



Board Report

File #: 2016-0939, **File Type:** Informational Report

Agenda Number: 12

PLANNING AND PROGRAMMING COMMITTEE JANUARY 18, 2017

SUBJECT: Regional Rail Update through December 2016

ACTION: RECEIVE AND FILE

RECOMMENDATION

RECEIVE AND FILE **Regional Rail Update through December 2016.**

ISSUE

The Regional Rail unit of the Program Management Department is responsible for providing overall coordination, management, and the programming of funds for Los Angeles County Metropolitan Transportation Authority's (Metro) commitment to the commuter, intercity, and high speed rail networks serving Los Angeles County. This unit also manages and coordinates capital improvement projects along the Metro owned railroad right-of-way.

DISCUSSION

Metro is the largest member agency for the Southern California Regional Rail Authority (SCRRA), the operator of the Metrolink commuter rail network. Metrolink carries approximately 42,000 riders per day throughout the southern California Region. Metro is a member of the Los Angeles - San Diego - San Luis Obispo (LOSSAN) Rail Corridor Agency. This Joint Powers Authority (JPA) coordinates the passenger rail services of the three carriers (Amtrak, Metrolink, and COASTER) within this intercity rail corridor.

Metro is instrumental in the planning and coordination efforts within the County of Los Angeles for the future high speed rail system connecting northern California to southern California. Staff is also involved with regional and statewide agencies working to develop integrated passenger rail service in the state. The Regional Rail team coordinates and leads capital improvement projects for the Metro owned and Metrolink operated right-of-way.

Capital Projects

The Regional Rail unit has 10 capital improvement projects that it is actively managing. These projects range from planning studies to the design of capacity and safety related projects. See Attachment A-1 and Attachment A-2.

1. North Burbank Airport Station (Station), Antelope Valley Line

The North Burbank Airport Station, formerly called Bob Hope Airport/Hollywood Way Station will add

a new Metrolink station on the Antelope Valley Line to provide a vital plane-to-train transit connection to the Burbank-Glendale-Pasadena Airport Authority. The first Invitation for Bids (IFB) for construction took place in March 2016. The construction bids came in approximately 50 percent over budget so all construction bids were declined in May 2016. Staff went back to the Board to increase the Life of Project (LOP) budget in June 2016 to include additional funds for construction, third party costs, and station redesign to reduce operation and maintenance (O&M) costs. The project redesign was completed in July 2016 and the IFB was reissued in August 2016. Construction bids were received on September 16, 2016. On December 6, City of Burbank Council unanimously approved the operation and maintenance (O&M) of the station. Since 70 percent of the proposed station is located in the City of Burbank and the remaining 30 percent of the station is located in the City of Los Angeles, City of Los Angeles has committed to funding 30 percent of the total cost of the operation and maintenance of the station. Staff is working with the City of Burbank, City of Los Angeles, and SCRRA to execute an O&M agreement. Burbank-Glendale-Pasadena Airport Authority is committed to provide free courtesy shuttle service from the station to the airport. Construction Contract award is anticipated by January 2017 and revenue operation is anticipated by March 2018.

2. Bob Hope Airport Pedestrian Grade Separation, Ventura Line

The Bob Hope Airport Pedestrian Grade Separation project consist of an elevated walkway to improve safety by providing a separate dedicated passageway for passengers to access the Bob Hope Airport from the Metrolink station. Staff has placed the Project on hold as Airport, LOSSAN, and City of Burbank has declined to accept O&M responsibility for the pedestrian bridge. Metro and SCRRA do not maintain Metrolink stations and associated grade separation structures. The \$7 million in State Interregional Transportation Improvement Program (ITIP) funds approved by the State for the construction of the Project has been deferred to FY 20/21. Since the project is on permanent hold, SCRRA has reallocated \$5.375 million Public Transportation Modernization, Improvement, and Service Enhancement Account Program (PTMISEA) funds from the Project to fund SCRRA State of Good Repair projects.

3. Brighton to Roxford Double Track

This project will double track approximately 11 miles of the Antelope Valley Line between Burbank and Sylmar. All crossings will be designed to be quiet-zone.

The consultant is currently working on Phase-2 Design Documents (65% PS&E) which is targeted for submittal on April 2017.

4. Doran Street and Broadway/Brazil Grade Separation Project

The objective of the Doran Street and Broadway/Brazil Grade Separation Project, formerly referred to as the Doran Street and Broadway/Brazil Safety and Access Project, is to significantly improve safety and enhance mobility by closing two at-grade rail crossings located in the City of Glendale and the City of Los Angeles. The project consisted of two components that will accommodate future rail expansion. First is the Salem/Sperry Overpass which connects West San Fernando Road to San Fernando Road in the vicinity of Sperry Street in Los Angeles and Salem Avenue in Glendale. The second component is the Northerly Access Point Overpass, formerly called the Fairmont Connector, which would be the extension of West San Fernando Road over the Verdugo Wash with a two-way connection to Fairmont Avenue. The Northerly Point of Access Overpass utilizes Fairmont Avenue,

resulting in a significant cost savings by using existing infrastructure as part of the solution.

In June 2015, the Metro Board partially approved the Doran Street and Broadway/Brazil Safety Access Project, Alternative 2 Fairmont Connector and Salem/Sperry Overpass. The Board approved the Salem/Sperry Overpass but Director Najarian amended the motion and directed staff to work with the City of Glendale and the City of Los Angeles to examine the project without the Fairmont Connector and to report back to the Board on furthering the study to develop another feasible alternative to the Fairmont Connector that meets the short term and long term goals of the region and local communities.

Traffic Study

Staff has completed a new traffic study that examined several alternatives, including prohibiting public access, one-way outbound traffic, and two-way traffic solutions. The results of the study indicate that both the Salem/Sperry Overpass and the Fairmont Connector, currently referred to as the “Northerly Point-of-Access”, with a two-way connection to Fairmont Avenue work in tandem, and together these provide a comprehensive solution that addresses the existing and forecasted traffic growth. The two-way traffic solution is critical for the economic vitality of the North Atwater Village businesses while not significantly impacting the intersection operations on Fairmont Avenue. The Salem/Sperry Overpass and two-way Northerly Point-of-Access to Fairmont Avenue will allow for the closure of both the Doran Street and Broadway/Brazil at-grade rail crossings, resulting in a substantial safety and mobility improvement for the community. In January 2017, staff will be requesting the Board to approve the recommended Alternative 2 Northerly Point of Access and Salem Sperry Grade Separation for the environmental documents and preliminary engineering design phase including third party costs of up to \$2 million for the City of Glendale, City of Los Angeles, Southern California Regional Rail Authority and other third parties.

Community Meeting

Metro conducted 2 community meetings on December 7, 2016 and updated the community participants with additional traffic and circulation analysis, the preferred alternative, and the future transit corridor improvements.

Funding

The project is funded for environmental and design phase only. Funding for real estate acquisition and construction is yet to be determined. The project is listed in the 2012 Southern California Memorandum of Understanding Agreement with California High Speed Rail Authority with a potential financial commitment of 50 percent of the total project cost.

5. Los Angeles County Grade Crossing and Corridor Safety Program

This is a comprehensive at-grade crossing and corridor safety program, including 110 at-grade crossings along the 160 miles of Metro owned and Metrolink operated right-of-way.

The team has developed preliminary recommendations on grade crossing and corridor safety improvements. In addition, the team has developed a preliminary ranking for grade crossing improvements and grade separation candidates. The team will be sharing the preliminary results and

recommendations with cities along the rail corridors and incorporating feedback into the final results and recommendations. The final report is anticipated to be completed in early 2017.

6. Raymer to Bernson Double Track

The Raymer to Bernson Double Track Project is currently on hold. This project will increase regional mobility along the Metrolink Ventura Subdivision and the Los Angeles-San Diego-Luis Obispo (LOSSAN) corridor by providing a second mainline track, approximately 6.4 miles in length, between Control Point (CP) Raymer to CP Bernson. The Ventura Subdivision is used by Metrolink Ventura Line, Amtrak Pacific Surfliner, Amtrak Coast Starlight and Union Pacific freight trains. This project is located in the rail corridor owned by Union Pacific Railroad (UPRR) and Metro. As part of this work, nine at-grade rail crossings and two bridges will be reconstructed including a new second side platform and a new grade separated pedestrian crossing at the existing Northridge Metrolink Station.

Background

There are currently two mainline tracks between Los Angeles Union Station and CP Raymer. North of CP Raymer, it is a single track with passing sidings located along the corridor through Ventura County. When northbound and southbound train schedules require a meet in the single-track corridor, one train must wait in a siding location for the other train to pass. This not only delays service but also results in trains idling in the sidings. Since CP Bernson to CP Topanga currently has two mainline tracks, the double track project as originally proposed would then allow for a continuous double-track railroad for additional 8.7 miles north of CP Raymer to CP Topanga, near the Chatsworth Metrolink station, improving the regional mobility, increasing the reliability of train services and reducing greenhouse gas emissions from idling trains

Modified Double Track Alternative

In response to concerns of residents adjacent to the project site, Metro has engaged WSP Parsons Brinkerhoff to analyze an alternative configuration of a partial double track that consists of leaving in place the existing 1.5 miles of single track by the residential neighborhood between Lindley Avenue and Balboa Boulevard (north of CP Raymer) and provides 5 miles of a new second mainline track between Balboa Boulevard to CP Bernson. The purpose of the study is to determine the operational benefits of the existing condition compared to the “partial double track” alternative and the full double track alignment.

The study concluded that both configurations (partial and full double track) can support the current train service schedules (passenger and freight) and the forecasted future train service growth defined by Metrolink’s 10-Year Strategic Plan and LOSSAN Corridorwide Strategic Implementation Plan. The operational capacity would increase by 150% for a partial double track alternative compared to a 200% increase for the full double track alignment. The study also indicated that additional capacity under both the partial and full double track alignments is possible through modification of the existing signal system.

State’s Response

Staff has shared the results of the study with the California State Transportation Agency and the California Department of Transportation (Caltrans) Division of Rail and Mass Transportation. Caltrans is supportive of the full double track project as it is a much needed improvement that will enhance regional mobility for the LOSSAN corridor. Caltrans was not receptive to the proposed partial double

track concept and preferred the full double track configuration. Caltrans also indicated that the state funds can only be redirected to the improvements along the LOSSAN corridor which is along the Metrolink Ventura Line in Los Angeles County.

Staff also met with Sherwood Forest residential neighborhood in October 2016 to discuss the findings of the study including the State's response on the preference for the full double track configuration. Staff will continue to keep the Sherwood Forest residential neighborhood and any interested stakeholders updated with any new developments of the project.

