in the LOSSAN North Corridor Strategic Plan ..... 7

Table 2: LOSSAN North Corridor Strategic Plan- Proposed 2015 Network in Operations Analysis .... 8

Table 3: LOSSAN North Corridor Strategic Plan: Proposed 2025 Network in Operations Analysis .... 9

Table 4: LOSSAN North Corridor Strategic Plan - Service Scenario Cases and Train Numbers Input into Operations Model ..... 10

Table 5: LOSSAN North Corridor Strategic Plan – Network Performance ..... 11

Table 6: 101-In-Motion Study - Commuter Rail Service Concept ..... 12

Table 7: 101-In-Motion Study - Commuter Rail Annual Ridership Forecasts Three AM Train Service Plan ..... 13

Table 8: 101-In-Motion Study – 2030 Daily Boardings and Alightings By Station ..... 13

Table 9: 101-In-Motion Study – Infrastructure Projects ..... 13

Table 10: 101-In-Motion Study –O&M Costs ..... 14

Table 11: SCRRA Strategic Assessment – Proposed Service Increases for Ventura County ..... 15

Table 12: SCRRA Strategic Assessment – Equipment Assignment at Layovers ..... 15

Table 13: SCRRA Strategic Assessment – Projected Weekday Trips ..... 15

Table 14: SCRRA Strategic Assessment – Infrastructure Improvements ..... 16

Table 15: California 20-Year Rail Plan: Pacific Surfliner Corridor Immediate and Near-Term Projects within the Study Area ..... 17

Table 16: California 20-Year Rail Plan: Proposed Intercity Service Levels ..... 17

Table 17: California 20-Year Rail Plan: Estimated Intercity Ridership (in millions) ..... 17

Table 18: Screening Of Potential Options For Initiating/Improving Interregional Peak Passenger Service Between Ventura And Santa Barbara Counties ..... 25

Table 19: Phase 1 Infrastructure Improvements ..... 26

Table 20: Screening Of Potential Options For Initiating/Improving Interregional Peak Period Passenger Service Between Ventura And Santa Barbara Counties ..... 30

Table 21: Potential Equipment Availability and Costs ..... 39

Table 22: O&M Cost Estimate for Phase 2 Service Expansion ..... 40

Table 23: Phase 2 Infrastructure Improvements ..... 40

Table 24: Phase 2 Equipment Costs ..... 41

Table 25: O&M Cost Estimate for Phase 3 Service Expansion ..... 41

Table 26: Phase 3 Infrastructure Improvements ..... 42

Table 27: Phase 3 Equipment Costs ..... 42

Table A-1: Operational Issues Checklist ..... A-2

Table A-2: Financial Issues Checklist ..... A-9

Table A-3: Institutional Issues Checklist ..... A-14



## ES 1 Executive Summary

The Ventura / Santa Barbara Rail Study was initiated by the Southern California Association of Governments (SCAG) in response to the interest by the Ventura County Transportation Commission (VCTC) and Santa Barbara County Association of Governments (SBCAG) in addressing the need for commuter-friendly intercity passenger rail service between western Ventura County and southern Santa Barbara County. Highway 101, which parallels the Union Pacific Rail line has been subject of significant highway congestion associated with peak commuter hour traffic between the two counties. A multi-modal approach to addressing this congestion problem has been used by the two transportation agencies in addressing this congestion problem.

Interest in implementing a commuter-friendly intercity passenger rail service raised a number of operational, financial, and institutional issues that this study has identified and analyzed. This analysis will assist SCAG, VCTC, SBCAG, California Department of Transportation (Caltrans), and other key stakeholders in determining if such a service is feasible and financially viable, and in identifying potential courses of action to facilitate possible implementation of interregional rail services that address both intercity and commuter travel needs between Ventura and Santa Barbara counties. The study addressed the following key objectives:

- **Evaluate the results of previous studies conducted related to developing commuter rail and intercity services between Ventura County and Santa Barbara counties using the Union Pacific Railroad Coast Line:** Based on the information provided in prior documents, this study summarized the potential service delivery options, ridership, capital and operating costs, and institutional and financial issues considered in prior studies as well as options considered for addressing these issues.
- **Evaluate the financial impacts of commuter-friendly interregional rail options upon the stakeholder agencies:** Drawing from the information provided in prior documents and the issues identified through interviews with key stakeholders, this study assessed the viability of potential alternatives for implementing interregional rail service between Ventura and Santa Barbara counties relative to the operational, financial and institutional issues of concern to the stakeholders.
- **Work with the key stakeholders to identify options to initiate peak hour rail services between the two counties which may be achieved within the financial resources of the stakeholders, and institutional and operational needs:** In coordination with the key stakeholders, this study developed and recommended mechanisms to assure responsive and successful implementation of public investments and services in the corridor in cooperation with the Union Pacific. Working with the key stakeholders, the objective was to address how the proposed services and the public investments necessary could be coordinated, funded and managed to assure effective public benefits are achieved and maintained.



## ES 2 Development of Alternatives

The Union Pacific Railroad Coast Line (Coast Line) corridor has been the focus of an extensive number of planning studies and inventory work over the last ten years. These studies have analyzed various services and infrastructure improvements that focused on improving passenger service reliability and frequency. Sections 3 and 4 of this report provide a summary and analysis of the following studies: *101-in-Motion Study*; *LOSSAN North Corridor Strategic Plan*; *Metrolink Commuter Rail Strategic Assessment, 2004/2005 Ventura County Congestion Management Plan*, and the *California 20-Year Rail Plan*.

Based on the results of these studies, it was determined that in order to increase the level of passenger rail service along the corridor significant track and signal improvements, capacity enhancements and equipment purchases would be needed. However, these improvements and acquisitions will take both time and financial resources, neither of which is currently available in any large quantity. As a result of this limitation, three rail service options and one bus service option were identified to provide improved passenger service in the early morning and late afternoon peak commute periods between Ventura and Santa Barbara Counties.

### **Service Option 1: Incremental increases in Pacific Surfliner services**

This option would provide incremental increases to the Pacific Surfliner service consistent with the overall build out service plan presented in the LOSSAN North Corridor Strategic Plan, beginning with a train that makes an earlier morning departure northbound from Los Angeles. Amtrak service does not typically cater to commuter services, however along the LOSSAN Corridor, it is difficult to differentiate commuter and intercity passengers. This service would build off the existing relationship between Amtrak and Metrolink to provide an earlier “intercity” travel option for passengers in Los Angeles and Ventura Counties. This same service would be performed in afternoon, where the southbound Pacific Surfliner could be initially rescheduled to provide both an intercity and commuter option between Santa Barbara, Ventura and Los Angeles Counties. As new intercity rail service is added by Caltrans, service should be added at a commuter friendly time to address this important market.

### **Service Option 2: Expansion of existing Metrolink service to Santa Barbara**

This option would require the incorporation of Santa Barbara County into the Southern California Regional Rail Authority (SCRRA) Joint Powers Board. This then assumes Metrolink service, either originating in Ventura County or provided as an extension of the Ventura County Line, would extend to Santa Barbara County.

### **Service Option 3: Dedicated Ventura-Santa Barbara Commuter Rail Service**

Dedicated commuter rail service was presented as a possible option in both the 101-in-Motion Study and the LOSSAN North Corridor Strategic Plan. A new commuter rail service would be provided between the communities of Ventura and Santa Barbara Counties separate from existing Metrolink or Pacific Surfliner services. This option would require new negotiations and contracts with the Union Pacific Railroad (UPRR) and new dedicated commuter rail support facilities (i.e. stations and maintenance facility).



#### **Service Option 4: Expansion of Coastal Express Bus Service**

Expansion of the existing Coastal Express Bus service is another option for providing additional capacity for transit service during the early morning and late afternoon. This option would utilize the new carpool lanes along US Highway 101 once construction was completed. While this is a viable option, operations currently and during construction would be impacted by the traffic congestion along this segment of the highway.

### **ES 3 Recommended Alternative**

Concurrent with the review of previous studies, a series of one-on-one interviews was conducted by phone and in-person with staff from key stakeholder agencies including SCAG, VCTC, SBCAG, Metrolink, Caltrans Division of Rail, and Amtrak. The purpose of the interviews was to identify specific issues and concerns related to three major aspects of implementing interregional rail service between Ventura and Santa Barbara counties: 1) Operational; 2) Financial; and 3) Institutional. The key issues for these categories are summarized below and are described in greater detail in Section 4. Additionally, Appendix A provides a Key Issues Checklist to make sure that all issues and concerns related to initiating interregional commuter service between Ventura and Santa Barbara counties are brought forward, examined, and, to the extent possible, either resolved, and/or advanced for future consideration/possible resolution.

#### **Operational Issues**

- Ability to maintain on-time performance for peak period southbound Metrolink services, while minimizing interference with UPRR trains to ensure quality freight service: Any new service or service expansion along the corridor needs to allow for the continuation of the existing service in a manner that maintains or improves the level of quality and on-time performance that currently exists. Typically this is accomplished by providing additional infrastructure at identified “choke” points along the corridor, where services may interact with each other.
- Ability to provide a reliable and attractive peak period service to the Ventura and Santa Barbara communities: There is a need to ensure that the new service can maintain a certain level of reliability and on-time performance while interacting with the existing services. To make it successful, the new service can not take second priority in order to allow for maintaining the quality of the existing service. All trains will need to be operated in a manner that can provide reliable service.
- Providing the service as a cost-effective solution to traffic congestion: Capital improvements to the corridor are necessary to maintain the service quality and on-time performance of all trains. To make the new service feasible, the improvements must be practical and affordable within existing or imminent sources of funding. In addition, operating and maintenance costs must be within the financial capacity of the involved agencies that will be called upon to provide funding to support the proposed service.



## Financial Issues

- Limitations on the financial capacity of the key participants to fund the potential capital and on-going operations and maintenance costs associated with full commuter rail-based service delivery alternatives: At the present time, neither Ventura nor Santa Barbara counties have a dedicated source of funding for a full commuter rail-based service. While an extension of the Santa Barbara County Measure D transit sales tax is proposed, the level of funding potentially available for a regional transit improvement such as full commuter rail service may be limited in the early stages of the program.
- Potential impact of diverting existing funds from existing interregional bus transit services: At the present time, Ventura and Santa Barbara Counties jointly fund interregional express bus service. In the absence of a new source of dedicated funding, initiation of new commuter rail service would divert the existing limited State Transportation Development Act (TDA) funding away from all the existing bus services throughout Ventura and Santa Barbara counties. This is due to the fact that rail funding comes off the top of TDA before funds are apportioned for other purposes.
- Potential to initiate interregional service between the two counties at limited additional capital and operating cost by adjusting existing intercity train service schedules and by leveraging funding programmed for enhancement of existing and proposed intercity rail service: If the existing intercity train schedule can be adjusted to allow for an earlier morning arrival in Santa Barbara and afternoon departure to Ventura, service could potentially be initiated at no additional capital or operating cost. This could provide a low cost approach to initiate service and to utilize the funding available at the local level to leverage investment by the State, in the form of Interregional (State Transportation Improvement Program) STIP funds and Proposition 1B State intercity rail bond funds.

## Institutional Issues

- Limitations on the financial capacity of the key participants raise concerns on the part of SCRRA/Metrolink about expanding membership and/or contracting for commuter rail service with agencies having limited financial resources: SCRRA requires that member agencies have the ability to dedicate and contribute funding for service initiation, operation, and for on-going preventive capital maintenance. Lack of such financial capacity could impact SCRRA's willingness to expand membership and/or to provide contract service.
- Concern about potential loss of and/or diminution of control over service decisions if absorbed into a larger joint powers agency such as SCRRA: As a potential new member or contract agency with SCRRA, SBCAG could potentially experience reduced autonomy over future service decisions.
- Need for an effective advocate to deal with the Union Pacific Railroad: If service was initiated as an interregional service provided by Amtrak using existing approved time slots for intercity service, the key stakeholders could together to provide effective advocacy with regard to the UPRR.

The service options identified from the review of previous studies were then compared to the key issues of concern raised by the stakeholder agencies. Based on these issues, the service options were screened to identify a financially feasible and



cost-effective approach that could potentially be implemented to initiate interregional service between the two counties. Table ES-1 summarizes the results of the screening. The screening results combined with further discussions among the project stakeholders, identified Service Option 1: Incremental increases in Pacific Surfliner service as the preferred option.

**Table ES-1: Screening Of Potential Options For Initiating/Improving Interregional Peak Passenger Service Between Ventura And Santa Barbara Counties**

Option	Description	Operational Feasibility	Financial Feasibility	Institutional Feasibility
Service Option 1	Incremental increases in Pacific Surfliner services	<b>Moderate:</b> Could be initiated with limited impact on other existing rail services and expanded as extended and new intercity rail sidings are implemented	<b>High:</b> Could be initiated at limited capital and operating cost by adjusting existing schedules and expanded as extended and new sidings are funded through the 2006 STIP Augmentation and Prop 1B	<b>Moderate:</b> Would require support from Caltrans, Amtrak, and UPRR
Service Option 2	Expansion of existing Metrolink service to Santa Barbara County	<b>Low:</b> Additional rolling stock and capacity enhancements needed to preserve on-time performance of existing rail services	<b>Low:</b> Requires dedicated funding not currently in place to fund capital and operating costs	<b>Low:</b> In the absence of dedicated funding, unlikely to be supported by SCRRRA, UPRR, and other key stakeholders
Service Option 3	Dedicated Ventura-Santa Barbara commuter rail service	<b>Low:</b> Additional rolling stock and capacity enhancements needed to preserve on-time performance of existing rail services and to obtain approval by the UPRR	<b>Low:</b> Requires dedicated funding not currently in place to fund capital and operating costs	<b>Low:</b> In the absence of dedicated funding, unlikely to be supported by UPRR and other key stakeholders
Service Option 4	Expansion of Coastal Express Bus service	<b>Low:</b> In short term, operation is constrained by Highway 101 congestion. <b>High:</b> Once 101 HOV lane is added	<b>High:</b> While potentially lower cost than dedicated commuter rail service, would require additional funding for operating costs	<b>Moderate:</b> While supported in both counties, not viewed as a substitute for rail service by rail advocates

## ES 4 Issues and Options

Based on further analysis and continued communication with the project stakeholders, Service Option 1 - Incremental increases in Pacific Surfliner service was further refined to reflect two alternatives.

- **Alternative 1: Reschedule the existing Amtrak 799 and 798 to an earlier departure time and later arrival time at Los Angeles Union Station.** This alternative reflects the lowest cost and earliest possible implementation scenario to address the desire for earlier morning and later afternoon rail service between Ventura and Santa Barbara Counties. Shifting the scheduled departure from Los Angeles to around 6:30 am would provide passengers with the ability to arrive in Ventura around 7:50 am, Santa Barbara around 8:30 am and in Goleta around 8:45 am. In the afternoon, departure from Goleta and Santa Barbara would occur



around 5:15 pm and 5:30 pm respectively with arrival in Los Angeles around 7:30 pm.

- **Alternative 2: Add a new intercity train between Los Angeles and Goleta, with arrival in Santa Barbara at approximately 8:30 am.** This alternative was carried forward as a viable alternative if the suggested rescheduling of Alternative 1 could not be implemented. This alternative would result in higher operating and maintenance and capital costs and would likely take longer to implement.

It is also important to note that both alternatives are supported by the City of Santa Barbara's On-TRAC proposal. Specifically, the alternatives address two of the City's November 15, 2007 action steps proposed to guide On-TRAC representative involvement regarding increasing transit service and establishing commuter rail between Santa Barbara and Ventura Counties: 1) focus current efforts on establishing new or rescheduled Amtrak Service; and 2) foster the coordination of regional interests in establishing Amtrak as a reasonable early start commuter service.

Table ES-2 summarizes the opportunities and challenges associated with each alternative for the following categories: scheduling, rolling stock, infrastructure improvements, operating costs, ridership, financial and institutional. Major findings from this analysis include the following:

#### **Alternative 1: Reschedule Existing Amtrak 799 and 798**

- **Schedule:** Although the revised schedule would allow arrival in Ventura, Santa Barbara, and Goleta around 7:50 am, 8:30 am and 8:45 am respectfully, it would also result in Amtrak losing the Coast Daylight time slot and agreed Rail-2-Rail time slot with Metrolink. However, since negotiations with the UPRR would be needed to modify the current schedule, preserving the timeslot for the Coast Daylight could be included in this negotiation. Additionally, due to limited double tracking and sidings within the corridor, this alternative could result in on-time performance concerns for SCRRA, Caltrans and Amtrak.
- **Rolling Stock:** No additional trainsets required.
- **Infrastructure Improvements:** Service could be initiated with currently proposed siding improvements at Strathern and Leesdale, which would provide benefits to both Metrolink and the proposed intercity service. Estimated costs for the Strathern project is \$1.0 million (2006 dollars) based on VCTC project estimates and *LOSSAN North Strategic Business Plan*. Also, an additional platform would be required at the Van Nuys Station to accommodate passenger train meets. Cost estimates for this improvement have not yet been developed.
- **Operating Costs:** No increase would be required in operating costs since new crews are not required with schedule change. However, maintenance costs could increase due to a potential change in the equipment maintenance schedule. Further analysis would be required to identify this potential cost impact.



- **Ridership:** Schedule change has the potential to gain new ridership between Ventura and Santa Barbara counties but may also result in a reduction in ridership from Rail-2-Rail train service (Los Angeles to Oxnard).
- **Financial:** An increase in the State's operating subsidy could result if ridership decreases on the rescheduled Amtrak 799 and 798. This increase could require a financial contribution from Santa Barbara and Ventura counties.
- **Institutional:** Implementation of the schedule change requires agreement from Caltrans, Amtrak, SCRRRA and Union Pacific.

#### Alternative 2: Add a New Intercity Trip

- **Schedule:** A new trip would retain the Coast Daylight time slot and agreed Rail-2-Rail time slot with Metrolink. Additionally, it would allow the initiation of an additional northbound Surfliner service, which is consistent with the LOSSAN North Strategic Plan. However, due to limited double tracking and sidings within the corridor, this alternative could result in on-time performance concerns for SCRRRA, Caltrans and Amtrak.
- **Rolling Stock:** Additional trainsets will be required. Table ES-3 provides a summary of order of magnitude costs estimates for a variety of acquisition scenarios.
- **Infrastructure Improvements:** Service could be initiated with currently proposed siding improvements at Strathern and Leesdale, which would provide benefits to both Metrolink and the proposed intercity service. Estimated costs for the Strathern project is \$1.0 million (2006 dollars) based on VCTC project estimates and *LOSSAN North Strategic Business Plan*. Another improvement that would be required to implement this alternative is an additional platform at the Van Nuys Station to accommodate passenger train meets. Cost estimates for this improvement have not yet been developed. Also, an analysis would be required to assure there is adequate overnight storage capacity at Amtrak's Redondo maintenance facility.
- **Operating Costs:** A new trip would require additional O&M and crew costs. The estimated increase in annual O&M costs for this service expansion is estimated to be approximately \$3.3 million.
- **Ridership:** Ridership levels on the existing Amtrak 799 and 798 trains would be maintained. Additional ridership may occur from the new morning and afternoon trips. However, ridership levels on the morning segment between Los Angeles and Ventura may be low.
- **Financial:** A funding source would be needed for the lease or purchase of equipment needed for the new service. Additionally, an increase in the State's operating subsidy could result if ridership decreases on the rescheduled Amtrak 799 and 798. This increase could require a financial contribution from Santa Barbara and Ventura counties.
- **Institutional:** Implementation of the new trips requires agreement from Caltrans, Amtrak, SCRRRA and the UPRR. Additionally, it could require cost-sharing agreements between Caltrans, SBCAG, and VCTC for the potential capital costs and operating costs and UPRR may require additional infrastructure to be provided to implement the service.



**Table ES-2: Screening Of Potential Options For Initiating/Improving Interregional Peak Period Passenger Service Between Ventura And Santa Barbara Counties**

Scheduling		
Alternative	Opportunities	Challenges
1	Reschedule Amtrak 799 and 798 to earlier departure time and later arrival time at Los Angeles Union Station	Allows for an earlier arrival into Ventura, Santa Barbara, and Goleta around 7:50 am, 8:30am, and 8:45 am respectively.
2	Add new intercity train between Los Angeles and Goleta, with arrival in Santa Barbara at approximately 8:30 am	Allows for an earlier arrival into Santa Barbara around 8:30am.
		Retains Coast Daylight time slot and agreed Rail-2-Rail time slot with Metrolink.
		Provides for initiation of an additional northbound Surfliner service, consistent with the LOSSAN North Strategic Plan.
<b>Rolling Stock</b>		
Alternative	Opportunities	Challenges
1	Reschedule Amtrak 799 and 798 to earlier departure time and later arrival time at Los Angeles Union Station	No additional trainsets required.
		No costs incurred for leasing or acquisition of rolling stock.



