Next Stop: a new kind of ride on Vermont.

VERMONT TRANSIT CORRIDOR
South Bay Extension Feasibility Study – Key Stakeholder Outreach Meeting
November 3, 2021

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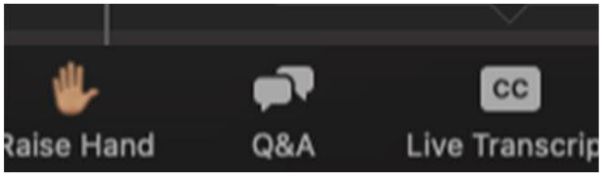
Housekeeping Items

- Question and answer session will occur after the presentation
- Please put questions you have during the presentation in the chat
  Please stay on mute during the presentation
- The “raise hand” button is at the top of your screen in the menu



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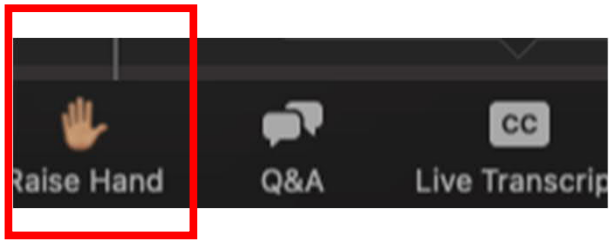
How to Participate

> Questions and comments will be addressed by our panel at the end of the presentation

> You may submit multiple comments/questions, as needed:

> Via web

- Click Participants > “raise hand”



- When announced, unmute your audio, you can then ask your question (s)
- You will be re-muted once you complete your comments (s)
- Click the “Q&A” function to submit your question in writing

> Via the phone (calling in):

- Press “*9” on your keypad
- You will be announced by the last four digits of your phone number
- You will be re-muted once you complete your comments (s)

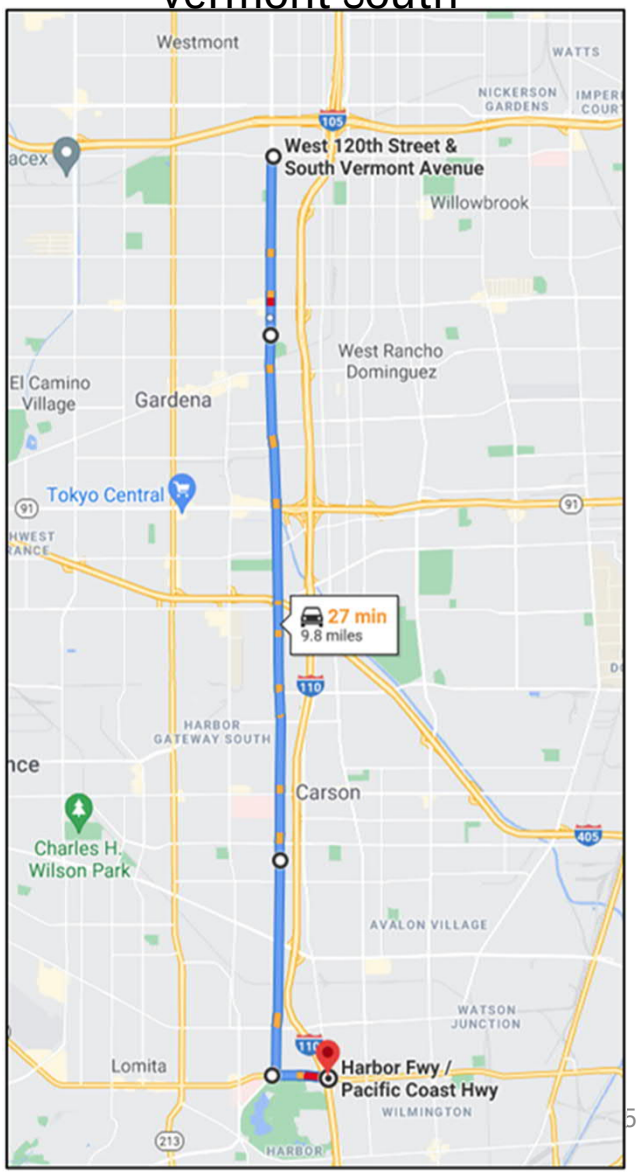
Agenda

- Introductions
- Study Background (Recap)
- Mobility Challenges
- Preliminary BRT Concepts
- Preliminary Rail Concepts
- Next Steps
- Q&A

