

Metrolink Antelope Valley Line

Metro Board Motion 47 authorized a study of the Metrolink Antelope Valley Line (AVL) between Burbank and Lancaster and directed staff to coordinate with Metrolink and the North County Transportation Coalition to:












- a) Determine a range of frequency of service to maximize regional accessibility throughout the day;
- b) Assess the condition of the existing rail infrastructure (e.g. tracks, culverts, tunnels, crossings, etc.) that limits operational flexibility and service reliability;
- c) Recommend needed infrastructure and capital improvement costs (in level of priority) along with cost benefit analysis to support the range of frequency of service, service reliability, safety, an on-time performance including latest technologies in rail propulsion, controls and rail stock.

Metro Planning and Programming Committee Meeting
July 17, 2019

AVL Study Context

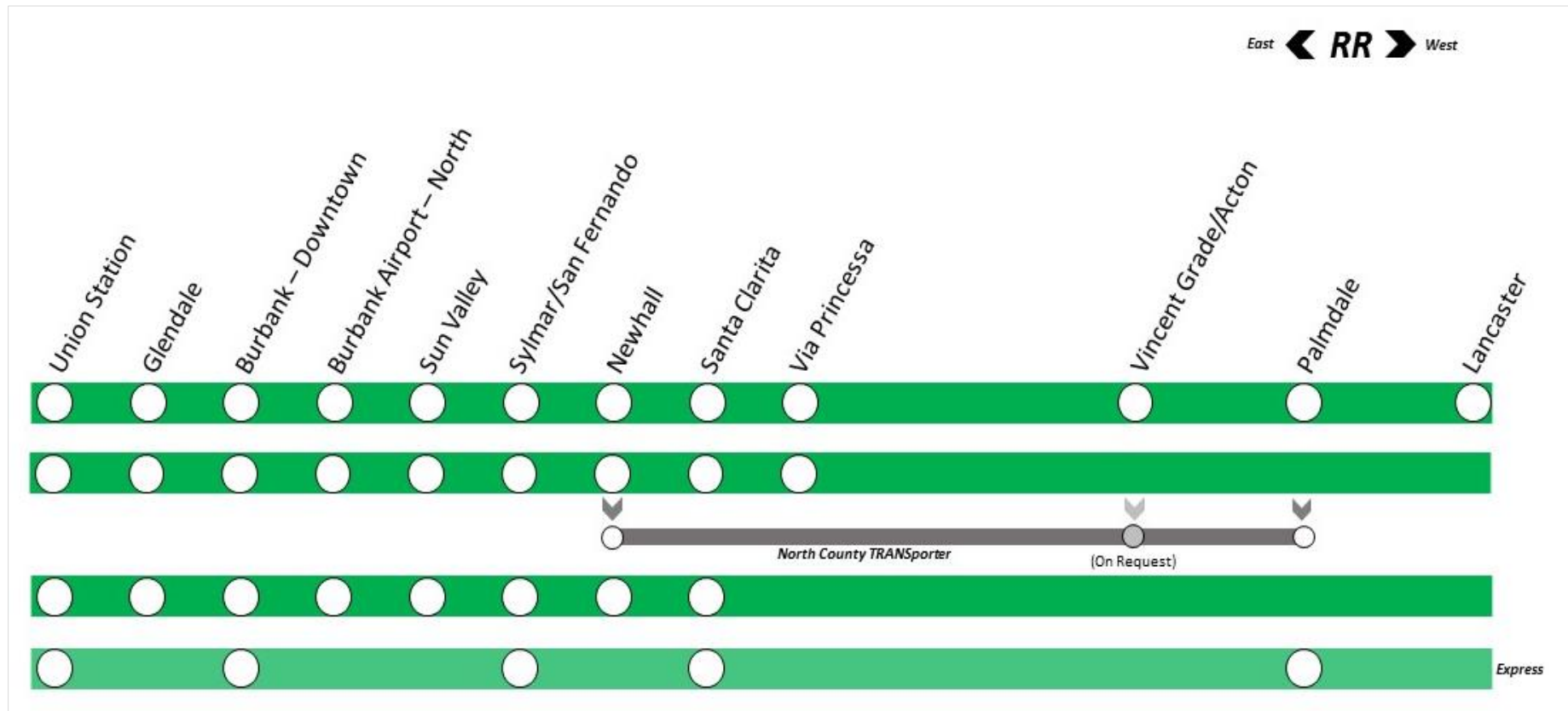
1. Strong Ridership and Mode Share Growth