Funding

Metro has secured a total of \$80.3 million for the project with \$60.82 million from the California State Transportation Improvement Program and \$19.48 million California State Proposition 1B Intercity Rail. The California Transportation Commission has postponed the funding of the project to fiscal year 2019. As of June 2016, Caltrans has ended the funding contract for the design phase of the project and Metro has placed the project on hold. Staff will continue to monitor state funding for the project and if state funding is still available, staff will return to the Board with recommendations by the first quarter of FY 19

7. Rosecrans/Marquardt Grade Separation

Rosecrans/Marquardt Grade Separation is major safety improvement to the confluence of railroad tracks crossing the intersection of Rosecrans and Marquardt Avenues in the City of Santa Fe Springs. The railroad tracks run in a diagonal direction at the Rosecrans and Marquardt grade crossing and is ranked No. 1 on the California Public Utilities Commission (CPUC) Section 190 list as the most hazardous crossing in the state. An estimated 45,000 vehicles and 130 trains use the intersection of Rosecrans and Marquardt daily with over 60 freight and 52 passenger trains daily. Train crossings are approximately every ten minutes bringing vehicular traffic to a standstill for a total of 21 hours gate down time per week.

The project completed 65 percent design in November 2016 and updated the total project budget from \$137.2 million to \$155.3 million based on this more detailed engineering work. Staff is in real estate acquisition on all eight full takes with the goal on beginning the remaining partial take real estate acquisition by Spring 2017. The real estate acquisition phase is the critical path on the project schedule as the process will take a total of two years or longer. The project is anticipated to be complete with 100 percent design by Summer 2017. The target start date for construction is Spring 2019.

Third Main Line Track

In advance of construction of the Rosecrans/Marquardt grade separation, BNSF in partnership with Caltrans is working on constructing the last segment of 1.3 mile of a third main line track at Rosecrans Avenue and Marquardt Avenue crossing which will facilitate the completion of the 14.7 mile triple track project from Redondo Junction in Los Angeles County to Fullerton in Orange County. Currently, there are no available time slots for passenger trains along this BNSF rail corridor with 28 time slots for Metrolink and 24 time slots for Amtrak. The triple track project will add capacity to the corridor by providing 32 new time slots with 10 additional time slots for Amtrak (for a total of 34 time slots) and 22 additional time slots for Metrolink (for a total of 50 time slots) and relieving a significant operational constraint in the corridor.

The CPUC's approval of the third main line track is conditioned upon the construction of the Rosecrans/Marquardt grade separation. As an additional benefit, having an operational third track during construction of the grade separation would eliminate the occasional need of reducing capacity from two tracks to one. This will help create a safer and more efficient working environment, lessen impacts on all rail operations, and will reduce potential construction delays.

Funding Plan

In July 2016, Metro was awarded a TIGER Grant for \$15 million for the Project. Metro also received a letter of financial commitment for \$68.6 Million funding from the California State Transportation Agency (Calsta). Since the project is ranked No.1 the CPUC list, it is eligible for Section 190 fund in the amount of \$15 million. Metro has committed \$26.5 million for Measure R funds. BNSF has also committed \$7 million. Staff is working with the California State Transportation agency to secure additional state funding sources to make up the \$23.3 million funding gap. In the meantime, staff is working with all the funding partners (i.e. California High Speed Rail Authority, BNSF, Calsta, City of Santa Fe Springs) to execute full funding agreements for right of way acquisition and construction.

8. Link Union Station (Link US)

The Link US project will reconfigure the railyard at Los Angeles Union Station (LAUS) to expand rail service capacity and enhance operational flexibility by creating up to 10 new run through tracks leaving LAUS to the south over US 101 and meeting mainline tracks along the Los Angeles River, and creating a northern loop track. Link US will significantly increase the capacity of the station and also significantly reduce greenhouse gases associated with idling locomotives. The project will provide the track infrastructure needed to support potential one-seat rides to key destinations in Southern California.

The project is currently in the Preliminary Engineering and Environmental Clearance phase. The Draft EIR/EIS is scheduled to be released to the public in summer 2017 and FRA's Record of Decision is scheduled for winter 2017. Staff will report to the Board in January with a recommendation on the Recommended Alternative that will be included in the Draft EIR/EIS.

Staff is continuing to coordinate the development of Link US with Metrolink and the CHSRA. Regular meetings are occurring among the Link US team, Metrolink and the CHSRA about accommodating the high speed rail program into the footprint of Link US EIR/S. Staff continues to work with the CHSRA on the necessary agreements including a full funding agreement and operations and maintenance agreement that addresses the implementation phase of the project (right of way acquisition and construction).

9. Van Nuys North Platform

Currently, there is only one single side platform serving the two main line tracks at the Amtrak/Metrolink Van Nuys station. A center platform will be constructed, along with a pedestrian underpass to the platform, providing safe access to both main tracks.

Final design was completed in Summer 2016. In June 2016 both the Metro and SCRRA boards, plus the CTC, approved the transfer of the construction of this project from Metro to SCRRA. This is a

pilot project, and if successful, will establish a path forward for Metrolink to manage the construction of future Metro class 1 commuter rail projects in Los Angeles County.

Metrolink released the IFB for construction in December 2016. Metrolink expects to award the construction contract in March 2017, and issue the NTP in April 2017. Construction is anticipated to take two years and be completed in early 2019.

10. Lone Hill to CP White Second Track

The Metrolink San Bernardino line is 70% single track. This project will add a 3.9 mile section of additional second track in the cities of La Verne and San Dimas. All 12 crossings will be designed to be quiet-zone ready.

The project is in the environmental clearance and 30% design phase. Community meetings were held in late November 2016. Survey work is mostly complete and the project is in the noise and vibration, environmental studies, and 30% design phase. Further outreach to the community will occur this Spring. The project is scheduled to be completed Summer 2017.

Metrolink Commuter Rail Operations

- Ticket Vending Machine Update

Metrolink is proceeding with their TVM procurement with a suggested recommendation for a cashless system with the option for cash TVMs. Metro has emphasized our Board's request for a TVM cash option in Los Angeles County and submitted a station by station request for one or more cash TVM at all Los Angeles County stations.

Metrolink has concluded their Title 6 analysis. Metro's TAP, OMB and Regional Rail departments meet regularly with Metrolink to provide input on the TVM procurement.

- Metrolink Request for Additional Rehab Funding (\$33M)

In November, the Metrolink board approved a budget amendment to provide additional rehabilitation and renovation funding, in order to prevent slow orders from occurring, as early as summer 2017. The majority of the work includes bridge, track and tie replacement along the Antelope Valley and Ventura lines, the River Corridor, and the rehabilitation of the canopies at Union Station.

Metro's share of the budget amendment is \$33M, which must be independently approved by the Metro board. In response to this budget amendment request, Regional Rail is hiring a consultant to verify the condition and state of good repair of Metro owned assets. Staff anticipates the consultant will be engaged by February 2017.

In the interim, staff accompanied SCRRA staff on a Hi-Rail trip on November 23, 2016 and December 8, 2016 to review asset conditions in advance of hiring the consultant (Attachment E - Metrolink Asset Inspection Summary). Staff's findings indicate that there are certain tracks, ties, bridges and culverts that are recommended for replacement immediately. However, there are a few bridges and culverts that despite their age are in fair condition and should be annually inspected. Staff will return to the board with a recommendation for additional state of good repair funding by April 2017.

- FY 2015-2016 CAFR and Audit

Metro's auditors Vasquez and Company are awaiting Metrolink's notice to proceed with field work which was expected to begin on around December 31, 2016. Metro staff will come back to the board when the final audit report is issued.

- \$18 Million Loan

Metro received Metrolink's first payment of \$5 million on April 1, 2016.

The following is a summary of Metrolink's repayment plan for the remaining payments and what has been paid to date:

\$5 million on or before March 31, 2016 - PAID

\$5 million on or before May 31, 2016 - PAID

\$590,240.76 Interest Payment received on July 29, 2016

\$1 million on or before August 31, 2016 - PAID

\$1 million on or before November 30, 2016 - PAID

\$1 million on or before February 28, 2017

The balance on or before June 30, 2017

This will achieve final payment by the loan maturity date of June 30, 2017.

- Metrolink Invoices and Billing Issues

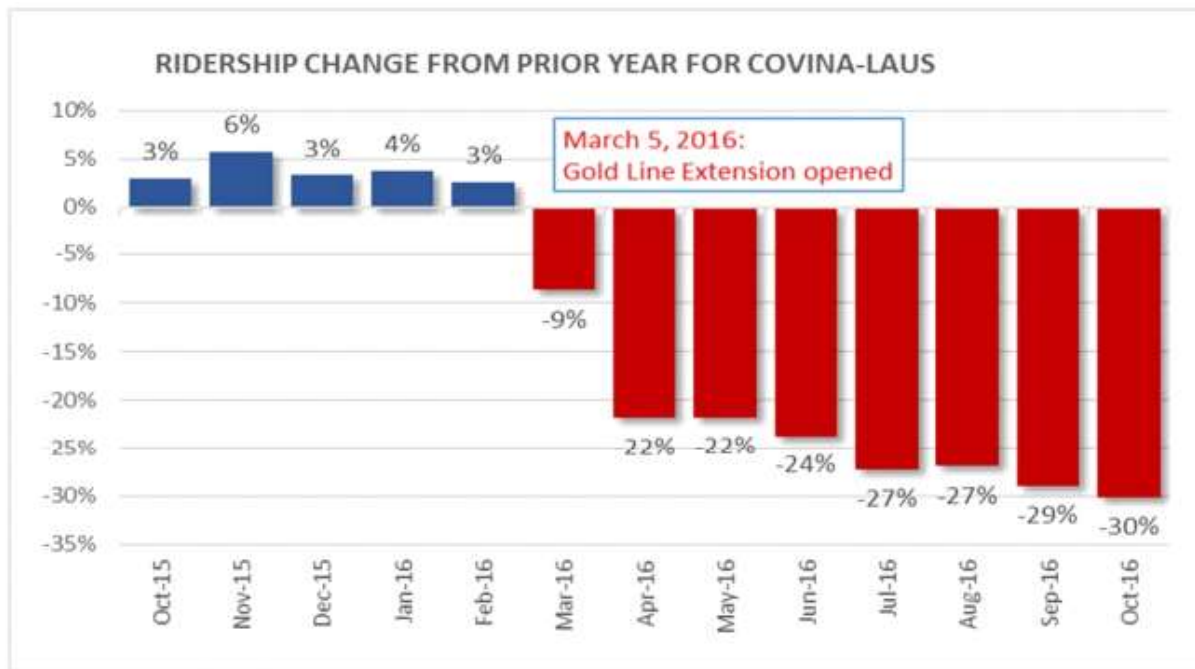
Metrolink has made some progress in submitting invoices to draw down on the \$30M of funding. However, there remains an issue with billing member agencies for Oracle 111 reimbursements for fiscal years 2011, 2012 and 2013. Metro's board approved extending the lapsing date to June 30, 2017, to allow Metrolink an opportunity to expend these funds. Metrolink has provided an invoicing and expenditure plan to meet the June 30, 2017, deadline to expend the lapsing funds. Staff will monitor Metrolink's progress in meeting the expenditure plan and will continue to meet with Metrolink management to resolve the invoicing backlog.

