

# SR 710 North Study

Technical Advisory Committee Meeting No. 10 – April 24, 2013

Stakeholder Outreach Advisory Committee Meeting No. 6 – April 25, 2013



# Agenda

- Public Outreach Update
- Recap of TAC No. 9 and SOAC No. 5
- Update on Parts 2 and 3 – Project Report and Environmental Studies Documentation
  - Update on each build alternative
- Next Steps

# Ground Rules

- Q&A after each section of the presentation
- Focus questions on information presented
- General comments and Q&A at the end

# Public Outreach Update: February 2013 – April 2013



# Summary of Outreach Activities February 2013 - April 2013

- Distributed Alternatives Analysis Report to 34 libraries in the study area
- Distributed information packets
- Conducted outreach for geotechnical boring activities
- Posted letter from Supervisor Antonovich to SR 710 stakeholders regarding alternatives removed from further study



# Summary of Outreach Activities February 2013 - April 2013 (cont.)

## **Elected Official Staff Briefings**

- Congresswoman Janice Hahn
- Congressman Xavier Becerra
- Supervisor Gloria Molina
- LA Mayor's Office
- Metro Elected Quarterly Legislative Briefing

## **Metro Board Reports**

- February 2013 - Planning and Programming Committee  
Alternatives Analysis Report (Receive and File)

# Summary of Outreach Activities February 2013 - April 2013 (cont.)

## **Special Requests**

- Arroyo Verdugo Sub-region
- Los Angeles County Public Works TAC
- San Gabriel Valley Economic Partnership
- Crescenta Valley Town Council Forum
- Downtown LA Central City Association
- Los Angeles Department of Transportation
- San Gabriel Valley Council of Governments  
Transportation Committee



# Summary of Outreach Activities February 2013 - April 2013 (cont.)

## Social Media

### ➤ Facebook

- 800+ total page “likes”/ 600 user average daily reach

### ➤ Twitter

- 407 followers

### ➤ Instagram

- #instamove/#HelpingYouGetThere campaigns

### ➤ SR 710 North Study Interactive E-Tool

- [www.Sr710etool.com](http://www.Sr710etool.com)



# January 2013 ACC Open House Sessions Stakeholder Feedback

## **ALTERNATIVES SELECTION PROCESS** **Identified Themes of Interest**

- Explain alternatives selection process in detail
- Cost of each alternative
- Estimated budget to complete the remaining environmental documentation
- Community and financial impacts (businesses, homes, Caltrans properties)

# January 2013 ACC Open House Sessions Stakeholder Feedback

Alternative	Identified Themes of Interest
No Build	<ul style="list-style-type: none"><li>• Provide traffic projections if No Build alternative is selected</li></ul>
TSM/TDM	<ul style="list-style-type: none"><li>• Provide traffic projections if TSM/TDM alternative is selected</li><li>• Identify improvements proposed for Fremont and Garfield Avenues and Atlantic, San Gabriel, and Temple City Boulevards</li></ul>
BRT Alternative	<ul style="list-style-type: none"><li>• Request for dedicated bus lanes</li></ul>

# January 2013 ACC Open House Sessions Stakeholder Feedback

Alternative	Identified Themes of Interest
LRT	<ul style="list-style-type: none"> <li>• What is the effect of LRT on CSULA Campus</li> <li>• Suggestion to route LRT from Pasadena Gold Line to Glendale</li> <li>• Provide ridership data</li> <li>• Provide adequate parking</li> <li>• Connections to Metrolink</li> </ul>
Freeway Tunnel	<ul style="list-style-type: none"> <li>• Goods movement</li> <li>• Traffic effects on local streets</li> <li>• Tolls</li> <li>• Air quality/ventilation details</li> <li>• Cost of alternative</li> <li>• Safety of homes above tunnel</li> <li>• Effect on natural and historic resources</li> <li>• Emergency response</li> <li>• Fire/life safety</li> </ul>

# Recap of TAC No. 9 and SOAC No. 5

- Public Outreach Update
- Recap of Part 1 – Alternatives Analyses
  - November 2012 TAC and SOAC Meetings
  - Alternatives Analysis Report
  - Fact Checks
- Update on Parts 2 and 3 – Project Report and Environmental Studies Documentation
  - Origin-Destination Study Findings
  - Environmental Studies
  - Preliminary Engineering
  - Preliminary Tunnel Considerations
- Next Steps

# Feedback Received During TAC No. 9/ SOAC No. 5

- How is input received from e-Tool and community being considered?
- Does the cost estimate include cost for mitigation?
- Evaluate a combined BRT/LRT/TSM/TDM alternative
- Extend St. John to California as part of TSM
- How effective are the scrubbers to screen PM2.5?
- Discuss permitting requirements with AQMD

# Feedback Received During TAC No. 9/ SOAC No. 5 (cont.)

- Discuss access to hospitals during construction
- Provide tunnel excavation volume and haul routes
- Distribute comment letters received on Section 6002 meeting
- Depth of freeway and LRT tunnels
- Protection against noise from jet fans
- Would like to know the methodology for cost-benefit analysis

# Fact Checks



# Freeway Tunnel Alternative

Claim – The Study Team is only focused on the freeway tunnel alternative.

**Fact – All alternatives are being studied with the same level of detail. Alternatives considered are:**

- **No Build**
- **TSM/TDM**
- **BRT**
- **LRT**
- **Freeway Tunnel**



# Freeway Tunnel Alternative

Claim – The Study Team is considering three freeway tunnel alternatives.

**Fact – This is not correct. The Study team is evaluating one freeway tunnel alternative with operational variations:**

- **Non-tolled scenario**
- **Tolled scenario**
- **Tolled scenario w/ Express Bus**

**Note: All of the scenarios will be evaluated with and without trucks**

# Air Quality

Claim – Study team did not use site-specific data for evaluating air quality impacts.

**Fact – This is correct. The Air Quality evaluation was conducted using established methodology and it is standard to use the closest regional data for screening phase**

**Fact – The study findings are relevant and appropriate for the level done during the AA Phase**

**Fact – PM2.5 and CO Hot Spot analysis will be performed during this phase**

# Update on Parts 2 and 3 - Project Report and Environmental Studies Documentation



# Update on Parts 2 and 3 – Project Report and Environmental Studies Documentation

- Status update on Preliminary Engineering
- Status update on Environmental Studies Documentation

# Status Update on Preliminary Engineering

- Conducting field reviews
- Coordinating design elements with the environmental team
- Surveying and mapping is on-going
- Refining alternatives to minimize impacts and improve performance
- Initiated dialogue with railroads
- Initiated dialogue with power agencies
- Began Value Analysis (VA) Study

# Refinements to Build Alternatives

- Transportation System Management (TSM) /Transportation Demand Management (TDM)
- Bus Rapid Transit (BRT) with TSM/TDM
- Light Rail Transit (LRT) with TSM/TDM
- Freeway Tunnel with TSM/TDM

# TSM/TDM Alternative



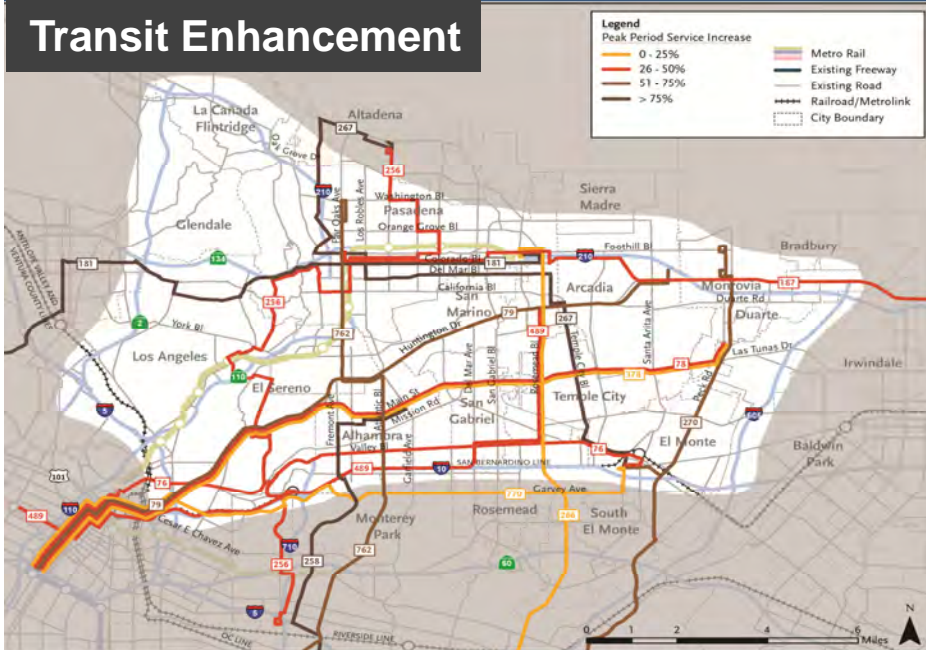
# Objectives of TSM/TDM Alternative Design Refinements

- Improve access and connectivity on local street system
- Reduce potential ROW and community/environmental impacts
- Reflect input from cities/stakeholders
- Improve mobility and reduce congestion

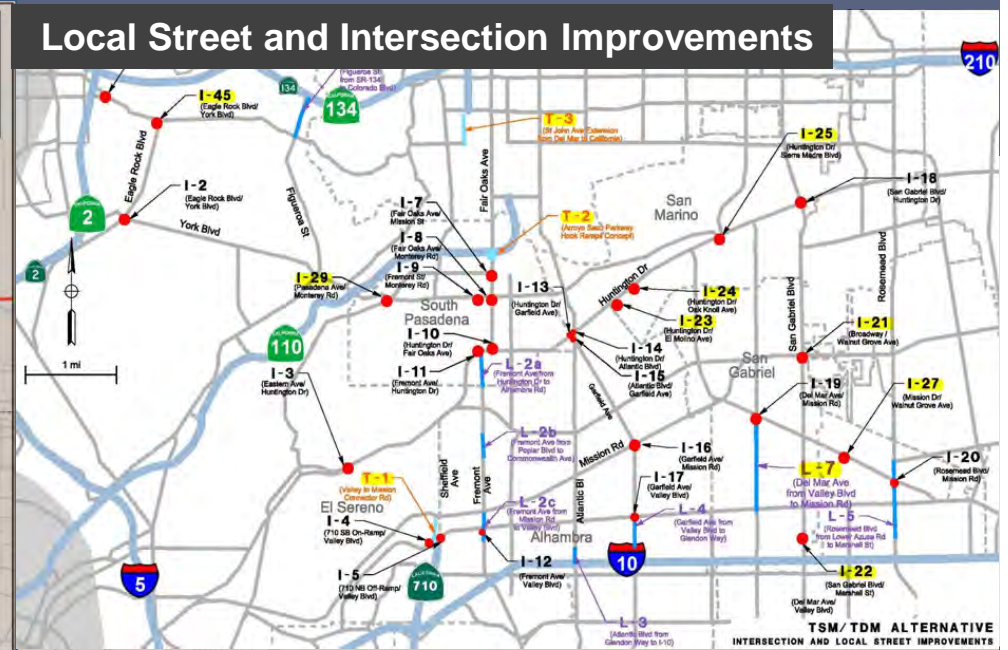


# Transportation System Management

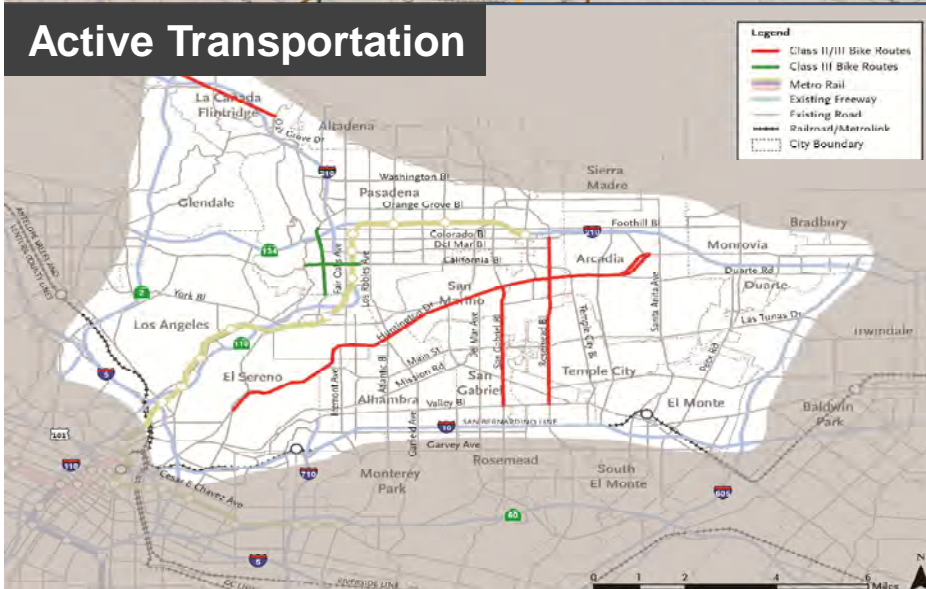
## Transit Enhancement



## Local Street and Intersection Improvements



## Active Transportation



## ITS Improvements



# Proposed Operational Improvements - TSM/TDM

## ➤ Intersection improvements include:

- Add/remove turning movement
- Add dedicated turning lane(s)
- Minor widening
- Optimize signal timing
- Median modification
- Restriping
- Bus refinements

## ➤ Local Street Improvements include:

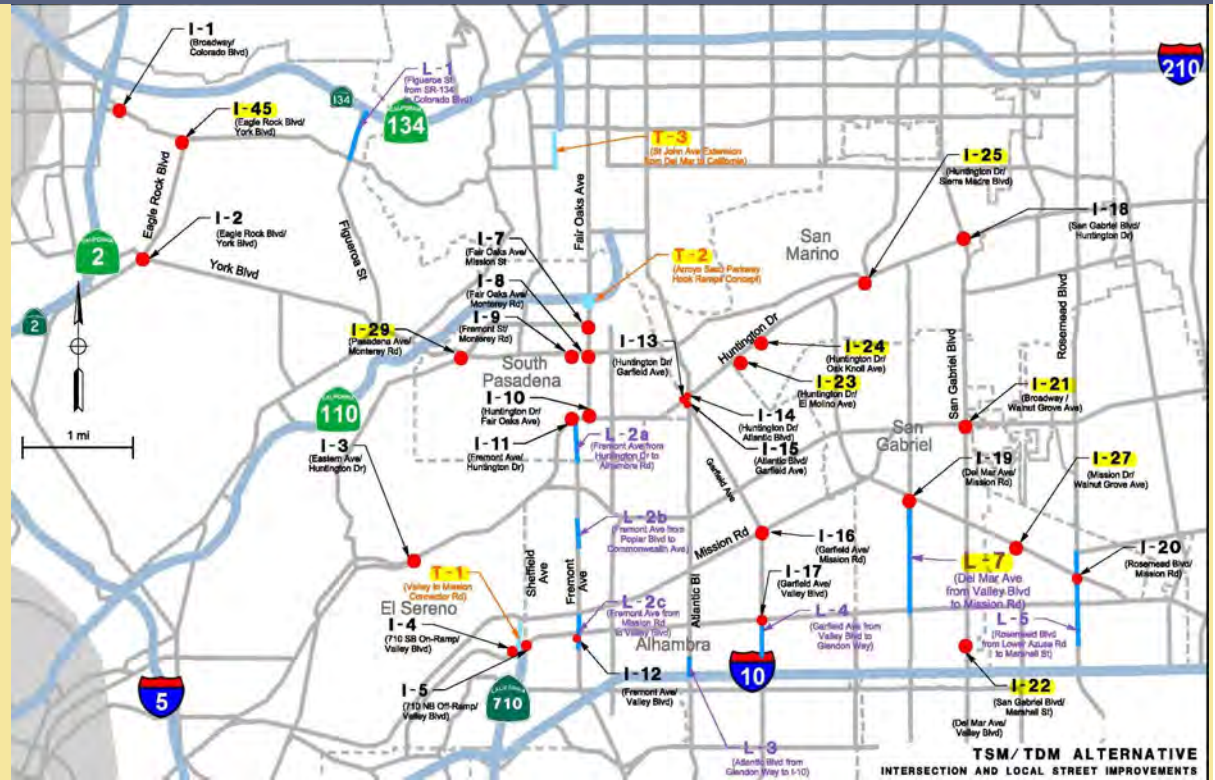
- Restriping
- Restrict peak-hour on-street parking
- Minor widening
- Median modification