Study Background (Recap)

- February 2017 - Vermont Bus Rapid Transit (BRT) Technical Study
- March 2019 - Vermont Transit Corridor Rail Conversion/Feasibility Study
- April 2019 - Board directed staff to:
  - Advance both BRT and rail concepts into environmental review
  - Explore feasibility of extending BRT and rail concepts south from 120th Street to the Metro J (Silver) Line PCH transitway station
- March 2021 –Initiated Vermont Transit Corridor South Bay Extension Feasibility

Vermont South



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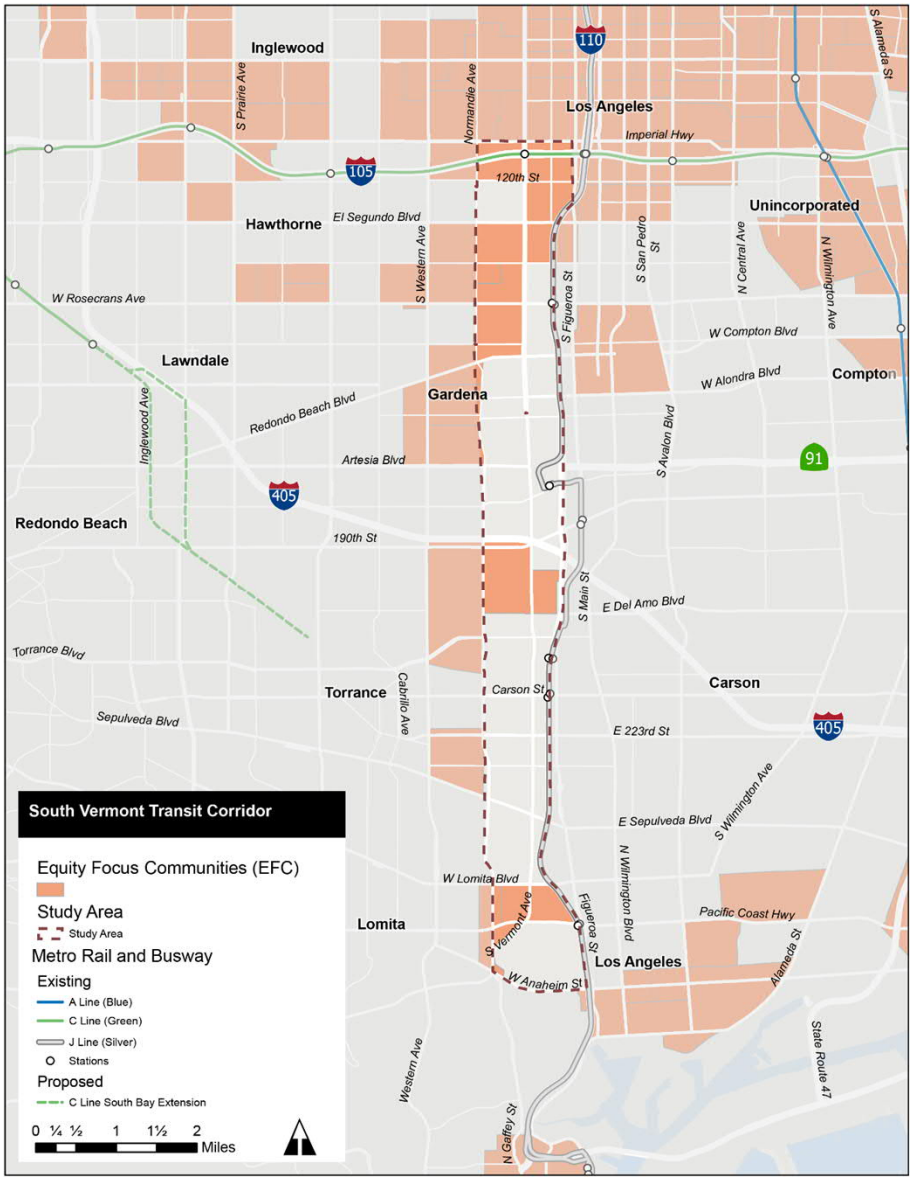
Corridor Profile