Rolling Stock			
Alternative		Opportunities	Challenges
2	Add new intercity train between Los Angeles and Goleta, with arrival in Santa Barbara at approximately 8:30 am	Provides for an additional trainset that increases flexibility for corridor-wide service enhancements.	Requires an additional trainset.
	2a. Lease equipment from Metrolink	If excess equipment is available from Metrolink's new equipment order, would make efficient interim use of equipment. New Metrolink equipment scheduled to arrive within the next couple of years.	Availability and duration of lease uncertain. Would require identification of new source of rolling stock at lease termination.
		Short term cost would be lower than cost of purchasing new equipment	All lease options require funding to pay for leasing of rolling stock
	2b. Locate and refurbish existing equipment for lease or acquisition	Short term cost would be lower than cost of purchasing new equipment.	Would require locating a source of existing equipment that could be refurbished.
		Not dependent on Metrolink or Amtrak equipment acquisition.	Availability and duration of lease uncertain. Would require identification of new source of rolling stock at lease termination.
		Provides an additional trainset and increases flexibility for corridor-wide service enhancements.	All lease options require funding to pay for leasing of rolling stock.
			Older equipment will require more extensive maintenance schedules due to wear and tear of equipment.
	2c. Secure new intercity trainset from pending State rolling stock acquisition	Long term solution and commitment for equipment.	Service is perceived as a lower priority compared to other proposed service expansion plans statewide.
		Could potentially secure a federal loan for vehicle acquisition through the Federal Railroad Administration Railroad Rehabilitation and Improvement Financing (FRA RRIF) Program. See Appendix B for more information.	Higher cost than leasing other equipment.
		Shorter timeframe for securing equipment.	Higher initial capital cost if purchased.



Rolling Stock		
Alternative	Opportunities	Challenges
2d. Lease/purchase DMU equipment	Potential for lower annual O&M costs.	Vehicle maintenance could require modifications or upgrades to existing maintenance facilities to accommodate an additional technology with different servicing requirements. Alternatively, provisions for maintenance could be contracted to a private company and conducted in a separate facility.
	Leasing could potentially be arranged through a vehicle leasing pool, with negotiated financing.	Minimizes operational flexibility and interchangeability with existing equipment.
	Could potentially secure a federal loan for vehicle acquisition through the Federal Railroad Administration Railroad Rehabilitation and Improvement Financing (FRA RRIF) Program. See Appendix B for more information.	
Infrastructure		
Alternative	Opportunities	Challenges
1 Reschedule Amtrak 799 and 798 to earlier departure time and later arrival time at Los Angeles Union Station	Service could be initiated with currently proposed siding improvements at Strathern and completion of the siding improvements at Leesdale, thus providing both Metrolink and intercity service benefits.	An additional platform would be required at the Van Nuys Station to accommodate passenger train meets.
2 Add new intercity train between Los Angeles and Goleta, with arrival in Santa Barbara at approximately 8:30 am	Service could be initiated with currently proposed siding improvements at Strathern and completion of the siding improvements at Leesdale, thus providing both Metrolink and intercity service benefits.	An additional platform would be required at the Van Nuys Station to accommodate passenger train meets.
		Would have to assure adequate overnight storage capacity at Amtrak Redondo maintenance facility.



<b>Operating Costs</b>		
<b>Alternative</b>	<b>Opportunities</b>	<b>Challenges</b>
1	Reschedule Amtrak 799 and 798 to earlier departure time and later arrival time at Los Angeles Union Station	No new equipment or crews required for service.
2	Add new intercity train between Los Angeles and Goleta, with arrival in Santa Barbara at approximately 8:30 am	Could potentially increase operating costs due to potential change in equipment maintenance schedule.
<b>Ridership</b>		
<b>Alternative</b>	<b>Opportunities</b>	<b>Challenges</b>
1	Reschedule Amtrak 799 and 798 to earlier departure time and later arrival time at Los Angeles Union Station	Potential to gain new ridership between Ventura and Santa Barbara counties.
2	Add new intercity train between Los Angeles and Goleta, with arrival in Santa Barbara at approximately 8:30 am	Potential to reduce ridership from Rail-2-Rail train service (Los Angeles to Oxnard).
		Maintains ridership on existing train 799 and 798 and adds new ridership from additional morning and afternoon service.
		Low ridership may occur between Los Angeles and Ventura for the new morning service.
		Additional afternoon train from Santa Barbara to Los Angeles expected to attract additional ridership by broadening travel options available for all travel including recreational travel.



Financial			
Alternative		Opportunities	Challenges
1	Reschedule Amtrak 799 and 798 to earlier departure time and later arrival time at Los Angeles Union Station	Capital and operating costs for rescheduling existing service would be lower than the cost of adding an additional round trip.	Could potentially increase operating costs due to potential change in equipment maintenance schedule.
		Siding improvements of joint commuter and intercity rail benefit (such as the Leesdale Siding) could potentially be partially funded with the approximately \$1 million in FTA funding authorization to SBCAG.	If the schedule change results in a decrease in ridership on Amtrak 799 and 798, could potentially increase the operating subsidy required.
		<p>Could potentially qualify for State or federal funding to provide supplementary capacity and additional mode choice options during Highway 101 construction. As an example, Altamont Commuter Express (ACE) received State funding for operation of an additional train as mitigation for Highway 203 construction impacts. The funding was provided through Caltrans in the form of highway construction mitigation funds, supplemented by State Intercity Rail funds made available through a replacement of midday Amtrak feeder bus service with the additional train. See Appendix B for more information.</p> <p>An early example of federal funding is provided by TriRail commuter rail service in Florida, which was initiated using FHWA highway funds as mitigation for I-95 construction impacts.</p>	



Financial			
Alternative		Opportunities	Challenges
2	Add new intercity train between Los Angeles and Goleta, with arrival in Santa Barbara at approximately 8:30 am	<p>Could potentially secure a federal loan for capital improvements and/or vehicle acquisition through the Federal Railroad Administration Railroad Rehabilitation and Improvement Financing (FRA RRIF) Program. Such funds could potentially be used to leverage local or State funds, with loan payments made by either local agencies or the State. In November 2007, Virginia Railway Express (VRE) became the first passenger rail service to receive a RRIF loan. VRE was awarded a \$72.5 million loan for new rolling stock to replace its old railcars. The State of Virginia is providing an additional \$20 million in funding. See Appendix B for more information</p>	<p>Capital and operating costs for an additional trainset and an additional round trip would be significantly higher than the cost of rescheduling existing service.</p>
		<p>Siding improvements of joint commuter and intercity rail benefit (such as the Leesdale Siding) could potentially be partially funded with the approximately \$1 million in FTA funding authorization to SBCAG.</p>	<p>Would require funding source for lease or purchase of additional rolling stock.</p>
		<p>Could potentially qualify for State or federal funding provide supplementary capacity and additional mode choice options during Highway 101 construction. As an example, Altamont Commuter Express (ACE) received State funding for operation of an additional train as mitigation for Highway 203 construction impacts, with funding provided from State Intercity Rail funds made available through a reduction in Amtrak feeder bus service. See Appendix B for more information.</p> <p>An early example of federal funding is provided by TriRail commuter rail service in Florida, which was initiated using FHWA highway funds as mitigation for I-95 construction impacts.</p>	<p>The State operating subsidy for the additional round trip could require financial contribution from Santa Barbara and Ventura counties.</p>



Institutional			
Alternative		Opportunities	Challenges
1	Reschedule Amtrak 799 and 798 to earlier departure time and later arrival time at Los Angeles Union Station	Intercity service can be provided through Amtrak's existing trackage/access rights, subject to UP terms and conditions.	Requires negotiation with UP for a new time slot.
			Requires agreement from Caltrans, Amtrak, and SCRRA to reschedule existing service.
2	Add new intercity train between Los Angeles and Goleta, with arrival in Santa Barbara at approximately 8:30 am	Intercity service can be provided through Amtrak's existing trackage/access rights, subject to UP terms and conditions.	Requires negotiation with UP for a new time slot.
			UP may require additional infrastructure to be provided to implement the service.
			Requires agreement from Caltrans, Amtrak, and SCRRA, and support from SBCAG to add service.
			Could require negotiation of cost-sharing agreements between Caltrans, SBCAG, and VCTC for potential capital costs and operating costs.



### **Potential Benefits**

The following potential benefits were identified related to the preferred service option:

- Would address commuter-friendly service between Ventura and Santa Barbara to serve the high existing and projected traffic between the two counties.
- Would provide alternative mode to serve the highly bi-directional travel volumes on Highway 101 between Los Angeles and Ventura, particularly during the morning and evening hours. Travel demand model analysis conducted for the 101 Corridor Study for LA Metro and Caltrans indicated that between 1997 and 2010 and 1997 and 2025, reverse trips from elsewhere in L.A. County to the West San Fernando Valley, from L.A. County to Ventura County and from Eastern Ventura County to Western Ventura County are all forecast to increase. This trend is also reflected in traffic counts, indicating that there is currently heavy bi-directional travel in the corridor that is projected to increase. The existing and projected volumes demonstrate that there is a potential ridership market that could be better served by having the LA departure moved to 5:30 am.
- Would provide a more convenient arrival time in Santa Barbara and Goleta to allow for a full business and recreational day, and to serve the student and visitor market going to University of California Santa Barbara. Current service arrives at 10:30 am and leaves at 4:40 pm. The proposed revised schedule would provide visitors the opportunity to spend a full 8 hours in Santa Barbara. Additionally, faculty, staff and students could arrive at Goleta at around 8:45 am and leave around 5:15 pm.
- If the service were to be extended beyond Goleta, would provide a better schedule for business and recreational travel to San Luis Obispo.

### **Projected Ridership Issues**

Determining realistic ridership estimates for passenger rail service between Los Angeles, Ventura and Santa Barbara will require a review of the output from both the intercity and regional demand models and the production of new forecasts. Recognizing the need to accommodate the output from the regional model is critical for determining the actual benefit of new Amtrak service in this corridor. For most of its length, the Pacific Surfliner is unique for passenger rail services in the western United States in that it caters to both commuter and intercity passengers. This mix of services is further encouraged through the use of the Rail-2-Rail program, which allows Amtrak passengers to ride Metrolink trains and Metrolink monthly pass holders to ride Amtrak. It should also be acknowledged that neither ridership model takes into account the benefits of the Rail-2-Rail program, which is an important component in determining the effectiveness of additional morning and evening service north of Los Angeles. This being the case it is not realistic to assume the intercity model alone provides an accurate representation of the projected ridership demand for the Pacific Surfliner. Based on the existing intercity and commuter forecasts prepared as part of the LOSSAN North Strategic Plan and the 101-in-Motion Study, the potential ridership was estimated to range from less than 100 intercity riders per day to over 3,000 commuter riders per day by 2030.



Travel between Los Angeles, Ventura and Santa Barbara is becoming increasingly more congested and the concept of “peak direction” is no longer as clear as it once was, as there is now extensive bi-directional travel at all times of the day. A statement that is supported by the traffic demand forecasts that was conducted for the 101-in-Motion Study of travel along US Route 101 over the next 5 to 15 years, in which traditional “reverse trips” are all forecast to increase.

This being said, it is not unreasonable to project that an additional early morning and evening Pacific Surfliner train would in fact attract ridership. An additional train or adjustment in the existing schedule to accommodate the time slots proposed would allow for better arrival and departure times into Ventura and Santa Barbara that provide a longer day for leisure travelers; more convenient travel times for college students, employees, and visitors; and an alternative mode of transportation to the automobile during some of the most congested periods of time along the roadways.

A more detailed analysis however that focuses exclusively on ridership and incorporates both the regional and intercity forecasts should be conducted to provide justification to this assumption.

### **Equipment Issues**

Finally, as discussed above, one of the critical issues involved with implementing Alternative 2: Adding a New Intercity Train to Santa Barbara, is the availability of locomotives and passenger cars. Based on a review of existing fleets across California and the western United States, it was determined that there are no available trainsets for implementing a new service. This lack of available trainsets supports the need for the State of California to expedite the acquisition of new trainsets. As a potential near term alternative to address this issue, a nationwide survey of potentially available trainsets was conducted to identify options for acquiring equipment within the next two years. The survey resulted in the identification of six potential used equipment sources and one source which could provide new equipment. The used equipment ranges in age from 7 years old to over 40 years old. In most cases the used equipment would require some level of refurbishment in order to make the vehicles operational.

Table ES-3 provides an order of magnitude estimate on the costs and time to acquire trainsets from the seven sources.



**Table ES-3: Potential Equipment Availability and Costs**

Equipment	Owner	Type	Est. Quantity	Location	Status	Est. Cost or Rehabilitation	Est. Timeline	Type of Agreement
First generation Amfleet I	Amtrak	Coach	40-50	Bear, DE	Require brake system rebuilding and interior cosmetic restoration	\$3-4million (\$500K per car @ 6-8 cars)	1-2 years	Lease/ Purchase
First generation "Genesis" P-40	Amtrak	Locomotive	25 +/-	Beech Grove, IN	Operational - may not pass current air quality and clean air standards for locomotives	\$3-4.5 million (\$1.5 mil per loco @ 2-3 locos)	< 1 year	Purchase
Bombardier Comet I-B	NJ Transit	Cab/Coach	70	In Service (NJ)	Built 1968, will need interior refurbishment and A/B overhaul	\$25K-75K + Rehab per car	6 mo - 1 year	Purchase
Bombardier Comet I	NJ Transit	Cab/Coach	30	In Service (NJ)	Built 1971, will need interior refurbishment and possible A/B overhaul	\$25K-90K + Rehab per car	6 mo - 1 year	Purchase
Colorado Rail Car	Colorado Rail	DMU	TBD	Built in Evergreen CO	New design to standards outlined by Ventura and Santa Barbara Counties - new construction	\$5M Bi-level Cab, \$4M Bi-level Coach	1.5 - 2 years	Lease/ Purchase
Gallery Cars	Virginia Rail Express	Coach	15+/-	In Service (VA)	Former Metra Gallery Cars, 1960 vintage, recently refurbished	\$25-75K per car	< 1 year	Purchase
Kawasaki Bi-Levels	Virginia Rail Express	Cab/Coach	10 coaches/ 3 cab	In Service (VA)	Relatively good condition - equipment purchased new about 7 years ago.	\$9-12 million (\$1.5 mil per car @ 6-8 cars)	< 1 year	Purchase

## ES 5 Proposed Next Steps/Recommendations

Based on the results of this analysis, the study team and project partners have identified the following next steps and recommendations for moving forward with the Scenario 1 Option - Incremental Increases in Pacific Surfliner Service. Similar to the previous analyses, the recommendations are provided for the following categories: scheduling, rolling stock, infrastructure, operating costs, ridership, financial and institutional. It is important to note that due to the need for multiple stakeholder involvement on the majority of issues there is overlap between the institutional category and all other categories.

### Scheduling

- Meet with Metrolink and Caltrans to identify opportunities to minimize train delay and optimize northbound arrival times in Santa Barbara;
- Coordinate with LOSSAN and Coast Rail Coordinating Council on overall service and to assure that schedule adjustments do not adversely affect existing intercity service and/or limit the potential for a new Coast Daylight train; and
- Work with Caltrans and Amtrak to assure that the schedule adjustments facilitate improved peak period intercity service and advance the objectives of the City of Santa Barbara OnTRAC proposal.



### **Rolling Stock**

- Work with agencies throughout the LOSSAN Corridor in support of efforts to expedite acquisition of trainsets to meet current needs, facilitate introduction of enhanced intercity service to Santa Barbara, and support other existing and new services statewide; and
- Provide sufficient cars and locomotive capacity to provide redundancy for emergencies and new services across California.

### **Infrastructure**

- Identify top tier projects based on the LOSSAN North project list that would facilitate the modification and expansion of intercity service to Santa Barbara, including Leesdale and Strathern (in TIP) sidings, additional sidings in Santa Barbara segment (is already STIP funding for design), and initiate identification of the next tier of projects.

### **Operating Costs**

- Work with Caltrans and Amtrak to ensure that introduction of improved intercity service to Santa Barbara can be accomplished with minimal or no increase in the operating subsidy paid by the State.

### **Ridership**

- Work with Amtrak, Caltrans, and the regional agencies to improve the ability to forecast peak period short-haul intercity ridership.

### **Financial**

- VCTC and SBCAG should work with Caltrans together to assemble financial resources required for implementation of the proposed service.
- Research and potentially apply with Caltrans for US DOT's recently announced Federal-State \$30 million capital grant program designed to support state efforts to improve intercity passenger rail service. The Federal Railroad Administration is administering the program and will begin accepting applications on March 18, 2008. The program is designed to provide funding for projects that demonstrate an on-time performance standard of 80 percent or greater, reduce travel time, increase service frequency, or enhance service quality for intercity rail passengers. Eligible projects include, but are not limited to: upgrading existing track to permit higher maximum operating speeds, adding or lengthening passing tracks to increase rail line capacity, improving track switches and signaling systems to advance reliability and safety, and purchasing new passenger rail cars to enhance the travel experience.



### **Institutional**

- Implement a Memorandum of Understanding (MOU) between VCTC and SBCAG regarding implementation of enhanced service between Ventura and Santa Barbara counties;
- Meet with Metrolink and Caltrans on opportunities to minimize train delay and optimize northbound arrival times in Santa Barbara and to identify opportunities to modify service;
- Coordinate with the California Business, Transportation and Housing Agency (BTH), Caltrans, California Transportation Commission and Amtrak to urge the acquisition of adequate fleet to meet current needs, facilitate introduction of enhanced intercity service to Santa Barbara, and support other existing and new services statewide;
- Support voter sentiment demonstrated by the passage of Proposition 1B to increase the number of cars for intercity service.
- Coordinate with LOSSAN and Coast Rail Coordinating Council on overall service and to assure that schedule adjustments do not adversely affect existing intercity service and the potential for a new Coast Daylight train;
- Coordinate with SCRRA to assure that intercity schedule adjustments do not adversely affect Metrolink commuter service; and
- Work with Caltrans and Amtrak to assure that the schedule adjustments facilitate improved peak period intercity service and advance the objectives of the City of Santa Barbara's OnTRAC proposal.



## 1. INTRODUCTION

The Ventura / Santa Barbara Rail Study was initiated by the Southern California Association of Governments (SCAG) in response to the interest by the Ventura County Transportation Commission (VCTC) and Santa Barbara County Association of Governments (SBCAG) in addressing the need for commuter-friendly intercity passenger rail service between western Ventura County and southern Santa Barbara County. Highway 101, which parallels the Union Pacific Rail line has been subject of significant highway congestion associated with peak commuter hour traffic between the two counties. A multi-modal approach to addressing this congestion problem has been used by the two transportation agencies in addressing this congestion problem.

Interest in implementing a commuter-friendly intercity passenger rail service request raised a number of operational, financial, and institutional issues that this study has identified and analyzed. This analysis will assist SCAG, Ventura County Transportation Commission (VCTC), SBCAG, California Department of Transportation (Caltrans), and other key stakeholders in determining if such a service is feasible and financially viable, and in identifying potential courses of action to facilitate possible implementation of interregional rail services that address both intercity and commuter travel needs between Ventura and Santa Barbara counties. The study addressed the following key objectives:

- **Evaluate the results of previous studies conducted related to developing commuter rail and intercity services between Ventura County and Santa Barbara counties using the Union Pacific Railroad Coast Line:** Based on the information provided in prior documents, this study summarized the potential service delivery options, ridership, capital and operating costs, and institutional and financial issues considered in prior studies as well as options considered for addressing these issues.
- **Evaluate the financial impacts of commuter-friendly interregional rail options upon the stakeholder agencies:** Drawing from the information provided in prior documents and the issues identified through interviews with key stakeholders, this study assessed the viability of potential alternatives for implementing interregional rail service between Ventura and Santa Barbara counties relative to the operational, financial and institutional issues of concern to the stakeholders.
- **Work with the key stakeholders to identify options to initiate peak hour rail services between the two counties which may be achieved within the financial resources of the stakeholders, and institutional and operational needs:** In coordination with the key stakeholders, this study developed and recommended mechanisms to assure responsive and successful implementation of public investments and services in the corridor in cooperation with the Union Pacific. Working with the key stakeholders, the objective was to address how the proposed services and the public investments necessary could be coordinated, funded and managed to assure effective public benefits are achieved and maintained.