# TSM/TDM Locations

- 28 intersection improvements
- 8 local street segments
- 2 street extensions
- 1 interchange modification

Refine locations as additional data is developed



Yellow highlights represent additions since AA phase

# Intersection Location Summary

- AA Phase: 20 intersections
- Current Phase: 28 intersections

Red highlights – removed intersection  
Green highlights- added intersection

#	Intersection Improvements	AA Phase	Current Phase	#	Intersection Improvements	AA Phase	Current Phase
I-1	Broadway/ Colorado Blvd	X	X	I-16	Garfield Ave/Mission Rd	X	X
I-2	Eagle Rock Blvd/York Blvd	X	X	I-17	Garfield Ave/ Valley Blvd	X	X
I-3	Eastern Ave/Huntington Dr	X	X	I-18	San Gabriel Blvd/Huntington Dr	X	X
I-4	710 SB On- Ramp/Valley Blvd	X	X	I-19	San Gabriel Blvd/ Mission Rd	X	
I-5	710 NB Off- Ramp/Valley Blvd	X	X	I-19	Del Mar Ave / Mission Rd		X
I-6	Fremont Ave/Columbia St/Pasadena Ave	X		I-20	Rosemead Blvd/Mission Rd	X	X
I-7	Fair Oaks Ave/ Mission St	X	X	I-21	Broadway/ Walnut Grove		X
I-8	Fair Oaks Ave/Monterey Rd	X	X	I-22	Improve left hand storage San Gabriel Blvd/ Marshall St		X
I-9	Fremont St/Monterey Rd	X	X	I-23	Huntington Dr/ El Molino Ave		X
I-10	Huntington Dr/Fair Oaks Ave	X	X	I-24	Huntington Dr/ Oak Knoll		X
I-11	Fremont Ave/Huntington Dr	X	X	I-25	Huntington Dr/Sierra Madre		X
I-12	Fremont Ave/Valley Blvd	X	X	I-27	Mission Dr/ Walnut Grove Ave		X
I-13	Huntington Dr/Garfield Ave	X	X	I-29	Pasadena Ave / Monterey Rd		X
I-14	Huntington Dr/Atlantic Blvd	X	X	I-44	Hellman Ave/ Fremont Ave		X
I-15	Atlantic Blvd/Garfield Ave	X	X	I-45	Eagle Rock Blvd/York Blvd		X

# Local Street Segments Summary

- AA Phase: 7 local street segments
- Current Phase: 8 local street segments

Red highlights– removed intersection  
Green highlights- added intersection

#	Local Streets	AA Phase	Current Phase
L-1	Figueroa St from SR 134 to Colorado Blvd	X	X
L-2a	Fremont Ave from Huntington Dr to Alhambra Rd	X	X
L-2b	Fremont Ave from Poplar Blvd to Commonwealth Ave	X	X
L-2c	Fremont Ave from Mission Rd to Valley Blvd	X	X
L-3	Atlantic Blvd from Glendon Way to I-10	X	X
L-4	Garfield Ave from Valley Blvd to Glendon Way	X	X
L-5	Rosemead Blvd from Lower Azusa Rd to Marshall St	X	X
L-7	Del Mar Ave b/w Mission Rd and Valley Blvd including intersections		X



# Other TSM/TDM Improvement Summary

- Current Phase: 3 new improvements
  - 2 street extensions
  - 1 interchange modification

#	Other Improvements	AA Phase	Current Phase
T-1	Valley to Mission connector road		X
T-2	City of South Pasadena - Arroyo Seco Parkway - Hook Ramps concept		X
T-3	St John extension from Del Mar to California		X

Red highlights – removed intersection  
Green highlights- added intersection

# Bus Rapid Transit (BRT)



# BRT Alternative

- BRT Attributes & Elements
- Recap of the BRT Alternative from SR 710 North Alternative Analysis
- Refinements to the BRT Alternative



# Defining BRT Attributes

- Speed and Reliability
- Identity and Image
- Flexible and Stageable
- Adaptable to Fit Context
- “Rail Like” Service and Quality
- Permanence



LA Metro Orange Line BRT

# Elements of BRT



**1** Running Ways



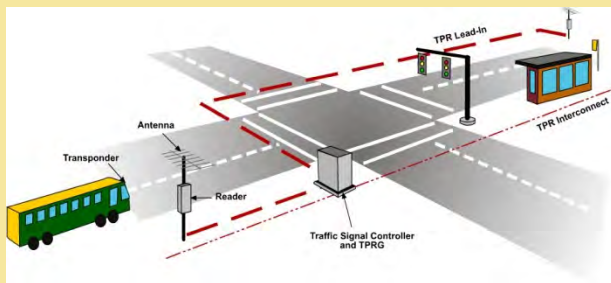
**2** Stations & Stops



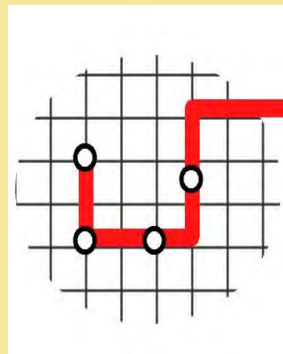
**3** Vehicles



**4** Fare Collection



**5** ITS / Technologies

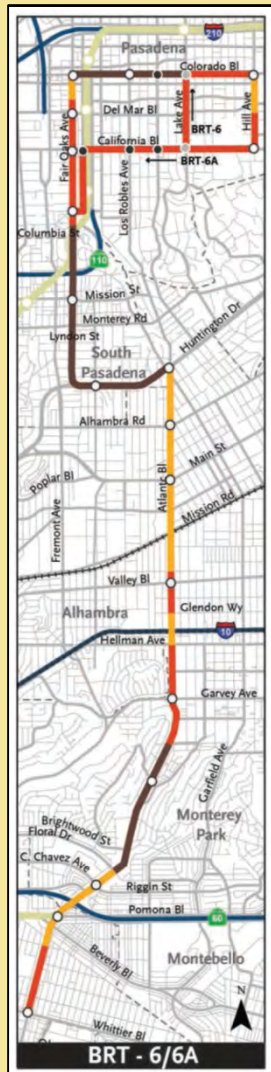


**6** Service & Operating Plan



**7** Branding & Image

# BRT Alternative Considered During Alternatives Analysis



- Alignment would run on surface streets from East LA to Pasadena, same route as Metro Rapid 762 in study area
- Running way consists of dedicated bus lanes (one or both directions) and mixed-flow lanes
- BRT vehicles mix with other traffic when approaching intersections
- Bus lanes created by restriping the roadway, prohibiting on-street parking, narrowing medians, planters, and sidewalks; no property acquisition required
- Stop locations similar to Metro Rapid 762 stops
- Peak headways of 20 minutes; or 10 minutes when combined with enhanced TSM Local 260 and Rapid 762 operations

# Objectives for BRT Alternative - Design Refinements

1. Improve the speed and reliability, comfort and convenience for the BRT trunk/spine alignment (from Whittier Boulevard to Del Mar Boulevard)
2. Improve access and connectivity to the regional transit system
3. Reduce potential effects to parking
4. Improve quality of BRT stations

# Highlights of BRT Design Refinements

- Peak-period only dedicated bus lanes
- Adds intersection improvements
- Include TSM/TDM improvements as baseline services
- Proposed bus feeder service to/from BRT line
- Enhanced station amenities along BRT line
- Off-board fare collection for BRT line
- Combine/consolidate BRT line with Route 762
- Includes Metro's Transit Signal Priority (TSP) project along route

# Peak-Period Bus Lanes and Intersection Improvements

## ➤ Peak-Period Bus Lanes

- Parking would be allowed in bus lanes outside of peak periods
- Over 10 miles, loss of approximately:
  - 1,100 on-street parking spaces in peak hours
  - 60 on-street parking spaces permanently

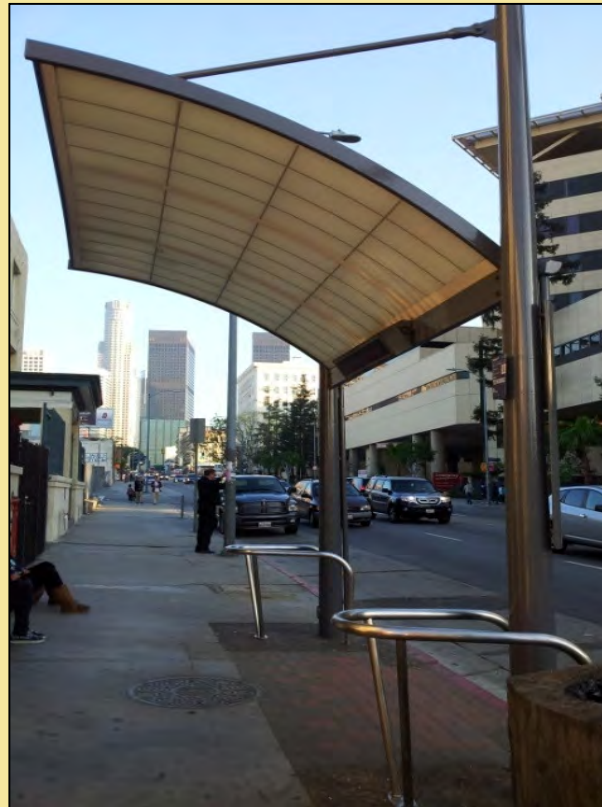
## ➤ Intersection Improvements

- Improve congested intersections by adding turn lanes and bus queue jump lanes (in addition to TSM intersections improvements)
- Minor right of way acquisitions required (no buildings affected)

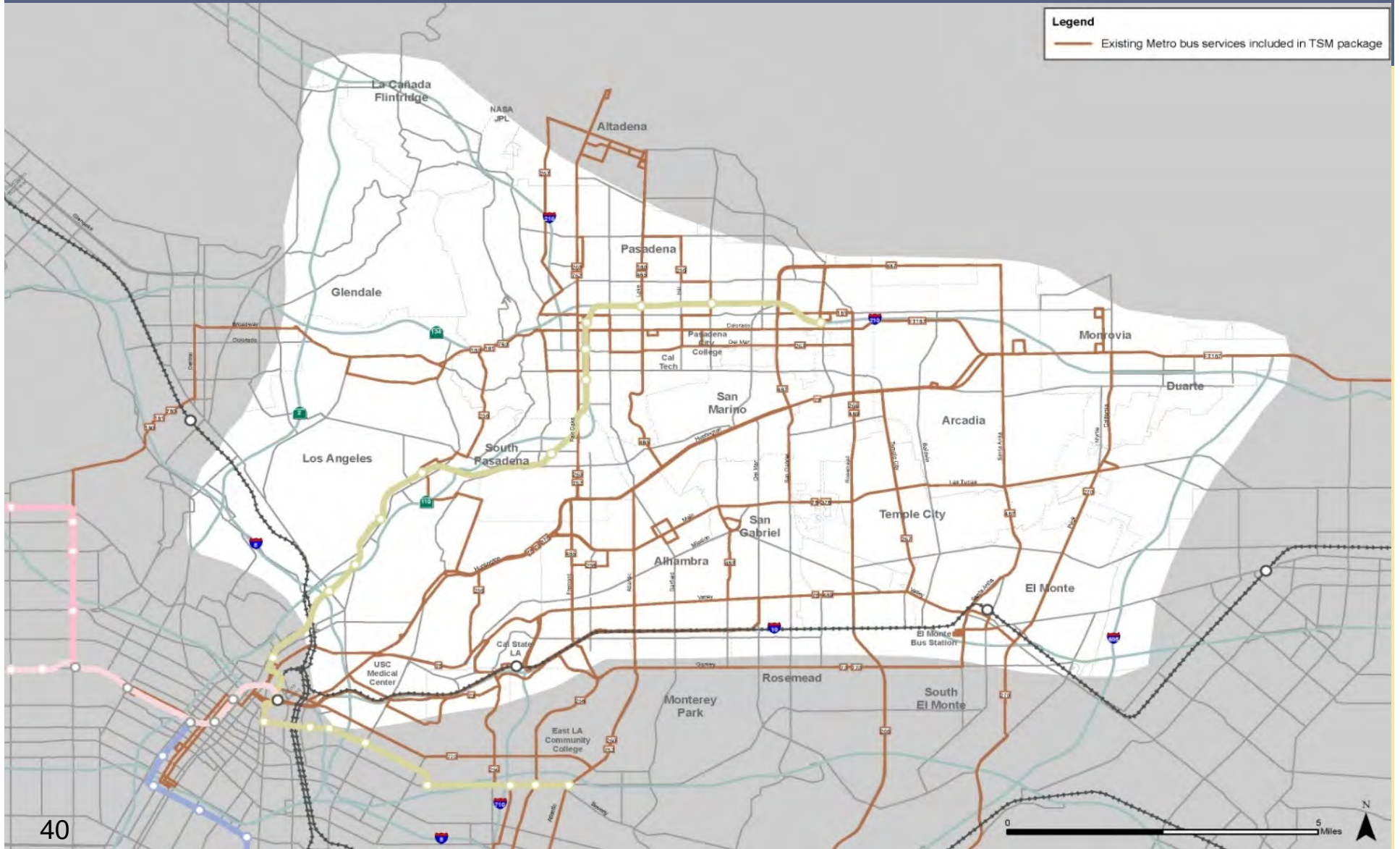


# BRT Station Improvements

- Amenities:
  - Shelters
  - Lighting
  - Ticketing
  - Next Bus displays
- Separate BRT stations at high volume stops
- Far side bus stops
- Acceleration lanes