- Metrolink Ridership and Revenues for FY 2015-16

For FY 2015-16 (July 2015 thru June 2016) Metrolink ridership was 1.2% below budget. Revenues were 1% above budget. Ridership was down 1% and revenues were even compared to FY 2014-15 actuals. More information is available in Attachment B.

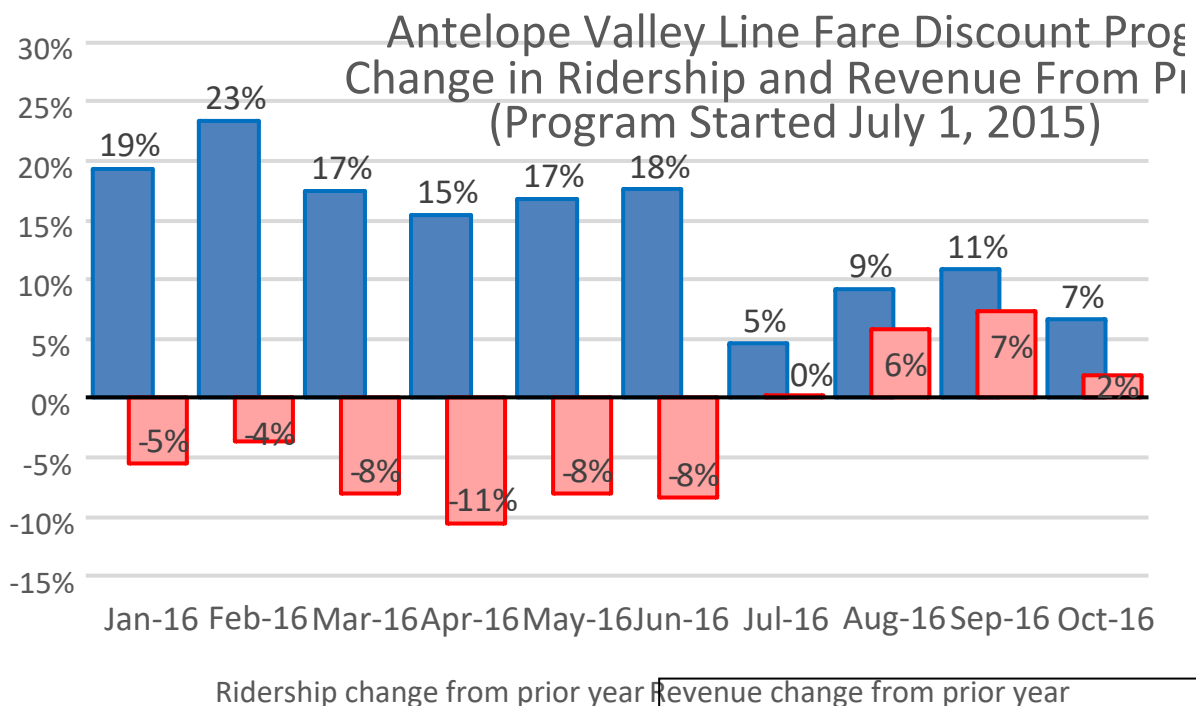
- Metrolink San Bernardino Line Ridership

Since the extension of the Metro Gold Line to Azusa in March 2016, ridership on the Metrolink San Bernardino Line has declined 12% year over year from July 2016 thru December 2016. Ridership to Los Angeles is down from El Monte (-13%), and Baldwin Park (-15%); however, decline from Covina has been most noticeable, down 28% since the opening of the Metro Gold Line.



• Antelope Valley Line (AVL) 25% Fare Discount Program

Since this program's inception in July 2015, the AVL fare discount program has been highly successful in attracting new riders to the AVL. Ridership growth for January 2016 thru November 2016 averaged 14% increase in ridership compared to the prior year. Fare revenues have increased, and the program is recovering more than half of the budgeted costs.



- Metrolink Rams Service

In late September Metrolink began operating the first of seven weekends of special Metrolink service to LA Rams home games. The service includes one additional round trip on each of the Antelope Valley, San Bernardino, Orange County and 91/Perris Valley lines. Ridership thru the first five games was strong, averaging 30% increase ridership compared to the prior weekend. Several trains were packed with hundreds of riders and standees. So far, the special Rams service has been highly successful at attracting additional Metrolink ridership.

- LOSSAN Intercity Rail (Amtrak Pacific Surfliner)

The LOSSAN corridor is the second busiest intercity rail corridor in the nation (see Attachment C). There are 41 stations and more than 150 daily passenger trains, with an annual ridership of 2.9 million on the Amtrak Pacific Surfliner plus 5.1 million on Metrolink and Coaster commuter rail.

For the 12 months ending June 2016, Amtrak Pacific Surfliner intercity rail ridership was 2.9M boardings, a 4% increase over prior year, and the most in fiscal year history since inception in 1977. Revenues on the Pacific Surfliner were also up 3% compared to the prior year. Farebox recovery is 75%. Attachment D shows the top 25 LOSSAN corridor station pairs for both ridership and revenues.

In early November 2016, additional service was added between Los Angeles and San Diego. This 12th round trip arrives at Los Angeles at 7:00 a.m. and provides a needed early morning arrival to Los Angeles. The return trip leaves at 8:25 p.m. and fills a previous three hour gap in the existing schedule.

Also in November, LOSSAN had 80,000 boardings on the Pacific Surfliner during the five days of Wednesday thru Sunday of the busy Thanksgiving week. This is a 6% increase in ridership compared to 2015.

LOSSAN and SCRRRA agreed to extend the term of the Rail-2-Rail Agreement thru June 30, 2016 for an increase in the contract value by \$662,000, for a total contract value of \$2.8 million. This is consistent with the current Metrolink budget for fiscal year 2016-17, and does not require an increase in subsidy from the Metrolink member agencies.

However, by June 30, 2017, LOSSAN is requesting to negotiate and execute a new R2R agreement that includes an increased reimbursement rate of \$7.00 per boarding (current rate is \$4.50) consistent with the average fare per boarding on the Metrolink Orange County and Ventura County lines. LOSSAN indicated that their recommended \$7.00 per boarding represents an equitable distribution of fare revenue between the two services.

The fiscal impact to each of the member agencies of this increase in reimbursement rate is summarized below.

Member Agency	Current Subsidy	Proposed Subsidy	Net Change
OCTA 63%	\$885,000	\$1,371,775	\$486,775
LA METRO 32%	\$446,000	\$696,774	\$250,774
VCTC 5%	\$69,000	\$108,871	\$39,871
TOTAL	\$1,400,000	\$2,177,420	\$777,420

Discussions continue between LOSSAN, SCRRA and the member agencies, including Metro, regarding a long-term Rail-2-Rail agreement.

- High Speed Rail

The Governor's budget allocates 25% of Cap and Trade funds to high speed rail. This allows acceleration of the program.

The Supplemental Alternative Analysis work is underway on the Burbank to Palmdale and Burbank to Anaheim segments in L.A. County. The California High Speed Rail Authority (CHSRA) is evaluating an alternative that partially includes LACMTA owned right-of-way as well as one that takes a more direct route between Palmdale and Burbank. The Draft 2016 Business Plan has been released by the CHSRA. This Plan has redefined the Initial Operating Segment (IOS) to be between the Central Valley north to San Jose. This is a departure from the previous plans that showed the IOS to be between the Central Valley and Burbank. In addition, the plan discussed an investment of \$4 billion dollars into southern California in advance of high speed rail. Metro in partnership with SCRRA provided comments to the CHSRA Supplemental Alternative Analysis Report for the Burbank to Los Angeles Project Section on October 5, 2016 (refer to Attachment F).

The Link US project accommodates HSR with up to 2 platforms and 4 tracks in LAUS. HSR has made a formal offer to acquire real estate at 728 Commercial Street for the Link US project.

NEXT STEPS

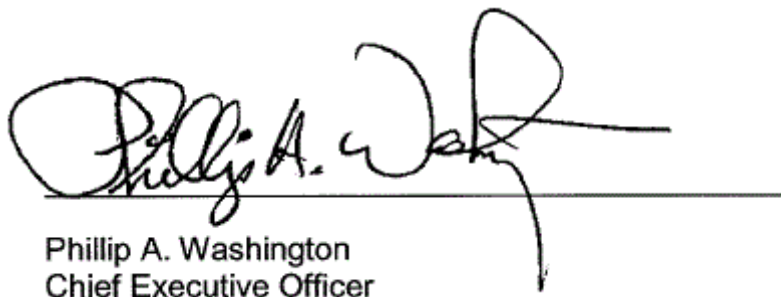
- Continue to develop the projects defined in Attachment A1
- Develop projects for funding under the High Speed Rail MOU

ATTACHMENTS

Attachment A-1 -- Regional Rail Capital Projects Status Report
Attachment A-2 - Regional Rail Capital Projects Budget
Attachment B -- Metrolink Ridership and Revenue Report
Attachment C -- LOSSAN Corridor Map
Attachment D -- LOSSAN Corridor Top 25 Station Pairs
Attachment E - Metrolink Asset Inspection Summary
Attachment F - Agency Comments on CHSRA Supplemental Alternative Analysis