Following this Introduction, the remaining sections of this technical memorandum are organized as follows. Section 2 provides an overview of the existing conditions and services in operation in the Union Pacific Railroad's Coast Line (Coast Line) segment between Goleta in Santa Barbara County and Moorpark in Ventura County, and continuing east to Los Angeles. Section 3 summarizes the prior studies conducted of intercity and commuter rail service in the corridor, with existing and proposed capital projects identified in Section 4. Section 5 focuses on the operational, financial, and institutional issues of concern to the key stakeholders, based on a series of interviews conducted. Section 6 describes the potential alternatives for rail service and their potential viability relative to existing financial constraints and the issues of concern to the stakeholders. Section 7 describes the issues and potential options to address the issues related to the preferred service alternative. Section 8 summarizes potential longer range improvement options and Section 9 summarizes next steps and recommendations.

## **2. OVERVIEW OF EXISTING CONDITIONS IN THE UNION PACIFIC COAST LINE**

The Coast Line is the mainline railroad linking Ventura County with Santa Barbara. The line parallels U.S. Highway 101 (U.S. 101 or Highway 101) which is experiencing increasing congestion.

### **2.1 Description of the Project Area**

Constructed by the Southern Pacific Railroad between the late 19<sup>th</sup> and early 20<sup>th</sup> Centuries, the Coast Line was originally constructed as a high speed passenger line to ferry passengers nearly 500 miles between San Francisco and Los Angeles. Today, the southern components of the Coast Line are comprised of the UPRR Santa Barbara Subdivision and the Southern California Regional Rail Authority's (SCRRA or Metrolink) Ventura Subdivision. Acquired by the UPRR in 1996 as part of the UPRR takeover of the Southern Pacific, the corridor today is traversed by UPRR freight services, Amtrak California Pacific Surfliner and Amtrak Coast Starlight intercity services (which took over passenger service from the Southern Pacific in May 1971), and Metrolink commuter rail services which began operation in October 1992. There is currently limited passenger service operating north of Santa Barbara and Goleta. Figure 1 illustrates the segment of the Coast Line that is the focus of this study and the stations within this segment.

The Ventura County portion of the Coast Line is a mostly single tracked segment that extends along a narrow coastal plain adjacent to the Pacific Coast. This portion of the corridor traverses the cities and communities of Simi Valley, Moorpark, Camarillo, Oxnard, and Ventura. SCRRA operates commuter service as far as Montalvo, on the Santa Paula Branch Line, in the City of Ventura. Amtrak/Amtrak California operates intercity rail services with multiple stops in Ventura County and Santa Barbara County, with some trains continuing to San Luis Obispo, and to Oakland and Seattle. UPRR operates through and local freight services along the Coast Line, including rail access to Port Hueneme. The Coast Line also connects at Montalvo with the Santa Paula Branch Line. The Santa Paula Branch Line was the subject of a recently-completed SCAG/VCTC study to assess the potential for reconnection with the SCRRA/Metrolink mainline in Santa Clarita and potential passenger and freight services.



The Santa Barbara County portion of the Coast Line parallels US 101 on a narrow coastal plain in very close proximity to the Pacific Ocean. It is mostly single tracked with passing sidings near Guadalupe, Surf, and Santa Barbara. This segment of the corridor traverses a mix of small coastal residential clusters, rural zones, coastal recreation, and some light industry focused on oil industry operations. The Union Pacific line and US 101 traverse the City of Carpinteria, the community of Montecito, the City of Santa Barbara, and the City of Goleta.

**Figure 1: The Union Pacific Railroad Coast Line: Goleta to Los Angeles Segment**



An important consideration in proposing any improvements along this corridor is the environmental sensitivity of many of the locations, especially where the rail corridor is adjacent to the coast line. Along northern Ventura County and most of Santa Barbara County, the corridor is adjacent to not only the beach, but also the coastal bluffs. These bluffs are geologically unstable and improvements to any of the transportation corridors in these areas must take into account this environmental issue. In addition, being adjacent to the ocean, the rail corridor crosses several wetlands. With so many environmental considerations, any infrastructure improvement along this segment of the corridor must receive the approval of the appropriate resource agencies and the California Coastal Commission before being implemented.

## 2.2 Current Infrastructure Conditions

Based on knowledge of the corridor and review of the prior planning studies and reports conducted along this segment of the Coast Line, the infrastructure in the corridor has not fully kept pace with the revival and subsequent increases in rail service north of Los Angeles. Though much of the Metrolink owned infrastructure (south of Moorpark) has been upgraded to Centralized Traffic Control (CTC) and the basic track work has been upgraded, there remain significant sections of single track, most notably over the Santa Susana Pass, through the two tunnels in this location,



and between Moorpark and Oxnard. Many locations along the UPRR owned and operated segments also still use an Automatic Block System (ABS) signal control and manual (hand thrown) switches, which are not conducive to efficient passenger operations.

The Caltrans Division of Rail has invested millions of dollars into improvement of this section of the Coast Line over the past several decades to improve the On-Time Performance (OTP) and reliability of intercity passenger services. However many of these improvements were focused on upgrading the poor and failing infrastructure that was already in place and did not emphasize expansion of capacity. As a result, capacity of the line remains a limiting factor in the amount of passenger and freight rail service that can be provided.

## 2.3 Existing Freight and Passenger Rail Service Levels

There are currently three primary rail services operating along this segment of the Coast Line: UPRR, Amtrak, and SCRRA. Each is described below.

- **UPRR Freight Services:** The UPRR operates approximately six to ten through trains and a handful of local freight trains along the corridor. Operating primarily in the Oxnard area.
- **Amtrak California Pacific Surfliner and Amtrak Coast Starlight Intercity Services:** Amtrak and its partner, Caltrans Division of Rail, operate six round trip Pacific Surfliners between Los Angeles, Ventura, Santa Barbara and Goleta. Two of these trips continue north to San Luis Obispo. This service is provided seven days a week. Supporting the service is a network of Amtrak-related Ambus bus service connections that extend the range of service to other cities and communities.
- **SCRRA Commuter Rail Service:** SCRRA operates the following service in the corridor:

### AM Peak Service

- 5 Southbound AM peak hour trains (3 from Montalvo and 2 from Moorpark)
- 1 Peak AM Southbound Amtrak train
- 1 Peak AM Northbound Metrolink train to Moorpark
- 1 Peak AM Northbound Amtrak train

### Off-Peak Service

- 2 Off – Peak Northbound Metrolink trains to Moorpark
- 2 Off – Peak Southbound trains from Moorpark

### PM Peak Service

- 1 Peak PM Southbound Metrolink train from Moorpark

All of these trains use the Rail-2-Rail Program. This has been in effect in Ventura County since its inception



## 2.4 Freight Operational Issues

The UPRR has seen significant growth in freight traffic in recent years. The UPRR moves significant volumes of freight from Northern California to Southern California through the Central Valley Line. Much of this freight traffic flows through the Tehachapi Pass, then into Los Angeles and West Colton and on east via the "sunset" route to points east. Rail congestion in the Tehachapi Pass, which is also shared with BNSF (Burlington Northern Santa Fe) Railway, has caused increased traffic in recent years on the Coast Line. This condition is likely to increase in the future. The anticipated growth in rail freight traffic may affect both the operational and institutional arrangements necessary to accommodate freight as well as increased passenger services. UPRR officials have also indicated that they view the Coast Line as a "safety valve" should the Central Valley Line be blocked for any reason.

A portion of the rail freight on the Coast Line is from the Port of Hueneme as well. Port of Hueneme is the only deep-water port in California between Long Beach/San Pedro and Oakland and it has seen a large increase in activity over the past several years. The Port is served by the Ventura County Railroad, a short-haul operation between the Port and the Coast Main Line via a connection in Oxnard.

Additionally, the recently-completed Santa Paula Branch Line Rail Study addressed improvements required in Ventura County on the Santa Paula Branch and Coast Line to accommodate growth in freight traffic generated by Port Hueneme as well as possible commuter rail service between Ventura and Santa Paula.

## 2.5 Existing Commuter Bus Service between Ventura and Santa Barbara

Commuter transit service between Ventura and Santa Barbara counties is currently provided by VISTA as the Coastal Express. The Coastal Express provides seven-day a week service between Ventura and Santa Barbara with stops in Carpinteria and weekday service to Goleta. Started as a three-year pilot program in 2001, the Coastal Express is jointly funded by the two counties and carries an estimated 179,000 trips annually. There are 13 northbound trips and 17 southbound trips on weekdays, and 9 roundtrips on weekends. It is likely that additional buses with more frequent service during the peak hours will be scheduled in the corridor

## 3. REVIEW OF PREVIOUS STUDIES AND EXISTING DOCUMENTS

The Coast Line corridor has been the focus of an extensive number of previous planning studies and inventory work performed over the last ten years. These studies have analyzed various services and infrastructure improvements that focus on improving passenger service reliability and frequency. SBCAG undertook the *101-in-Motion Study* to determine what improvements will be needed and acceptable to meet the long range needs of this corridor, including a "lane and a train" concept incorporating provision of additional freeway capacity with transportation systems management and commuter rail and expanded transit services. The Los Angeles-San Diego-San Luis Obispo Corridor Agency (LOSSAN), a Joint Powers Agency (JPA) established to guide development of intercity passenger rail service in the



Corridor from San Diego through Orange, Los Angeles, Ventura, and Santa Barbara Counties to San Luis Obispo has undertaken studies to assess capital and operating requirements for the Coast Line based on future demands for freight, intercity and commuter passenger services. Other studies, including the *Metrolink Commuter Rail Strategic Assessment*, *Santa Paula Branch Line Rail Project*, *2004/2005 Ventura County Congestion Management Plan*, and the *California 20-Year Rail Plan*, have also addressed issues associated with rail-related services within the Ventura to Santa Barbara portion of the Coast Line, as well as extensions of the corridor to the east and west (south and north) and in relation to connecting rail lines. This Santa Barbara/Ventura Rail study builds upon these prior analyses to identify potential options for initiating commuter rail service, while considering intercity and freight needs and their impact on capital and operating costs.

The studies and documents of particular relevance to this study include:

- **LOSSAN North Corridor Strategic Plan:** This document outlined a 25 year strategic vision for the corridor between Los Angeles and San Luis Obispo. While focused primarily on intercity rail improvements; the operational analysis conducted assumed one option that included a commuter service between Camarillo and Goleta for purpose of modeling future capacity needs.
- **101-in-Motion Study:** The overall purpose of this study was to develop an action plan consisting of short-term and long-term solutions that would reduce congestion along the Highway 101 corridor in Santa Barbara County. The proposed improvements recommended for the corridor incorporate interregional commuter rail as part of the solution to the growing congestion along the 101 Corridor.
- **Pacific Surfliner Route FY 2006-07 Business Plan:** This document, produced annually, is a corridor-specific short-range plan produced by the Caltrans Division of Rail. The document provides an overview of Pacific Surfliner service including performance standards and results, operating and marketing plans, and capital improvements planned.
- **SCRRRA Strategic Assessment:** The purpose of this document was to identify a long-term guide for the growth of the Metrolink system over the next 25 years, to allow for the member agencies to plan for the capital funding and operating subsidies necessary to respond to the demand for expanded services. While the Strategic Assessment calls for several projects and service expansions in Ventura County along the existing Metrolink system, no service extension is proposed to Santa Barbara.
- **Ventura County Congestion Management Plan:** The Ventura County Congestion Management Plan was produced to help develop a coordinated approach to managing and decreasing traffic congestion by linking the various transportation, land use and air quality planning programs through Ventura County. This includes transit and rail alternatives for congestion relief.
- **California 20-Year Rail Plan:** Completed in 2001, this document was developed in cooperation with all of the major railroads and rail agencies in the State of California and was intended to provide a 20 year outlook to the State of California's railroad infrastructure needs in response to the projected growth in both passenger and freight services.



Each of these documents is described in greater detail below.

### 3.1 LOSSAN North Corridor Strategic Plan

The recently completed *LOSSAN North Corridor Strategic Plan* was produced by the Caltrans Division of Rail to develop a vision for the rail corridor between Los Angeles and San Luis Obispo over the next 25 years. This document identifies several infrastructure improvements necessary to obtain the desired intercity passenger service levels. The projects were then categorized into short, medium, and long-term improvements. Along with this, an operational analysis was conducted to determine the effectiveness these improvements would have on the overall corridor. One scenario included interregional commuter service operating between Camarillo and Goleta for purposes of assessing capacity improvements needed. This service was based on the assumption that it would operate on the 2015 and/or 2030 network improvements.

Tables 1 through 5 present the preliminary results of the operational analysis and color codes the scenarios by the network improvements in each case that are located within this project's study area. Table 1 presents the overall infrastructure projects in the *LOSSAN North Corridor Strategic Plan* assumed for Ventura and Santa Barbara Counties. The projects highlighted in orange are located within this project's study area.

**Table 1: Infrastructure Projects Identified in the LOSSAN North Corridor Strategic Plan**

County	Project Type	Project Name	Estimated Cost
SB	Track	MP 276 Track Realignment & Highway 1 Overpass Replacement	\$42,000,000
SB	Track	Waldorf Siding Extension	\$15,000,000
SB	Track	Devon to Tangair Curve Realignments	\$165,000,000
SB	Track	Tangair Siding Extension	\$22,000,000
SB	Track	Santa Barbara County Curve Realignments	\$586,000,000
SB	Station	Goleta Station Improvements	\$700,000
<b>SB</b>	<b>Station</b>	<b>Santa Barbara Station Improvements</b>	<b>\$522,000</b>
<b>SB</b>	<b>Track</b>	<b>Ortega Siding</b>	<b>\$18,000,000</b>
<b>SB</b>	<b>Track</b>	<b>Sandyland Siding</b>	<b>\$18,000,000</b>
<b>SB</b>	<b>Track</b>	<b>Rincon Siding</b>	<b>\$18,000,000</b>
<b>SB</b>	<b>Track</b>	<b>Seacliff Siding North</b>	<b>\$18,000,000</b>
<b>SB</b>	<b>Track</b>	<b>Seacliff Curves Realignment</b>	<b>\$8,500,000</b>
VEN	Track	Montalvo Curve Realignments	\$1,100,000
VEN	Track	Santa Clara River Curve Realignment	\$5,000,000
<b>VEN</b>	<b>Track</b>	<b>CP West Camarillo Curve Realignments</b>	<b>\$165,000,000</b>
<b>VEN</b>	<b>Station</b>	<b>Camarillo Station Improvements</b>	<b>\$7,000,000</b>
<b>VEN</b>	<b>Track</b>	<b>Moorpark to Simi Valley Rail Replacement</b>	<b>\$24,000,000</b>
<b>VEN</b>	<b>Station</b>	<b>Moorpark Station Improvements</b>	<b>\$1,000,000</b>



Table 1: Cont

County	Project Type	Project Name	Estimated Cost
VEN	Track	CP Posas to MP 423 Second Main Track	\$45,000,000
VEN	Track	Simi Valley to CP Strathearn Second Main Track	\$37,000,000
VEN	Track	Strathearn Siding Curve Realignment	\$500,000
VEN	Station	Simi Valley Station Improvements	\$6,000,000
VEN	Structure	Los Angeles Street Grade Separation	\$75,000,000
VEN	Track	Hasson to Simi Valley Station Second Main Track	\$33,000,000
VEN	Structure	Santa Susan Tunnel 26 Seismic Upgrade	\$13,000,000

*Note: Those rows highlighted in **ORANGE** represent projects within the limits of this study. Some of these projects were used in the Operations Analysis and included in the tables below.*

Table 2: LOSSAN North Corridor Strategic Plan- Proposed 2015 Network in Operations Analysis

Project Name	Location
Spring Switches	All sidings Capitan-Grover; both ends of sidings
Platform on northward track	Van Nuys
6.3 miles new 2nd Main Track	CP Raymer - CP Desoto
<b>New 9,240-ft. siding</b>	<b>Ortega</b>
<b>New 2,000-ft. siding</b>	<b>Carpenteria</b>
<b>5,000-ft. siding extension. Length now 10,000 ft.</b>	<b>Seacliff</b>
11,000-ft. Siding extension and CTC. Length now 14,800 ft.	Waldorf
3600-ft. Siding extension and CTC. Length now 7,600 ft.	Guadalupe
<b>CTC islands</b>	<b>Sidings Narlon, Honda, Concepcion</b>
3,400-ft. Siding extension and CTC. Length now 8,500 ft.	Capitan
<b>New south switch and CTC. Converts spur to siding.</b>	<b>Goleta Depot</b>
CTC	San Luis Obispo

*Note: This table represents infrastructure projects as outlined for the 2015 network in the Operations Analysis. Those rows highlighted in **ORANGE** represent the 2015 Network projects within the limits of this study.*



**Table 3: LOSSAN North Corridor Strategic Plan: Proposed 2025 Network in Operations Analysis**

Project Name	Location
3.4 mi. new 2nd Main Track	Moorpark to MP 423
6.4 mi. new 2nd Main Track	Hasson to Simi Valley, and Simi Valley to Strathern
Curve realignment to allow 55-mph passenger speed	Burbank Jct.
Run-through tracks	Los Angeles Union Station
4,300-ft. siding extension and CTC. Length now 9,900 ft.	Tangair
<b>New 10,500-ft. siding</b>	<b>Sandyland</b>
<b>New 4,750-ft. siding</b>	<b>Rincon</b>
Full CTC	San Luis Obispo to Goleta
<b>6.9 mi. new 2nd Main track</b>	<b>Oxnard to Camarillo</b>
<b>New Crossover</b>	<b>West Camarillo</b>
Use of Budweiser lead for UP trains working. Will require additional construction	Gemco (Van Nuys)
<i>Note: This table represents infrastructure projects as outlined for the 2025 network in the Operations Analysis. Those rows highlighted in <b>ORANGE</b> represent the 2025 Network projects within the limits of this study.</i>	



**Table 4: LOSSAN North Corridor Strategic Plan - Service Scenario Cases and Train Numbers Input into Operations Model**

Run	Case	Assumptions and Tasks	Type	Metrolink Ventura	Surfliner LAX-SBA	Surfliner GTA-SLO	Camarillo-Goleta	UP Freight
A0a	2006\A0	Base Case: 2006 track, signals, trains	Base	20	10	4	0	4
A1	2015\A1	2015 traffic on 2006 network	Demand	26	12	6	0	6
A2	2015\A2	2015 traffic on 2015 network	Investment	26	12	6	0	6
B1	2015\B1	Additional Amtrak LA-SLO trains on 2015\A2 network	Demand	No train numbers were provided in the report for this service case.				
B2	2015\B2	Additional Amtrak LA-SLO trains on 2015\A2 network, plus improvements	Investment					
C1	2015\C1	Additional Metrolink trains on 2015\A2 network	Demand	26	12	6	6	6
C2	2015\C2	Additional Metrolink trains on 2015\A2 network, plus improvements	Investment	26	12	6	6	6
D1	2015\D1	DMU Service	Demand	26	12	6	6	6
D2	2015\D2	DMU Service, plus improvements	Investment	26	12	6	6	6
E1	2025\E1	2025 traffic on 2015 network	Demand	38	14	8	8	8
E2	2025\E2	2025 traffic on 2025 network, plus improvements. Metrolink equipment on Camarillo-Goleta trains.	Investment	38	14	8	8	8
E3	2025\E3	2025 traffic on 2025 network, plus improvements. DMU equipment on Camarillo-Goleta trains.	Investment	38	14	8	8	8

*Note: The column highlighted in **ORANGE** represents a proposed Camarillo to Goleta Commuter Rail Service. Rows shaded in **GREY** highlight the Year 2015 model runs, while the rows shaded in **YELLOW** highlight the Year 2025 model runs.*



Table 5: LOSSAN North Corridor Strategic Plan – Network Performance

Case	Incremental Improvements	Number of Trains			On-Time Percentage	Delay Ratio		Delay Hours/Day		Avg. Speed	On-Time Percentage
		Avg. per Day	Avg. Revenue Passenger	Avg. UP Freight	Passenger	Passenger	Freight	Passenger	Freight	Camarillo - Goleta	Camarillo-Goleta
2006\A0a	<b>Base Case: 2006 track, signals, trains</b>	65	52	13	84%	5%	13%	4.0	4.7	-	-
2015\A1	<b>2015 traffic on 2006 network</b> Existing switches Goleta-San Luis Obispo	81	65	16	75%	7%	17%	6.5	10.7	-	-
2015\A2	<b>2015 traffic on 2015 network</b> CTC islands; some siding extensions	81	65	16	83%	5%	12%	4.8	7.1	-	-
2015\A2	<b>2015 traffic on 2015 network</b> CTC islands; some siding extensions; Faster curves south of Goleta	81	65	16	83%	5%	13%	4.9	7.3	-	-
2015\C1	<b>Camarillo-Goleta trains on 2015\A2 network</b>	85	69	16	84%	7%	14%	7.0	8.3	-	-
2025\E2	<b>2025 traffic on 2015 network, plus improvements:</b> Additional 2nd MT; CTC Goleta-SLO. Metrolink equipment	111	91	20	83%	6%	13%	7.0	10.5	38.5	84%
2025\E3	<b>2025 traffic on 2015 network, plus improvements:</b> Additional 2nd MT; CTC Goleta-SLO. DMU equipment	111	91	20	83%	6%	12%	7.3	10.3	39.3	85%

*Note: Rows shaded in **GREY** highlight the Year 2015 model runs, while the rows shaded in **YELLOW** highlight the Year 2025 model runs.*



### 3.2 101-In-Motion Study

As part of the *101-In-Motion Study* completed in 2006, a conceptual planning level analysis was conducted of weekday commuter rail service operating between Ventura County and the major Santa Barbara County destinations for the near-term and long range (year 2030). The primary purpose of this analysis was to provide input on a decision of whether or not commuter rail should be part of the comprehensive solution package for reducing congestion along the US 101 Corridor.