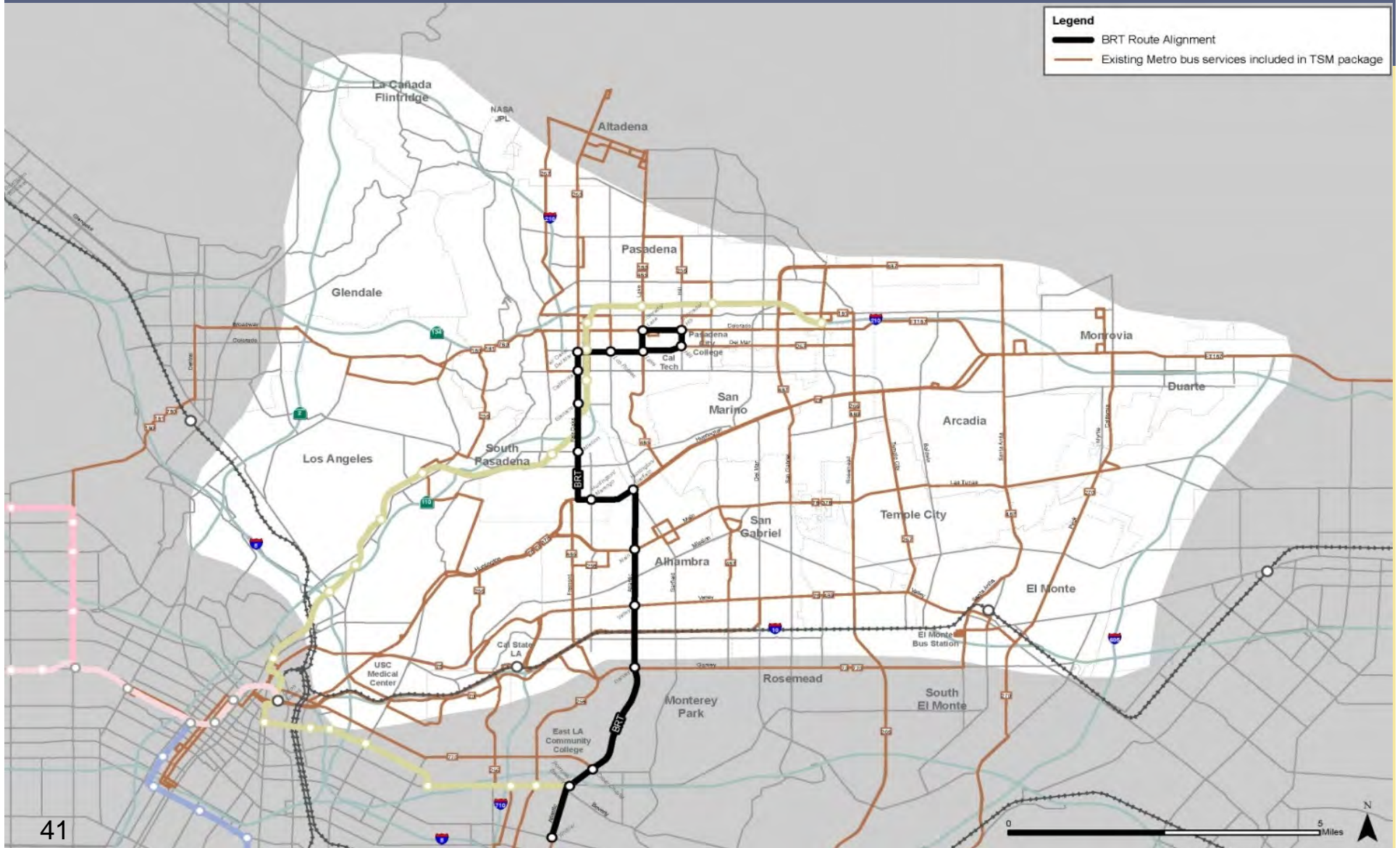


# BRT – TSM Transit Component

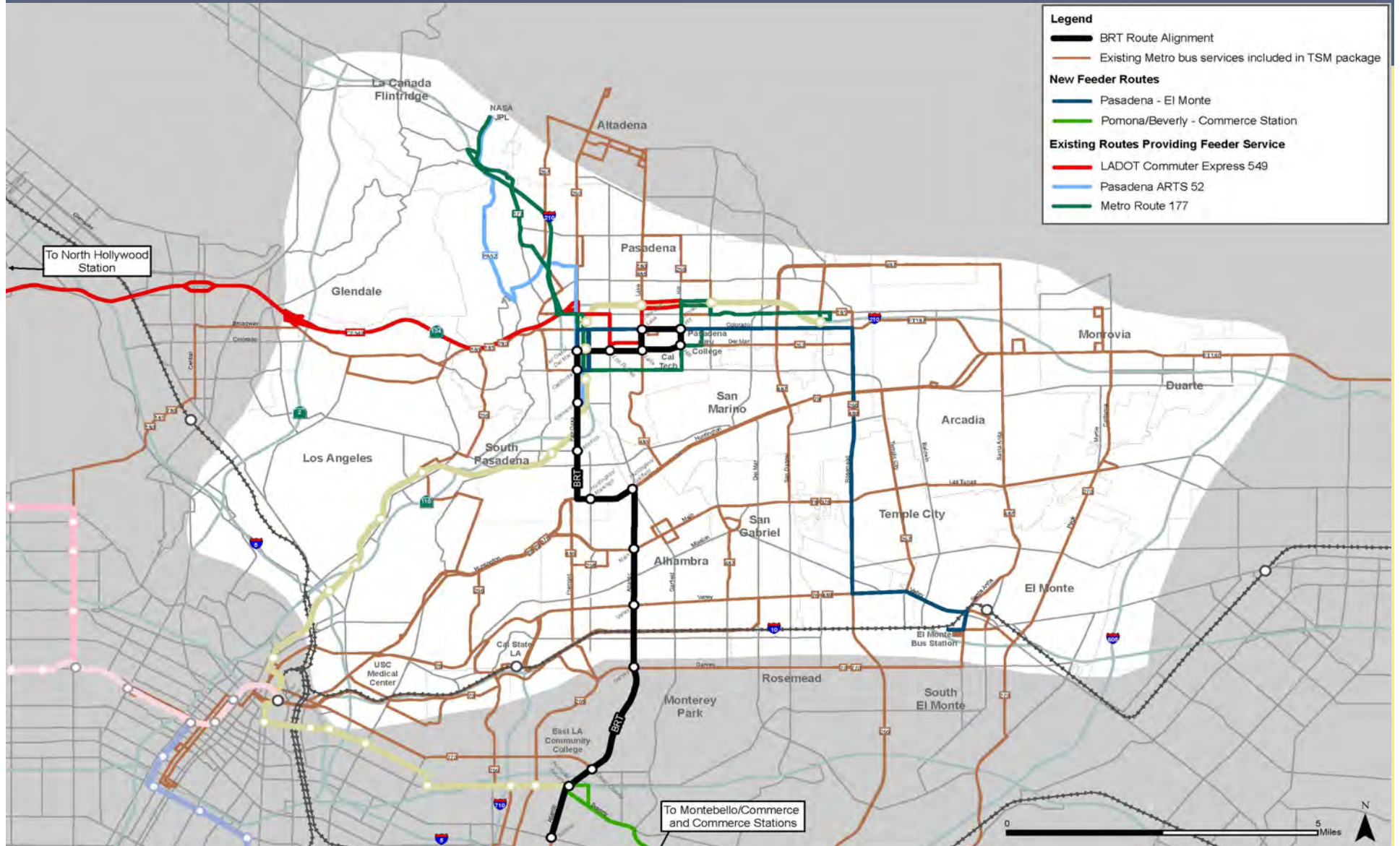




# BRT – Main Corridor

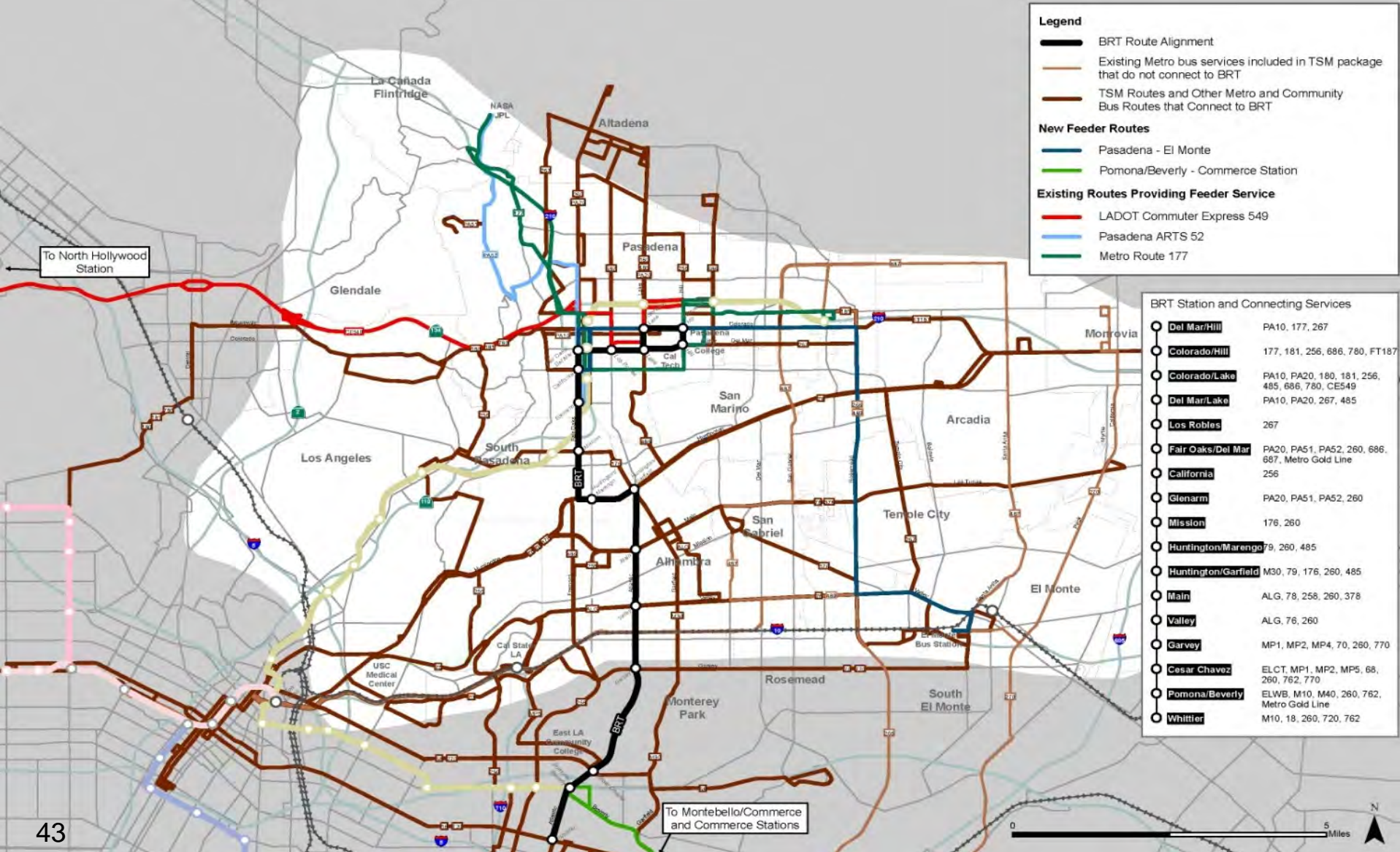


# BRT – Feeder Service

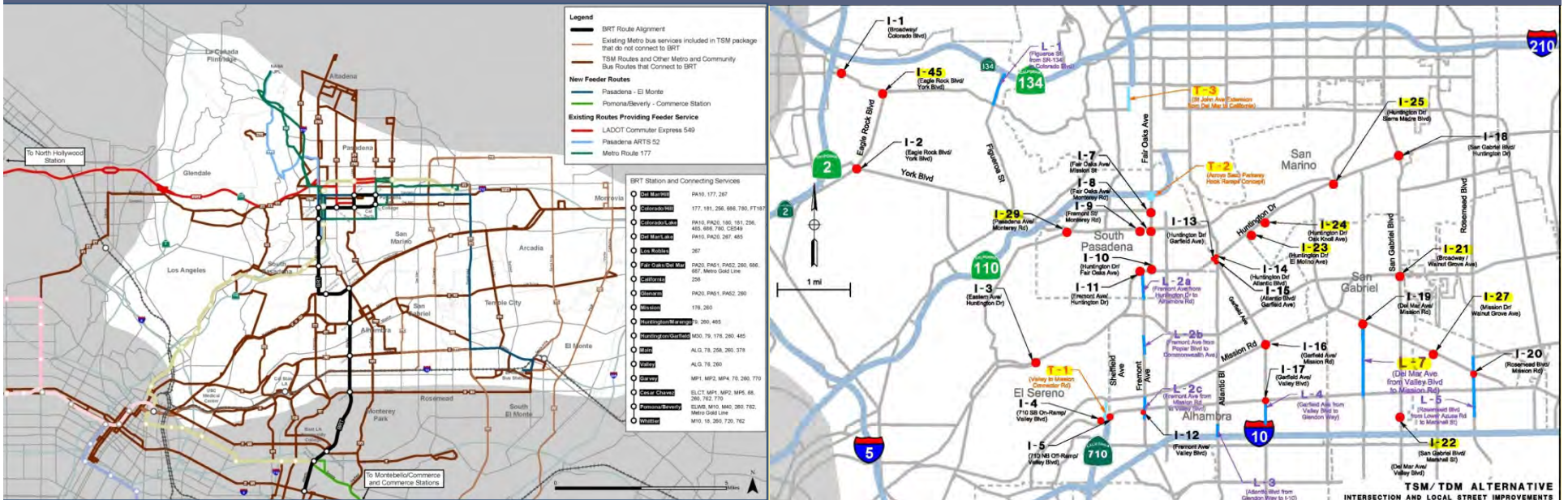




# BRT Alternative – Transit Service



# BRT Alternative



BRT alternative includes transit refinements, feeder service, active transportation, ITS, local street and intersection improvements



# Light Rail Transit (LRT)



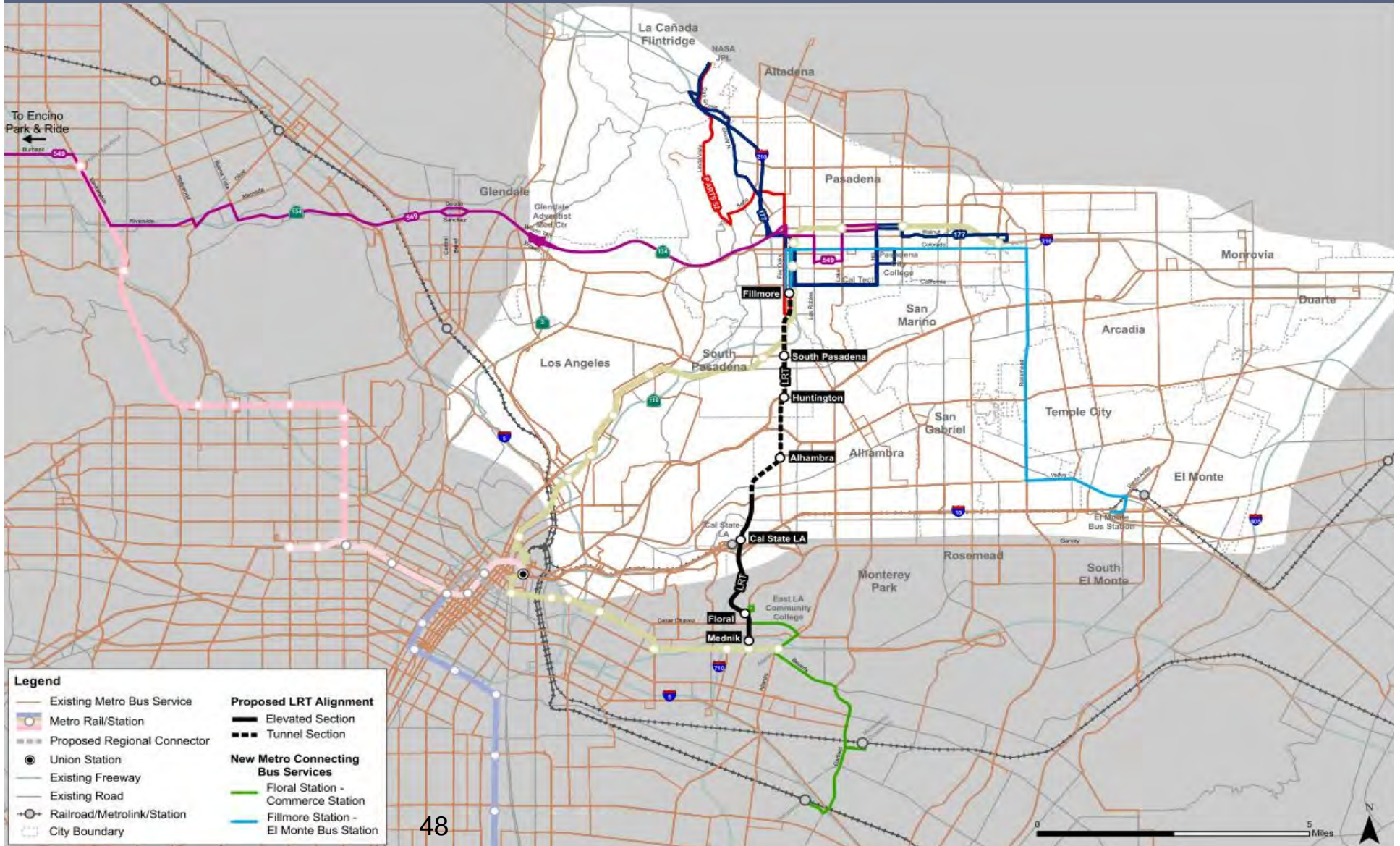
# LRT Design Activities

- Met with Cal State LA and County DPW
- Met with Caltrans and UPRR (re: LRT maintenance yard)
- Met with Metro Service Planning and developed complementary bus service
- Met with SCE, LADWP, and Pasadena Power Utility
- Began more detailed design of structures, including tunnel, fire life safety, ventilation, and fault crossing
- Refined alignment and station locations
- Began station design
- Began portal design