- a) Daily AVL trips could increase from 6,500 in FY19 to 15,000 by FY30
- b) Projected 9% growth per annum through 2042

Station	FY15	FY19	2042	Growth Trends
GLENDALE	609	718	1,568	
BURBANK	832	925	1,689	
BURBANK AIRPORT-NORTH	—	79	727	
SUN VALLEY	76	102	899	
SYLMAR / SAN FERNANDO	462	642	4,598	
NEWHALL	295	394	1,942	
SANTA CLARITA	263	401	1,566	
VIA PRINCESSA / VISTA CANYON	421	546	944	
ACTON / VINCENT GRADE	95	130	425	
PALMDALE	342	499	8,241	
LANCASTER	349	475	4,295	
TOTAL	3,744	4,911	39,025	

Existing AVL Stopping Patterns

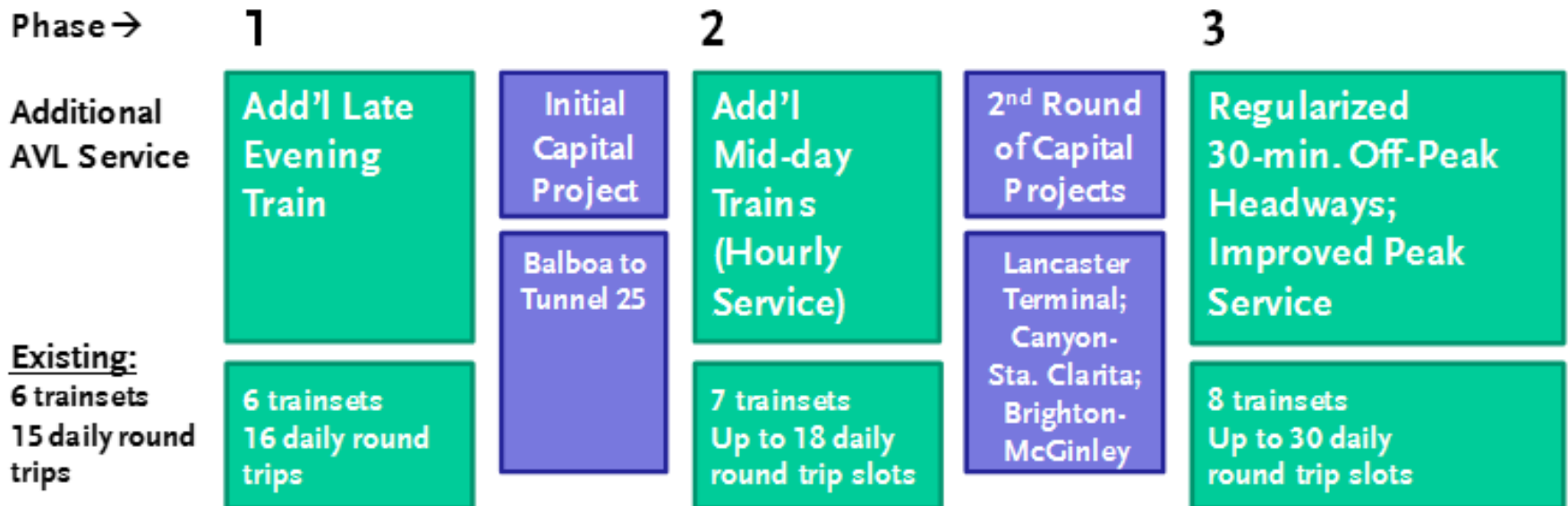
Existing net cost to operate and maintain the Antelope Valley Line is \$34.5 million with 15 daily round trips using 6 train sets and AVTA bus support.



Service Scenario Plan

1. Study identified a phased incremental plan for improving AVL service, if funding is identified.

- a) Planning years provided are build out conditions due to multiple service options and capital project scheduling.
- b) New/Available round trips can be filled by current operators (Metrolink or Union Pacific Railroad) or future potential operators (Amtrak –Pacific Surfliner, California High Speed Rail Authority or Virgin Trains USA)