As shown in Table 6, the analysis was based on a three roundtrip scenario, with station locations at Camarillo, Oxnard, Ventura, Carpinteria, Santa Barbara, and Goleta. Estimated ridership and revenue for the service was forecast for 2010, 2020, and 2030 under three conditions: current congestion levels (assuming minimal capacity improvements to U.S. 101), increased congestion levels (no improvements to U.S. 101), and HOV lanes with Express Bus transit added to U.S. 101. As presented in Table 7, annual ridership for these three scenarios ranged in 2030 from 440,000 with HOV and Express Buses to 880,000 with no improvements. Additionally, Table 8 provides a comparison of the daily boardings and alightings by station for the 2030 scenarios.

As shown Table 9, these service scenarios also assumed several key infrastructure improvements to the rail corridor primarily in Santa Barbara County, as well as purchase of rolling stock. The total cost of these infrastructure projects was estimated to be \$79.5 million dollars (in 2004 dollars). Table 10 summarizes the key components of the annual operating costs estimate methodology. The annual operating cost was estimated to be approximately \$6 million a year (in 2004 dollars).

The overall annual operating costs assumed for this service were based on available information and a \$41.31 cost per mile that was an average across the entire Metrolink system. Based on the 2007 Metrolink Budget, the current O&M cost per mile for the Ventura County Line is \$63.58 and the UPRR costs are assumed to have also increased over what was published in the *101-In-Motion Study*. The UPRR costs used for the estimates that were incorporated into the *101-In-Motion Study* were based on the operating agreement made by Metrolink with the Southern Pacific Railroad in 1991. UPRR subsequently acquired the Southern Pacific in 1996.

As part of the commuter rail assessment, a potential early start scenario was also developed that presented alternative concepts of initiating the service with minimal capital investments. Both concepts focused on two roundtrips using either used or new equipment, basing the service out of Montalvo, along the Santa Paula Branch line, and assuming no track infrastructure improvements along the Coast Line. No costs were associated with these concepts, and the issue was identified that the UPRR would not likely approve these concepts without some infrastructure improvements.

**Table 6: 101-In-Motion Study: Commuter Rail Service Concept**

<b>Camarillo to Santa Barbara &amp; Goleta</b>	<b>Peak Hour Number of Trains</b>
Northbound	3
Southbound	3



**Table 7: 101-In-Motion Study: Commuter Rail Annual Ridership Forecasts  
Three AM Train Service Plan**

Scenario	2010	2020	2030
With HOV/Bus	242,491	334,032	439,868
Current Congestion	440,892	513,896	586,490
Increased Congestion	484,981	668,064	879,735

**Table 8: 101-In-Motion Study: 2030 Daily Boardings and Alightings By Station**

Stations	With HOV/Bus		Current Congestion		Increased Congestion	
	On	Off	On	Off	On	Off
Camarillo	134	0	178	0	268	0
Oxnard	242	0	323	0	485	0
Ventura	385	0	513	0	769	0
Carpinteria	71	32	95	42	143	63
Santa Barbara	34	506	45	674	67	1,011
Goleta	0	329	0	438	0	658
<b>Totals</b>	<b>866</b>	<b>867</b>	<b>1,154</b>	<b>1,154</b>	<b>1,732</b>	<b>1,732</b>

**Table 9: 101-In-Motion Study: Infrastructure Projects**

County	Project Type	Project Name	Estimated Cost
VEN	Station	Oxnard Station Improvements	\$11,420,481
SB	Track	Goleta Layover Facility	\$4,268,695
VEN	Track	Camarillo Layover Facility	\$4,268,695
SB	Track	Summerland Passing Siding	\$5,969,082
VEN	Track	Oxnard Siding Extension	\$9,164,685
SB	Station	Add parking to Carpinteria Station	\$3,291,420
SB	Station	Santa Barbara & Goleta Station Shuttle and Parking Improvements	\$3,509,750
--	Equipment	Rolling Stock Requirements*	\$37,600,000
<b>TOTAL COSTS</b>			<b>\$79,492,808</b>
<i>* Assumes 4 locomotives, 7 coaches, 4 cab cars &amp; 1 procurement allowance</i>			



**Table 10: 101-In-Motion Study: O&M Costs**

Cost Items	Unit Cost	Unit Measure	Cost
Train Operations & Equipment Maintenance	\$41.31 per train mile	83,820 train miles	\$3,462,604
UP Capital Maintenance	\$22,222 per route mile	55 route miles	\$1,222,222
UP Operations	\$7.30 per train mile	83,820 train miles	\$611,886
UP Interest Rental	\$5,555.56 per route mile	55 route miles	\$305,556
Shared Station Maintenance	\$1,500 per station	6 stations	\$9,000
Support Facility Maintenance	\$10,000 per year	1 year	\$10,000
General & Administrative Costs	\$500,000 per year	1 year	\$500,000
<b>Total Annual Cost</b>			<b>\$6,121,268</b>
<i>Note: Based on 2004 dollars. Current O&amp;M unit costs have increased to \$63.58 for the Ventura County Line. UPRR costs were based on what was negotiated in 1991 and are assumed to have also increased.</i>			

### 3.3 Pacific Surfliner Route FY 2006-07 Business Plan

The *Pacific Surfliner Route Business Plan* is a corridor specific short-range plan updated annually by the Caltrans Division of Rail as a supplement to the *California State Rail Plan*. The *State Rail Plan* includes both a passenger and freight element and presents a longer range 10-year plan for State-supported rail passenger services. The *Pacific Surfliner Business Plan* is intended to provide a near-term overview of service performance and goals, operating and marketing plans and capital improvements underway or programmed, which include track, signal and station projects and estimated capital costs along the entire corridor between San Diego, Los Angeles and San Luis Obispo.

A summary of the existing and programmed capital improvements relevant to this study are provided in the following sections.

### 3.4 SCRRRA Strategic Assessment

The *SCRRRA Strategic Assessment* is a planning document updated every few years that sets a long-term vision for the growth and expansion of Metrolink. In addition to setting the vision for the growth of existing services, this document also evaluates the potential for future expansions of Metrolink into new corridors.

While the 2007 *SCRRRA Strategic Assessment* references numerous service and infrastructure improvements to the Ventura County Line, Metrolink does not mention a potential expansion into the Ventura-Santa Barbara rail corridor. However, several of the improvements along the Ventura County Line would benefit commuter service that extends as far south as Camarillo. As shown in Tables 11 through 14, several of the service and infrastructure improvements benefit the Oxnard and Montalvo areas.



- Table 11 summarizes the proposed service increases for Ventura County based on the preferred long range service concept in the Strategic Assessment;
- Table 12 summarizes the equipment assignment for the Montalvo layover facility;
- Table 13 summarizes the Ventura County Line’s projected daily ridership; and
- Table 14 summarizes the 2015 and 2020 estimated capital costs for proposed infrastructure improvements and the share split between Ventura and Los Angeles County.

**Table 11: SCRRRA Strategic Assessment: Proposed Service Increases for Ventura County**

Line			2005	2010	2015	2020	2030
Ventura County			18	18	28	34	42
<i>Increase over 2005</i>				0%	56%	89%	133%
<i>Increase over Prior Period</i>					56%	21%	17%
Line	Time Period	Direction	2005	2010	2015	2020	2030
Ventura County	AM Peak	Inbound	5	5	6	6	7
	AM Peak	Outbound	1	1	3	4	7
	PM Peak	Inbound	1	1	3	4	7
	PM Peak	Outbound	5	5	6	6	7
	Off-Peak	Inbound	3	3	5	7	7
	Off-Peak	Outbound	3	3	5	7	7
Line	Time Period	Direction	2005	2010	2015	2020	2030
Ventura County	AM Peak	Inbound		40-60	30-40	30-40	30
	AM Peak	Outbound		NA	90	60	30
	PM Peak	Inbound		NA	90	60	30
	PM Peak	Outbound		40-60	30-40	30-40	30
	Off-Peak	Inbound		180	90	60	60
	Off-Peak	Outbound		180	90	60	60

**Table 12: SCRRRA Strategic Assessment: Equipment Assignment at Layovers**

Layover	Current	2010	2015	2020	2030
Montalvo	3	3	5	6	6

**Table 13: SCRRRA Strategic Assessment: Projected Weekday Trips**

Ventura County Line	2005	2010	2015	2020	2030
Weekday Peak Period Trips		4,259	5,009	6,112	9,651
Total Weekday Trips		4,642	5,760	7,274	11,485
It should be noted that ridership on both the Ventura County Lines in 2006 already approaches the projections for 2010.					



**Table 14: SCRRRA Strategic Assessment: Infrastructure Improvements**

2015 Infrastructure Improvements	2005	2013	Cost Share	
			LACMTA	VCTC
Montalvo Layover Facility	\$3,475,800	\$4,756,872	\$2,146,966	\$2,609,906
Signal & Safety Improvements ( <i>all Ventura County</i> )	\$97,762,000	\$133,794,048	\$57,383,727	\$9,199,475
<b>SUBTOTAL</b>	<b>\$101,237,800</b>	<b>\$138,550,920</b>	<b>\$59,530,693</b>	<b>\$11,809,381</b>
2020 Infrastructure Improvements	2005	2013	Cost Share	
			LACMTA	VCTC
Oxnard Improvements	\$20,560,000	\$34,233,911	\$15,451,131	\$18,782,781
Signal & Safety Improvements ( <i>all Ventura County</i> )	\$80,000,000	\$133,205,880	\$28,883,205	\$9,159,034
<b>SUBTOTAL</b>	<b>\$100,560,000</b>	<b>\$167,439,791</b>	<b>\$44,334,336</b>	<b>\$27,941,815</b>

### 3.5 Ventura County Congestion Management Plan

Incorporated into the 2004/2005 *Ventura County Congestion Management Plan* (CMP) is a chapter outlining the existing and proposed transit services for serving Ventura County. These services include local, paratransit, Metrolink and Amtrak rail services, and intercity express services. Outlined within this chapter are possible future passenger rail facilities and operations. A commuter rail operation between Ventura and Santa Barbara Counties is proposed as one possible solution to congestion along the US 101 corridor. It is not suggested whether this should be a new operation, or simply an extension of Metrolink. No technical or statistical data accompanies this solution, only a statement identifying the need to evaluate options and determine whether commuter rail service would be appropriate and cost-effective for the corridor.

In addition to the possibility of commuter rail service, the CMP discusses the inter-county express services provide by VISTA. This service operates the “Coastal Express”, which provides seven-day a week connections between Ventura and Santa Barbara, with stops in Carpinteria, and weekday service to Goleta. The service, which began in August 2001, provides express bus service with 13 northbound and 17 southbound trips every weekday, and 9 roundtrips on weekends. As stated earlier, it is likely that additional buses with more frequent service during the peak hours will be scheduled in the corridor.

### 3.6 California 20-Year Rail Plan

The *California 20-Year Rail Plan* (State Rail Plan) is the document on which many of the projects proposed in subsequent studies and reports are based. The State Rail Plan provides a comprehensive look at the passenger and freight rail infrastructure and needs for the state as a whole. As shown in Table 15 through 18, the projects identified conform to those agreed upon in both the *101-in-Motion* and *LOSSAN North Corridor Strategic Plan* documents. Table 15 summarizes the proposed infrastructure improvements in the project’s study area, Table 16 provides the



proposed level of intercity service through 2020; and Table 17 provides the estimates annual ridership levels on the proposed intercity service.

A key difference between the *State Rail Plan* and the *101-in-Motion* and *LOSSAN North Corridor Strategic Plan* documents is that the *State Rail Plan* only mentions enhanced intercity passenger service for the Ventura/Santa Barbara commuter market. Commuter rail is not discussed in this document.

**Table 15: California 20-Year Rail Plan: Pacific Surfliner Corridor Immediate and Near-Term Projects within the Study Area**

Description	Project Costs (in millions 2000\$)							
Project Name	Project Development	ROW	Track/Structure	Stations	Signals	Crossings	Rolling Stock	Total Cost
Summerland Siding	\$1.34		\$3.49		\$3.43	\$1.77		\$10.03
Carpinteria Siding	\$1.03		\$3.61		\$3.09			\$7.73
Tangair Siding Extension	\$1.57	\$2.26	\$5.94		\$2.74			\$12.51
Seacliff Curves Realignment	\$0.10	\$4.32	\$0.65					\$5.07
Montalvo Curve Realignment	\$0.04	\$0.14	\$0.28		\$0.09			\$0.55
Santa Clara River Curve Realignment	\$0.08	\$1.85	\$0.48		\$0.50			\$2.91
CP West Camarillo Curve Realignment	\$0.08	\$1.69	\$0.50		\$0.47			\$2.74

**Table 16: California 20-Year Rail Plan: Proposed Intercity Service Levels**

Los Angeles to Santa Barbara	2000	2005	2020
No. of Trains Assumed	4	5	7
Estimated Travel Time (hh:mm)	2:45	2:07	2:04

**Table 17: California 20-Year Rail Plan: Estimated Intercity Ridership (in millions)**

Origin-Destination	2000	2005	2020
San Diego to San Luis Obispo	1.57	3.34	5.76



## 4. EXISTING AND PROPOSED CAPITAL PROJECTS AND SERVICE ENHANCEMENTS

A variety of capital projects are currently underway or recently completed in the Ventura to Santa Barbara portion of the Coast Line corridor. In addition, other capital improvements are proposed under the recently-adopted 2006 Augmentation of the State Transportation Improvement Program (STIP) and Caltrans' proposed priority list of intercity rail projects for funding from Proposition 1B. Enhancements to existing service are also proposed.

### 4.1 Capital Projects

#### Projects Underway or Recently Completed

As identified in the Business Plan of the Pacific Surfliner for FY 2006-07, the following projects are underway, or have recently been completed along the Coast Line between Santa Barbara and Los Angeles.

- **Goleta-Moorpark Track and Signal Improvements:** New continuous welded rail, cross ties, ballast, the extension of current sidings, construction of new sidings, grade crossing improvements, and a new Centralized Traffic Control (CTC) signal system were implemented along the Coast Line in 2001 at a cost of \$30 million.
- **Ellwood-Seacliff Track and Signal Improvements:** This \$12.7 million project was completed in 2002 and replaced the old signal block system with 31 miles of CTC. In addition, a new 9,000 foot siding was constructed adjacent to the Goleta Layover facility, and the existing Seacliff siding was rebuilt to include power switches.
- **Hasson Siding Extension:** Completed in 2003, this project extended the current siding to 10,000 feet to allow for running train meets.
- **Ventura County Track and Signal Improvements:** With approximately \$1 million programmed, this program of projects currently underway will replace rail, ties and bridge supports, in addition to upgrading rail crossings, signals and switches throughout Ventura County.
- **Santa Susana Tunnel 26:** Completed in April 2007, this \$10.9 million project upgraded the existing tunnel, originally built in 1905, to withstand seismic activity.
- **Chatsworth Track and Station Improvements:** Completed in 2002, this \$4.5 million project added a second platform at the station, extended a siding, and replaced the existing signal block system with CTC.
- **Moorpark-Burbank Track and Signal Improvements:** This project (currently underway) \$1.5 million programmed to upgrade the existing rail infrastructure and renovate the existing turnouts and sidings.



### Projects Programmed

The Business Plan for the Pacific Surfliner calls for the following additional projects programmed along the Coast Line between Santa Barbara and Los Angeles:

- **Additional Track Signal and Infrastructure Upgrades:** An additional \$2.9 million has been proposed and another \$4 million has been programmed to provide for currently undefined infrastructure upgrade north of Los Angeles.
- **Moorpark-Simi Valley Rail Replacement:** This \$4 million project will replace rail on the seven miles of track between Moorpark and Simi Valley to improve overall safety and allow for faster speeds.
- **Leesdale Siding:** This project would extend the existing siding at a cost of \$7.2 million, providing additional capacity and allowing for improved meets between passing trains.

### 2006 STIP Augmentation: Interregional Program Projects Programmed

In June 2007, the California Transportation Commission approved a program of projects to augment the 2006 STIP. Included in the Interregional Program component recommended by Caltrans are two projects totaling approximately \$18 million for improvements along the Coast Line between Santa Barbara and Los Angeles

- **Siding Upgrade and Extension, Santa Barbara County:** A total of \$11.45 million is programmed for siding upgrade and extension in Santa Barbara County. Of this total, \$1 million is programmed in FY 2009 for planning and environmental analysis; \$1 million in FY 2010 for plans, specifications, and estimates (PS&E); and \$9.45 million in FY 2011 for construction.
- **Sidings in Santa Barbara and Ventura Counties:** A total of \$6.87 million is proposed for sidings in Santa Barbara and Ventura Counties. Of this total, \$2 million is programmed in FY 2009 for planning and environmental analysis, with \$4.87 million programmed in FY 2010 for plans, specifications, and estimates (PS&E).

### Caltrans' Proposed Intercity Rail Project Priorities for Proposition 1B Funding

In November 2006, California voters passed multiple propositions approving the issuance of State bonds, including Proposition 1B. This Proposition calls for a total of over \$19 billion in bonds for transportation projects, of which \$4 billion is to be deposited into a newly-created Public Transportation Modernization, Improvement, and Service Enhancement Account. Of the \$4 billion, \$400 million was designated to be available, upon appropriation by the Legislature, for intercity rail capital projects, including a minimum of \$125 million for the procurement of intercity rail cars and locomotives.

In June 2007, Caltrans presented to the California Transportation Commission its \$445 million list of recommended intercity rail capital project priorities for funding from the proceeds of Proposition 1B. In developing these priorities, Caltrans relied



extensively on the Amtrak California Passenger Rail System *20- Year Improvement Plan* developed in 2001 and on the various Strategic Business Plans prepared for the individual corridors, including the *LOSSAN (Pacific Surfliner) North Strategic Business Plan*, as well as the Caltrans' *Ten Year California State Rail Plan*. In proposing intercity rail projects for funding, Caltrans' objectives were to advance projects with greatest benefit, balance the needs of the three major intercity rail corridors, leverage financial and project contributions from partner agencies, and maximize joint benefits for commuter and freight partners. Included in the priority projects proposed by Caltrans are two projects that could potentially benefit the Ventura to Santa Barbara segment of the Coast Line corridor:

- **Procure New Rail Cars:** A total of \$150 million in funding is recommended for the purchase of up to 36 bi-level intercity rail cars for use on the Pacific Surfliner, Capitol, and San Joaquin Corridors. The new equipment will reduce crowding of existing trains and allow for increased frequencies and new routes. This level of funding is above the \$125 million minimum required in Proposition 1B for the acquisition of rail rolling stock.
- **Coast Daylight Capital Project Funds:** A total of \$25 million in funding is proposed for construction of new track and extension of sidings to connect the Pacific Surfliner to the Capitol Corridor services. These improvements will enable the start-up of a new coastal rail service connecting Northern and Southern California, and will improve mobility within the individual corridors.