# LRT Complementary Bus Service

- Researched existing Metro and municipal bus services to the LRT station areas
- Evaluated local “circulator” routes and longer distance “feeder services”
- Identified services to supplement existing Metro and municipal services in areas with sufficient potential demand:
  - South to Riverside and Orange County Metrolink lines
  - East and south through SGV to El Monte Bus Station
  - West to North Hollywood using route of LADOT 549
  - North to JPL using existing Metro and municipal services

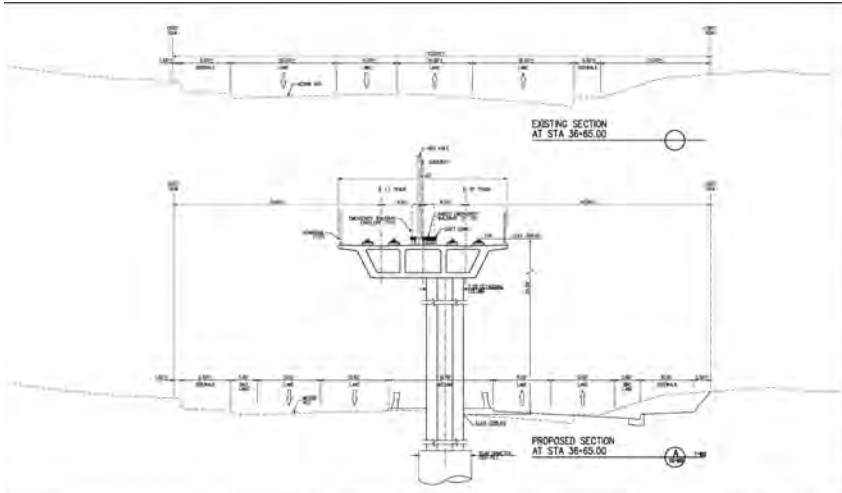
# LRT Design Update



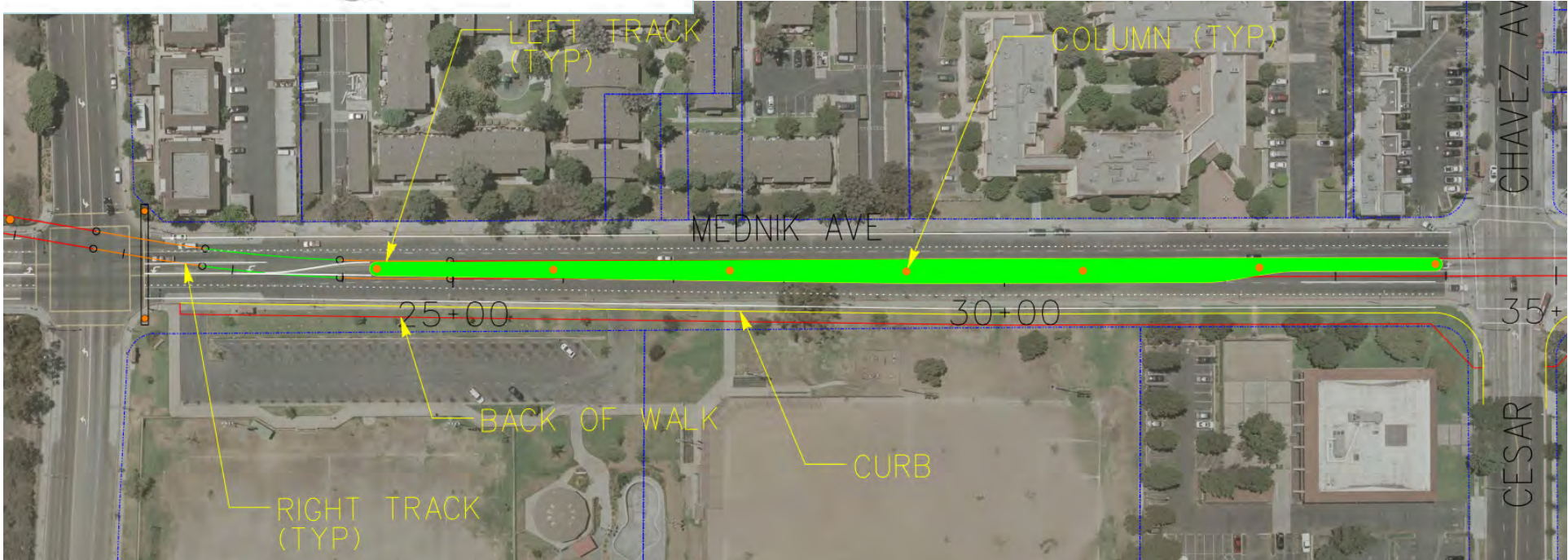


# LRT Design Refinements

- Added median on Mednik
- Relocated Floral station parking
- Shifted alignment by Cal State LA
- Relocated portal south of Valley Boulevard; shifted SR 710 southbound on-ramp
- Grade separated maintenance yard lead
- Relocated Alhambra station parking
- Shifted approach to Fillmore Station; relocated station

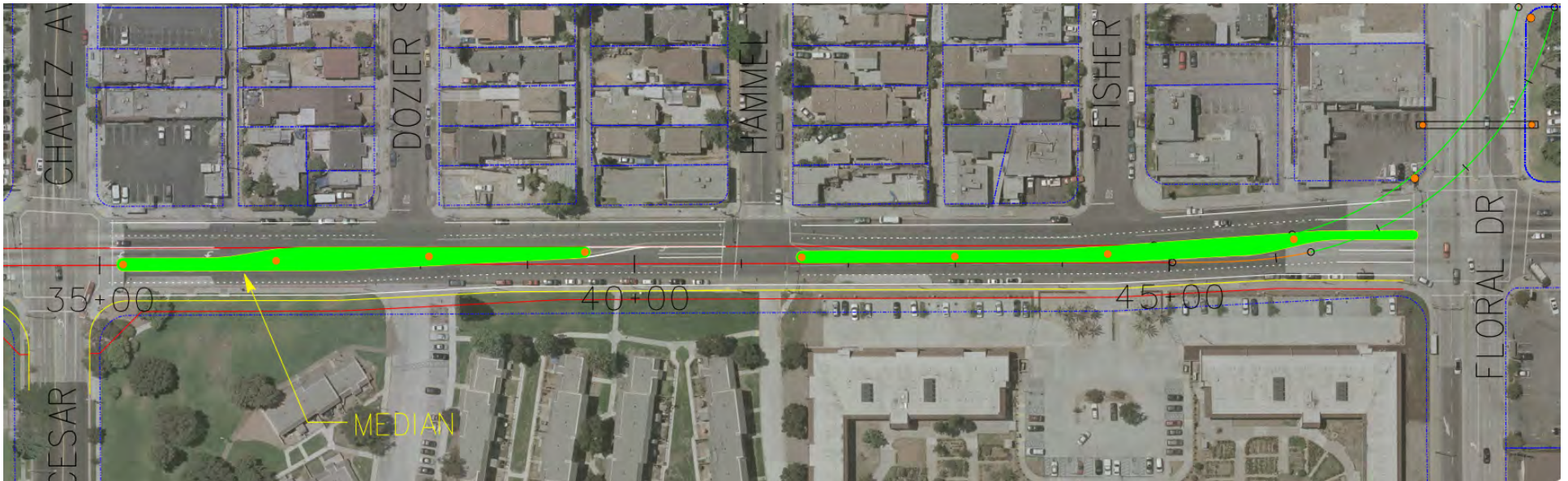


# Mednik Median



Mednik Avenue will be widened in existing right-of-way. The LRT will be elevated on columns in a newly created median.

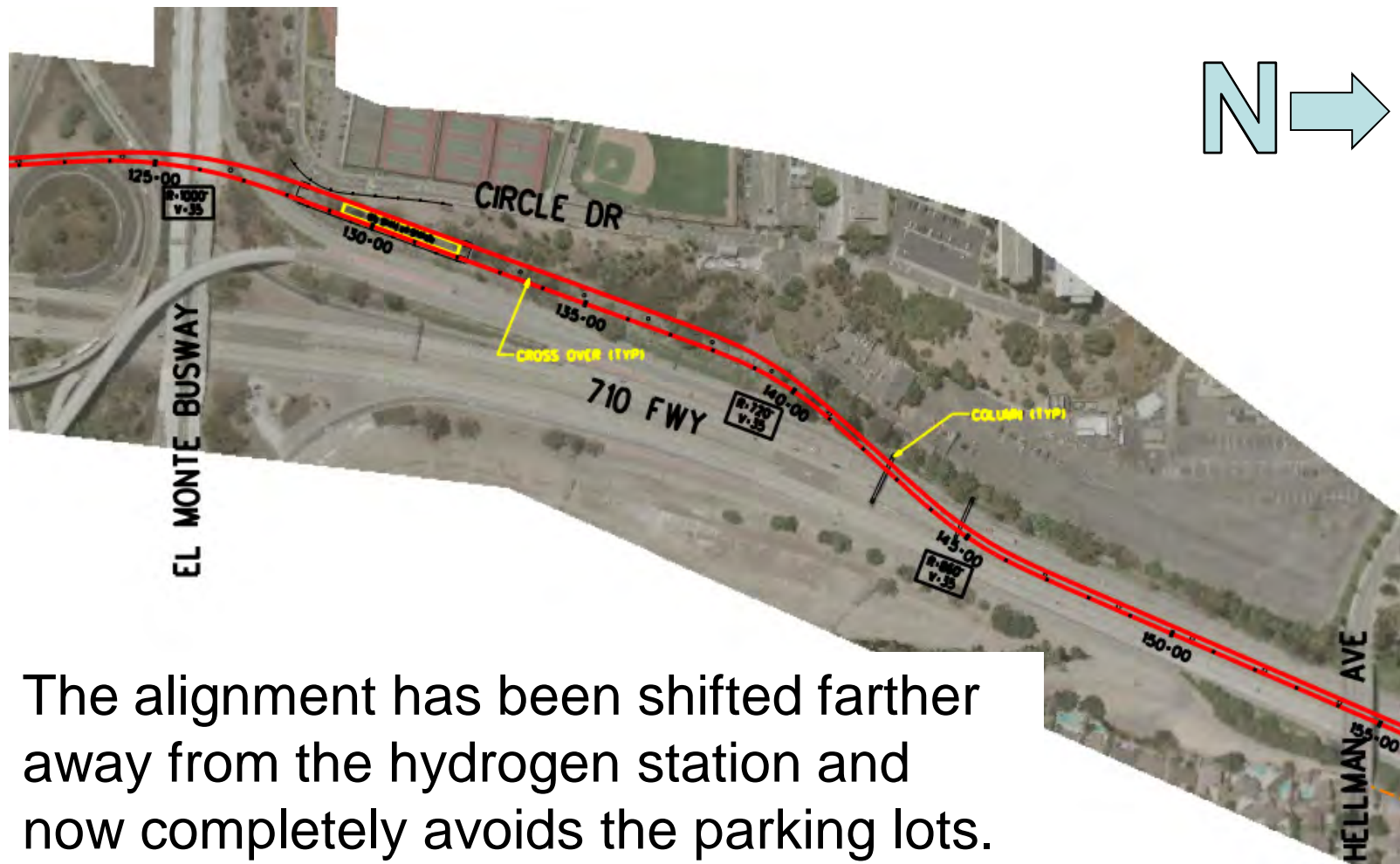
# Mednik Median



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# Cal State LA Area



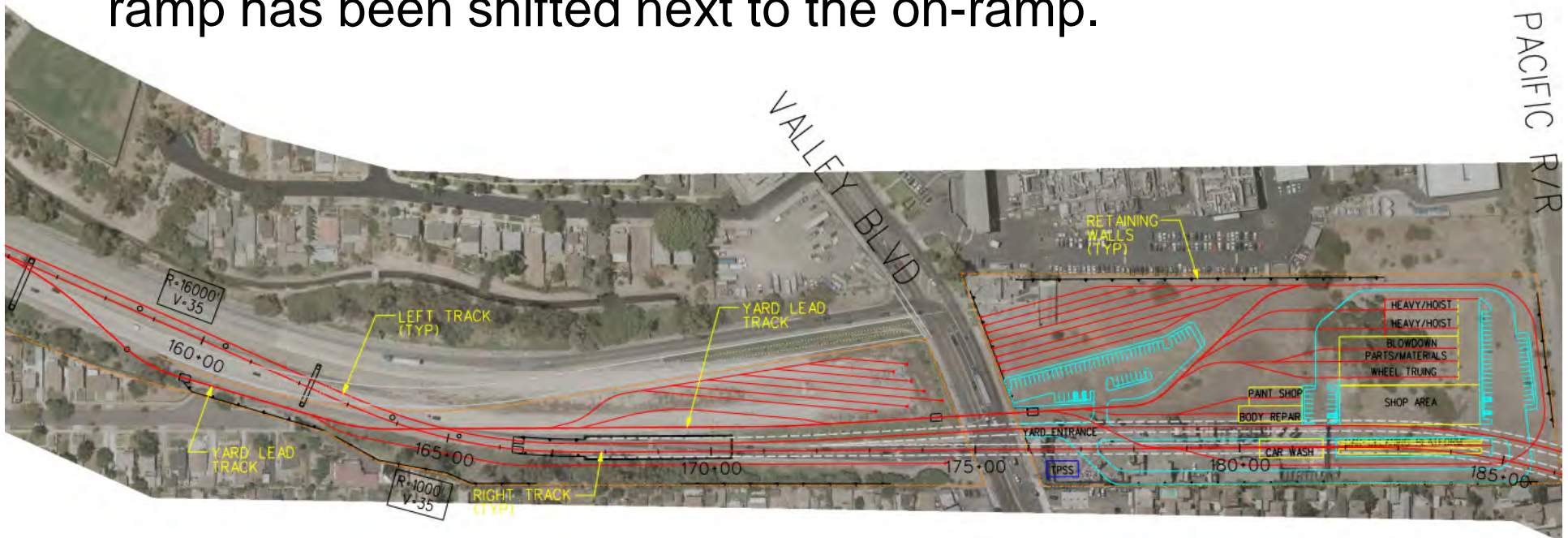
The alignment has been shifted farther away from the hydrogen station and now completely avoids the parking lots.