Service Scenario Plan

Five Year Plan

Scenario 1: 1 additional late evening train

Ten Year Plan

Scenario 2: 2 additional off-peak round trips to provide hourly mid-day service

Twenty Year Plan

Scenario 3: Improved peak service and semi-hourly off-peak service

Future Year Plan Options

Scenario 4: Semi-hourly service plus express service

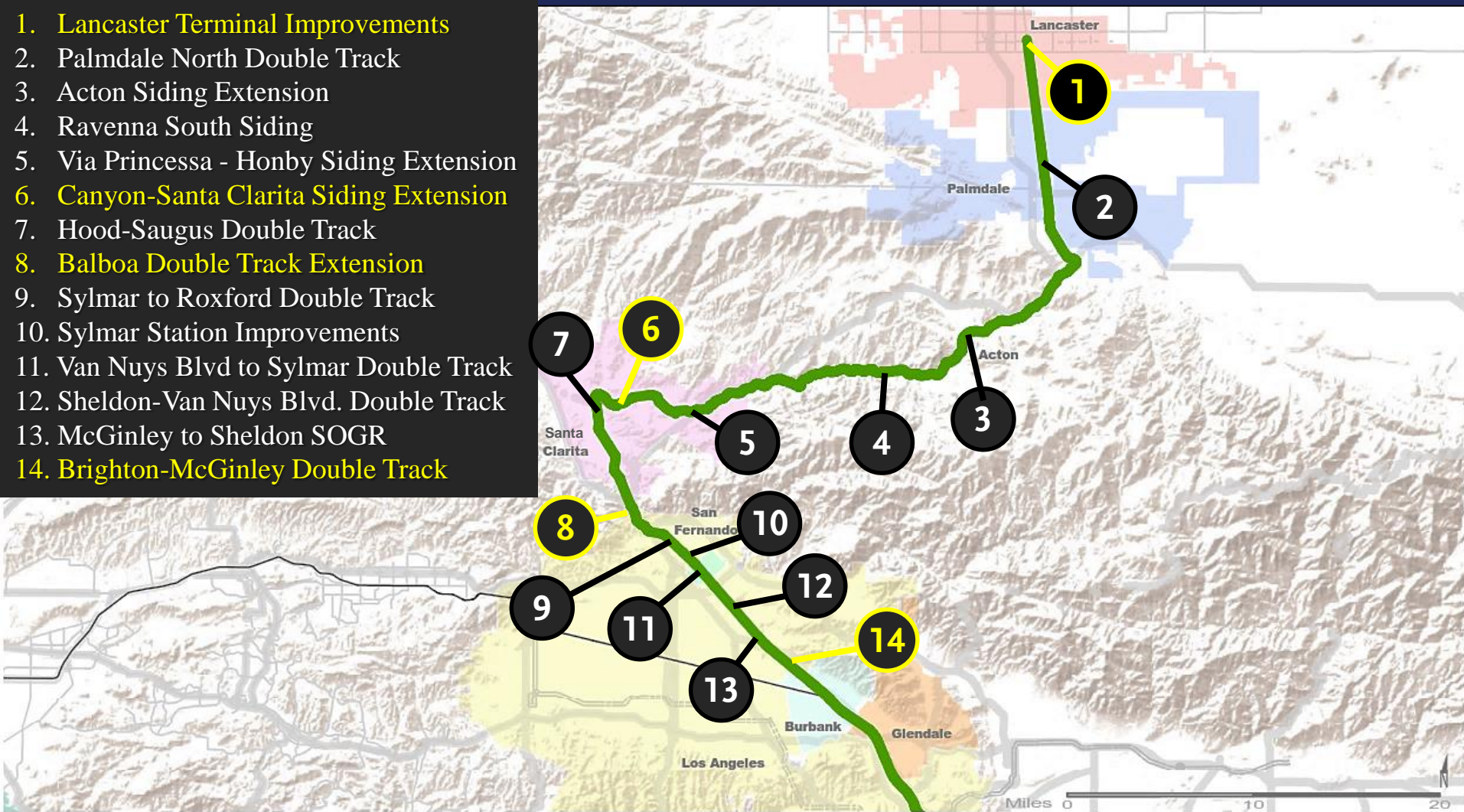
Scenario 5: Same as (4), with intermediate turns at Santa Clarita

Scenario 6: Same as (4), with intermediate turns at Sylmar/San Fernando

- 1. Collectively, the 6 service scenarios will require 14 capital projects.**
- 2. Antelope Valley Line Stakeholders advised the team to move forward with service scenarios 1, 2 and 3**