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**REGIONAL RAIL PROJECT STATUS REPORT
AS OF DECEMBER 10, 2016**

PROJECT NAME	BOARD APPROVED	SENT TO PROCUREMENT	RFP ISSUED	PROJECT AWARD	PROJECT STATUS	PROJECT START DATE	PROJECT COMPLETION	DELAYS/COST INCREASE EXPLANATION
Antelope Valley Line Study	APR 2011	JUL 2011	BENCH	OCT 2011	Completed	NOV 2011	SEP 2014	
Bob Hope Airport Metrolink Station	JUL 2012 MAY 2013 JUL 2014 DEC 2015	AUG 2016	BENCH	OCT 2016	RFP for Construction issued	OCT 2016	MAR 2018	
Bob Hope Airport Pedestrian Bridge	JUN 2014	OCT 2014	JAN 2015	MAR 2015	ON HOLD	MAY 2015	TBD	
Brighton to Roxford Double Track	JUL 2012	JUL 2014	SEP 2014	SEP 2015	Environmental & PSE	SEP 2015	OCT 2018	
Citadel/Montebello Metrolink Station Study	JUN 2016	JUL 2016	AUG 2016	NOV 2016	Study in progress	SEP 2016	JUL 2017	
Citrus Grade Crossing Improvements	MAR 2015	N/A	Metrolink	AUG 2015	Pre Construction	OCT 2015	APR 2019	
Doran St Grade Separation	MAY 2011	NOV 2012	DEC 2012	JUL 2013	ON HOLD	JUL 2013	TBD	Meeting with cities of Glendale and Los Angeles to obtain consensus on project.
El Monte Metrolink Station Study	MAR 2016	JUL 2016	AUG 2016	NOV 2016	Study in progress	SEP 2016	JUL 2017	
L.A. Glendale Burbank Corridor Studies	OCT 2016	Staff developing RFP						
L.A. County Grade Crossings	JUL 2012	NOV 2014	MAR 2015	SEP 2015	Study in progress	OCT 2015	OCT 2017	
L.A. County Metrolink Station Needs Assessment	JUL 2012	NOV 2014	BENCH	DEC 2015	Study in progress	JAN 2016	MAR 2017	
Lone Hill to White - Env & 30 % Design	OCT 2013	MAY 2015	SEP 2015	MAR 2016	Environmental & preliminary engineering	MAR 2016	JUN 2017	
Northridge Metrolink Station Study	JUN 2016	JUL 2016	AUG 2016	NOV 2016	Study in progress	SEP 2016	JUL 2017	
Ramona Grade Crossing Improvements	MAR 2015	N/A	Metrolink	AUG 2015	Pre Construction	OCT 2015	APR 2019	
Raymer/Bernsen Double Track	JAN 2014	JAN 2014	JUN 2014	AUG 2014	ON HOLD	AUG 2014	TBD	Delayed at the request of the Board of Directors and CEO
Rio Hondo Metrolink Station Study	JUN 2016	JUL 2016	AUG 2016	NOV 2016	Study in progress	SEP 2016	JUL 2017	
Rosecrans Marquardt Grade Separation	Measure R List of Projects	AUG 2014	OCT 2014	APR 2015	Environmental; PS&E; Real estate acquisition	APR 2015	JUN 2019	
San Bernardino Line Study	JUL 2012	OCT 2012	FEB 2013	APR 2013	Completed	MAY 2013	SEP 2014	
Soledad Speed Increase	MAR 2015	N/A	Metrolink	AUG 2015	Pre Construction	OCT 2015	APR 2019	
LINK US (Formerly SCRIP)	JUL 2012 OCT 2015	AUG 2013	OCT 2013	AUG 2014	Environmental; preliminary engineering	NOV 2014	MAR 2018	Environmental expanded
Van Nuys North Platform	JAN 2014	JAN 2014	FEB 2014	JUN 2014	100% Design	JUL 2014	TRANSFERRED TO METROLINK FOR CONSTRUCTION	

**REGIONAL RAIL PROJECT BUDGET REPORT
AS OF DECEMBER 10, 2016**

ATTACHMENT A-2

PROJECT NAME	LIFE OF PROJECT BUDGET	FUND SOURCES	(\$1,000) AMOUNT	FY13		FY14		FY15		FY 16		FY 17		FY18	FY19	FY20	FY21
				BUDGET	ACTUAL	BUDGET	ACTUAL	BUDGET	ACTUAL	BUDGET	ACTUAL	BUDGET	ACTUAL				
Antelope Valley Line Study	1,000	MR 3%	1,000	1,000	618	-	18	-	85	-	-	-	-				
Bob Hope Airport Metrolink Station	15,000	MR 3%	12,414	2,000	1,367	2,000	1,089	2,600	784	2,015	690	7,940	127	10,937			
		STURRA	2,586														
Bob Hope Airport Pedestrian Bridge	28,000	MR 3%	15,625					5,150	1	3,500	1,251	1,300	6	300			
		PROP 1B PTMISEA	5,375														
		ITIP	7,000														
Brighton to Roxford Double Track	110,000	MR 3%	3,000					1,500	9	1,250	1,335	3,000	1,363	1,500	1,085		
		PROP 1A	55,000														
		CHSRA	52,000														
Citadel/Montebello Metrolink Station Study												220	-				
Citrus Grade Crossing Improvements	2,030	MR 3%	2,030							250	17	500	182	500	1,000	280	
Doran St Grade Separation	83,700	MR 3%	6,600	6,600		1,000	1,054	8,000	890	1,009	711	2,200	43	3,000	1,371		
		PROP 1A	45,000														
		CHSRA	19,600														
		TBD	12,500														
El Monte Metrolink Station Study	TBD	MR 3%	300								1	220	-	300			
L.A. Glendale Burbank Corridor Studies												-	-				
L.A. County Grade Crossings	4,500	MR 3%	4,500					3,000	-	1,110	743	1,800	592	2,500			
L.A. County Metrolink Station Needs Assessment	600	MR 3%	600					500	-	350	15	325	152	600			
Lone Hill to White - Env & 30 % Design	72,000	MR 3%	3,000					175	-	400	192	2,100	602	2,000	447		
		TBD	69,000														
Northridge Metrolink Station Study	TBD	MR 3%	200								1	340	-	200			
Ramona Grade Crossing Improvements	2,030	MR 3%	2,030							250	18	500	287	500	1,000	280	
Raymer/Bernsen Double Track	104,416	MR 3%	391			2,000	1,846	6,500	4,280	4,653	1,232	300	286	-			
		STIP	63,500				Reimbursed		Reimbursed	Advance \$ and get reimbursed							
		PROP 1B	16,800														
		FRA	1,564														
		TBD	30,109														
Rio Hondo Metrolink Station Study												220	-				
Rosecrans Marquardt Grade Separation	137,200	MR 20%	35,000					1,000	9	3,000	2,208	2,105	867	22,000	10,000	1,653	-
		PROP 1A	53,000														
		SECTION 190	15,000														
		BNSF	7,000														
		TBD	27,200														
San Bernardino Line Study	1,000	MR 3%	1,000	1,000		7,500	669	-	103	-	-	-	-	-	-	-	-
LINK US (Formerly SCRIP)	2,500,000	MR 3%	55,000	4,000		4,000	55	9,000	5,454	9,535	6,814	9,225	5,435	19,000	8,000	7,000	
		PROP 1A	175,000														
		ARRA	32,000														
		CHSRA	137,000														
		TBD	2,101,000														
Soledad Speed Increase	3,940	MR 3%	3,940							500	157	500	296	500	1,900	1,040	
Van Nuys North Platform	32,598	MR 3%	200			1,000	742	3,000	1,718	3,213	1,129	500	417	TRANSFERRED TO METROLINK FOR CONSTRUCTION			
		PROP 1B	34,500							Advance \$ and get reimbursed							
		FRA	800														

ATTACHMENT B

SOUTHERN CALIFORNIA REGIONAL RAIL AUTHORITY
 Passenger Fare Revenue and Ridership Report - Systemwide
 Twelve Months Ended June 30, 2016
 (Thousands)

Description	FY 15-16 Budget	FY 15-16 Actual	Increase (Decrease)		FY 14-15 Actual	Comparison FY 16 Vs FY 15 Actuals		
			Amount	%		Amount	%	
Revenue								
July	\$ 7,164	\$ 6,923	\$ (241)	-3.4%	\$ 7,188	\$ (265)	-3.7%	
August	\$ 7,169	\$ 7,003	\$ (166)	-2.3%	\$ 7,190	\$ (188)	-2.6%	
September	\$ 7,079	\$ 6,949	\$ (130)	-1.8%	\$ 7,106	\$ (157)	-2.2%	
October	\$ 7,177	\$ 7,391	\$ 214	3.0%	\$ 7,205	\$ 186	2.6%	
November	\$ 6,797	\$ 7,053	\$ 256	3.8%	\$ 6,828	\$ 226	3.3%	
December	\$ 6,489	\$ 6,448	\$ (41)	-0.6%	\$ 6,517	\$ (69)	-1.1%	
January	\$ 6,628	\$ 6,669	\$ 40	0.6%	\$ 6,660	\$ 9	0.1%	
February	\$ 6,705	\$ 7,188	\$ 484	7.2%	\$ 6,740	\$ 449	6.7%	
March	\$ 7,163	\$ 7,215	\$ 52	0.7%	\$ 7,199	\$ 16	0.2%	
April	\$ 7,383	\$ 7,056	\$ (327)	-4.4%	\$ 7,186	\$ (130)	-2%	
May	\$ 7,272	\$ 7,022	\$ (251)	-3.4%	\$ 6,957	\$ 65	1%	
June	\$ 7,168	\$ 6,932	\$ (237)	-3.3%	\$ 6,999	\$ (67)	-1%	
Totals Y-T-D Revenue	\$ 84,195	\$ 83,849	\$ (346)	-0.4%	\$ 83,774	\$ 75	0.1%	

Ridership*

July	996	1,019	23	2.3%	1,023	(5)	-0.5%
August	1,007	1,009	2	0.2%	1,018	(9)	-0.9%
September	980	978	(3)	-0.3%	996	(19)	-1.9%
October	992	1,032	40	4.0%	1,083	(51)	-4.7%
November	946	898	(48)	-5.0%	870	28	3.2%
December	895	888	(7)	-0.8%	903	(15)	-1.7%
January	916	905	(11)	-1.2%	934	(29)	-3.1%
February	928	948	21	2.2%	907	41	4.6%
March	993	996	3	0.3%	1,033	(36)	-3.5%
April	1,022	961	(61)	-6%	1,048	(86)	-8%
May	1,012	947	(65)	-6%	984	(37)	-4%
June	996	957	(39)	-4%	1,025	(68)	-7%
Totals Y-T-D Ridership	11,683	11,538	(145)	-1.2%	11,824	(286)	-2.4%