## 4.2 Planned, Programmed, and Proposed Service Increases

### Planned or Programmed Increases

- **Pacific Surfliner Service:** Over the FY 2006 – 2016 period, the *California State Rail Plan* calls for three incremental service increases for the Pacific Surfliner. These service expansions are:
  - 2009-2010: 12<sup>th</sup> round trip between Los Angeles and San Diego;
  - 2012-2013: 13<sup>th</sup> round trip between Los Angeles and San Diego; and
  - 2013-2014: 6<sup>th</sup> round trip between Los Angeles and Goleta plus a third round trip between Goleta and San Luis Obispo.
- **Metrolink Service Expansions for the Ventura County Line:** Based on the 2007 *Metrolink Strategic Assessment*, commuter rail service on the Ventura County line is proposed to increase in 2015. By 2015, the Strategic Assessment calls for a total of 28 Metrolink trains along the Ventura County Line, representing a 56-percent increase over existing (2005) service levels. Included are six peak direction and three off-peak direction trains during peak periods.



## Proposed Services

Several recent studies have identified proposed increases to both intercity and commuter rail services along the Coast Line north of Los Angeles. This section summarizes these “proposed” services that were not identified in the *Pacific Surfliner Business Plan* or in Metrolink’s *Strategic Assessment*.

- **Pacific Surfliner:** The *LOSSAN North Corridor Strategic Business Plan* identified an increase of up to seven daily round trips between Los Angeles and Santa Barbara, with three extending service to San Luis Obispo by the 2020-2030 timeframe.
- **Coast Daylight:** The proposed Coast Daylight service would be a reintroduction of daily service between Los Angeles and San Francisco, with one or two trains in each direction. This service could provide for two additional round trips between Los Angeles, Santa Barbara and San Luis Obispo.
- **Ventura-Santa Barbara Intercounty Commuter Service:** Directly related to this study is the proposed commuter rail service between Ventura and Santa Barbara, referenced in both the *101-in-Motion Study* and the *LOSSAN North Corridor Strategic Plan*. This service would provide peak period service of up to four round trip trains each weekday<sup>1</sup>. End points of this service vary, but would be between Oxnard and Goleta.

## 5. KEY OPERATIONAL, FINANCIAL, AND INSTITUTIONAL CONCERNS

Concurrent with the review of previous studies, a series of one-on-one interviews was conducted by phone and in-person with staff from key stakeholder agencies including SCAG, VCTC, SBCAG, Metrolink, Caltrans Division of Rail, and Amtrak. The purpose of the interviews was to identify specific issues and concerns related to three major aspects of implementing interregional rail service between Ventura and Santa Barbara counties:

1. Operational issues and options;
2. Funding and financing related issues; and
3. Institutional and organizational issues.

The issues raised during the Key Leader Interviews are summarized below. In addition, the issues were integrated into three Key Issues Checklists provided in Appendix A. The concept behind the Key Issues Checklists was to make sure that all issues and concerns related to initiating interregional commuter service between Ventura and Santa Barbara counties were brought forward, and, to the extent possible, either resolved, analyzed, and/or advanced for future consideration/possible resolution.

<sup>1</sup> LOSSAN North Railroad Capacity and Performance Analysis, LOSSAN Rail Corridor Agency, 2007



## 5.1 Key Operational Issues

The most challenging operational concerns in providing additional peak period service between Ventura and Santa Barbara communities identified by key stakeholders are as follows:

- Ability to maintain on-time performance for peak period southbound Metrolink services, while minimizing interference with UPRR trains to ensure quality freight service: Any new service or service expansion along the corridor needs to allow for the continuation of the existing service in a manner that maintains or improves the level of quality and on-time performance that currently exists. Typically this is accomplished by providing additional infrastructure at identified “choke” points along the corridor, where services may interact with each other.
- Ability to provide a reliable and attractive peak period service to the Ventura and Santa Barbara communities: There is a need to ensure that the new service can maintain a certain level of reliability and on-time performance while interacting with the existing services. To make it successful, the new service can not take second priority in order to allow for maintaining the quality of the existing service. All trains will need to be operated in a manner that can provide reliable service.
- Providing the service as a cost-effective solution to traffic congestion: Capital improvements to the corridor are necessary to maintain the service quality and on-time performance of all trains. To make the new service feasible, the improvements must be practical and affordable within existing or imminent sources of funding. In addition, operating and maintenance costs must be within the financial capacity of the involved agencies that will be called upon to provide funding to support the proposed service.

## 5.2 Key Financial Issues

Based on the results of the key leader interviews, the most challenging financial concerns associated with providing additional peak period service between Ventura and Santa Barbara communities are as follows:

- Limitations on the financial capacity of the key participants to fund the potential capital and on-going operations and maintenance costs associated with full commuter rail-based service delivery alternatives: At the present time, neither Ventura nor Santa Barbara counties have a dedicated source of funding for a full commuter rail-based service. While an extension of the Santa Barbara County Measure D transit sales tax is proposed, the level of funding potentially available for a regional transit improvement such as full commuter rail service may be limited in the early stages of the program.
- Potential impact of diverting existing funds from existing interregional bus transit services: At the present time, Ventura and Santa Barbara Counties jointly fund interregional express bus service. In the absence of a new source of dedicated funding, initiation of new commuter rail service would divert the existing limited TDA funding away from all the existing bus services throughout Ventura and Santa Barbara counties. This is due to the fact that rail funding comes off the top of TDA before funds are apportioned for other purposes.



- Potential to initiate interregional service between the two counties at limited additional capital and operating cost by adjusting existing intercity train service schedules and by leveraging funding programmed for enhancement of existing and proposed intercity rail service: If the existing intercity train schedule can be adjusted to allow for an earlier morning arrival in Santa Barbara and afternoon departure to Ventura, service could potentially be initiated at no additional capital or operating cost. This could provide a low cost approach to initiate service and to utilize the funding available at the local level to leverage investment by the State, in the form of Interregional STIP funds and Proposition 1B State intercity rail bond funds

### 5.3 Key Institutional Issues

Based on the results of the key leader interviews, the most challenging institutional concerns associated with providing additional peak period service between Ventura and Santa Barbara communities are as follows:

- Limitations on the financial capacity of the key participants raise concerns on the part of SCRRA/Metrolink about expanding membership and/or contracting for commuter rail service with agencies having limited financial resources: SCRRA/Metrolink requires that member agencies have the ability to dedicate and contribute funding for service initiation, operation, and for on-going preventive capital maintenance. Lack of such capacity could impact SCRRA/Metrolink's willingness to expand membership and/or to provide contract service.
- Concern about potential loss of and/or diminution of control over service decisions if absorbed into a larger joint powers agency such as SCRRA/Metrolink: As a potential new member or contract agency with SCRRA/Metrolink, SBCAG could potentially experience reduced autonomy over future service decisions.
- Need for an effective advocate to deal with the Union Pacific Railroad: If service was initiated as an interregional service provided by Amtrak using existing approved time slots for intercity service, the key stakeholders could together to provide effective advocacy with regard to the UPRR.

## 6. POTENTIAL INTERREGIONAL RAIL SERVICE OPTIONS

Based on the review of the previous studies in Sections 3 and 4, it was determined that in order to increase the level of passenger rail service along the corridor significant track and signal improvements, capacity enhancements and equipment purchases would be needed. However, these improvements and acquisitions will take both time and financial resources, neither of which is currently available in any large quantity. As a result of this limitation, three rail service options and one bus service option were identified to provide improved passenger service in the early morning and late afternoon peak commute periods between Ventura and Santa Barbara Counties.



### **Service Option 1: Incremental increases in Pacific Surfliner services**

This option would provide incremental increases to the Pacific Surfliner service consistent with the overall build out service plan presented in the *LOSSAN North Corridor Strategic Plan*, beginning with a train that makes an earlier morning departure northbound from Los Angeles. Amtrak service does not typically cater to commuter services, however along the LOSSAN Corridor, it is difficult to differentiate commuter and intercity passengers. This service would build off the existing relationship between Amtrak and Metrolink to provide an earlier “intercity” travel option for passengers in Los Angeles and Ventura Counties. This same service would be performed in afternoon, where the southbound Pacific Surfliner could be initially rescheduled to provide both an intercity and commuter option between Santa Barbara, Ventura and Los Angeles Counties. As new intercity rail service is added by Caltrans, service should be added at a commuter friendly time to address this important market.

### **Service Option 2: Expansion of existing Metrolink service to Santa Barbara**

This option would require the incorporation of Santa Barbara County into the SCRRA Joint Powers Board. This then assumes Metrolink service, either originating in Ventura County or provided as an extension of the Ventura County Line, would extend to Santa Barbara County.

### **Service Option 3: Dedicated Ventura-Santa Barbara Commuter Rail Service**

Dedicated commuter rail service was presented as a possible option in both the 101-in-Motion Study and the LOSSAN North Corridor Strategic Plan. A new commuter rail service would be provided between the communities of Ventura and Santa Barbara Counties separate from existing Metrolink or Pacific Surfliner services. This option would require new negotiations and contracts with the UPRR and new dedicated commuter rail support facilities (i.e. stations and maintenance facility).

### **Service Option 4: Expansion of Coastal Express Bus Service**

Expansion of the existing Coastal Express Bus service is another option for providing additional capacity for transit service during the early morning and late afternoon. This option would utilize the new carpool lanes along Highway 101 once construction was completed. While this is a viable option, operations currently and during construction would be impacted by the traffic congestion along this segment of the highway.

These service options were compared to the key issues of concern raised by the stakeholder agencies described previously in Section 5. Based on these issues, the service options were screened to identify a financially feasible and cost-effective approach that could potentially be implemented to initiate interregional service between the two counties. Table 18 summarizes the results of the screening. The screening results combined with further discussions among the project stakeholders, identified Service Option 1: Incremental increases in Pacific Surfliner service as the preferred option.



Table 18: Screening Of Potential Options For Initiating/Improving Interregional Peak Passenger Service Between Ventura And Santa Barbara Counties

Option	Description	Operational Feasibility	Financial Feasibility	Institutional Feasibility
Service Option 1	Incremental increases in Pacific Surfliner services	<b>Moderate:</b> Could be initiated with limited impact on other existing rail services and expanded as extended and new intercity rail sidings are implemented	<b>High:</b> Could be initiated at limited capital and operating cost by adjusting existing schedules and expanded as extended and new sidings are funded through the 2006 STIP Augmentation and Prop 1B	<b>Moderate:</b> Would require support from Caltrans, Amtrak, and UPRR
Service Option 2	Expansion of existing Metrolink service to Santa Barbara County	<b>Low:</b> Additional rolling stock and capacity enhancements needed to preserve on-time performance of existing rail services	<b>Low:</b> Requires dedicated funding not currently in place to fund capital and operating costs	<b>Low:</b> In the absence of dedicated funding, unlikely to be supported by SCRRA, UPRR, and other key stakeholders
Service Option 3	Dedicated Ventura-Santa Barbara commuter rail service	<b>Low:</b> Additional rolling stock and capacity enhancements needed to preserve on-time performance of existing rail services and to obtain approval by the UPRR	<b>Low:</b> Requires dedicated funding not currently in place to fund capital and operating costs	<b>Low:</b> In the absence of dedicated funding, unlikely to be supported by UPRR and other key stakeholders
Service Option 4	Expansion of Coastal Express Bus service	<b>Low:</b> In short term, operation is constrained by Highway 101 congestion. <b>High:</b> Once 101 HOV lane is added	<b>High:</b> While potentially lower cost than dedicated commuter rail service, would require additional funding for operating costs	<b>Moderate:</b> While supported in both counties, not viewed as a substitute for rail service by rail advocates



## 7. Service Option 1 Issues and Options

Service Option 1 focuses on expansion of Pacific Surfliner service, thus minimizing institutional issues that would arise in negotiating with the UPRR for increased “commuter” service. It is important to highlight the existing cooperation between Metrolink and Amtrak operations along this corridor. Two commuter trains (Metrolink Trains Number 153 and 158) are already operated by Amtrak Pacific Surfliner service, one southbound and one northbound in the morning.

As mentioned earlier, Service Option 1 focuses on a near-term term solution to the desire for earlier morning and later afternoon rail service between Ventura and Santa Barbara Counties. Pending approval from SCRRRA and assessment of the potential impact on intercity rail ridership and fare revenue as well as State operating support, Amtrak train 799 would be given an earlier departure from Los Angeles Union Station to allow for arrival into Santa Barbara around 8:30 AM. Train 792 already provides late afternoon southbound service. Shifting the existing departure time from Goleta at 4:15 PM to a later time could also be researched as a possible solution to better address the southbound peak passenger flow. This schedule change would be in conjunction with infrastructure improvements in Ventura County that would extend the passing sidings at Strathern, near Simi Valley, and Leesdale in Camarillo. These infrastructure projects have been identified as necessary to allow for continued service reliability once the new Amtrak schedule is implemented. These projects have also been identified by the VCTC as immediate term needs for existing Metrolink service. In addition, a new siding or siding extension near the Ventura and Santa Barbara County line (Seacliff Siding Extension) will also be required to accommodate this earlier train service. This improvement will be necessary for service reliability by providing a location for the meet between Amtrak Trains Number 799 and 768.

The estimated O&M and equipment costs for this service modification will remain unchanged from existing costs since no additional trains are being added. As shown in Table 19, capital costs associated with the assumed infrastructure improvements required for this service increase is approximately \$19.00 million.

**Table 19: Phase 1 Infrastructure Improvements**

Location / Project	Estimated Cost
Strathern Siding Extension	\$1.00 Million
Seacliff Siding Extensions	\$18.00 Million
<b>TOTAL CAPITAL COST</b>	<b>\$19.00 Million</b>

*Costs based on VCTC project estimates and LOSSAN North Strategic Business Plan –in 2006 dollars.*



## 7.1 Service Option 1 Alternatives

Based on further analysis and continued communication with the project stakeholders, Service Option 1 - Incremental increases in Pacific Surfliner service was further refined to reflect two alternatives. Alternative 1 reflects the description provided above for rescheduling the existing 799 train. Alternative 2 provides an alternate approach in case the schedule can not be changed.

- **Alternative 1: Reschedule the existing Amtrak 799 and 798 to an earlier departure time and later arrival time at Los Angeles Union Station.** This alternative reflects the lowest cost and earliest possible implementation scenario to address the desire for earlier morning and later afternoon rail service between Ventura and Santa Barbara Counties. Shifting the scheduled departure from Los Angeles to around 6:30 am would provide passengers with the ability to arrive in Ventura, Santa Barbara and Goleta around 7:50 am, 8:30 am and 8:45 am respectively. In the afternoon, departure from Goleta and Santa Barbara would occur around 5:15 pm and 5:30 pm respectively with arrival in Los Angeles around 7:30 pm.
- **Alternative 2: Add a new intercity train between Los Angeles and Goleta, with arrival in Santa Barbara at approximately 8:30 am.** This alternative was carried forward as a viable alternative if the suggested rescheduling of Alternative 1 could not be implemented. This alternative would result in higher operating and maintenance and capital costs and would likely take longer to implement.

It is also important to note that both alternatives are supported by the City of Santa Barbara's On-TRAC proposal. Specifically, the alternatives address two of the City's November 15, 2007 action steps proposed to guide On-TRAC representative involvement regarding increasing transit service and establishing commuter rail between Santa Barbara and Ventura Counties: 1) focus current efforts on establishing new or rescheduled Amtrak Service; and 2) foster the coordination of regional interests in establishing Amtrak as a reasonable early start commuter service.

Table 20 summarizes the opportunities and challenges associated with each alternative for the following categories: scheduling, rolling stock, infrastructure improvements, operating costs, ridership, financial and institutional. Major findings from this analysis include the following:

### Alternative 1: Reschedule Existing Amtrak 799 and 798

- **Schedule:** Although the revised schedule would allow arrival in Ventura, Santa Barbara and Goleta around 7:50 am, 8:30 am and 8:45 am respectfully, it would also result in Amtrak losing the Coast Daylight time slot and agreed Rail-2-Rail time slot with Metrolink. However, since negotiations with the UPRR would be needed to modify the current schedule, preserving the timeslot for the Coast Daylight could be included in this negotiation. Additionally, due to limited double tracking and sidings within the corridor, this alternative could result in on-time performance concerns for SCRRA, Caltrans and Amtrak.



- **Rolling Stock:** No additional trainsets required.
- **Infrastructure Improvements:** Service could be initiated with currently proposed siding improvements at Strathern and Leesdale, which would provide benefits to both Metrolink and the proposed intercity service. Estimated costs for the Strathern project is \$1.0 million (2006 dollars) based on VCTC project estimates and *LOSSAN North Strategic Business Plan*. Also, an additional platform would be required at the Van Nuys Station to accommodate passenger train meets. Cost estimates for this improvement have not yet been developed.
- **Operating Costs:** No increase would be required in operating costs since new crews are not required with schedule change. However, maintenance costs could increase due to a potential change in the equipment maintenance schedule. Further analysis would be required to identify this potential cost impact.
- **Ridership:** Schedule change has the potential to gain new ridership between Ventura and Santa Barbara counties but may also result in a reduction in ridership from Rail-2-Rail train service (Los Angeles to Oxnard).
- **Financial:** An increase in the State's operating subsidy could result if ridership decreases on the rescheduled Amtrak 799 and 798. This increase could require a financial contribution from Santa Barbara and Ventura counties.
- **Institutional:** Implementation of the schedule change requires agreement from Caltrans, Amtrak, SCRRA and Union Pacific.

#### Alternative 2: Add a New Intercity Trip

- **Schedule:** A new trip would retain the Coast Daylight time slot and agreed Rail-2-Rail time slot with Metrolink. Additionally, it would allow the initiation of an additional northbound Surfliner service, which is consistent with the *LOSSAN North Strategic Plan*. However, due to limited double tracking and sidings within the corridor, this alternative could result in on-time performance concerns for SCRRA, Caltrans and Amtrak.
- **Rolling Stock:** Additional trainsets will be required. Table ES-3 provides a summary of order of magnitude costs estimates for a variety of acquisition scenarios.
- **Infrastructure Improvements:** Service could be initiated with currently proposed siding improvements at Strathern and Leesdale, which would provide benefits to both Metrolink and the proposed intercity service. Estimated costs for the Strathern project is \$1.0 million (2006 dollars) based on VCTC project estimates and *LOSSAN North Strategic Business Plan*. Another improvement that would be required to implement this alternative is an additional platform at the Van Nuys Station to accommodate passenger train meets. Cost estimates for this improvement have not yet been developed. Also, an analysis would be required to assure there is adequate overnight storage capacity at Amtrak's Redondo maintenance facility.



- **Operating Costs:** A new trip would require additional O&M and crew costs. The estimated increase in annual O&M costs for this service expansion is estimated to be approximately \$3.3 million.
- **Ridership:** Ridership levels on the existing Amtrak 799 and 798 trains would be maintained. Additional ridership may occur from the new morning and afternoon trips. However, ridership levels on the morning segment between Los Angeles and Ventura may be low.
- **Financial:** A funding source would be needed for the lease or purchase of equipment needed for the new service. Additionally, an increase in the State's operating subsidy could result if ridership decreases on the rescheduled Amtrak 799 and 798. This increase could require a financial contribution from Santa Barbara and Ventura counties.
- **Institutional:** Implementation of the new trips requires agreement from Caltrans, Amtrak, SCRRA and Union Pacific. Additionally, it could require cost-sharing agreements between Caltrans, SBCAG, and VCTC for the potential capital costs and operating costs and UP may require additional infrastructure to be provided to implement the service.