Scenario Infrastructure Project Overview

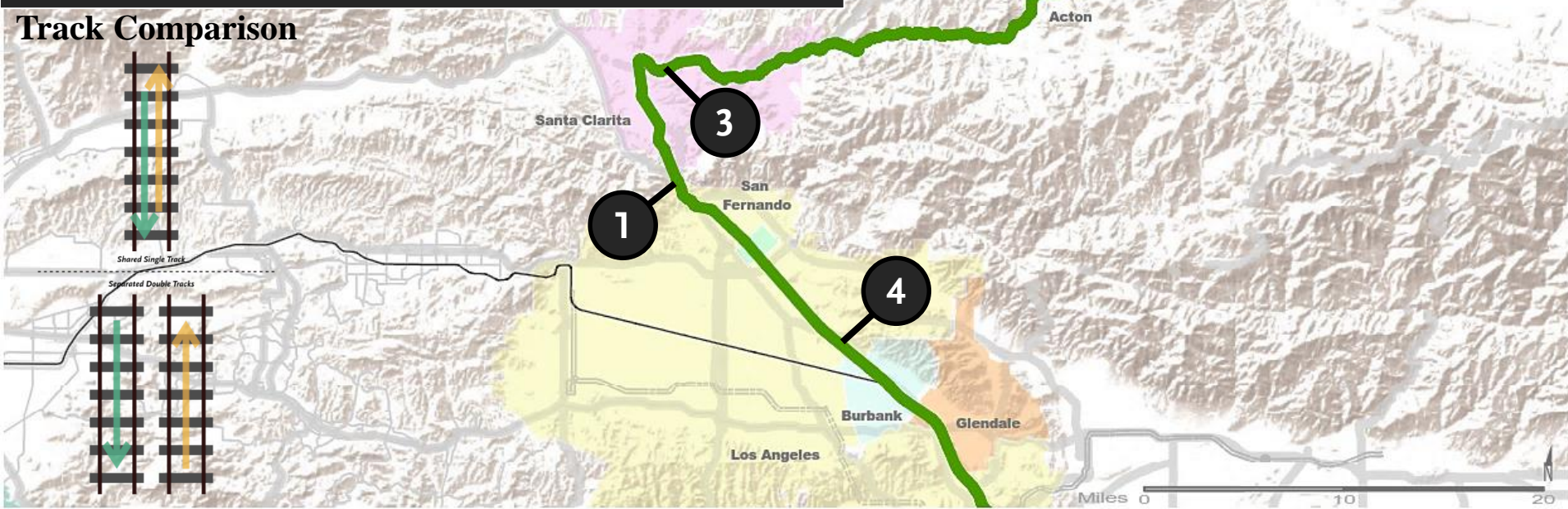
1. Lancaster Terminal Improvements
2. Palmdale North Double Track
3. Acton Siding Extension
4. Ravenna South Siding
5. Via Princessa - Honby Siding Extension
6. Canyon-Santa Clarita Siding Extension
7. Hood-Saugus Double Track
8. Balboa Double Track Extension
9. Sylmar to Roxford Double Track
10. Sylmar Station Improvements
11. Van Nuys Blvd to Sylmar Double Track
12. Sheldon-Van Nuys Blvd. Double Track
13. McGinley to Sheldon SOGR
14. Brighton-McGinley Double Track



 Metro Scenarios 1, 2 and 3 require 4 of 14 capital projects highlighted above.

Capital Project Investments for Scenarios 1, 2 & 3

- First Phase to support Service Scenario 2**
1. Balboa Double Track Extension-Balboa Boulevard to Sierra Highway; Capital Cost = \$41.8M
- Second Phase to support Service Scenario 3**
2. Lancaster Terminal Improvements, Cost = \$27.3M
 3. Canyon-Santa Clarita Siding, Cost = \$48.8M
 4. Brighton-McGinley Double Track, Cost = \$57.3M



First phase capital investment allows for hourly mid-day service and existing peak service

Second phase capital investment allows for 30 minute bi-directional service to Santa Clarita and hourly service from Santa Clarita to Lancaster.

Funding Opportunities

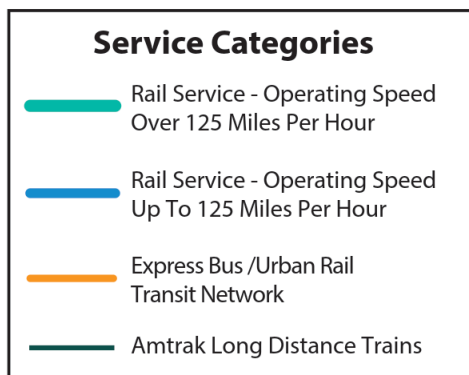
1. Local funding has not yet been identified for the capital infrastructure required to achieve the twenty year plan, Total Cost: \$175.2 M
 - a) Phase I, First Ten Years: \$41.8 M, Team to work with State and Local Partners to identify funding.
 - b) Phase II, Second Ten Years: \$133.4M, Team to work with Local, State and Federal Partners to identify funding.