Revenue Per Rider

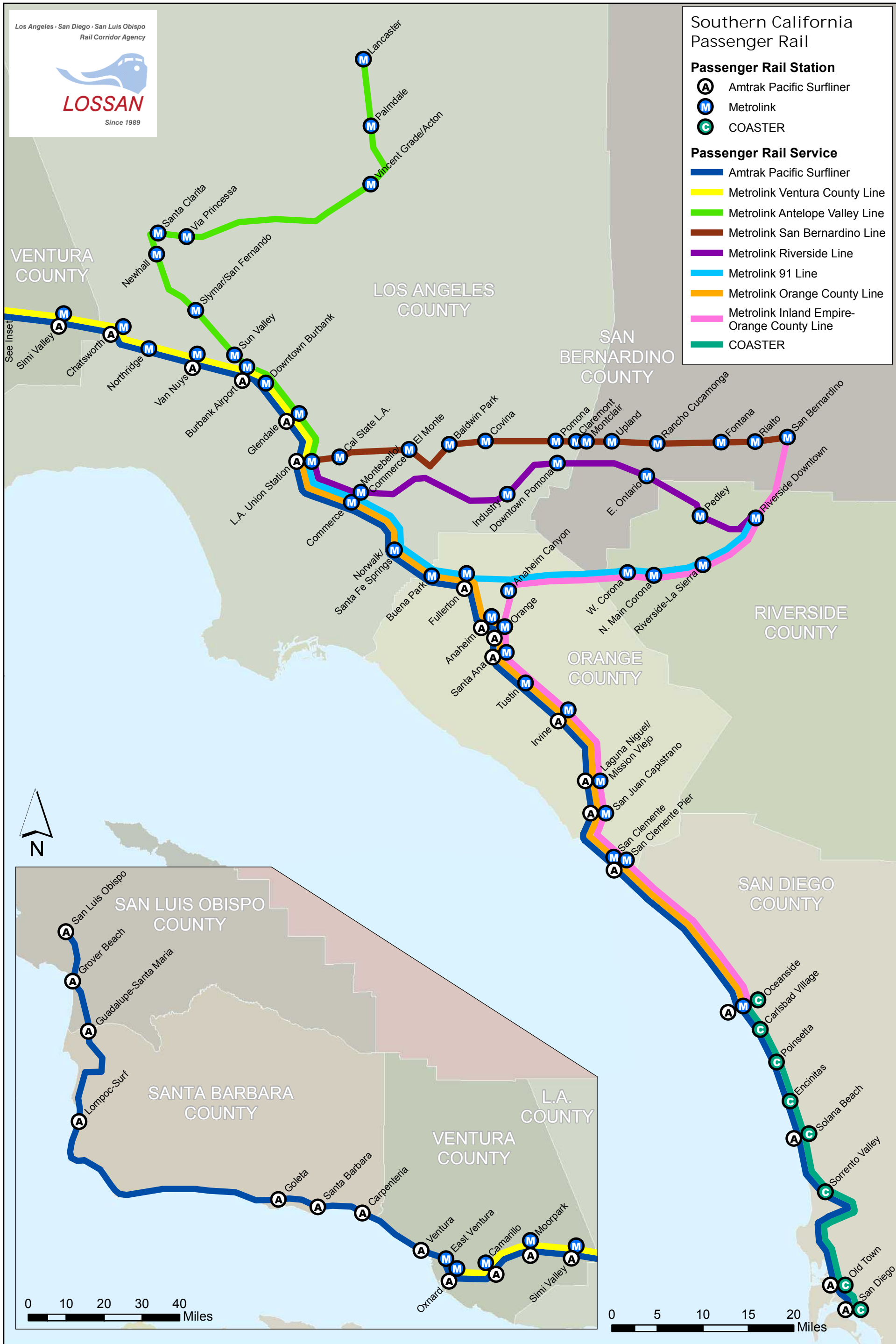
July	\$ 7.19	\$ 6.80	\$ (0.40)	-5.5%	\$ 7.02	\$ (0.23)	-3.2%
August	\$ 7.12	\$ 6.94	\$ (0.18)	-2.5%	\$ 7.06	\$ (0.12)	-1.7%
September	\$ 7.22	\$ 7.11	\$ (0.11)	-1.6%	\$ 7.13	\$ (0.02)	-0.3%
October	\$ 7.24	\$ 7.16	\$ (0.07)	-1.0%	\$ 6.65	\$ 0.51	7.7%
November	\$ 7.19	\$ 7.85	\$ 0.67	9.3%	\$ 7.85	\$ 0.01	0.1%
December	\$ 7.25	\$ 7.26	\$ 0.01	0.2%	\$ 7.22	\$ 0.04	0.6%
January	\$ 7.23	\$ 7.37	\$ 0.13	1.8%	\$ 7.13	\$ 0.24	3.4%
February	\$ 7.23	\$ 7.58	\$ 0.35	4.9%	\$ 7.43	\$ 0.15	2.0%
March	\$ 7.21	\$ 7.24	\$ 0.03	0.4%	\$ 6.97	\$ 0.27	3.9%
April	\$ 7.22	\$ 7.34	\$ 0.12	1.6%	\$ 6.86	\$ 0.48	7.0%
May	\$ 7.18	\$ 7.41	\$ 0.23	3.2%	\$ 7.07	\$ 0.34	4.9%
June	\$ 7.20	\$ 7.25	\$ 0.05	0.7%	\$ 6.83	\$ 0.42	6.1%
Average Y-T-D Revenue/Rider	\$ 7.21	\$ 7.27	\$ 0.06	0.8%	\$ 7.09	\$ 0.18	2.6%

*Values above is considered preliminary. Mobile ticketing credits and refunds are not reflected in the totals.

* Ridership includes Rail to Rail

*Please note ridership counts are obtained from estimated conductor counts, which includes unticketed passengers. Due to the nature of these manual counts, there is a possibility for margin of error.

Los Angeles – San Diego – San Luis Obispo Rail Corridor Map



ATTACHMENT D

Los Angeles – San Diego – San Luis Obispo Rail Corridor Additional Performance Indicators

Station Pair Ridership/Revenue - Federal Fiscal Year 2015-16 to Date

<u>Station Pair by Ridership</u>	<u>Ridership</u>	<u>Rank</u>	<u>Station Pair by Revenue</u>	<u>Revenue</u>
Los Angeles - San Diego	190,994	1	Los Angeles - San Diego	\$7,282,573
Los Angeles - Solana Beach	94,782	2	Los Angeles - Solana Beach	\$3,034,330
Los Angeles - Oceanside	86,546	3	Los Angeles - Old Town San Diego	\$2,648,322
Los Angeles - Old Town San Diego	68,860	4	Los Angeles - Oceanside	\$2,316,213
Irvine - Los Angeles	58,401	5	Los Angeles - Santa Barbara	\$1,465,232
Irvine - San Diego	56,978	6	Irvine - San Diego	\$1,331,648
Los Angeles - Santa Barbara	52,124	7	Anaheim - San Diego	\$1,172,904
Fullerton - Los Angeles	49,912	8	Fullerton - San Diego	\$1,025,525
Irvine - Solana Beach	47,079	9	Irvine - Los Angeles	\$991,760
Anaheim - San Diego	41,135	10	Irvine - Solana Beach	\$742,368
Anaheim - Los Angeles	40,723	11	San Diego - San Juan Capistrano	\$699,590
Fullerton - San Diego	35,770	12	San Diego - Santa Barbara	\$684,763
San Diego - San Juan Capistrano	35,209	13	San Diego - Santa Ana	\$599,555
Los Angeles - San Juan Capistrano	30,593	14	Los Angeles - San Juan Capistrano	\$583,359
Los Angeles - Santa Ana	27,967	15	Fullerton - Los Angeles	\$556,983
Irving - Old Town San Diego	23,396	16	Anaheim - Los Angeles	\$546,515
San Diego - Santa Ana	22,750	17	Irving - Old Town San Diego	\$545,972
Anaheim - Solana Beach	18,181	18	Anaheim - Old Town San Diego	\$499,150
Anaheim - Old Town San Diego	17,487	19	Los Angeles - San Luis Obispo	\$486,668
Fullerton - Solana Beach	17,465	20	Goleta - Los Angeles	\$434,977
San Diego - Santa Barbara	16,997	21	Los Angeles - Santa Ana	\$434,225
Fullerton - Old Town San Diego	14,281	22	Fullerton - Old Town San Diego	\$417,527
Goleta - Los Angeles	13,365	23	Oceanside - Santa Barbara	\$398,330
Los Angeles - San Luis Obispo	11,960	24	Fullerton - Solana Beach	\$389,049
Oceanside - Santa Barbara	10,487	25	Anaheim - Solana Beach	\$374,394
<i>All other markets</i>	1,015,236		<i>All other markets</i>	\$22,260,375
	2,098,678			\$51,922,306

Los Angeles – San Diego – San Luis Obispo Rail Corridor Additional Performance Indicators

Ridership by Station - Federal Fiscal Year 2015-16 to Date

Code	Station Name	October - June FY 2015-16	October - June FY 2014-15	% Change
		Total Riders	Total Riders	Total
LAX	Los Angeles	982,920	951,351	+3.3
SAN	San Diego	544,274	543,219	+0.2
IRV	Irvine	328,356	305,424	+7.5
OSD	Oceanside	309,844	280,851	+10.3
SOL	Solana Beach	269,006	274,495	-2.0
FUL	Fullerton	264,019	253,011	+4.4
SBA	Santa Barbara	212,087	210,478	+0.8
ANA	Anaheim	201,483	190,630	+5.7
OLT	San Diego - Old Town	188,925	169,365	+11.5
SNC	San Juan Capistrano	164,011	162,619	+0.9
SNA	Santa Ana	138,000	131,675	+4.8
OXN	Oxnard	59,700	63,418	-5.9
GTA	Goleta	59,536	58,934	+1.0
VNC	Van Nuys	53,693	54,307	-1.1
SLO	San Luis Obispo	52,158	52,769	-1.2
CWT	Chatsworth	51,821	52,126	-0.6
BUR	Burbank	45,945	45,860	+0.2
VEC	Ventura	45,113	43,121	+4.6
GDL	Glendale	38,402	37,459	+2.5
CML	Camarillo	37,578	38,284	-1.8
SIM	Simi Valley	33,905	33,132	+2.3
CPN	Carpinteria	21,244	20,419	+4.0
MPK	Moorpark	15,551	15,167	+2.5
SRB	San Diego	14,427	11,588	+24.5
GVB	Grover Beach	13,759	13,790	-0.2
CBV	Carlsbad - Village	10,453	9,241	+13.1
SNP	San Clemente - Pier	10,038	8,789	+14.2
GUA	Guadalupe	9,092	9,526	-4.6
ENC	Encinitas	8,938	8,287	+7.9
POI	Carlsbad - Poinsettia	7,317	6,365	+15.0
LPS	Surf	5,761	6,016	-4.2

ATTACHMENT E -- METROLINK ASSET INSPECTION SUMMARY



Metro

Los Angeles County
Metropolitan Transportation Authority

One Gateway Plaza
Los Angeles, CA 90012-2952

213.922.2000 Tel
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December 13, 2016

SUBJECT: METROLINK ASSET INSPECTION SUMMARY: VALLEY & VENTURA LINES SUMMARY FINDINGS

Metro Engineering staff was asked to provide targeted inspections of several bridges and culverts on the Metrolink Valley and Ventura Subdivision Lines. On November 23, 2016 a team of Metro staff accompanied by Metrolink field personnel conducted the site visit of the Valley Subdivision as requested. The survey of the Ventura Subdivision took place December 8, 2016. The assets inspected are listed in Figures 1 and 2 below (all assets listed are from the “Priority A List” for the “Valley and Ventura Subdivisions” as provided by Metrolink, See *Attachment A*). The following table presents Metro’s independently derived Condition Rating and Recommendations for each of these assets: (The individual inspection reports for these structures are included as *Attachment C* of this brief):

Figure 1: Valley Subdivision: Structures Inspected by Metro

Mile Point:	Name:	Age:	Metro Condition Rating:	Metro Recommendation:
50.51	Bridge 2	107 yrs.	3	Replace
50.57	Culvert 5	66 yrs.	4	Repair Defects and Continue Inspections
50.64	Bridge 1	107 yrs.	3	Replace
50.77	Bridge 4	107 yrs.	3	Replace
52.66	Bridge 7	86 yrs.	4	Repair Defects and Continue Inspections
55.19	Bridge 9	72 yrs.	5	Repair Defects and Continue Inspections
55.91	Culvert 1	94 yrs.	3	Replace

Figure 2: Ventura Subdivision: Structures Inspected by Metro

Mile Point:	Name:	Age:	Metro Condition Rating:	Metro Recommendation:
452.1	Bridge 2	100 yrs.	4	Repair Defects and Continue Inspections
458.71	Bridge 1	91 yrs.	3	Replace

ANALYSIS (Bridges and Culverts):

For the nine ‘Priority A’ assets inspected (listed above), Metro believes five (5) of these structures (those listed with a Condition Rating of “3”) are candidates for replacement.