# Valley Boulevard Area

The tunnel portal has been moved south of Valley Boulevard. The yard lead is now elevated over Valley Boulevard. The northbound 710 off-ramp has been shifted next to the on-ramp.



UNION PACIFIC R/R



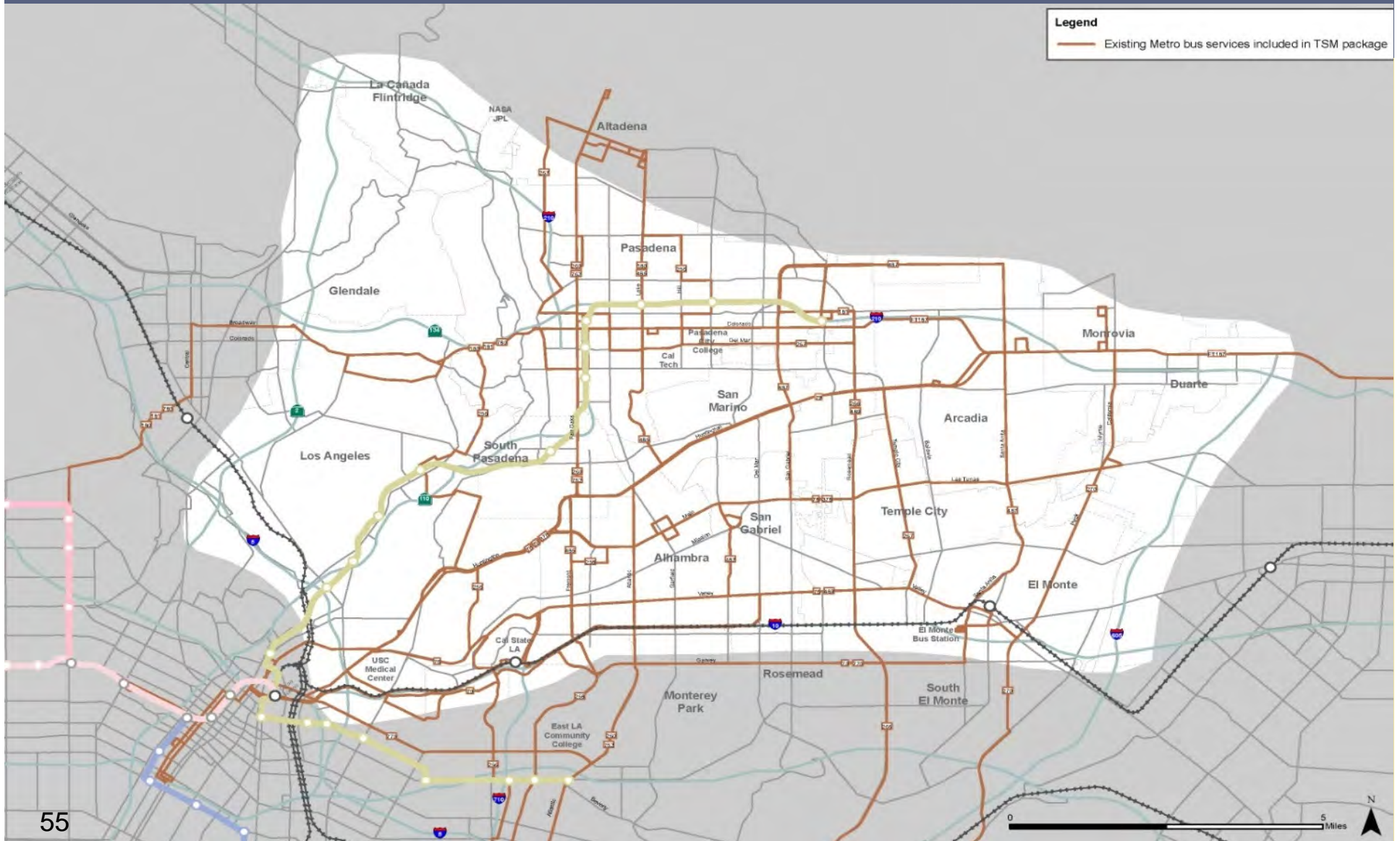
# Fillmore Station



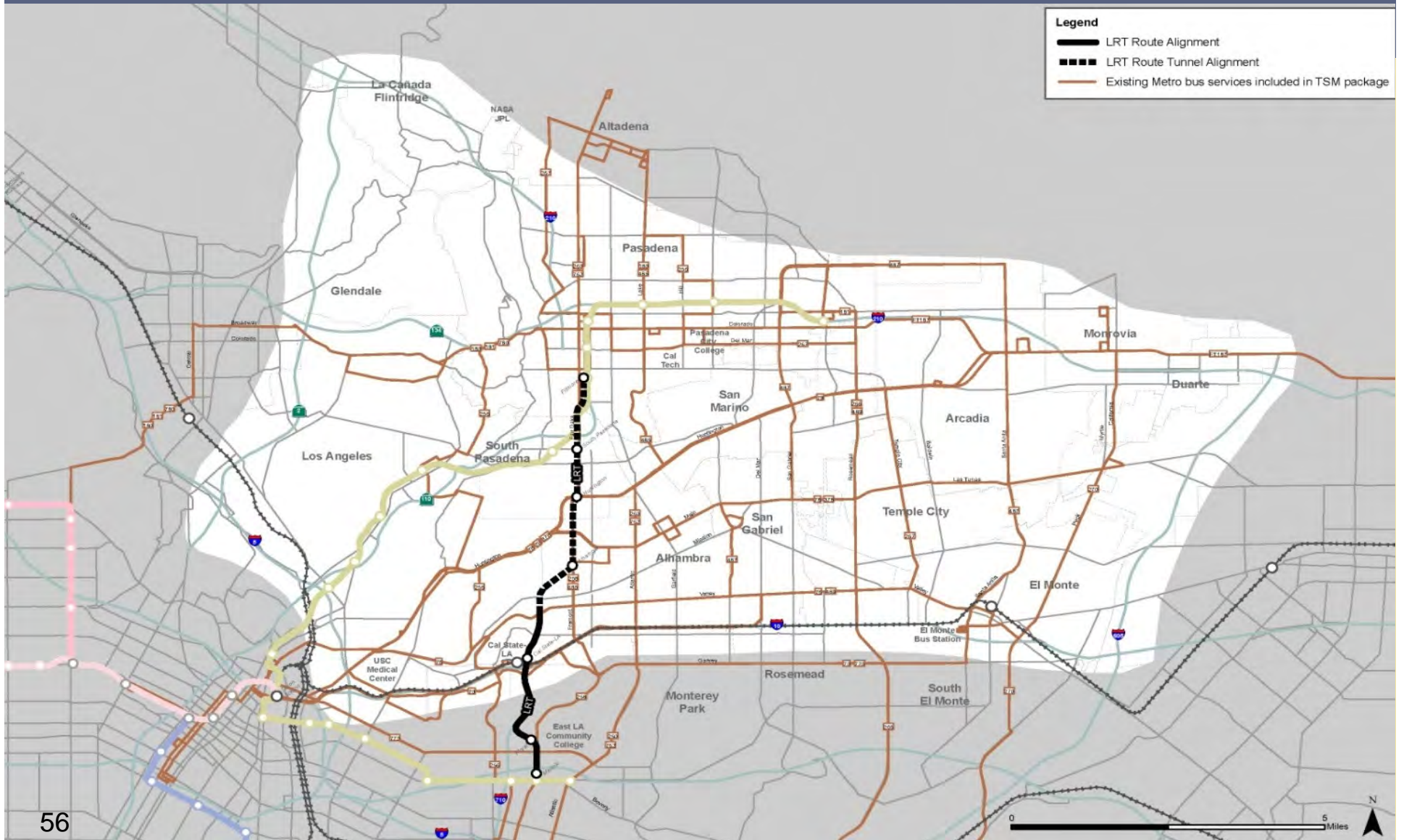
The alignment now shifts to Raymond Avenue, which reduces the property needed for the Fillmore Station and allows for a plaza between the new and existing stations.