**Table 20: Screening Of Potential Options For Initiating/Improving Interregional Peak Period Passenger Service Between Ventura And Santa Barbara Counties**

Scheduling			
Alternative	Opportunities	Challenges	
1	Reschedule Amtrak 799 and 798 to earlier departure time and later arrival time at Los Angeles Union Station	Allows for an earlier arrival into Ventura, Santa Barbara, and Goleta around 7:50 am, 8:30am, and 8:45 am respectively.	Amtrak would lose Coast Daylight time slot and agreed Rail-2-Rail time slot with Metrolink. For the Coast Daylight timeslot, since negotiations with the UPRR would be needed to modify the current schedule, preserving the timeslot for the Coast Daylight could be included in this negotiation.
			Schedule would have to be coordinated to minimize delays associated with new train meets.
			Limited double track and siding capacity could reduce opportunity for schedule recovery. Concerns about on-time performance would be of particular concern to SCRRA, Caltrans, and Amtrak, with respect to the reliability of existing commuter and intercity rail services.
2	Add new intercity train between Los Angeles and Goleta, with arrival in Santa Barbara at approximately 8:30 am	Allows for an earlier arrival into Santa Barbara around 8:30am.	Schedule would have to be coordinated to minimize delays associated with new train meets.
		Retains Coast Daylight time slot and agreed Rail-2-Rail time slot with Metrolink.	Limited double track and siding capacity could reduce opportunity for schedule recovery. Concerns about on-time performance would be of particular concern to SCRRA, Caltrans, and Amtrak, with respect to the reliability of existing commuter and intercity rail services.
		Provides for initiation of an additional northbound Surfliner service, consistent with the LOSSAN North Strategic Plan.	
Rolling Stock			
Alternative	Opportunities	Challenges	
1	Reschedule Amtrak 799 and 798 to earlier departure time and later arrival time at Los Angeles Union Station	No additional trainsets required.	Possible change in equipment maintenance schedule.
		No costs incurred for leasing or acquisition of rolling stock.	



Rolling Stock			
Alternative		Opportunities	Challenges
2	Add new intercity train between Los Angeles and Goleta, with arrival in Santa Barbara at approximately 8:30 am	Provides for an additional trainset that increases flexibility for corridor-wide service enhancements.	Requires an additional trainset.
	2a. Lease equipment from Metrolink	If excess equipment is available from Metrolink's new equipment order, would make efficient interim use of equipment. New Metrolink equipment scheduled to arrive within the next couple of years.	Availability and duration of lease uncertain. Would require identification of new source of rolling stock at lease termination.
		Short term cost would be lower than cost of purchasing new equipment	All lease options require funding to pay for leasing of rolling stock
	2b. Locate and refurbish existing equipment for lease or acquisition	Short term cost would be lower than cost of purchasing new equipment.	Would require locating a source of existing equipment that could be refurbished.
		Not dependent on Metrolink or Amtrak equipment acquisition.	Availability and duration of lease uncertain. Would require identification of new source of rolling stock at lease termination.
		Provides an additional trainset and increases flexibility for corridor-wide service enhancements.	All lease options require funding to pay for leasing of rolling stock.
			Older equipment will require more extensive maintenance schedules due to wear and tear of equipment.
	2c. Secure new intercity trainset from pending State rolling stock acquisition	Long term solution and commitment for equipment.	Service is perceived as a lower priority compared to other proposed service expansion plans statewide.
		Could potentially secure a federal loan for vehicle acquisition through the Federal Railroad Administration Railroad Rehabilitation and Improvement Financing (FRA RRIF) Program. See Appendix B for more information.	Higher cost than leasing other equipment.
		Shorter timeframe for securing equipment.	Higher initial capital cost if purchased.



Rolling Stock		
Alternative	Opportunities	Challenges
2d. Lease/purchase DMU equipment	Potential for lower annual O&M costs.	Vehicle maintenance could require modifications or upgrades to existing maintenance facilities to accommodate an additional technology with different servicing requirements. Alternatively, provisions for maintenance could be contracted to a private company and conducted in a separate facility.
	Leasing could potentially be arranged through a vehicle leasing pool, with negotiated financing.	Minimizes operational flexibility and interchangeability with existing equipment.
	Could potentially secure a federal loan for vehicle acquisition through the Federal Railroad Administration Railroad Rehabilitation and Improvement Financing (FRA RRIF) Program. . See Appendix B for more information	
Infrastructure		
Alternative	Opportunities	Challenges
1 Reschedule Amtrak 799 and 798 to earlier departure time and later arrival time at Los Angeles Union Station	Service could be initiated with currently proposed siding improvements at Strathern and Leesdale, thus providing both Metrolink and intercity service benefits.	An additional platform would be required at the Van Nuys Station to accommodate passenger train meets.
2 Add new intercity train between Los Angeles and Goleta, with arrival in Santa Barbara at approximately 8:30 am	Service could be initiated with currently proposed siding improvements at Strathern and Leesdale, thus providing both Metrolink and intercity service benefits.	An additional platform would be required at the Van Nuys Station to accommodate passenger train meets.
		Would have to assure adequate overnight storage capacity at Amtrak Redondo maintenance facility.



<b>Operating Costs</b>		
<b>Alternative</b>	<b>Opportunities</b>	<b>Challenges</b>
1	Reschedule Amtrak 799 and 798 to earlier departure time and later arrival time at Los Angeles Union Station	No new equipment or crews required for service.
2	Add new intercity train between Los Angeles and Goleta, with arrival in Santa Barbara at approximately 8:30 am	Could potentially increase operating costs due to potential change in equipment maintenance schedule.
<b>Ridership</b>		
<b>Alternative</b>	<b>Opportunities</b>	<b>Challenges</b>
1	Reschedule Amtrak 799 and 798 to earlier departure time and later arrival time at Los Angeles Union Station	Potential to gain new ridership between Ventura and Santa Barbara counties.
2	Add new intercity train between Los Angeles and Goleta, with arrival in Santa Barbara at approximately 8:30 am	Potential to reduce ridership from Rail-2-Rail train service (Los Angeles to Oxnard).
		Maintains ridership on existing train 799 and 798 and adds new ridership from additional morning and afternoon service.
		Low ridership may occur between Los Angeles and Ventura for the new morning service.
		Additional afternoon train from Santa Barbara to Los Angeles expected to attract additional ridership by broadening travel options available for all travel including recreational travel.



Financial			
Alternative	Opportunities	Challenges	
1	Reschedule Amtrak 799 and 798 to earlier departure time and later arrival time at Los Angeles Union Station	Capital and operating costs for rescheduling existing service would be lower than the cost of adding an additional round trip.	Could potentially increase operating costs due to potential change in equipment maintenance schedule.
		Siding improvements of joint commuter and intercity rail benefit (such as the Leesdale Siding) could potentially be partially funded with the approximately \$1 million in FTA funding authorization to SBCAG.	If the schedule change results in a decrease in ridership on Amtrak 799 and 798, could potentially increase the operating subsidy required.
		<p>Could potentially qualify for State or federal funding to provide supplementary capacity and additional mode choice options during Highway 101 construction. As an example, Altamont Commuter Express (ACE) received State funding for operation of an additional train as mitigation for Highway 203 construction impacts. The funding was provided through Caltrans in the form of highway construction mitigation funds, supplemented by State Intercity Rail funds made available through a replacement of midday Amtrak feeder bus service with the additional train. See Appendix B for more information.</p> <p>An early example of federal funding is provided by TriRail commuter rail service in Florida, which was initiated using FHWA highway funds as mitigation for I-95 construction impacts.</p>	



Financial			
Alternative		Opportunities	Challenges
2	<p>Add new intercity train between Los Angeles and Goleta, with arrival in Santa Barbara at approximately 8:30 am</p>	<p>Could potentially secure a federal loan for capital improvements and/or vehicle acquisition through the Federal Railroad Administration Railroad Rehabilitation and Improvement Financing (FRA RRIF) Program. Such funds could potentially be used to leverage local or State funds, with loan payments made by either local agencies or the State. In November 2007, Virginia Railway Express (VRE) became the first passenger rail service to receive a RRIF loan. VRE was awarded a \$72.5 million loan for new rolling stock to replace its old railcars. The State of Virginia is providing an additional \$20 million in funding. See Appendix B for more information.</p>	<p>Capital and operating costs for an additional trainset and an additional round trip would be significantly higher than the cost of rescheduling existing service.</p>
		<p>Siding improvements of joint commuter and intercity rail benefit (such as the Leesdale Siding) could potentially be partially funded with the approximately \$1 million in FTA funding authorization to SBCAG.</p>	<p>Would require funding source for lease or purchase of additional rolling stock.</p>
		<p>Could potentially qualify for State or federal funding provide supplementary capacity and additional mode choice options during Highway 101 construction. As an example, Altamont Commuter Express (ACE) received State funding for operation of an additional train as mitigation for Highway 203 construction impacts, with funding provided from State Intercity Rail funds made available through a reduction in Amtrak feeder bus service. See Appendix B for more information.</p> <p>An early example of federal funding is provided by TriRail commuter rail service in Florida, which was initiated using FHWA highway funds as mitigation for I-95 construction impacts.</p>	<p>The State operating subsidy for the additional round trip could require financial contribution from Santa Barbara and Ventura counties.</p>



Institutional			
Alternative		Opportunities	Challenges
1	Reschedule Amtrak 799 and 798 to earlier departure time and later arrival time at Los Angeles Union Station	Intercity service can be provided through Amtrak's existing trackage/access rights, subject to UP terms and conditions.	Requires negotiation with UP for a new time slot.
			Requires agreement from Caltrans, Amtrak, and SCRRA to reschedule existing service.
2	Add new intercity train between Los Angeles and Goleta, with arrival in Santa Barbara at approximately 8:30 am	Intercity service can be provided through Amtrak's existing trackage/access rights, subject to UP terms and conditions.	Requires negotiation with UP for a new time slot.
			UP may require additional infrastructure to be provided to implement the service.
			Requires agreement from Caltrans, Amtrak, and SCRRA , and support from SBCAG to add service.
			Could require negotiation of cost-sharing agreements between Caltrans, SBCAG, and VCTC for potential capital costs and operating costs.



### **Potential Benefits**

The following potential benefits were identified related to the preferred service option:

- Would address commuter-friendly service between Ventura and Santa Barbara to serve the high existing and projected traffic between the two counties.
- Would provide alternative mode to serve the highly bi-directional travel volumes on Highway 101 between Los Angeles and Ventura, particularly during the morning and evening hours. Travel demand model analysis conducted for the 101 Corridor Study for LA Metro and Caltrans indicated that between 1997 and 2010 and 1997 and 2025, reverse trips from elsewhere in L.A. County to the West San Fernando Valley, from L.A. County to Ventura County and from Eastern Ventura County to Western Ventura County are all forecast to increase. This trend is also reflected in traffic counts, indicating that there is currently heavy bi-directional travel in the corridor that is projected to increase. The existing and projected volumes demonstrate that there is a potential ridership market that could be better served by having the LA departure moved to 5:30 am.
- Would provide a more convenient arrival time in Santa Barbara and Goleta to allow for a full business and recreational day, and to serve the student and visitor market going to University of California Santa Barbara. Current service arrives at 10:30 am and leaves at 4:40 pm. The proposed revised schedule would provide visitors the opportunity to spend a full 8 hours in Santa Barbara. Additionally, faculty, staff, and students could arrive at Goleta around 8:45 am and leave around 5:15 pm.
- If the service were to be extended beyond Goleta, would provide a better schedule for business and recreational travel to San Luis Obispo.

### **Projected Ridership Issues**

Determining realistic ridership estimates for passenger rail service between Los Angeles, Ventura and Santa Barbara will require a review of the output from both the intercity and regional demand models and the production of new forecasts. Recognizing the need to accommodate the output from the regional model is critical for determining the actual benefit of new Amtrak service in this corridor. For most of its length, the Pacific Surfliner is unique for passenger rail services in the western United States in that it caters to both commuter and intercity passengers. This mix of services is further encouraged through the use of the Rail-2-Rail program, which allows Amtrak passengers to ride Metrolink trains and Metrolink monthly pass holders to ride Amtrak. It should also be acknowledged that neither ridership model takes into account the benefits of the Rail-2-Rail program, which is an important component in determining the effectiveness of additional morning and evening service north of Los Angeles. This being the case it is not realistic to assume the intercity model alone provides an accurate representation of the projected ridership demand for the Pacific Surfliner. . Based on the existing intercity and commuter forecasts prepared as part of the LOSSAN North Strategic Plan and the 101-in-Motion Study, the potential ridership was estimated to range from less than 100 intercity riders per day to over 3,000 commuter riders per day by 2030.



Travel between Los Angeles, Ventura and Santa Barbara is becoming increasingly more congested and the concept of “peak direction” is no longer as clear as it once was, as there is now extensive bi-directional travel at all times of the day. A statement that is supported by the traffic demand forecasts that was conducted for the 101-in-Motion Study of travel along US Route 101 over the next 5 to 15 years, in which traditional “reverse trips” are all forecast to increase

This being said, it is not unreasonable to project that an additional early morning and evening Pacific Surfliner train would in fact attract ridership. An additional train or adjustment in the existing schedule to accommodate the time slots proposed would allow for better arrival and departure times into Ventura and Santa Barbara that provide a longer day for leisure travelers; more convenient travel times for college students, employees, and visitors; and an alternative mode of transportation to the automobile during some of the most congested periods of time along the roadways.

A more detailed analysis however that focuses exclusively on ridership and incorporates both the regional and intercity forecasts should be conducted to provide justification to this assumption.

### **Equipment Issues**

Finally, as discussed above, one of the critical issues involved with implementing Alternative 2: Adding a New Intercity Train to Santa Barbara, is the availability of locomotives and passenger cars. Based on a review of existing fleets across California and the western United States, it was determined that there are no available trainsets for implementing a new service. This lack of available trainsets supports the need for the State of California to expedite the acquisition of new trainsets. As a potential near term alternative to address this issue, a nationwide survey of potentially available trainsets was conducted to identify options for acquiring equipment within the next two years. The survey resulted in the identification of six potential used equipment sources and one source which could provide new equipment. The used equipment ranges in age from 7 years old to over 40 years old. In most cases the used equipment would require some level of refurbishment in order to make the vehicles operational.

Table 21 provides an order of magnitude estimate on the costs and time to acquire trainsets from the seven sources.



**Table 21: Potential Equipment Availability and Costs**

Equipment	Owner	Type	Est. Quantity	Location	Status	Est. Cost or Rehabilitation	Est. Timeline	Type of Agreement
First generation Amfleet I	Amtrak	Coach	40-50	Bear, DE	Require brake system rebuilding and interior cosmetic restoration	\$3-4million (\$500K per car @ 6-8 cars)	1-2 years	Lease/ Purchase
First generation "Genesis" P-40	Amtrak	Locomotive	25 +/-	Beech Grove, IN	Operational - may not pass current air quality and clean air standards for locomotives	\$3-4.5 million (\$1.5 mil per loco @ 2-3 locos)	< 1 year	Purchase
Bombardier Comet I-B	NJ Transit	Cab/Coach	70	In Service (NJ)	Built 1968, will need interior refurbishment and A/B overhaul	\$25K-75K + Rehab per car	6 mo - 1 year	Purchase
Bombardier Comet I	NJ Transit	Cab/Coach	30	In Service (NJ)	Built 1971, will need interior refurbishment and possible A/B overhaul	\$25K-90K + Rehab per car	6 mo - 1 year	Purchase
Colorado Rail Car	Colorado Rail	DMU	TBD	Built in Evergreen CO	New design to standards outlined by Ventura and Santa Barbara Counties - new construction	\$5M Bi-level Cab, \$4M Bi-level Coach	1.5 - 2 years	Lease/ Purchase
Gallery Cars	Virginia Rail Express	Coach	15+/-	In Service (VA)	Former Metra Gallery Cars, 1960 vintage, recently refurbished	\$25-75K per car	< 1 year	Purchase
Kawasaki Bi-Levels	Virginia Rail Express	Cab/Coach	10 coaches/ 3 cab	In Service (VA)	Relatively good condition - equipment purchased new about 7 years ago.	\$9-12 million (\$1.5 mil per car @ 6-8 cars)	< 1 year	Purchase

## 8. POTENTIAL FUTURE MODIFICATIONS

Although the primary objective of this study was to identify a potential near term service option for providing improved peak passenger service to Santa Barbara, the study also looked at more extension service expansion option. The following provide two scenarios for future expansion.

### 8.1 Phase 2 Service Modification

Phase 2 would build upon Alternatives 1 and 2 described above (reschedule existing service and add a new intercity train) by providing a total of two additional roundtrips per day. The infrastructure enhancements that would be needed for this expansion would include all remaining enhancements that have been identified by the Caltrans Rail Division for the Coast Daylight service between Los Angeles and San Francisco. A more thorough operational analysis of this Phase would be required to determine the feasibility of this alternative as well as to prioritize these improvements and identify an appropriate service level.

As shown in Table 22, the estimated increase in annual O&M costs for this service expansion is approximately \$9.40 million for two roundtrips operating seven days a week.



**Table 22: O&M Cost Estimate for Phase 2 Service Expansion**

Item	Unit Cost	Annual Train Miles	Estimated Annual Cost
Train Crew Labor	\$9 per train mile	163,520	\$1.47 Million
Operations & Maintenance	\$31 per train mile	163,520	\$5.10 Million
MOW / Access Charges	\$10 per train mile	163,520	\$1.60 Million
General & Administrative	15% of other costs	\$8.17 Million	\$1.23 Million
<b>TOTAL O&amp;M COST</b>			<b>\$9.40 Million</b>

*Unit costs based on LOSSAN North Strategic Business Plan - in 2006 dollars*

Capital costs associated with the assumed infrastructure improvements required for this service increase are estimated to be approximately \$34.00 million, in addition to the projects identified previously for Service Option 1. It is important to note that not all of these projects may be necessary to implement the suggested service level for Phase 2. A high level operations analysis would be needed if this alternative is carried forward to refine the cost estimate to reflect the set of projects needed to achieve the stated service level. Projects associated with Service Option 1 and Phase 2 are illustrated in Figure 2.

In addition, the remaining single track segment between Raymer and De Soto in Los Angeles County may create conflicts with opposing southbound Metrolink trains. To minimize initial costs, an option can be reviewed to identify a departure time from Union Station to minimize conflict at this location until such time the second track can be constructed.

**Table 23: Phase 2 Infrastructure Improvements**

Location / Project	Estimated Cost
Goleta Service Track Extension	\$3.00 Million
Sandyland Siding	\$24.00 Million
Ortega Siding	\$4.00Million
Carpinteria Siding	\$3.00 Million
<i>(Double track between Raymer and De Soto)</i>	<i>\$38.5 million</i>
<b>TOTAL CAPITAL COST</b>	<b>\$34 to \$72.5 million</b>

*Costs based on LOSSAN North Strategic Business Plan- 2006 dollars.*

Using unit costs from the *LOSSAN North Strategic Business Plan* and 2001 costs from the *Pacific Surfliner Business Plan* (adjusted for inflation to 2006 dollars), the following costs are associated with the additional equipment required for this Phase.



**Table 24: Phase 2 Equipment Costs**

Unit Cost	Estimated Costs	
Locomotives @ \$4.14 M each	\$8.28 - \$16.56 Million	\$4.14 - \$8.28 Million
Refurbished Horizon-class Coaches @ \$1.45 M each	\$10.15 - \$20.30 Million	
Pacific Surfliner Coaches @ \$3.00 M <sup>1</sup> each		\$15.00 - \$30.00 Million
<b>TOTAL CAPITAL COST FOR ROLLING STOCK</b>	<b>\$18.43 - \$36.86 Million</b>	<b>\$19.14 - \$38.28 Million</b>

1. Inflated to 2006 dollars from 2001 cost listed in 2006-07 Pacific Surfliner Business Plan

The two equipment cost estimates are based on a horizon-class trainset of seven cars (no cab car) and two locomotives and a Pacific Surfliner trainset of five cars (including cab car) and one locomotive.

In summary, the enhancements or projects required for Phase 2 are:

- Total of two round trip trains between Los Angeles and Santa Barbara; and
- Implementation of all remaining infrastructure improvements identified by Caltrans Rail Division to support Coast Daylight service – complimentary to the “Near-term” projects identified in the *LOSSAN North Strategic Business Plan*.