Of the five assets identified for replacement four of the structures are bridges and one is a culvert. The Metrolink Inspector Condition Ratings for the assets that Metro inspected vary from 4 to 5 indicating a fair to satisfactory condition. However, Metrolink’s Engineering Assessment Ratings are all 3. Note that decimal Metrolink Engineer’s Assessment Rating Codes (3.x, as shown in *Attachment A*) have been

rounded up or down to the nearest whole number as applicable for comparison to Metro’s assigned condition rating. In this case, Metro’s assigned Condition Ratings concur with Metrolink’s Engineering Assessment Rating. Refer to the following Table 1 for a comparison:

TABLE 1	Metro:	Metrolink:	
Asset Name: (Mile Point)	Condition Rating:	Engineer’s Assessment Rating:	Inspector’s Condition Rating:
50.51	3	3.0	5
50.64	3	3.0	5
50.77	3	3.0	5
55.91	3	3.0	4
458.71	3	3.0	4

Metro Cost Estimating Staff has contributed their input and experience in developing a Rough Order of Magnitude cost estimate required to replace the four bridges and culvert. The usual construction cost for railroad bridges is in the order of \$1,500 per square foot. As these four bridges are relatively small in footprint a higher cost of \$2,000 per square foot may be used. Due to the simplicity of the culvert installation, a lower cost estimate of \$1,500 per square foot is appropriate for this structure. The approximate removal and construction costs are presented in Table 2 below:

TABLE 2: Estimated Demolition and Construction Costs for 4 bridges and 1 culvert:

Asset Name: (Mile Point)	Square Footage:	Cost Dollars	Contingency (30% Dollars)	Metro’s Total: (Dollars)	Metrolink’s Total: (Dollars)
50.51	26 x 6	\$ 312,000	\$ 94,000	\$ 406,000	\$ 840,000
50.64	26 x 8	\$ 416,000	\$ 125,000	\$ 541,000	\$ 840,000
50.77	27 x 8	\$ 432,000	\$ 130,000	\$ 562,000	\$ 840,000
55.91	27 x 8	\$ 324,000	\$ 97,000	\$ 421,000	\$ 350,000
458.71	42 x 15	\$ 1,260,000	\$ 378,000	\$ 1,638,000	\$ 1,960,000
Sum:				\$ 3,568,000	\$ 4,830,000

ANALYSIS (Rail Ties):

Metro’s Director of Track Work Engineering observed the condition of the ties along the Valley Subdivision and agrees that the ties within the zones indicated by Metrolink in *Attachment A*, do require replacement. This would include the 8,450 ‘Group A’ ties and 8,000 Group B Ties identified. The ties are spaced at approximately 20 inches on center; therefore this would result in a total of 5 miles of replacement on the Valley Subdivision. Replacement of these ties would be in compliance with FRA Track Safety Standards Compliance Manual.

CONCLUSION:

In conclusion, Metro Engineering's Assessment of Metrolink's provided list of 'Priority A' structures (bridges and culverts) is that only approximately half of these structures are recommended for replacement. As noted on page 1 of this report, Metro's recommendation is for Replacement of roughly half of the assets we inspected. The remainder of the structures, in our opinion, are in 'Fair to Satisfactory' condition and we recommended that repairs (as detailed in the individual inspection reports, see *Attachment C*) are performed for the defects identified. These 'Fair to Satisfactory' structures may then be inspected on a regular schedule and reevaluated in the future.

Metro's Rough Order of Magnitude cost estimate approximately is 25% less than the estimate provided by Metrolink. Track ties will require replacement. Approximately 5 miles of ties are recommended for replacement along the Valley Subdivision this includes both 'Priority A' and 'Priority B' identified segments (see *Attachment A*). Metro agrees that the rail ties require replacement within the segments indicated by Metrolink.

Regards,

Craig Remley P.E.
Metro Senior Structural Engineer
(213) 922-3981
remleyc@metro.net

Attachments:

Attachment A:

Bridge & Rail Tie Rehabilitation Project Priority List (As Provided by Metrolink, November 2016)

Attachment B:

SCRRA: Bridge and Safety Management Condition and Priority Defect Rating System

Attachment C:

Selected Bridge and Culvert Inspection Reports (By Metro for Metrolink)

Bridge - Rehabilitation Project Priority List (As Provided by Metrolink, November 2016):

Bridge Rehab Projects Priority List															
Subdiv/Category	Priority	MP	Cost	Scope	Year Built	Engineer's Assessment Rating	Inspector's Condition Rating	Inspection Date	Begin Contract	Finalize Contract Pkg	Advertise Contract	Award Contract	Begin Construction	End Construction	
Valley	Priority A Bridges	1	50.64	\$840,000	Replace rail top	1909	3.2	5	7/14/16	11/1/2016	7/1/2017	8/1/2017	10/1/2017	11/1/2017	2/1/2018
		2	50.51	\$840,000	Replace rail top	1909	3.3	5	7/14/16	11/1/2016	7/1/2017	8/1/2017	10/1/2017	11/1/2017	2/1/2018
		3	46.91	\$840,000	Replace rail top	1938	3.3	5	7/22/16	11/1/2016	7/1/2017	8/1/2017	10/1/2017	11/1/2017	2/1/2018
		4	50.77	\$840,000	Replace rail top	1909	3.4	5	7/15/16	11/1/2016	7/1/2017	8/1/2017	10/1/2017	11/1/2017	2/1/2018
		5	47.45	\$500,000	Replace rail top	1938	3.4	5	7/20/16	11/1/2016	7/1/2017	8/1/2017	10/1/2017	11/1/2017	2/1/2018
		6	50.46	\$840,000	Replace rail top	1909	3.5	5	7/15/16	11/1/2016	7/1/2017	8/1/2017	10/1/2017	11/1/2017	2/1/2018
		7	52.66	\$900,000	Replace rail top	1930	3.5	5	7/12/16	11/1/2016	7/1/2017	8/1/2017	10/1/2017	11/1/2017	2/1/2018
		8	44.98	\$900,000	Replace rail top	1944	3.5	5	8/4/16	11/1/2016	7/1/2017	8/1/2017	10/1/2017	11/1/2017	2/1/2018
		9	55.19	\$500,000	Replace rail top	1944	3.5	5	7/15/16	11/1/2016	7/1/2017	8/1/2017	10/1/2017	11/1/2017	2/1/2018
		10	47.03	\$840,000	Replace rail top	1938	3.6	5	7/21/16	11/1/2016	7/1/2017	8/1/2017	10/1/2017	11/1/2017	2/1/2018
		11	47.39	\$1,120,000	Replace rail top	1938	3.6	5	7/21/16	11/1/2016	7/1/2017	8/1/2017	10/1/2017	11/1/2017	2/1/2018
		12	48.08	\$500,000	Replace rail top	1938	3.6	4	7/19/16	11/1/2016	7/1/2017	8/1/2017	10/1/2017	11/1/2017	2/1/2018
		13	54.05	\$500,000	Replace rail top	1946	3.6	5	7/12/16	11/1/2016	7/1/2017	8/1/2017	10/1/2017	11/1/2017	2/1/2018
	Subtotal		\$9,160,000												
Valley	Priority B Bridges	1	8.41	\$500,000	Replace rail top	1906	3.9	5	9/20/16	11/1/2016	7/1/2017	8/1/2017	10/1/2017	11/1/2017	2/1/2018
		2	10.63	\$1,260,000	Replace rail top	1906	3.9	5	9/19/16	11/1/2016	7/1/2017	8/1/2017	10/1/2017	11/1/2017	2/1/2018
	Subtotal		\$1,760,000												
Valley	Priority A Culverts	1	55.91	\$350,000	Replace clay pipe - collapsed	1922	3.2	4	8/13/15	11/1/2016	1/31/2017	2/28/2017	4/30/2017	6/1/2017	8/1/2017
		2	53.84	\$350,000	Replace timber box	1904	3.3	4	8/17/15	11/1/2016	1/31/2017	2/28/2017	4/30/2017	6/1/2017	8/1/2017
		3	49.99	\$280,000	Replace timber box	1922	3.4	4	11/9/15	11/1/2016	1/31/2017	2/28/2017	4/30/2017	6/1/2017	8/1/2017
		4	44.16	\$280,000	Replace timber box	1939	3.4	4	1/9/16	11/1/2016	1/31/2017	2/28/2017	4/30/2017	6/1/2017	8/1/2017
		5	50.57	\$280,000	Replace timber box	1980	3.4	4	10/20/15	11/1/2016	1/31/2017	2/28/2017	4/30/2017	6/1/2017	8/1/2017
		6	55.75	\$280,000	Replace timber box	1927	3.5	5	8/18/15	11/1/2016	1/31/2017	2/28/2017	4/30/2017	6/1/2017	8/1/2017
		7	48.74	\$280,000	Replace clay pipe - joint displacement	1900	3.5	4	11/11/15	11/1/2016	1/31/2017	2/28/2017	4/30/2017	6/1/2017	8/1/2017
		8	54.13	\$280,000	Replace clay pipe - crushing, displacement	1922	3.6	5	8/17/15	11/1/2016	1/31/2017	2/28/2017	4/30/2017	6/1/2017	8/1/2017
		9	59.42	\$350,000	Replace cast iron pipe - cracking, displacement	1922	3.6	4	8/13/15	11/1/2016	1/31/2017	2/28/2017	4/30/2017	6/1/2017	8/1/2017
		10	66.78	\$420,000	Replace RCP - separated joints	1921	3.7	4	8/4/15	11/1/2016	1/31/2017	2/28/2017	4/30/2017	6/1/2017	8/1/2017
		11	52.99	\$700,000	Replace aged cast iron pipe	1900	3.7	3	10/26/15	11/1/2016	1/31/2017	2/28/2017	4/30/2017	6/1/2017	8/1/2017
		12	49.69	\$280,000	Replace CMP - deflected; strut added	1988	3.8	4	11/9/15	11/1/2016	1/31/2017	2/28/2017	4/30/2017	6/1/2017	8/1/2017
		13	49.53	\$420,000	Replace aged cast iron pipe	1900	3.8	5	11/10/15	11/1/2016	1/31/2017	2/28/2017	4/30/2017	6/1/2017	8/1/2017
		14	52.32	\$350,000	Replace aged cast iron pipe	1900	3.9	5	10/27/15	11/1/2016	1/31/2017	2/28/2017	4/30/2017	6/1/2017	8/1/2017
		15	52.38	\$420,000	Replace aged cast iron pipe	1900	3.9	5	10/27/15	11/1/2016	1/31/2017	2/28/2017	4/30/2017	6/1/2017	8/1/2017
	Subtotal		\$5,320,000												
Ventura	Priority A Bridges	1	488.71	\$1,960,000	Replace Timber Trestle - major cracking	1925	3.0	4	3/8/16	11/1/2016	7/1/2017	8/1/2017	10/1/2017	11/1/2017	2/1/2018
		2	452.1	\$840,000	Replace rail top	1916	3.3	5	3/14/16	11/1/2016	7/1/2017	8/1/2017	10/1/2017	11/1/2017	2/1/2018
	Subtotal		\$2,800,000												
Ventura	Priority B Bridges	1	436.96	\$655,200	Replace rail top	1939	3.9	5	4/1/16	11/1/2016	7/1/2017	8/1/2017	10/1/2017	11/1/2017	2/1/2018
		2	484.12	\$655,200	Replace rail top	1901	3.9	5	4/4/16	11/1/2016	7/1/2017	8/1/2017	10/1/2017	11/1/2017	2/1/2018
	Subtotal		\$1,310,400												
Ventura	Priority B Culverts	1	436.46	\$150,000	Replace culvert - part rail top	1925	3.9	4	10/16/14	11/1/2016	1/31/2017	2/28/2017	4/30/2017	6/1/2017	8/1/2017
			Subtotal		\$150,000										