# LRT – TSM Transit Refinement

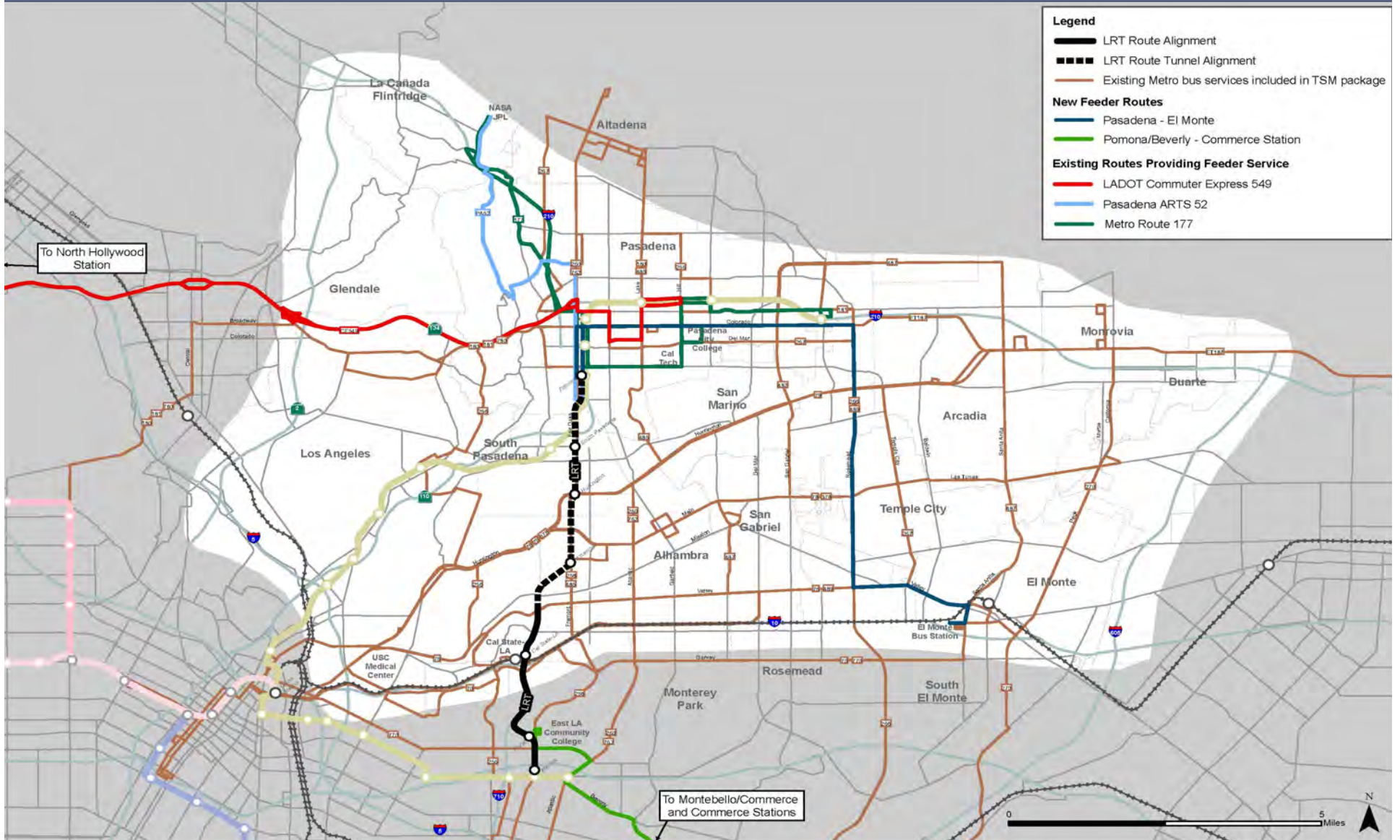


# LRT – Main Corridor



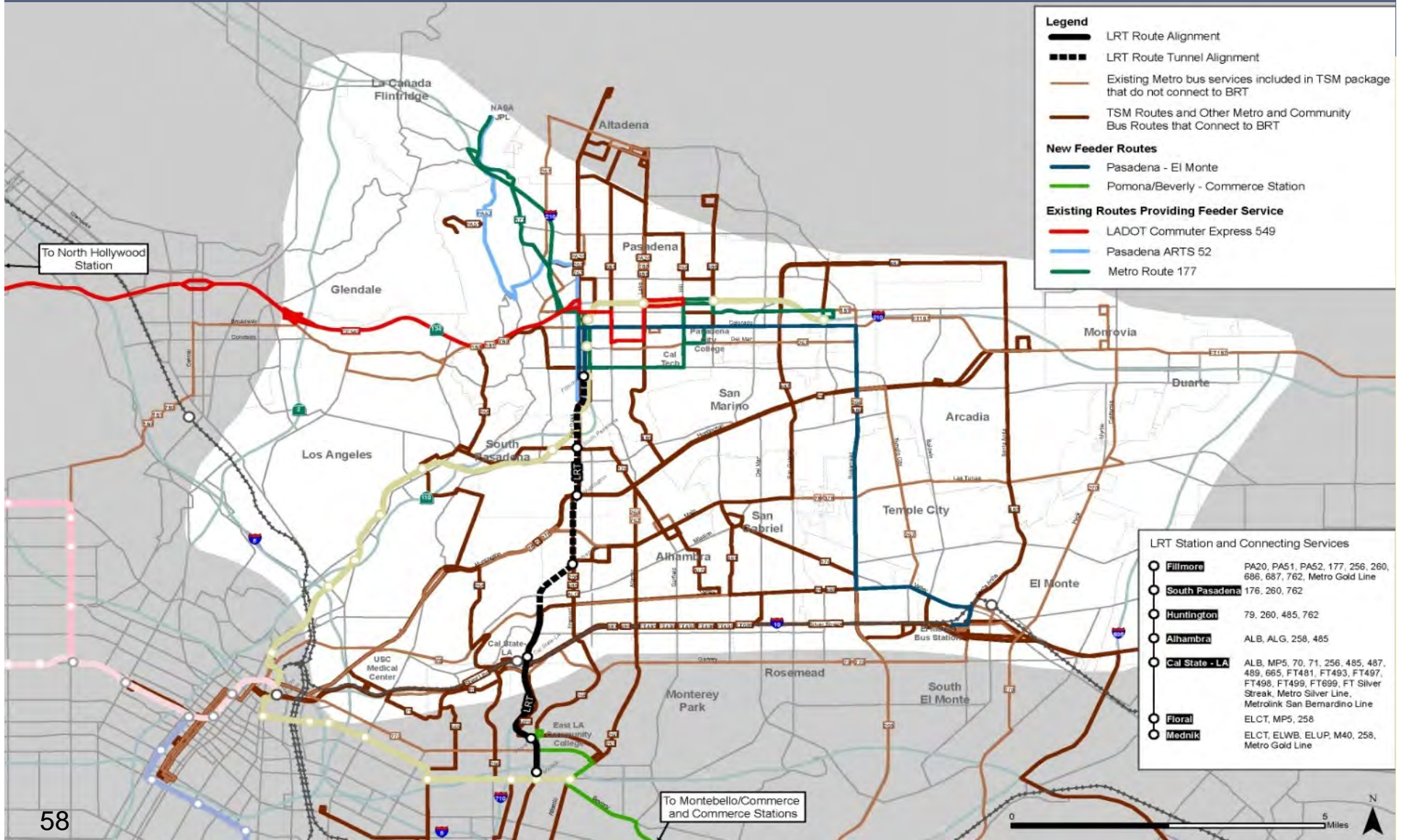


# LRT – Feeder Service

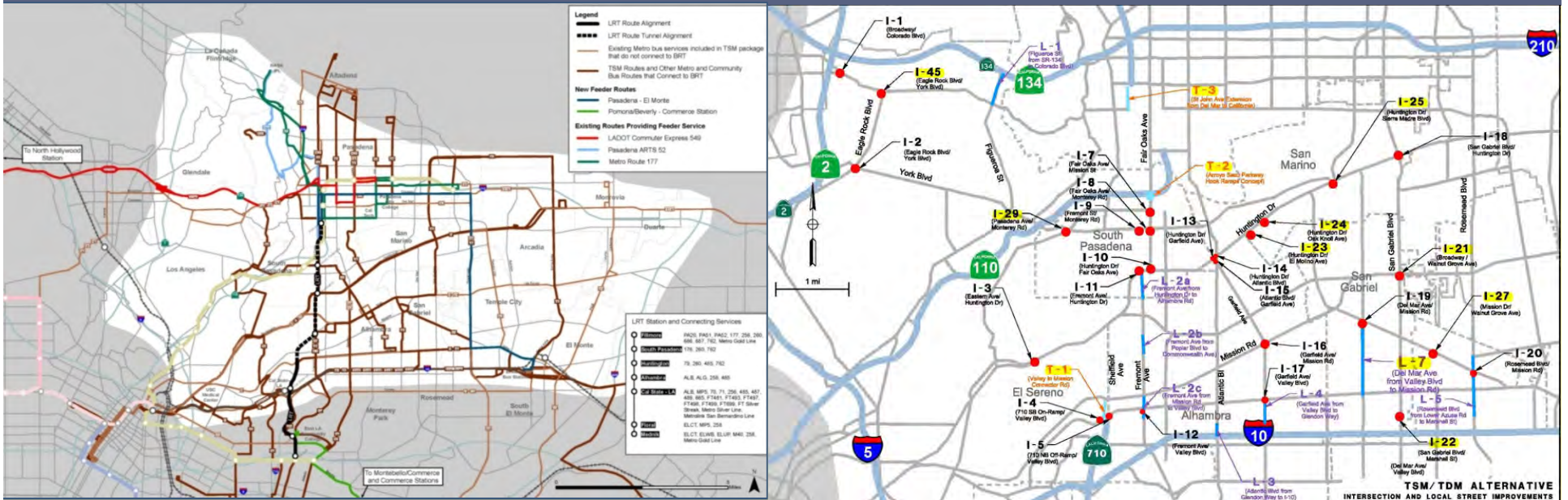




# LRT Alternative – Transit Service



# LRT Alternative



LRT alternative includes transit refinements, feeder service, active transportation, ITS, local street and intersection improvements



# Freeway Tunnel



# Freeway Tunnel Development Since AA Phase

- Continued to develop Draft Project Report Plans
- Set Maximum Disturbance Limit (MDL) and coordinated with environmental staff
- Continued coordination with LACFCD, Cal State LA, UPRR, Cities, Fire Marshal, Power Agencies
- Continued coordination related to tunnel safety and ventilation
- Began portal design

# Freeway Variations

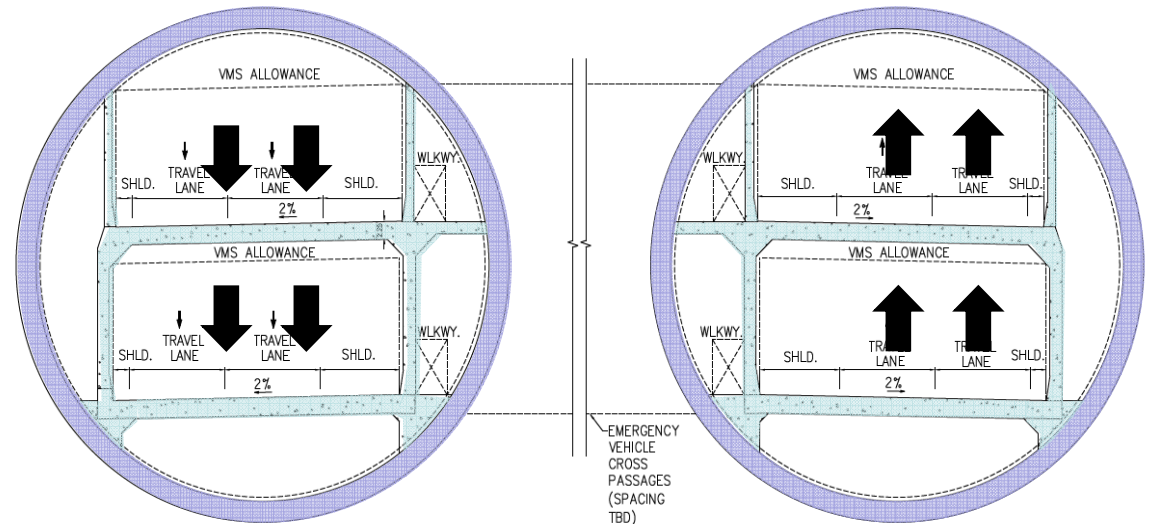
- No Toll
  - Dual bore tunnel considered
- Tolloed
  - Single and dual bore tunnels considered
- Tolloed with Express Bus
  - Single and dual bore tunnel with Express Bus inside the tunnel

All variations will be evaluated with and without trucks inside the tunnel

# Freeway Tunnel

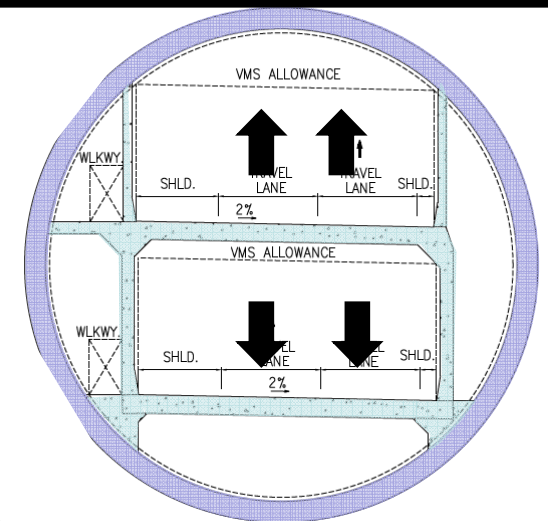
## Dual Bore

(Four lanes northbound and southbound)



## Single Bore

(Two lanes northbound and southbound)