Future Passenger Service with multiple Operators

A. Potential New Operator Along the Corridor

1. The State is considering an extension of intercity passenger rail service to Santa Clarita to connect with the Pacific Surfliner service in Los Angeles. This could present an opportunity for through service between Santa Clarita and San Diego with Amtrak bus service to shorten the commute to Bakersfield from the current 3 hours to about 90 minutes (LAUS to Bakersfield).

*This exhibit modified the 2018 State Rail Plan



New investment opportunity would require coordination between LOSSAN and Metrolink

Future Passenger Service with multiple Operators

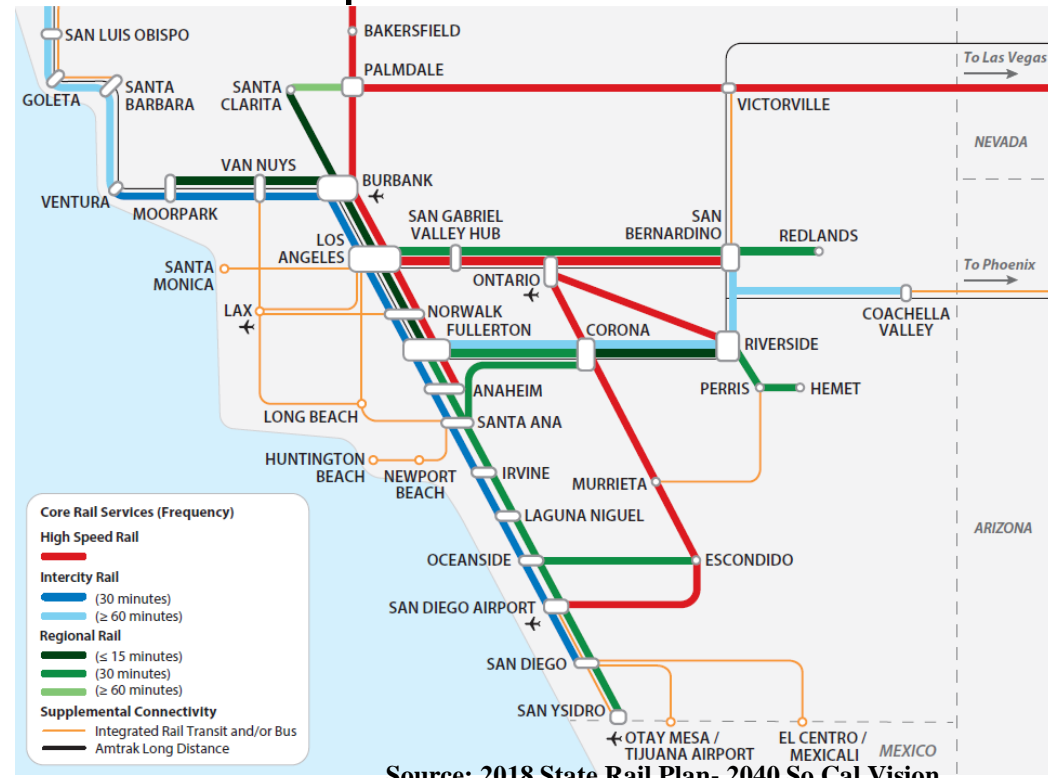
HSR Blended Service/ Blended Operations:

1. Current Limitations on HSR between Palmdale and Los Angeles

- a) Original HSR Plan for dedicated alignment extremely costly; funding unlikely
- b) Blended service on the AVL route offers potential benefits for CHSRA, Virgin Trains USA, Amtrak and Metrolink rail services

2. Further analysis required for additional capital investment

- a) Identify line electrification constraints for CHSRA such as vertical clearance and curve straightening projects.
- b) Identify and evaluate additional capacity projects to support blended service



Future Passenger Service with multiple Operators

1. Rail Multiple Unit Technology – Rail Multiple Units

- a) Diesel Multiple Unit (DMU) – One Power Car required for four cab cars
- b) Electric Multiple Unit (EMU, similar to HSR) – 1:3 ratio for powering
- c) Metrolink is developing a Fleet Modernization Plan (Fall 2020) to plan for a zero emissions future.

2. Travel Time Improvement

- a) 100 mph maximum capability for both (79 mph CA max speed)
- b) Tilting train capability for both DMU and EMU



Source: Redlands Passenger Rail Project (SBCTA)

3. Compatibility with Future High Speed Rail

Continue to evaluate the extent to which the EMU service supports future development of HSR in the corridor

Thank You!