## 8.2 Phase 3 Service Modifications

Phase 3 presents a longer-term plan for the corridor that provides additional service above that of Phase 2 and that addresses the desired level of morning and afternoon trains. In support of this service, additional infrastructure in both Ventura and Santa Barbara Counties would be required that reflect the long-term or “vision” projects, not already implemented for Service Option 1 and Phase 2, and outlined in the *LOSSAN North Strategic Business Plan*.

The estimated increase in O&M costs for this service expansion will depend on the level of service required at the time of implementation. The full Amtrak implementation plan calls for a total of 14 Pacific Surfliner trains, two Coast Daylight and two Coast Starlight trains. Since these are the numbers available today, the estimated O&M costs provided for this phase are based on these train volumes between Los Angeles and Goleta only. Costs provided below are based on the increase number of trains above those assumed for Phase 2 and provide a range between weekday service and seven-day a week service.

**Table 25: O&M Cost Estimate for Phase 3 Service Expansion**

Item	Unit Cost	Annual Train Miles	Estimated Annual Cost
Train Crew Labor	\$9 per train mile	233,856 – 327,040	\$2.10 - \$2.94 Million



Operations & Maintenance	\$31 per train mile	233,856 – 327,040	\$7.25 - \$10.10 Million
MOW / Access Charges	\$10 per train mile	233,856 – 327,040	\$2.34 - \$3.27 Million
General & Administrative	15% of other costs	\$11.69 - \$16.31 Million	\$1.75 - \$2.45 Million
<b>TOTAL O&amp;M COST</b>		<b>\$13.44 - \$18.76 Million</b>	

*Unit costs based on LOSSAN North Strategic Business Plan – in 2006 dollars*

Capital costs associated with the assumed infrastructure improvements required for this service increase are estimated to be approximately \$102.00 million, and are in addition to the projects associated with Service Option 1 and Phase 2. Figure 2 illustrates all proposed infrastructure improvement projects. It is important to note that not all of these projects may be necessary to implement the suggested service level for Phase 3. A high level operations analysis would need to be conducted to provide a refined total capital cost estimate.

**Table 26: Phase 3 Infrastructure Improvements**

Location / Project	Estimated Cost
Rincon Siding	\$5.00 Million
Oxnard-Camarillo Second Main Track	\$10.00 Million
CP Los Posas to MP 423 Second Main Track	\$51.00 Million
CP Davis to Simi Valley Station Second Main Track	\$36.00 Million
<b>TOTAL CAPITAL COST</b>	<b>\$102.00 Million</b>

*Costs based on LOSSAN North SBP - 2006 dollars.*

Using unit costs from the *LOSSAN North Strategic Business Plan* and 2001 costs from the Pacific Surfliner Business Plan (adjusted for inflation to 2006 dollars), the following costs are associated with the additional equipment required for this Phase, in addition to that of Phase 2. This assumes another one or two trainsets. Depending on the level of service required for this Phase however, additional trainsets above the one or two assumed in this chapter may be required.

**Table 27: Phase 3 Equipment Costs**

Unit Cost	Estimated Costs	
Locomotives @ \$4.14 M each	\$8.28 - \$16.56 Million	\$4.14 - \$8.28 Million
Refurbished Horizon-class Coaches @ \$1.45 M each	\$10.15 - \$20.30 Million	
Pacific Surfliner Coaches @ \$3.00 M <sup>1</sup> each		\$15.00 - \$30.00 Million
<b>TOTAL CAPITAL COST FOR ROLLING STOCK</b>	<b>\$18.43 - \$36.86 Million</b>	<b>\$19.14 - \$38.28 Million</b>

*1. Inflated to 2006 dollars from 2001 cost listed in 2006-07 Pacific Surfliner Business Plan*





The two equipment cost estimates are based on a horizon-class trainset of seven cars (no cab car) and two locomotives and a Pacific Surfliner trainset of five cars (including cab car) and one locomotive.

In summary, the enhancements or projects required for Phase 3 are:

- Additional service and equipment in support of the desired levels for morning and afternoon; and
- Implementation of all remaining projects outlined in the LOSSAN North Strategic Business Plan as Long-Term or “Vision” projects.

### 8.3 Longer Term Options for Future Consideration

Though the option selected as the most probable for near-term implementation focused on enhancements of the Pacific Surfliner service, additional options were identified from recommendations made in previous studies. These options may still be valid in selecting a long-term solution. In light of existing operational, financial, and institutional constraints, these options were not considered viable for immediate or near-term implementation.

**Dedicated Ventura-Santa Barbara Commuter Rail Service:** This option seeks to provide a dedicated commuter rail operation serving the communities of north Ventura and southern Santa Barbara Counties. This service could be operated by Metrolink or contracted out to a private operator and would use either traditional commuter rail equipment or diesel multiple units (DMU). This option was not seen as a practical near-term solution because of the cost associated with introducing a new rail service, the lack of funding to support the cost, issues associated with negotiating with the UPRR, and the need to develop unified political support for such a service.

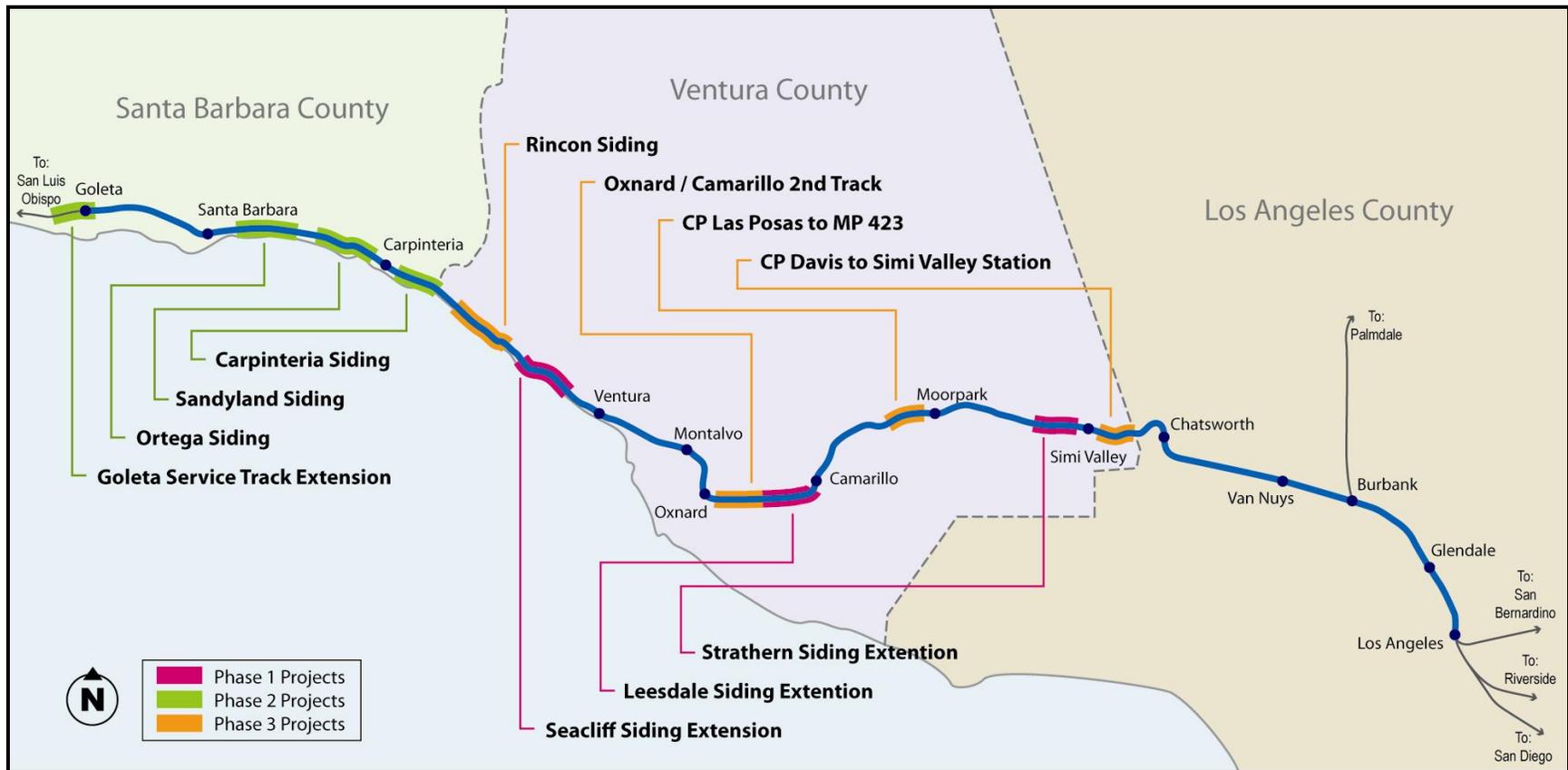
- **Extension of Metrolink Service to Santa Barbara:** An additional option considered calls for including Santa Barbara County within the Southern California Regional Rail Authority Joint Powers Board and extending the existing Metrolink service to Santa Barbara County. This option could either extend the existing Ventura County Line north to Santa Barbara, or create a split Metrolink service with a few trains traveling north from Camarillo or Oxnard to Santa Barbara. This option was not seen as a practical near-term solution because Santa Barbara was not already part of the Joint Powers Board and Metrolink did not feel it was a cost-effective option as it related to the cost of operating a new or expanded service without a committed source of funding. It would also add significant additional cost to Ventura County, for which no funds are available.
- **Expansion of Coastal Express Bus Service:** A non-rail option considered was expansion of the existing Coastal Express Bus services along Highway 101. This option would increase the frequency of the existing service between the Ventura County Government Center and the University of California, Santa Barbara (UCSB). This option relies on the completion of the widening of Highway 101. In the longer term, completion of the Carpool Lane will ease congestion along Highway 101 and provide for faster bus service. During construction the buses



will be subject to the same congestion as all other auto traffic.



Figure 2: Capital Improvements Associated with the Potential Ventura / Santa Barbara Interregional Rail Service Implementation Option





## 9. PROPOSED NEXT STEPS/RECOMMENDATIONS

Based on the results of this analysis, the study team and project partners have identified the following next steps and recommendations for moving forward with the Scenario 1 Option - Incremental Increases in Pacific Surfliner Service. Similar to the previous analyses, the recommendations are provided for the following categories: scheduling, rolling stock, infrastructure, operating costs, ridership, financial and institutional. It is important to note that due to the need for multiple stakeholder involvement on the majority of issues there is overlap between the institutional category and all other categories.

### Scheduling

- Meet with Metrolink and Caltrans to identify opportunities to minimize train delay and optimize northbound arrival times in Santa Barbara;
- Coordinate with LOSSAN and Coast Rail Coordinating Council on overall service and to assure that schedule adjustments do not adversely affect existing intercity service and/or limit the potential for a new Coast Daylight train; and
- Work with Caltrans and Amtrak to assure that the schedule adjustments facilitate improved peak period intercity service and advance the objectives of the City of Santa Barbara OnTRAC proposal.

### Rolling Stock

- Work with agencies throughout the LOSSAN Corridor in support of efforts to expedite acquisition of trainsets to meet current needs, facilitate introduction of enhanced intercity service to Santa Barbara, and support other existing and new services statewide; and
- Provide sufficient cars and locomotive capacity to provide redundancy for emergencies and new services across California.

### Infrastructure

- Identify top tier projects based on the LOSSAN North project list that would facilitate the modification and expansion of intercity service to Santa Barbara, including Leesdale and Strathern (in TIP) sidings, additional sidings in Santa Barbara segment (is already STIP funding for design), and initiate identification of the next tier of projects.

### Operating Costs

- Work with Caltrans and Amtrak to insure that introduction of improved intercity service to Santa Barbara can be accomplished with minimal or no increase in the operating subsidy paid by the State.

### Ridership

- Work with Amtrak, Caltrans, and the regional agencies to improve the ability to forecast peak period short-haul intercity ridership.



### **Financial**

- VCTC and SBCAG should work with Caltrans together to assemble financial resources required for implementation of the proposed service.
- Research and potentially apply with Caltrans for US DOT's recently announced Federal-State \$30 million capital grant program designed to support state efforts to improve intercity passenger rail service. The Federal Railroad Administration is administering the program and will begin accepting applications on March 18, 2007. The program is designed to provide funding for projects that demonstrate an on-time performance standard of 80 percent or greater, reduce travel time, increase service frequency, or enhance service quality for intercity rail passengers. Eligible projects include, but are not limited to: upgrading existing track to permit higher maximum operating speeds, adding or lengthening passing tracks to increase rail line capacity, improving track switches and signaling systems to advance reliability and safety, and purchasing new passenger rail cars to enhance the travel experience.

### **Institutional**

- Implement a Memorandum of Understanding (MOU) between VCTC and SBCAG regarding implementation of enhanced service between Ventura and Santa Barbara counties;
- Meet with Metrolink and Caltrans on opportunities to minimize train delay and optimize northbound arrival times in Santa Barbara and to identify opportunities to modify service;
- Coordinate with the California Business, Transportation and Housing Agency (BTH), Caltrans, California Transportation Commission and Amtrak to urge the acquisition of adequate fleet to meet current needs, facilitate introduction of enhanced intercity service to Santa Barbara, and support other existing and new services statewide;
- Support voter sentiment demonstrated by the passage of Proposition 1B to increase the number of cars for intercity service.
- Coordinate with LOSSAN and Coast Rail Coordinating Council on overall service and to assure that schedule adjustments do not adversely affect existing intercity service and the potential for a new Coast Daylight train;
- Coordinate with SCRRRA to assure that intercity schedule adjustments do not adversely affect Metrolink commuter service; and
- Work with Caltrans and Amtrak to assure that the schedule adjustments facilitate improved peak period intercity service and advance the objectives of the City of Santa Barbara's OnTRAC proposal.



## **APPENDIX A: SUMMARY ISSUES CHECKLISTS**



**Table A-1: Operational Issues Checklist**

Operational Issues	VCTC	SBCAG	SCRRA	CALTRANS
<b>Travel time savings and 101 traffic reduction concerns with regard to commuter rail</b>	The estimated travel time for passengers taking the bus vs. taking a commuter rail would be quicker (especially if HOV lanes added the entire length) since the bus travels on the streets in close proximity to the major employment centers.	Would like to relieve some of the pressure of 101 by getting people onto trains - particularly during the 101 construction.,	Once SBCAG starts running a train against Metrolink, other current trains will have reduced on time performance.	X
<b>Use of AMTRAK to implement service</b>	Similar to the Capital Corridor. A scenario could work if the Amtrak train left Los Angeles earlier in order to arrive in Santa Barbara by 9:00 am. Time slot is available because it is a Metrolink time slot. Amtrak ridership models have indicated that there is limited traditional intercity ridership, while commuter rail ridership projections undertaken for the 101-In-Motion and LOSSAN North indicate significant commuter-type ridership.	Interested in seeing the modification of Amtrak schedules to serve commuter rail time slots. As a short term idea, SBCAG is not fully convinced that Amtrak trains would provide real commuter rail, but is willing to see what would happen.	Could store an Amtrak train in Moorpark but they would still need infrastructure required and a train set.	There is interest on the part of Amtrak California to provide more effective interregional service between Ventura and Santa Barbara Counties through joint Amtrak / interregional commuter service. Neither Amtrak nor Caltrans has expressed an official position on this matter.
<b>Bus and Rail Target Markets</b>	Bus and rail will serve different target markets. With the existing 13-17 on-time bus round trips per weekday, bus service is more frequent and convenient than 2 commuter trains. In addition, many residents commute to Santa Barbara in their autos.	X	X	X



Operational Issues	VCTC	SBCAG	SCRRA	CALTRANS
<b>Pilot Program</b>	VCTC sees the earlier Amtrak service as a way to conduct a demonstration program to see if ridership is there. This could be done with little or no cost, just an earlier service from Amtrak.	Because Measure D sunsets in 2010, SBCAG is proposing to renew the sales tax to 1/2-cent tax and wants to look at a potential pilot program. SBCAG want to know what kind of project could be accomplished that doesn't cost \$200M to implement. Pilot program would have to be smaller than proposed in 101-in-Motion commuter rail project, since the level of proposed sales tax is lower than the level considered in 2006.	<b>X</b>	<b>X</b>
<b>Implementation Plan</b>	<b>X</b>	A Conceptual Implementation Plan is needed that could build to a larger service, including: Modified Amtrak, sidings one by one, and building to a fuller service governed by a possible JPA.	<b>X</b>	<b>X</b>
Need for commuter rail during widening on 101	Caltrans District 7 normally maintains all lanes of traffic during construction and/or performs construction at night to minimize its impact on traffic. It is expected this would occur for the improvements on Highway 101.	A Commuter Rail project will be especially needed while construction is occurring on the 101 widening. Prior studies for the 101-In-Motion Program have shown that it rail would provide the equivalent of half a lane of freeway capacity. Can deal with rail earlier than the widening delivery	<b>X</b>	<b>X</b>



Operational Issues	VCTC	SBCAG	SCRRA	CALTRANS
<b>Views/comments with regard to need for commuter rail in general</b>	X	At some point rail is going to be a need to connect Ventura County and Goleta. Staff sees the potential to add Commuter Rail earlier than express bus service expansion	X	X
<b>Comments on existing bus service</b>	The Coastal Express is extremely successful with 65% farebox return and is supported by both counties. Service expansion is proposed, with more buses, especially during peak hours.	Existing bus service costs are split between VC and SB. The service has a high farebox recovery rate.	X	X
<b>Identification of Infrastructure Needed/ Environmental Constraints</b>	These projects are identified in the LOSSAN North, SCRRA and State Rail Plans.	Sidings are needed. SBCAG wants to know what the physical/ environmental constraints are and improvements that will be needed. Wants to define physical constraints along the Coast Line including information on where there are potential locations for sidings, layover facilities, other.	Capital improvements and infrastructure are required to run a train set.	X
<b>Comments on Scheduling</b>	X	X	SCRRA control scheduling up to Moorpark, after that UP might impede on scheduling. The variable that they don't have control over is UP. Need infrastructure, scheduling and not very much flexibility if something fails. Shifting schedule causes a lot of problems.	X



Operational Issues	VCTC	SBCAG	SCRRA	CALTRANS
<b>Comments on Service</b>	X	X	Coast Coordinating Committee wants to run the Coast Daylight at the same time. Once SBCAG starts running a train against Metrolink, other current train's on time performance will dwindle. Trains could be run to LA north but there is an issue of on time reliability	X
<b>Comments on Capital Improvements</b>	X	X	In SCRRA's view, the Coast Line needs infrastructure, improved scheduling and provision of flexibility if something fails. At present, there are limited assets to keep train running on time. The line needs capital improvements.	There are all kinds of capital improvements needed, beginning north of Union Station all the way up the line.
<b>Caltrans Equipment Purchase</b>	X	X	Caltrans will be buying \$150 million in rolling stock with funding from the Proposition 1B bond measure.	X



Operational Issues	VCTC	SBCAG	SCRRA	CALTRANS
<b>Feeder Bus Service</b>	There will be additional costs for both counties to provide feeder bus service from commuter rail stations to employment centers.	X	X	X
<b>Equipment Needed</b>	X	X	SCRRA doesn't have the equipment set to overnight at Montalvo to make the run to Santa Barbara before heading to Union Station, nor does it have the space to store additional equipment or enough money to acquire another train set. Potentially, an Amtrak trainset could be stored in Moorpark.	With regard to available rolling stock, there are some rail cars in Delaware that are being looked at by Amtrak, with support from Caltrans. Officials in Amtrak California are interested as well.
<b>DMU Sets</b>	X	X	SCRRA is not opposed to FRA compliant DMU sets, but the sets need enough wheels to trigger grade crossings, require 12 axles, and may not be a long term solution. SCRRA needs to assess whether or not it is worth while to add another equipment set type. In the longer run, DMU equipment could potentially limit service capacity.	X