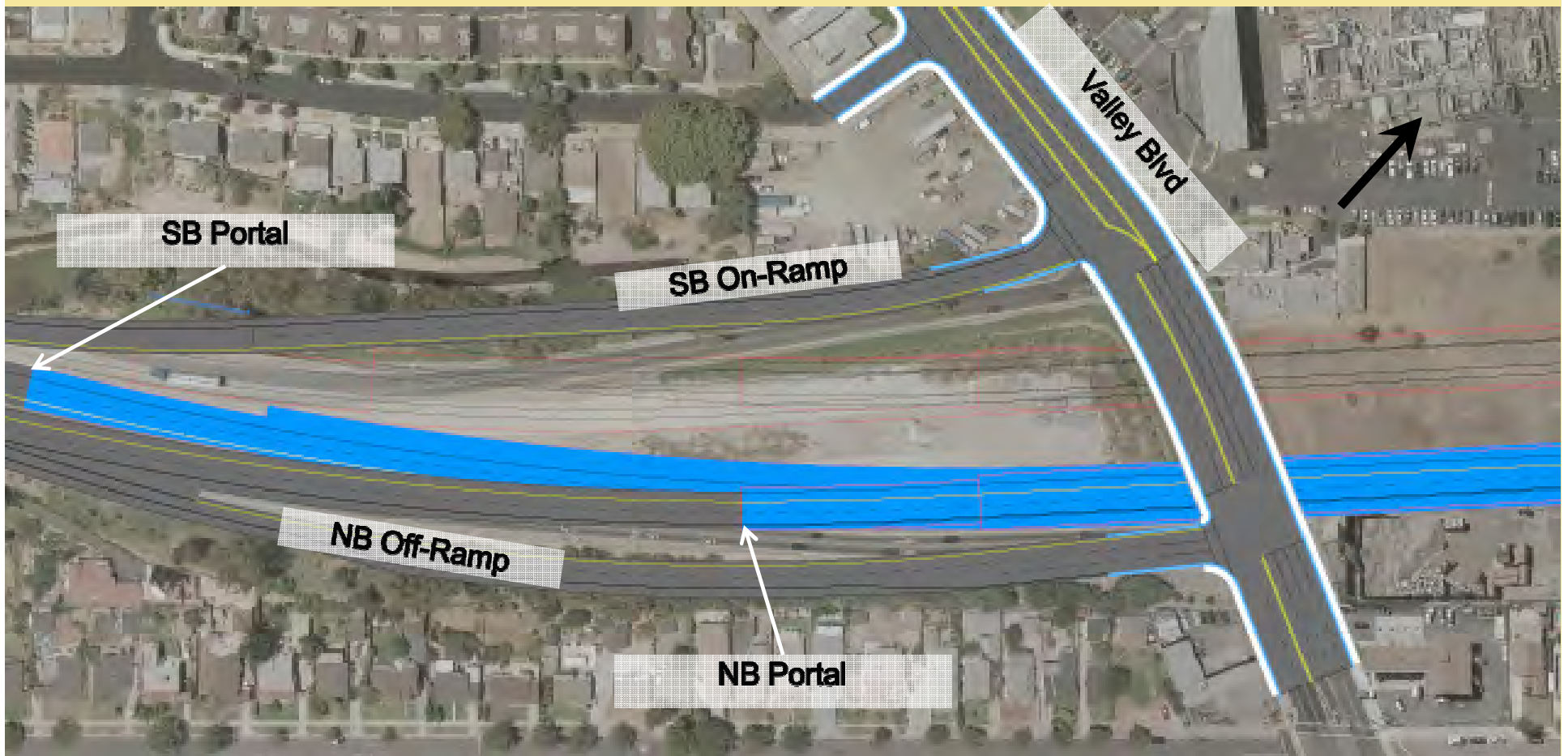




# Freeway Tunnel (Dual Bore) South Portal

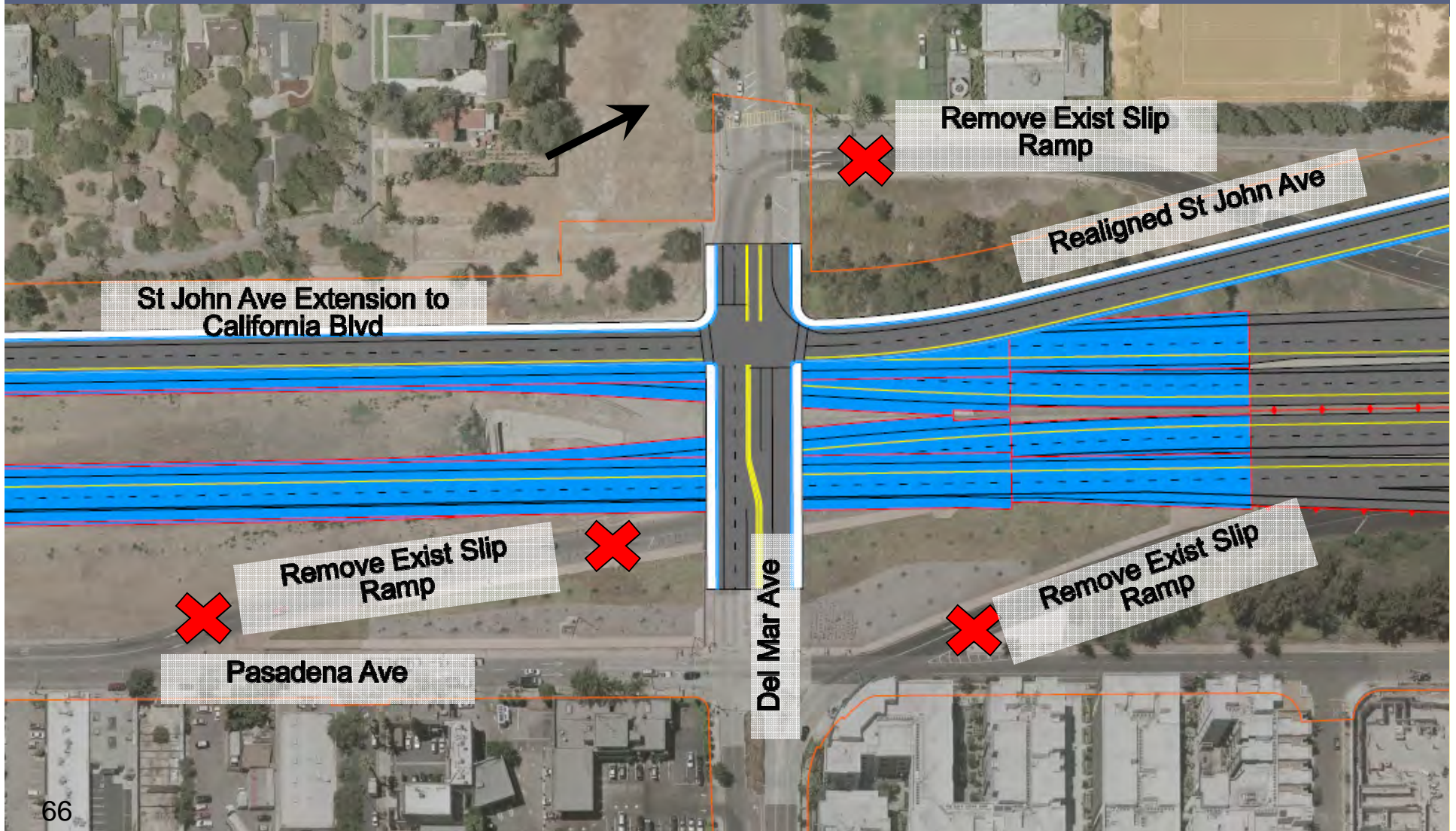


# Freeway Tunnel (Single Bore) South Portal

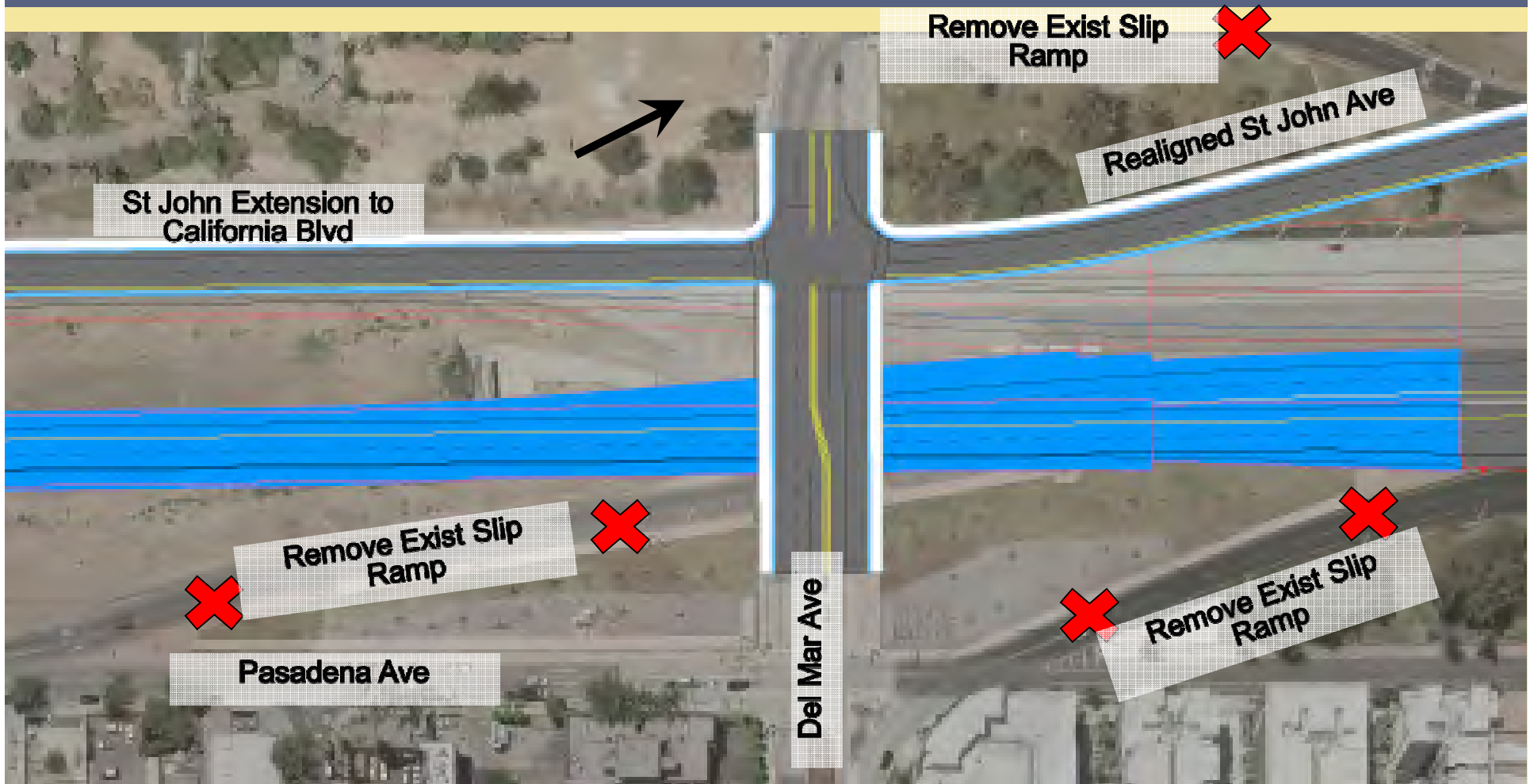




# Freeway Tunnel (Dual Bore) North Portal



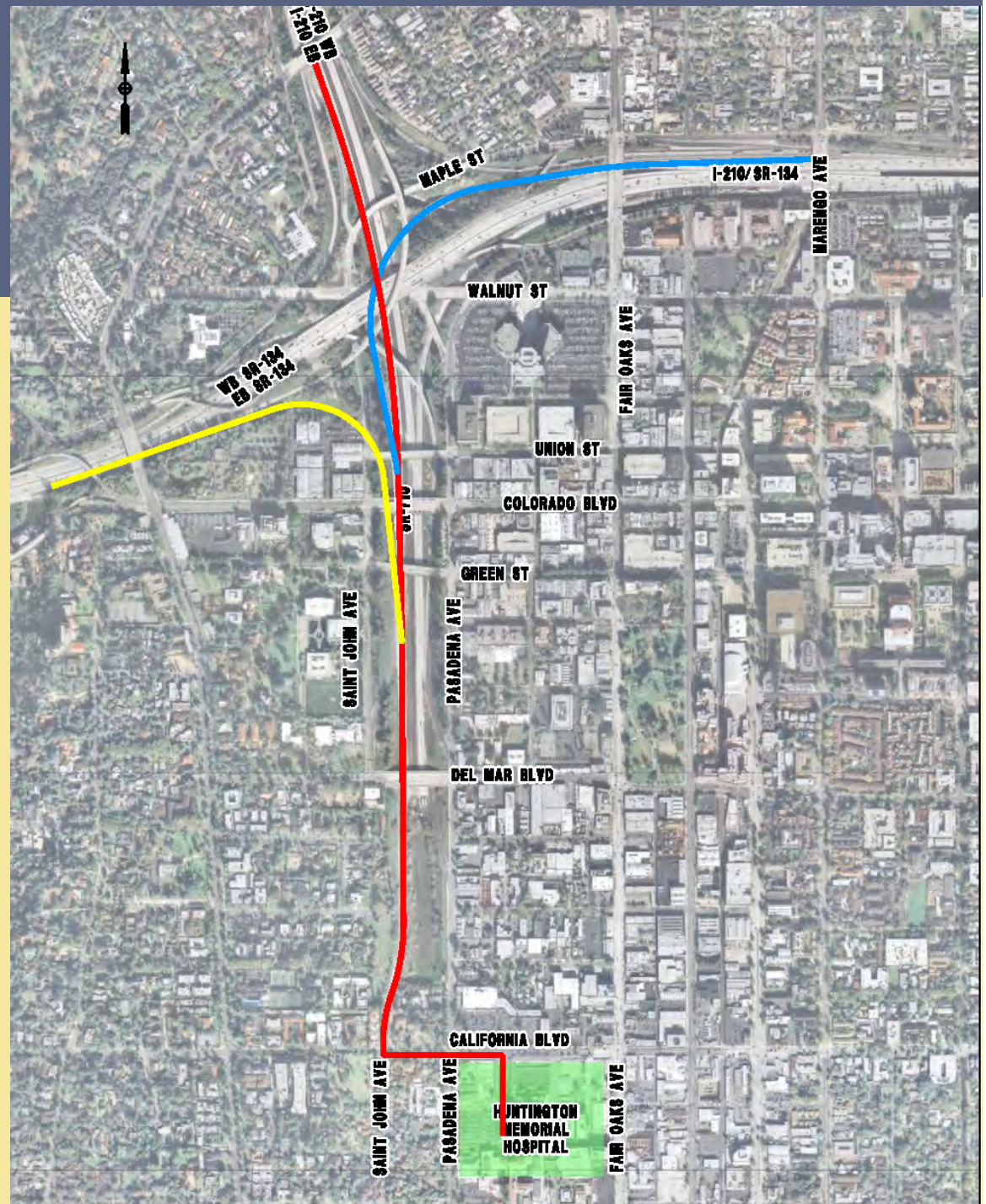
# Freeway Tunnel (Single Bore) North Portal





# Existing Access to Huntington Mem. Hospital

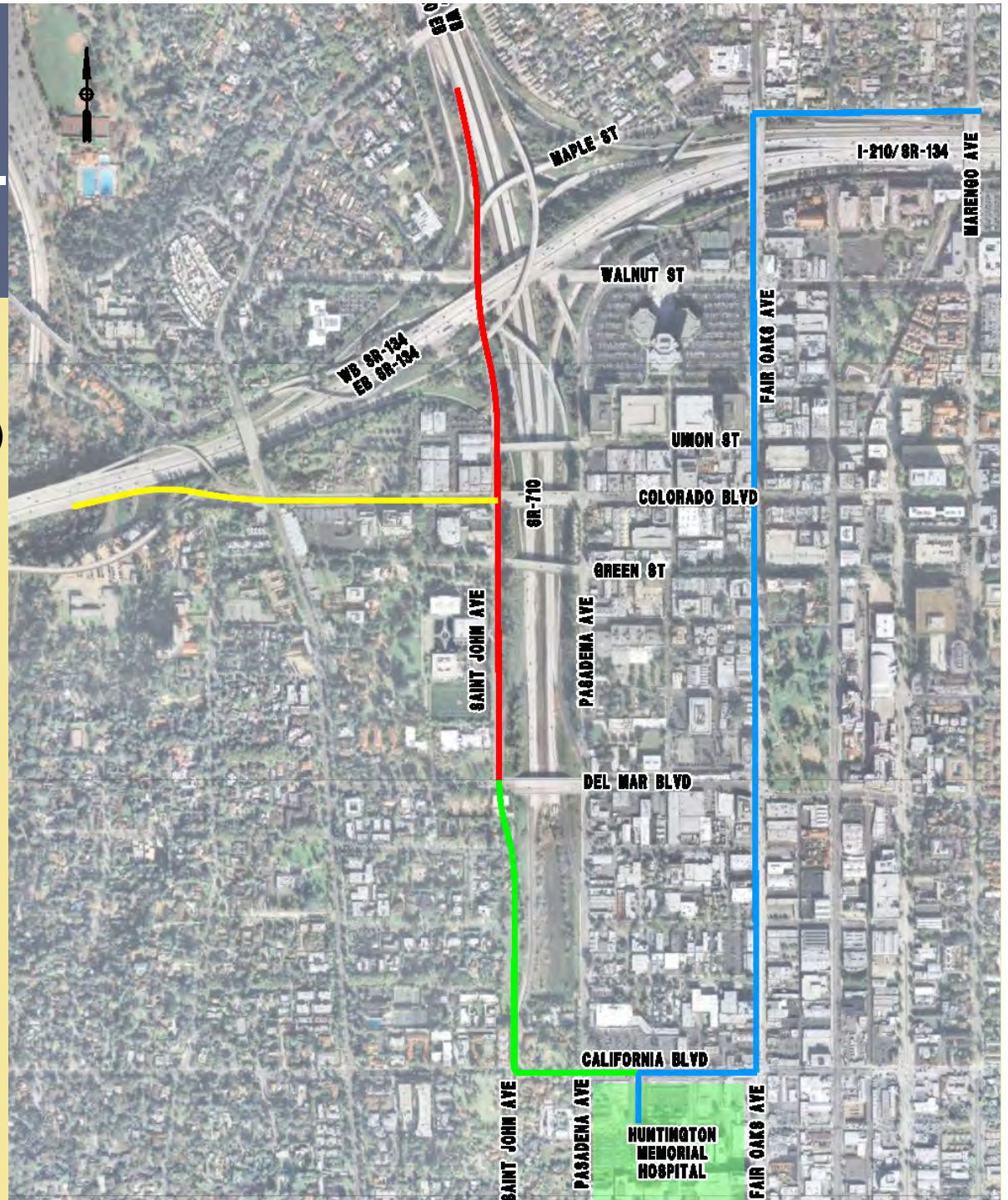
- Routes coming from the north (red line)
- Routes coming from the east (blue line)
- Routes coming from the west (yellow line)





# New Access to Huntington Mem. Hospital

- Routes coming from the north (Same distance) (red line)
- Routes coming from the east (Same distance) (blue line)
- Routes coming from the west (Approx. 670' shorter) (yellow line)
- Route along St. John extension (New route) (green line)





# North Portal Haul Route

- Truck haul route from the North Portal would use existing ramps and freeway
- Existing NB slip ramps from Pasadena Avenue will be closed
- Total Cubic Yards per Portal (dual bore) = About 5 Million
- Haul destination is undetermined





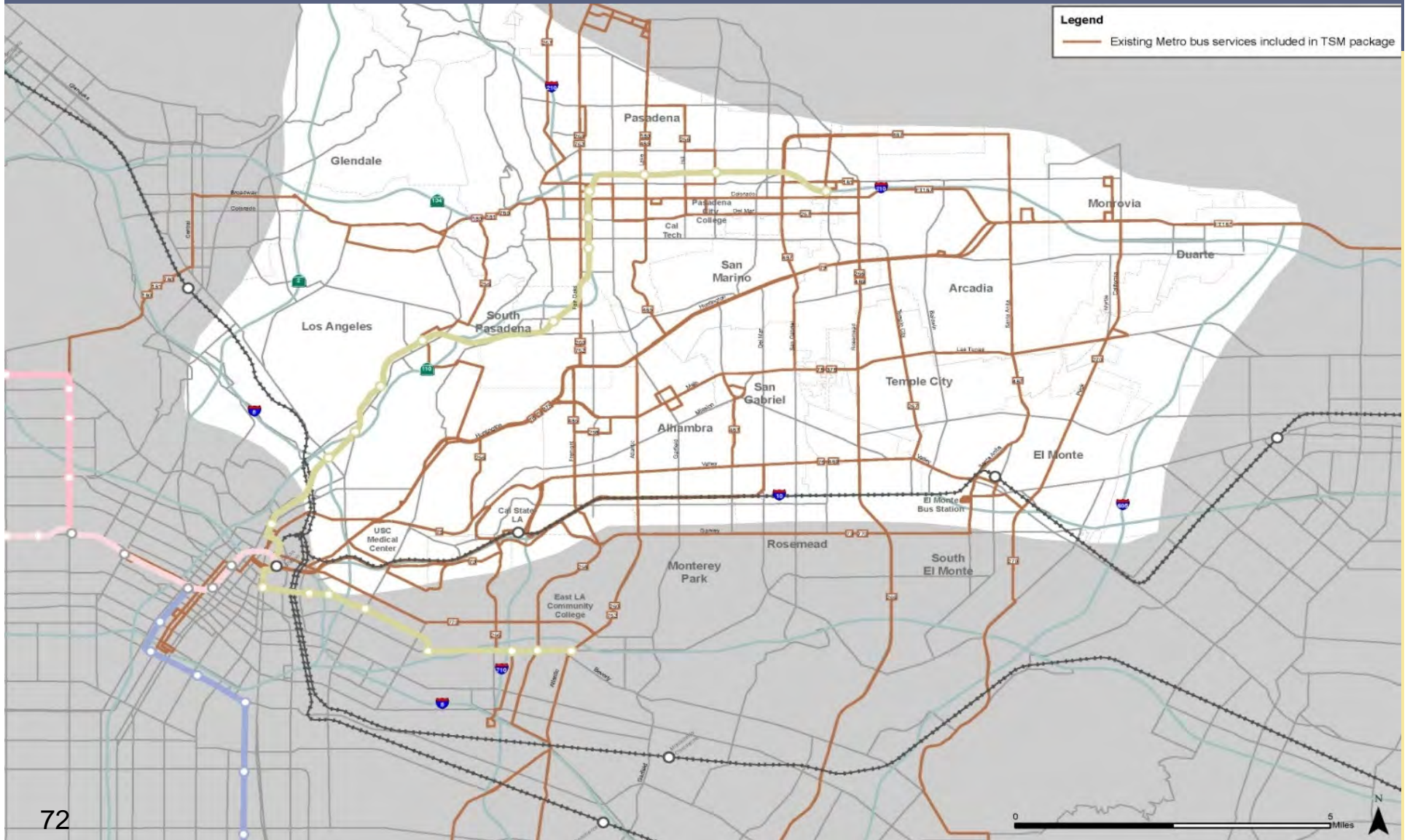
# South Portal Haul Route

- Truck haul route from the South Portal would cross under Valley Boulevard and enter SR 710 directly
- Haul trucks will be prohibited from using I-10 east to avoid weaving conflicts with traffic coming on from Valley Boulevard
- Removal of excavated material by rail is also being evaluated and coordinated with UPRR
- Haul destination is undetermined