- Approximately 70% of residents are people of color
- Approximately 13% of residents have limited English proficiency
- High percentage of low and middle-income households, who are more likely to rely on transit to access jobs

	2017 Households by Income Group		
	Low	Medium	High
Los Angeles County	33%	28%	39%
Study Area	36%	30%	34%



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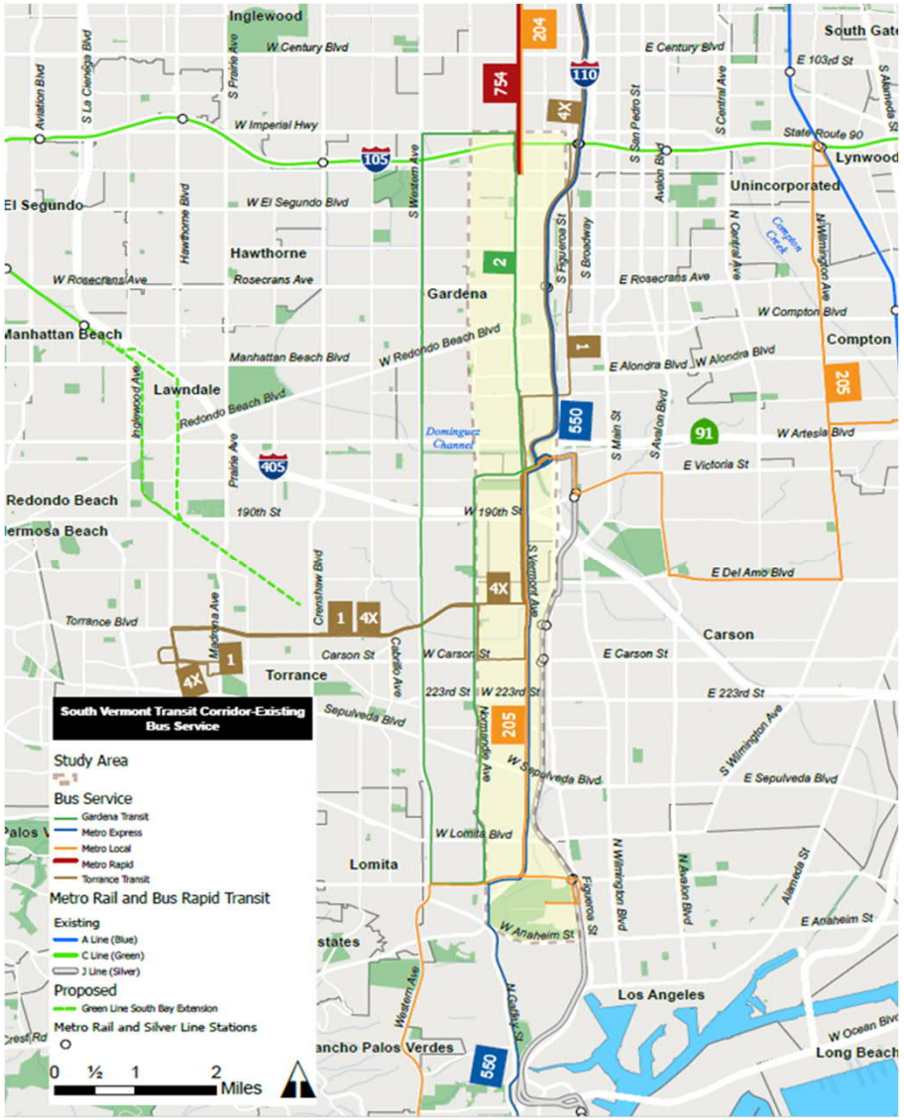
Mobility Challenges