Rail Tie - Rehabilitation Project Priority List (As Provided by Metrolink, November 2016):

Track Projects Priority List						
Priority Designation	Priority A Projects	Value	Condition Notes	Timeline		
1	2500 Ties between MP 46 - MP 48, MP 63 - MP 64	\$500,000	Over 30% of the wood ties in this segment need to be replaced.	Advertise Contract - 2/2017; Award Contract/NTP - 4/2017; Begin Construction - 6/2017; End Construction - 12/2017		
2	3000 Ties between MP 52 - MP 54	\$825,000	Approximately 25% of the Wood Ties in this segment need to be replaced.	Advertise Contract - 2/2017; Award Contract/NTP - 4/2017; Begin Construction - 6/2017; End Construction - 12/2017		
3	Lang Station Rd Crossing	\$400,000	Crossing and track structure need to be replaced (Main Track and siding)	Advertise Contract - 2/2017; Award Contract/NTP - 4/2017; Begin Construction - 6/2017; End Construction - 12/2017		
4	2950 Ties between MP 54 - MP 59	\$787,500	Up to 20% of the wood ties in this segment need to be replaced.	Advertise Contract - 2/2017; Award Contract/NTP - 4/2017; Begin Construction - 6/2017; End Construction - 12/2017		
5	Acton Spur Turnout	\$500,000	Spur was constructed in 1966. Speed in siding was just raised due to Acton Project. Turnout needs to be replaced.	Advertise Contract - 2/2017; Award Contract/NTP - 4/2017; Begin Construction - 6/2017; End Construction - 12/2017		
	Total Priority A Track Projects:	\$3,012,500				
	Priority B Projects					
1	4000 Ties Between MP 9 - MP 11	\$1,000,000	Over 30% of the wood ties in this segment need to be replaced.	Advertise Contract - 2/2017; Award Contract/NTP - 4/2017; Begin Construction - 6/2017; End Construction - 12/2017		
2	4000 Ties Between MP 6 - MP 8	\$1,000,000	Approximately 25% of the Wood Ties in this segment need to be replaced.	Advertise Contract - 2/2017; Award Contract/NTP - 4/2017; Begin Construction - 6/2017; End Construction - 12/2017		
	Total Priority B Track Projects:	\$2,000,000				

ATTACHMENT A

Ventura Subdivision	Priority Designation	Priority A Projects	Value	Condition Notes	Timeline
	1	2700 Ties between MP 447 - MP 450	\$675,000	Over 30% of the wood ties in this segment need to be replaced.	Advertise Contract - 2/2017; Award Contract/NTP - 4/2017; Begin Construction - 6/2017; End Construction - 12/2017
	2	1300 Ties between MP 444 - MP 446	\$325,000	Approximately 25% of the Wood Ties in this segment need to be replaced.	Advertise Contract - 2/2017; Award Contract/NTP - 4/2017; Begin Construction - 6/2017; End Construction - 12/2017
	3	Turnout at MP 460	\$375,000	Turnout needs to be replaced.	Advertise Contract - 2/2017; Award Contract/NTP - 4/2017; Begin Construction - 6/2017; End Construction - 12/2017
	4	800 Ties Between MP 451 - MP 452	\$200,000	Up to 20% of the wood ties in this segment need to be replaced.	Advertise Contract - 2/2017; Award Contract/NTP - 4/2017; Begin Construction - 6/2017; End Construction - 12/2017
	5	3600 Ties Between MP 458 - MP 462	\$900,000	Approximately 15% of the Wood Ties in this segment need to be replaced.	Advertise Contract - 2/2017; Award Contract/NTP - 4/2017; Begin Construction - 6/2017; End Construction - 12/2017
	6	3600 Ties Between MP 454 - MP 458	\$900,000	Approximately 10%-15% of the Wood Ties in this segment need to be replaced.	Advertise Contract - 2/2017; Award Contract/NTP - 4/2017; Begin Construction - 6/2017; End Construction - 12/2017
	Total Priority A Track Projects:		\$3,375,000		
	Ventura Subdivision	Priority Designation	Priority B Projects	Value	Condition Notes
1		3400 Ties between MP 434 - MP 439	\$850,000	Over 30% of the wood ties in this segment need to be replaced.	Advertise Contract - 2/2017; Award Contract/NTP - 4/2017; Begin Construction - 6/2017; End Construction - 12/2017
2		2400 Ties Between MP 430 - MP433	\$600,000	Approximately 25% of the Wood Ties in this segment need to be replaced.	Advertise Contract - 2/2017; Award Contract/NTP - 4/2017; Begin Construction - 6/2017; End Construction - 12/2017
3		Rail Replacement - Curve 439.24 (1650')	\$247,500	Curve needs to be transposed from high side to low side, with new rail on the high side. Low Rail has already been transposed and was originally placed in 1966. High Rail is experiencing some gauge and head wear and still has some life in it. Head-Free rail to be replaced as well.	Advertise Contract - 2/2017; Award Contract/NTP - 4/2017; Begin Construction - 6/2017; End Construction - 12/2017
4		1200 Ties Between MP 427 - MP 429	\$300,000	Approximately 20% of the Wood Ties in this segment need to be replaced.	Advertise Contract - 2/2017; Award Contract/NTP - 4/2017; Begin Construction - 6/2017; End Construction - 12/2017
5		Turnout at CP Santa Susana	\$375,000	Turnout needs to be replaced.	Advertise Contract - 2/2017; Award Contract/NTP - 4/2017; Begin Construction - 6/2017; End Construction - 12/2017
6		Katherine Rd Crossing	\$400,000	Crossing and track structure need to be replaced (Main Track and Siding)	Advertise Contract - 2/2017; Award Contract/NTP - 4/2017; Begin Construction - 6/2017; End Construction - 12/2017
7		Rail Replacement - Curve 433.1 (1100')	\$165,000	Curve needs to be transposed.	
8		Hidden Ranch Drive Crossing	\$400,000	Crossing is 33 years old and needs to be rehabilitated.	Advertise Contract - 2/2017; Award Contract/NTP - 4/2017; Begin Construction - 6/2017; End Construction - 12/2017
9		600 Ties Between MP 433 - MP 434	\$150,000	Approximately 15% of the Wood Ties in this segment need to be replaced.	Advertise Contract - 2/2017; Award Contract/NTP - 4/2017; Begin Construction - 6/2017; End Construction - 12/2017
Total Priority B Track Projects:		\$3,487,500			
Note: 2350' of rail on another project was removed from the list resulting in a reduction for the Subdivision of \$150,000.					

ATTACHMENT B

SCRRRA: Bridge and Safety Management Policy 7.4.1 Condition and Priority Defect Rating System:

Condition Codes:

1	Failed , Stop Trains.
2	Imminent Failure , Take appropriate action. Provide detailed inspection.
3	Poor , Defects are sound with serious or advancing defects. Interim inspections warranted.
4	Fair , Defects are sound with minor problems. Interim inspections warranted.
5	Satisfactory , Minor defects or exceptions.
6	Good , No defects or exceptions noted.

Priority Codes:

Code:	Correction Period:	Description:
A	15 days	Imminent safety issue (non-redundant failure or failure of direct load path)
B	1 year	Early or Pre-failure (redundant systems or indirect load path)
C	3 years	Non-critical defects (not immediate safety concern).
D	5 years	Monitor Defects.

MTA / SCRRA JOINT REVIEW – VALLEY SUBDIVISION



Picture 1: One of two SCRRA Hy-Rail Vehicles used to complete the field visit with MTA.

As part of SCRRA's on-going efforts to secure Track and Structures rehabilitation funding SCRRA and MTA staff took part in a joint review of portions of the Valley Subdivision deemed to be at risk for potential speed reductions if rehabilitation work is delayed.

On November 23, 2016 6 staff from MTA and 5 from SCRRA conducted a Hy-Rail trip from approximately Milepost 58 (Aliso

Canyon Road) to Milepost 48 (Burke Road Private Crossing). The purpose of the trip was for MTA staff to review proposed rehabilitation work locations, priorities, and provide context as to what projects MTA provided funding would address.