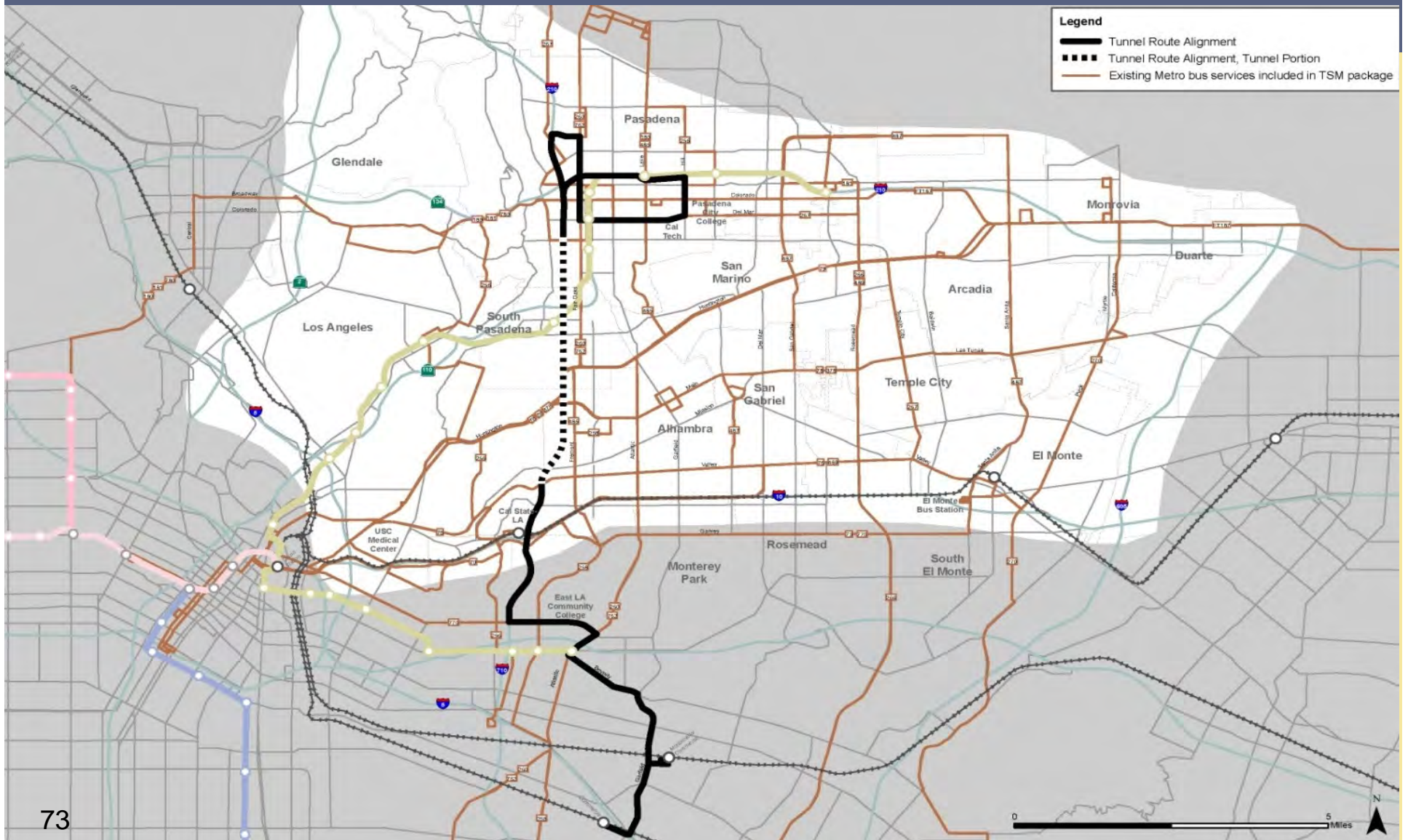




# Express Bus in Tunnel

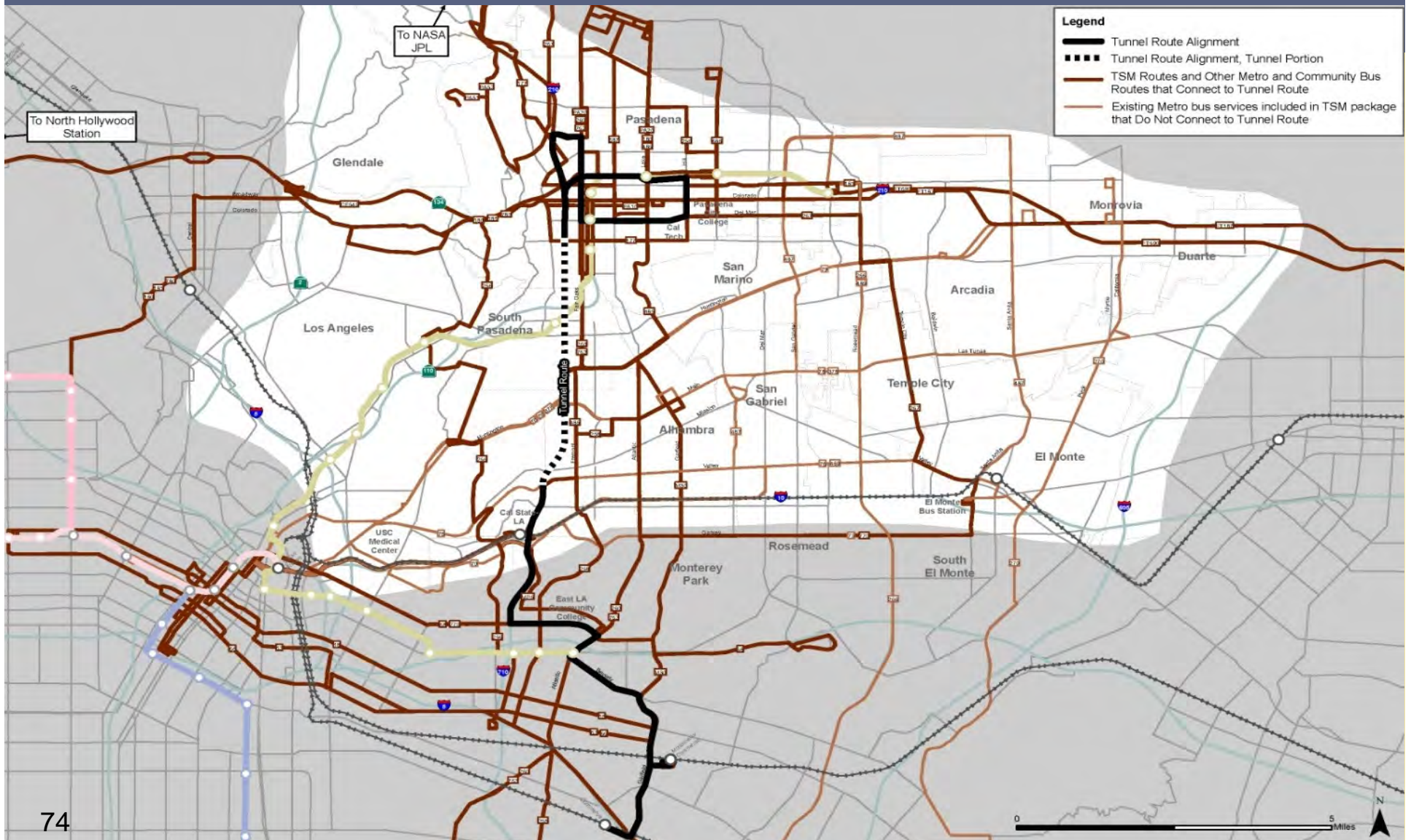


# Express Bus in Tunnel





# Express Bus in Tunnel



# Freeway Tunnel Alternative

- All freeway tunnel variations include transit refinements, feeder service, active transportation, ITS, local street and intersection improvements

# Status Update on Environmental Studies Documentation



# Technical Studies Update

- Met with Caltrans functional units
- Initiated data collection and review for all technical studies
- Finalizing maximum disturbance lines for use in technical studies
- Conducting field surveys for biological/wetland resources
- Conducting archival review for cultural resources



# Technical Studies Update (cont.)

- Establishing key view locations
- Developing community profiles
- Developing air quality and noise work plans
- Completed geotechnical field exploration
- Performed down-hole vibration testing (to aid in vibration analysis)
- Identifying and collecting data on potential Section 4(f) resources
- Conducting archival review for known hazardous waste generators/contaminated sites
- 2012 RTP is being validated for baseline conditions for traffic



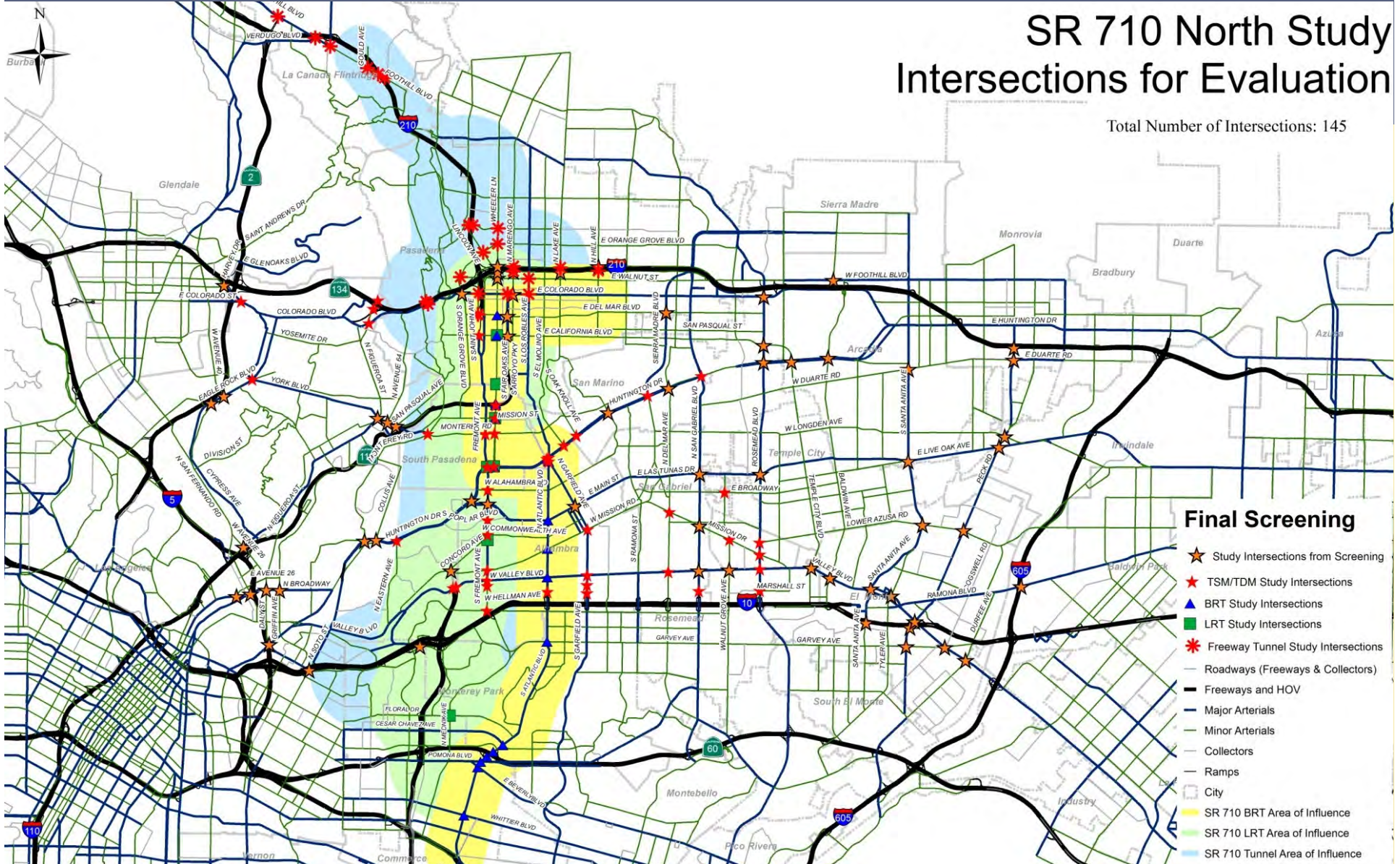
# Intersection Screening Process

- Began with approximately **2000** intersections
- Removed lower functional classification intersections
- Focused on intersections with high approach volumes
- Put high consideration on intersections within an influence area for BRT, LRT, and freeway tunnel
- Retained all TSM/TDM alternative intersections

# Study Intersections Map

## SR 710 North Study Intersections for Evaluation

Total Number of Intersections: 145



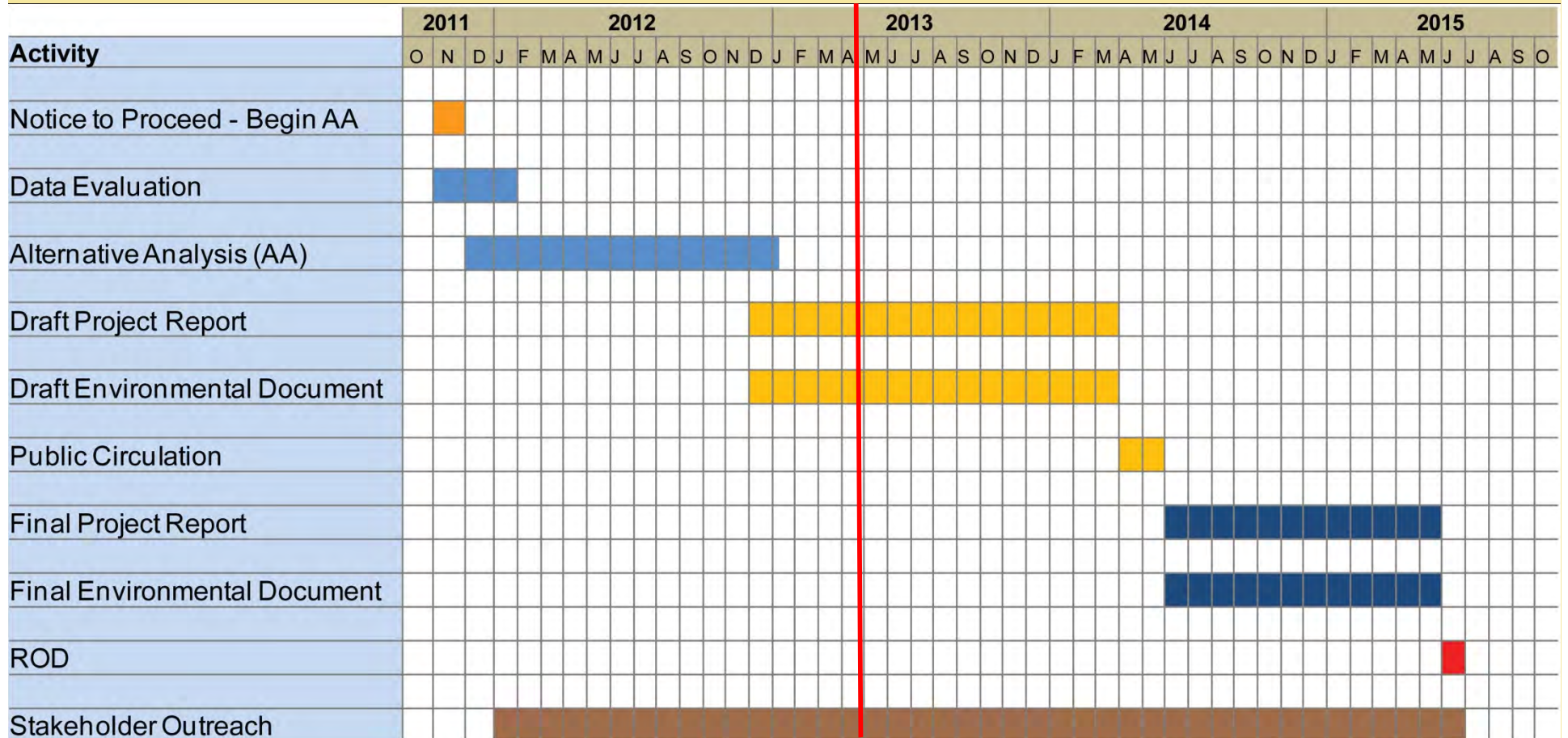


# Next Steps





# Study Schedule



# Next Steps

- Continue validation of the 2012 RTP model
- Evaluate performance of Build Alternatives using 2012 RTP model
- Continue to refine alternatives
- Continue with Technical Studies
- Continue with Preliminary Engineering
- Continue Value Analysis (VA) Study

# Tentative Meeting Dates for TAC/SOAC

- 2013 TAC/SOAC Meeting Schedule
  - July 10/11
  - September 11/12
  - November 13/14



# Open Discussion