Operational Issues	VCTC	SBCAG	SCRRA	CALTRANS
<b>Perceived Purpose of this Study</b>	Purpose of this study is to develop realistic costs to run commuter rail service between Ventura and Santa Barbara. VCTC believes that the 101-in-Motion Study underestimated the O&M costs through use of 2005 unit costs and a lower than current estimate of the capital costs that would be required by UPRR. VCTC would like to see the cost comparison (capital and O&M costs) for different alternatives.	Within the next 3-4 months, SBCAG will need a Pilot Program to fold into a revised Measure D Expenditure Plan – potentially on the order of \$20-\$40 million. The Ventura / Santa Barbara Rail Study could assist by defining a proposed approach for phased initiation of interregional passenger rail service between the counties.	<b>X</b>	<b>X</b>
<b>Comments regarding past reports and how information in those reports was used by the agencies</b>	<b>X</b>	Lossan draft report shows that SB is at capacity	In SCRRA's view, Santa Barbara did not incorporate all the suggestion that were made in past reports, particularly for capital improvements in order to keep the service on time. When they did the sales tax, they assumed a large amount of state dollars not previously pledged for proposed commuter rail service.	<b>X</b>
<b>Comments/concerns regarding 101 in Motion Study</b>	Considers O&M Costs from 101 In Motion Study to be underestimated.	The 101 in Motion calls for an HOV lane and showed that there is a market for both bus and commuter rail.	According to SCRRA, operational costs were not underestimated; the way they were applied was underestimated. The 101-in-Motion project used SCRRA-based O&M costs for commuter rail. SBCAG did not incorporate suggestions particularly for Capital Improvements to keep service on time.	<b>X</b>



Operational Issues	VCTC	SBCAG	SCRRA	CALTRANS
<b>Public Understanding</b>	X	Need to demonstrate that there is a market, building on what has been established and demonstrated in the 101 In Motion and in Lossan North studies. Demonstration that there is a market will take us beyond the other studies and break new ground.	X	X
<b>Public understanding of implementing Commuter rail in a phased approach</b>	X	Implementing Commuter Rail (CR) in a phased approach requires behind-the-scenes work with elected officials and the public – not just technical evaluation. Need to demonstrate that there will be a community benefit from such projects – not just impacts.	X	X
<b>Public view of using older trains</b>	X	City of Santa Barbara in particular has a lot of enthusiastic officials. Interested in a starting service with old trains as a starter.	X	X
<b>Public identification of potential issues with regard to commuter rail</b>	X	SBCAG want to identify potential resource impacts or issues that would have to be dealt with if it went forward with commuter rail.	X	X
<b>Suggested additional interviews</b>	X	SBCAG wants to involve elected officials, including members of the SBCAG Board, Santa Barbara City Council members, and Coast Rail Now leadership.	X	X



**Table A-2: Financial Issues Checklist**

Financial Issues	VCTC	SBCAG	SCRRA	CALTRANS
<p><b>Evaluation of Commuter Rail Capital and O&amp;M Costs</b></p>	<p>Wants the Ventura / Santa Barbara Rail Study to provide a realistic comparison of capital and O&amp;M costs. In response to VCTC's concerns, the O&amp;M costs in the 101-in-Motion have been updated to reflect current SCRRA operating cost data and to reflect current UPRR requirements. Wants to see a comparison of 1) No rail service 2) implementing Amtrak-based interregional rail service, and 3) commuter rail service.</p>	<p>Considers the commuter rail costs developed in the 101-in-Motion Program to reflect actual costs as the time they were developed. All costs were validated by SCRRA and were based on Metrolink actual experience and on the cost of comparable systems across the country. These costs have now been updated.</p>	<p>O&amp;M costs were based on SCRRA costs and were not underestimated. The way the costs were applied relative to projected O&amp;M revenues resulted in underestimation of the potential funding required to support the service.</p>	<p>X</p>
<p><b>Allocation of Capital and Operating Costs/Cost Sharing</b></p>	<p>The main issue in the study is not cost-sharing. The main issue is to define the right project and its cost. If that can be accomplished, VCTC would consider sharing costs 50/50 with SBCAG. VCTC would prefer to keep the allocation of capital and operating costs simple. They don't really want to have extensive negotiations.</p>	<p>With regard to funding the capital and operating costs of commuter rail service SBCAG would consider two scenarios - one that assumes SBCAG would pay part of the cost, and another that assumes costs would be paid by SB and "others". SBCAG would consider cost-sharing among multiple agencies, including Caltrans, VCTC, and SBCAG.</p>	<p>X</p>	<p>Caltrans would potentially consider an approach whereby the Pacific Surfliner could be used as an interregional commuter service between Ventura and Santa Barbara, similar to the role played by intercity rail service in the Capitol Corridor. Of possible concern is the impact that an earlier morning arrival in Santa Barbara could have on Pacific Surfliner ridership, farebox revenues, and the level of State operating support required. Neither Caltrans nor Amtrak has taken an official position of this matter.</p>



Financial Issues	VCTC	SBCAG	SCRRA	CALTRANS
<p><b>In the absence of a dedicated source of funding, there are limited sources of revenue that could be used for commuter rail capital and operating costs.</b></p>	<p>VCTC does not have a dedicated transportation sales tax. In addition, use of TDA funds for commuter rail would take needed funding from all transit operators (bus) and all cities in both counties, as TDA for rail comes off-the-top, countywide.</p>	<p>SBCAG has established a framework for development of a Measure D 1/2 Cent Sales Tax Renewal 2008 Investment Plan. The 1/2 cent tax rate proposed is lower than the 3/4 cent tax renewal that was not successful in 2006. The lower rate would limit the amount of funding potentially available for regional projects, including commuter rail service and other components of the 101-in-Motion Program. SBCAG is interested in looking at how other commuter rail systems have been funded. In addition to potential extension of Measure D, other sources of interest include State intercity rail funding (Caltrans) and VCTC TDA funds.</p>	<p>SCRRA considers it essential that future member agencies of the JPA have adequate financial capacity for initiation of service, on-going operations, and continuing preventive maintenance funding.</p>	<p style="text-align: center;">X</p>



<p><b>There is potential for future sales tax measures to be considered in Ventura and Santa Barbara counties.</b></p>	<p>Although a sales tax measure failed at the ballot, there could be consideration of a measure in the future. There is competition for future additional sales tax within transportation, with paratransit and other services in need of additional funding. There is also competition between transportation and open space, so positioning with regard to timing of including a new measure is important and will determine its success.</p>	<p>Within the next 3-4 months, SBCAG will need a Pilot Program to fold into a revised Measure D Expenditure Plan – potentially on the order of \$20-\$40 million. Because Measure D sunsets in 2010 and a 1/2-cent sales tax renewal proposed, SBCAG wants to look at a pilot program that could leverage existing sources of State funding, allow for initiation of interregional commuter rail service, and not cost \$200M to implement. While a potential future funding source would require passage of the Measure D extension, the initial funding level likely to be provided through the measure would be limited.</p>	<p>X</p>	<p>X</p>
<b>Financial Issues</b>	<b>VCTC</b>	<b>SBCAG</b>	<b>SCRRA</b>	<b>CALTRANS</b>
<p><b>Funding for operations is limited, with little or no funding available from each county's share of TDA Funds</b></p>	<p>According to VCTC, TDA would have to be the primary funding source for VCTC. Does not want to shift TDA funds from their bus service. Would like to determine a source of revenue to implement and maintain commuter rail without taking money away from the bus services. TDA funding for Rail comes off-the-top and affects all areas of apportionment within each county.</p>	<p>Wants VCTC to use TDA funds currently being used for non-transit purposes to fund commuter rail. In the absence of redirecting TDA funds, both SBCAG and VCTC have limited or no funding that could be used to support commuter rail operations. In addition, SBCAG no longer receives Congestion Mitigation and Air Quality (CMAQ) funds, which had been used years earlier to initiate express bus service between the counties.</p>	<p>X</p>	<p>X</p>



<b>The presence of freight rail services in the corridor enhances the potential to secure State Rail Bond funding available through Proposition 1B.</b>	In VCTC's view, the presence of freight rail service and the potential for the UPRR Coast Line and the Santa Paula Branch Line to provide a redundant relief freight route could assist in attracting State funding for rail passenger and freight improvements (particularly sidings).	In SBCAG's view, the presence of freight rail service and the potential for the UPRR Coast Line to provide a redundant relief freight route could assist in getting state funding for improvements (particularly sidings).	<b>X</b>	<b>X</b>
<b>Comments about State Funding</b>	<b>X</b>	Would like funding from State (Caltrans), with SBCAG paying its share of costs beyond what the State would pay.	<b>X</b>	<b>X</b>
<b>SBCAG received a \$1 million earmarked FTA New Starts grant through SAFETEA_LU.</b>	<b>X</b>	SBCAG received a \$1 million FTA grant in SAFETEA-LU, but has been told that it would need to do an Alternatives Analysis in order to use it since it is New Starts funding.	<b>X</b>	<b>X</b>
<b>Potential for Interregional Rail funding through the 2006 STIP Augmentation and through Proposition 1B</b>	Based on the June 2007 action of the CTC, approximately \$18 million was approved for siding upgrade and extension in Santa Barbara County, and for new sidings in Santa Barbara and Ventura counties.	Based on the June 2007 action of the CTC, approximately \$18 million was approved for siding upgrade and extension in Santa Barbara County, and for new sidings in Santa Barbara and Ventura counties.	<b>X</b>	Caltrans will be buying a minimum of \$125 million in rail rolling stock with funding from the Proposition 1B bond measure that was approved by voters statewide in 2006.



Financial Issues	VCTC	SBCAG	SCRRRA	CALTRANS
<b>Potential Intercity Rail Proposition 1B Projects</b>	Need to add the Leesdale Siding and the Pedestrian Crossing in Camarillo	<b>X</b>	<b>X</b>	<p>There are a number of project categories specified for use of the \$19 billion in Proposition 1B State rail bond proceeds. Of the total, Intercity Rail is eligible for \$400 million, with some additional funds potentially available through the goods movement components of the 1B program. Of the \$400 million, \$150 million is proposed by Caltrans for acquisition of rolling stock. In July 2007, Caltrans presented to the CTC its priorities for the balance of the Prop 1B intercity rail funding. In addition to the potential to receive additional rolling stock, the Pacific Surfliner corridor is proposed to receive \$25 million for construction of new track or extension of sidings to facilitate the start-up of the Coast Daylight. This service would connect the Pacific Surfliner and Capital Corridors, but would likely be used for projects outside of the corridor in the area north of San Luis Obispo.</p>



**Table A-3: Institutional Issues Checklist**

Institutional Issues	VCTC	SBCAG	SCRRA	CALTRANS
<b>Comments on creating a new institution for commuter rail service</b>	VCTC is not interested in creating a new institutional structure.	Interested in all types of institutional possibilities, including creation of a new commuter rail district. SBCAG is interested in flushing out the upsides and downsides to joining a larger organization like Metrolink.	SCRRA would not endorse an alternative in the 101-in-Motion because it did not want another partner that has no money.	<b>X</b>
<b>Metrolink institutional comments</b>	Implementation of commuter rail would have to be approved by Metrolink.	SBCAG is concerned about being a small part of a big entity if it joined SCRRA/Metrolink. Interested in flushing out upside and downside of joining as a member of the JPA. Joint concurrence with VCTC would be required for membership and for contract for service with Metrolink.	<b>X</b>	In order to run existing service into Santa Barbara County before 9am, SCRRA/Metrolink would have to concur.
<b>UP Institutional Comments</b>	Would need support from UP to run a commuter rail train other than Amtrak. VCTC has a good working relationship with UP, however UPRR is expected to resist implementation of commuter rail	SBCAG thinks there would be more leverage in dealing with UPRR if it had Metrolink's help.	In SCRRA's view, Caltrans won't risk raising the interregional definition with UPRR if the service is commuter rail. SCRRA is not interested in getting approval from UPRR. SCRRA could negotiate with UPRR but it requires the SCRRA Board's approval and member agencies could block them. The most effective institutional approach for negotiating with the Union Pacific is Capital Improvements. If it's done for Amtrak service those capital improvements would be funded and performed by and for Caltrans.	<b>X</b>



Institutional Issues	VCTC	SBCAG	SCRRA	CALTRANS
<p><b>Potential for SBCAG to become a member agency of SCRRA/Metrolink</b></p>	<p>VCTC is not clear if Santa Barbara would be a member or would contract for service (negotiate price for service).</p>	<p>X</p>	<p>SCRRA doesn't need another partner that has no money. SBCAG would have to contribute what all member agencies contribute. This is a very capital-intensive operation; built on the assumption that member agencies have significant preventative maintenance ability. If there was a funding stream that was up to par with what they require their member agencies to have, then they might consider it. SBCAG would have to pick between bus service and commuter rail. Not willing to reduce its financial requirements for their member agencies. If SBCAG wanted to become a member it would have to contribute what other member agencies contribute.</p>	<p>X</p>
<p><b>Comments on SB contracting with Metrolink</b></p>	<p>X</p>	<p>X</p>	<p>SCRRA is not interested in contracting with SBCAG for the extension of service from Ventura County. Santa Barbara would be required to have its money initially and continually. In addition, the Ventura County Metrolink line is not a growing service. Further, if an additional train set is run from Santa Barbara County to Los Angeles County, there is little reason for Los Angeles County to want to increase its subsidy cost (based on train-miles within each county).</p>	<p>X</p>



Institutional Issues	VCTC	SBCAG	SCRRA	CALTRANS
<b>Comments on using an Amtrak Train</b>	If the decision was made to initiate service through Amtrak, a formal request to AMTRAK would be needed, with support from Caltrans.	<b>X</b>	<b>X</b>	<b>X</b>
<b>Caltrans Institutional Comments</b>	With respect to capital improvements, the more sidings put in by Caltrans as improvements for intercity and freight service, the better, with AMTRAK service as the beneficiary.	<b>X</b>	There are too many other high priority intercity projects north and south and Caltrans needs more money in order to agree to use state funds for track improvements and additional intercity service. Caltrans wouldn't risk the interregional definition with UP because the service is commuter rail.	<b>X</b>
<b>Comments regarding potential Inter-regional service</b>	<b>X</b>	<b>X</b>	<b>X</b>	In Caltrans' view, SCRRA/Metrolink would be the main agency that would have to concur with providing inter-regional service by starting the existing service earlier to arrive in Santa Barbara before 9:00 am.



## **APPENDIX B: SUMMARY OF ALTAMONT COMMUTER EXPRESS AND VIRGINIA RAILWAY EXPRESS FUNDING EXAMPLES**



---

### **Altamont Commuter Express Use of State Funds for Highway Construction Mitigation**

Altamont Commuter Express (ACE) received State funding for operation of an additional train as mitigation for Highway 203 construction impacts. With Caltrans' assistance, funding was derived from two sources: highway construction mitigation funds and intercity bus funds. With respect to highway construction mitigation funds, ACE received \$150,000 from Caltrans to provide rail service as a mitigation for the Highway 203 construction. These funds were supplemented with \$175,000 in funding provided from State Intercity Rail funds made available by replacing the midday Amtrak feeder bus service with train service. In return ACE accepted Amtrak tickets for use of this midday service.



## Virginia Railway Express Use of Railroad Rehabilitation & Improvement Financing (RRIF)

The RRIF program was established by the Transportation Equity Act for the 21st Century (TEA-21) and amended by the Safe Accountable, Flexible and Efficient Transportation Equity Act: a Legacy for Users (SAFETEA-LU) and provides financial assistance in the form of direct loans or loan guarantees to eligible participants for the purpose of: 1) acquiring, improving, or rehabilitating intermodal, rail freight, passenger equipment or facilities, including track, components of track, bridges, yards, building or shops; 2) to refinance outstanding debt incurred for these purposes; or 3) to develop or establish new intermodal or rail facilities.

Direct loans can be made for up to 100% of the total project cost, for terms up to 25 years at an interest rate equal to the cost of borrowing for a comparable term based on the current Treasury rate at the time of closing. Loan guarantees can be made up to 80% of the cost of a loan, for terms up to 25 years, at a rate the Secretary determines reasonable taking into account prevailing interest rates and customary fees incurred under similar obligations in the private capital market.

Additionally, the following changes included in SAFETEA-LU amended the RRIF program:

- **Expansion of eligible applicants:** SAFETEA-LU expanded the type of entities eligible for the RRIF program to include limited option shippers and commuter railroads.
- **Expansion of the list of projects to be given priority consideration:** SAFETEA-LU added to the list of eligible projects to include those that “enhance service and capacity in the national rail system” and “would materially alleviate rail capacity problems which degrade the provision of service to shippers and would fulfill the need in the national transportation system.” These two types of projects were included to address congestion on the nationally important rail lines.
- **Expanding RRIF assistance levels:** SAFETEA-LU expanded the total authority for outstanding RRIF financial assistance from \$3.5 billion to \$35 billion and amount reserved for small and regional railroads increased from \$1 billion to \$7 billion. Additionally, the Secretary may not establish a limit on the amount that could be used for one direct loan or loan guarantee.
- **Requirement for Collateral:** SAFETEA-LU provides that the Secretary may not require an applicant to provide collateral and that any collateral provided be valued at going concern value after giving effect to the present value of the improvement.

### **Relevance to Ventura/Santa Barbara Rail Study**

Table B-1 summarizes the RRIF loan agreements that have been provided since 2002. The Virginia Railway Express (VRE) loan is most relevant to the potential Ventura/Santa Barbara rail service.

The VRE is a transportation partnership of the Northern Virginia Transportation Commission (NVTC) and the Potomac and Rappahannock Transportation Commission (PRTC) and provides commuter rail service from the Northern Virginia suburbs to Alexandria, Crystal City and downtown Washington, D.C. In January 2006, VRE submitted a RRIF loan application for a not to exceed agreement of \$72.5 million to finance a portion of the acquisition costs for 50 new bi-level passenger railcars. The remaining funding for the acquisition (\$20 million) was provided by the State of Virginia. In November 2007, VRE’s application was approved and became the first commuter rail operator to receive a loan under the FRA’s RRIF loan program. With receipt of the RRIF loan agreement, the new equipment is allowing VRE to replace old railcars, increase the size of its fleet, add seating capacity to each railcar, and improve service for its riders.



**Table B-1: Summary of RRIF Program Agreements**

Organization	Year	Amount
Nashville and Eastern Railroad	2008	\$4.6 million
Columbia Basin Railroad	2008	\$3.0 million
Virginia Railway Express	2007	\$72.5 million
R.J. Corman Railway	2007	\$59 million
Dakota, Minnesota & Eastern Railroad	2007	\$48 million
Iowa Interstate Railroad	2006	\$9.35 million
Great Smoky Mountains Railroad	2005	\$7.5 million
Riverport Railroad	2005	\$5.5 million
The Montreal, Maine & Atlantic Railway	2005	\$34 million
Tex-Mex Railroad	2005	\$50 million
Iowa Interstate Railroad	2005	\$32.7 million
Stillwater Central Railroad	2004	\$4.6 million
Wheeling & Lake Erie Railway	2004	\$25 million
Arkansas & Missouri Railroad	2003	\$11 million
Nashville and Western Railroad	2003	\$2.3 million
Dakota, Minnesota & Eastern Railroad	2003	\$233 million
Amtrak	2002	\$100 million
Mount Hood Railroad	2002	\$2.07 million

Source: <http://www.fra.dot.gov/us/content/177>, March 2008.

**FRA's Substantive Criteria for Evaluation of RRIF Applications**

The following summarizes FRA's criteria and standards used to determine evaluate RRIF Applications. These criteria are drawn from the RRIF program's authorization legislation ([45 U.S.C. 821](#) and [822](#) and [823](#)) and implementing regulations ([49 CFR part 260](#)). According to the FRA's website, the criteria descriptions below differ from the statute and the regulations only for purposes of brevity and do not contain any new criteria or impose any new legal requirements or have any legal effect. Application evaluations are made based on the following criteria and standards, as more fully set forth in the statute or the regulations, evaluated individually and considered collectively.

- The statutory eligibility of the applicant and the project ([49 CFR 260.3](#), definition of applicant and [49 CFR 260.5](#), eligible purposes);
- The creditworthiness of the project, including the present and probable demand for rail services and a reasonable likelihood that the loan will be repaid on a timely basis. ([49 CFR part 260](#), Subpart B-FRA policies and procedures for Evaluating Applications for Financial Assistance)
- The extent to which the project will enhance safety. [49 CFR 260.7\(a\)](#))
- The significance of the project on a local, regional, or national level in terms of generating economic benefits and improving the railroad transportation system. ([49 CFR 260.7\(c\)](#))



- The improvement to the environment that is expected to result directly or indirectly by the implementation of the project. [49 CFR 260.7\(b\)](#) ) and
- The improvement in service or capacity in the railroad transportation system or the reduction in service-or capacity-related problems that is expected to result directly or indirectly from the implementation of the project (45 U.S.C. [822\(c\)](#).)