The primary focus of the review was wood crosstie and structure condition but other aspects of railroad rehabilitation work such as rail, crossings, and embankments were reviewed, including potential mud slide conditions caused by the Sand brush fire in July.

In addition to reviewing general conditions from the Hy-Rail vehicles the group stopped several times to more carefully examine crosstie and structure conditions, particularly of the older bridges of the "Rail Top" design type.

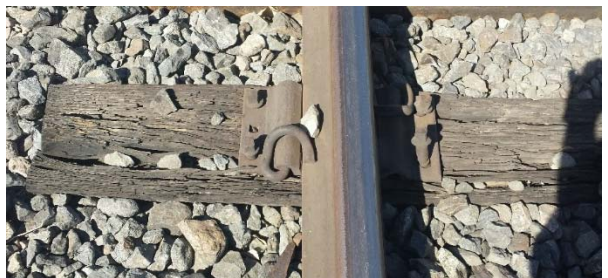
Overall, it was the consensus of the MTA team that certain segments of the crosstie conditions visited, as reported by SCRRA, were approaching serious levels of deterioration, and while still meeting FRA Track Safety Standards it is reasonable that substantial crosstie replacement projects should begin as soon as possible.



Picture 2: SCRRA Staff and MTA Staff Inspecting a Wood Box Culvert on the Valley Subdivision



Picture 3: Failed Tie Condition on the Valley Subdivision



Picture 4: Failed Tie with Raised Lags



Picture 5: The inside of one of the top 3 Priority "Rail-Top" Bridges on the Valley Subdivision

Similarly, it was agreed that 3 of the 5 of SCRRRA's highest priority bridges and 1 of 2 culverts visited for replacement were sufficiently justified for replacement as soon as possible. It was also determined that two of the lower priority bridges and one of the culverts visited, likely could be further assessed and possibly deferred a number of years in order to concentrate available funding on the most urgent candidates.

The MTA and SCRRRA representatives intend to conduct similar reviews of the Ventura, San Gabriel and River Subdivisions in order to more effectively prioritize and allocate rehabilitation funding.

Participants in this Hy-Rail Review were:

MTA:

Sam Mayman, Jeanet Owens, Androush Danielians, Zoric Sheynman, Craig Remley, Dan Mahgerefteh

SCRRRA:

Darrell Maxey, Wayne Mauthe, Aaron Azevedo, Daniel Villagomez, Ivan Robles



Picture 6: SCRRRA and MTA Staff inspecting a "Rail-Top" Bridge on the Valley Subdivision



Metro

METROLINK

October 5, 2016

Mr. Jeff Morales
Chief Executive Officer
California High-Speed Rail Authority
770 L Street, Suite 620
Sacramento, CA 95814

Re: Agency Comments on 2016 Supplemental Alternative Analysis Report for the Burbank to Los Angeles Project Section

Dear Mr. Morales,

In April 2016, the California High-Speed Rail Authority (CHSRA) released to the public the report on the Burbank to Los Angeles Supplemental Alternative Analysis (SAA) (herein referred to as the "2016 SAA"). The 2016 SAA provides the current status of activities on the Burbank to Los Angeles project section and recommends carrying forward the following build alternatives and options under the guiding principle of a blended corridor by using the existing Metro-owned rail right-of-way (ROW), operated and maintained by Metrolink and shared with Amtrak Surfliner and Union Pacific Railroad as tenants, to the extent feasible:

- Carry forward two station options at Burbank Airport Station and two alternatives from Burbank Airport Station to Alameda Avenue.
- Carry forward one at-grade alternative from Alameda Avenue to Los Angeles Union Station (LAUS), with two design options from SR-2 to LAUS.
- Carry forward at-grade station platforms at LAUS.

The Los Angeles County Metropolitan Transportation Authority (Metro) and the Southern California Regional Rail Authority (SCRRA) (herein defined collectively as "the Agencies") have reviewed the 2016 SAA and have collaborated on providing comments on the 2016 SAA for your consideration. Specifically, the Agencies' comments are focused on the segment of the corridor from Alameda Avenue to LAUS and the two design options, "Dedicated" and "Shared" options.

Dedicated Option (Alameda Avenue to LAUS)

The Agencies consider the proposed Dedicated Option as presented in the 2016 SAA infeasible for the following reasons:

- 1) Under the Alameda Avenue to LAUS from Alameda Avenue to US-110 segment, the Dedicated Option proposes two dedicated tracks for High Speed Rail (HSR) service, which would require a significant portion of the Metro's ROW, reducing the existing ROW available for commuter rail (conventional passenger rail service and freight operations). The Agencies strongly believe that the proposed configuration under the Dedicated Option will not provide adequate ROW to support existing or future growth and capacity needs for passenger rail service and freight operations. Metrolink has indicated that for the Burbank to LA segment, the corridor width should comply with current Metrolink standards and be sufficient to include space for two tracks with a combined maintenance road and utility corridor, as well as a set back from the barrier or fence separating its rail operating corridor from an adjacent electrified HSR corridor.
- 2) Metro has four existing tracks with two tracks on west and east bank of the Los Angeles (LA) River that serves 120 commuter rail trains daily. The existing two tracks on the east bank of the LA River are primarily used by UPRR freight and Metrolink non-revenue equipment moves. Under the Alameda Avenue to LAUS from SR-110/Central Maintenance Facility to LAUS segment, the Dedicated Option proposes to relocate all passenger rail service (Metrolink and Amtrak) from the west bank of the LA River to the east bank. With 120 commuter trains plus at least 12 long, slow freight trains that will now be limited to the existing two tracks on the east bank, the Agencies would not be able to provide an adequate level of service to accommodate current train traffic, let alone future growth of passenger rail service and freight operations.
- 3) Furthermore, under the Dedicated Option, additional rail bridges over the LA River would need to be constructed to support the passenger rail operations in and out of LAUS to mitigate interference with UPRR freight operations. First, the existing Mission Tower Bridge over the LA River just south of Main Street, which the 2016 SAA proposes to be double-tracked to carry Metrolink and Amtrak train traffic, does not provide an acceptable route in and out of LAUS given that the existing track alignment is designed for low-speed operations. Therefore, a potential new double-track bridge over the LA River on a higher-speed alignment would be required. Secondly, a new rail bridge connecting the West Bank Line with the East Bank Line would be required just north of the Cesar Chavez roadway bridge to provide a route for non-revenue equipment movements between LAUS and Metrolink's Central Maintenance Facility (CMF) via the East Bank Line. The impacts of these two new bridges, including environmental, permitting, cost, etc. are significant and should have been addressed in the 2016 SAA.
- 4) The 2016 SAA does not adequately describe impacts to the CMF under the Dedicated Option. A high level review indicates that the CMF design would not be feasible and would require almost complete relocation at an already constrained site, including tracks, buildings, utilities and related support facilities while it is in operation. The CMF is Metrolink's primary heavy service facility and nearly all of Metrolink 50 trainsets arrive at CMF to be inspected, tested, fueled, cleaned and serviced between 7 AM and 8 PM. Please describe in detail the

proposed modifications to the CMF and how the existing CMF operations can be maintained with the proposed modifications in the final condition and during construction.

Shared Option (SR-2 to LAUS)

The Agencies would like to offer the following comments regarding the proposed Shared Option as presented in the 2016 SAA:

- 1) The 2016 SAA does not include supporting documentation on the effects of the proposed track configuration to operational performance of passenger rail services. From SR-2 to LAUS, the Shared Option proposes that HSR and Metrolink services share two tracks and UPRR and Amtrak services share one or two tracks, depending on the location within the corridor. The Agencies are concerned that an adequate level of service cannot be maintained under the proposed track configuration in the current and future conditions.
- 2) The concepts of operations and maintenance under the proposed Shared Option need to be developed through close collaboration among all affected railroads and CHSRA. There are incompatibilities between electrified HSR and diesel-hauled conventional passenger services, including equipment, operational patterns, stations, train control and communication systems, as well as infrastructure and systems maintenance. These issues will result in significant changes to current operations and maintenance methods and will require extensive analyses, coordination, and collaboration with the Agencies to develop workable operations and maintenance plans and standards in advance of designing any alignments.
- 3) Under the Shared Option, Metro would need to modify and/or renegotiate all shared use/operating agreements with all affected railroads. The increased risks and liability to Metro, as the owner of the rail right of way, due to the introduction of CHSRA trains to the rail corridor will need to be addressed in a separate new agreement between Metro and CHSRA.
- 4) Under the Shared Option, the cost of maintaining the shared tracks and related infrastructure will need to be distributed between CHSRA and SCRRA in a manner to be determined in the future.

Additional Considerations

In addition to comments on the Dedicated and Shared Options listed above, the Agencies would like CHSRA to consider the following items:

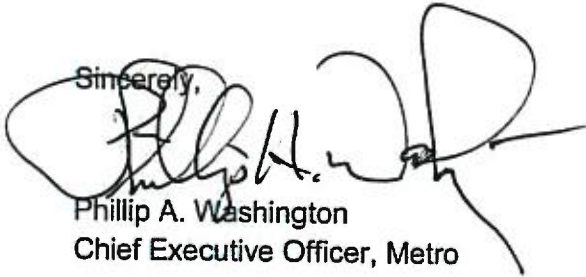
- 1) The at-grade alternative from Alameda Avenue to LAUS as presented in the 2016 SAA appears to have significant impacts to current passenger rail operations and infrastructure that have yet to be resolved with stakeholders. The Agencies recommend that CHSRA reconsider the three alternatives presented in the 2014 SAA (Tunnel Alternatives LAPT1 and LAPT3, and Surface Alternative) in the alternative analysis going forward to connect to project limits of the Link Union Station Project.

- 2) Detailed rail simulation modeling of both Shared and Dedicated Options should be performed and provided to the Agencies to demonstrate that any proposed track configuration would provide adequate capacity to accommodate current and future passenger rail and freight operations. If this cannot be demonstrated, the alternative analysis should include additional and separate dedicated HSR tracks to minimize or eliminate impacts to the Metro corridor.

Summary

The Agencies do not support the Dedicated Option of the at-grade alternative from Alameda Avenue to LAUS, but would like to work collaboratively with CHSRA to further develop and refine various other options to address our concerns. The Agencies look forward to partnering with CHSRA to bring HSR to Southern California. We greatly appreciate the partnership with CHSRA and look forward to working together to bring a high speed rail system in Southern California.

Sincerely,



Phillip A. Washington
Chief Executive Officer, Metro

Sincerely,



Arthur T. Leahy
Chief Executive Officer, SCRRA

Cc: Stephanie Perez, FRA
Michelle Boehm, CHSRA
Jeanet Owens, Metro
Elissa Konove, SCRRA