- No continuous transit service
- Slow bus speeds - not competitive with car
  - Bus: 62 mins
  - Car: 25 to 28 mins
- Relatively low bus service frequency
  - Metro Lines 205 and 550: 30+ mins
- Low transit ridership (pre-covid average weekday)
  - 2,900 on Vermont South (Metro 205, 550, GTrans 2, and Torrance 1)
  - 45,000 on Vermont North (Metro 204 and 754)



Mobility Challenges

- Bike lanes on many segments of corridor but there are still some gaps
- 120th Street is the only cross-street with bike lanes
- Narrow sidewalks along some segments of the corridor
- Several crosswalks are faded and hard to see

Transit Options

- Bus Rapid Transit (BRT)
  - Premium transit service designed to be more like rail
  - Key features include dedicated bus lanes, transit signal priority, high frequency service, enhanced stations
- Light Rail Transit (LRT)
  - Operates above, below or at street level with top speed of 35-65 miles per hour
  - Example: Metro E (Expo) Line, Metro L (Gold) Line
- Heavy Rail Transit (HRT)
  - Operates above or below ground at top speed of 32-70 mph
  - Example: Metro B (Red) Line

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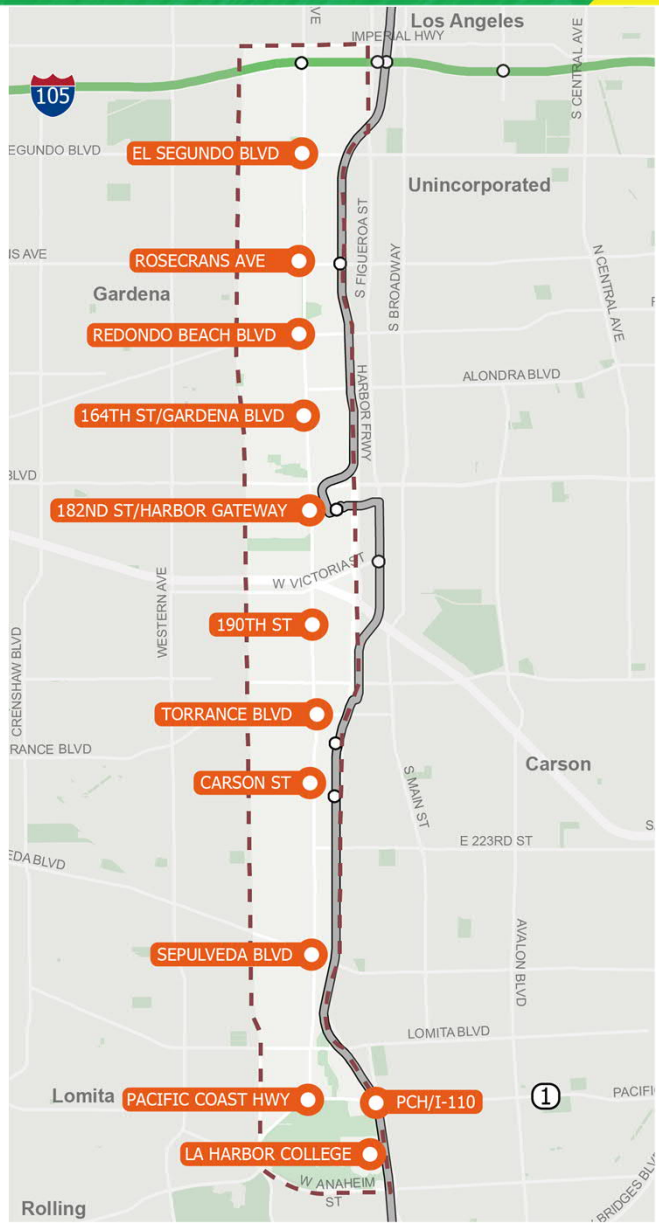
Proposed Station Locations

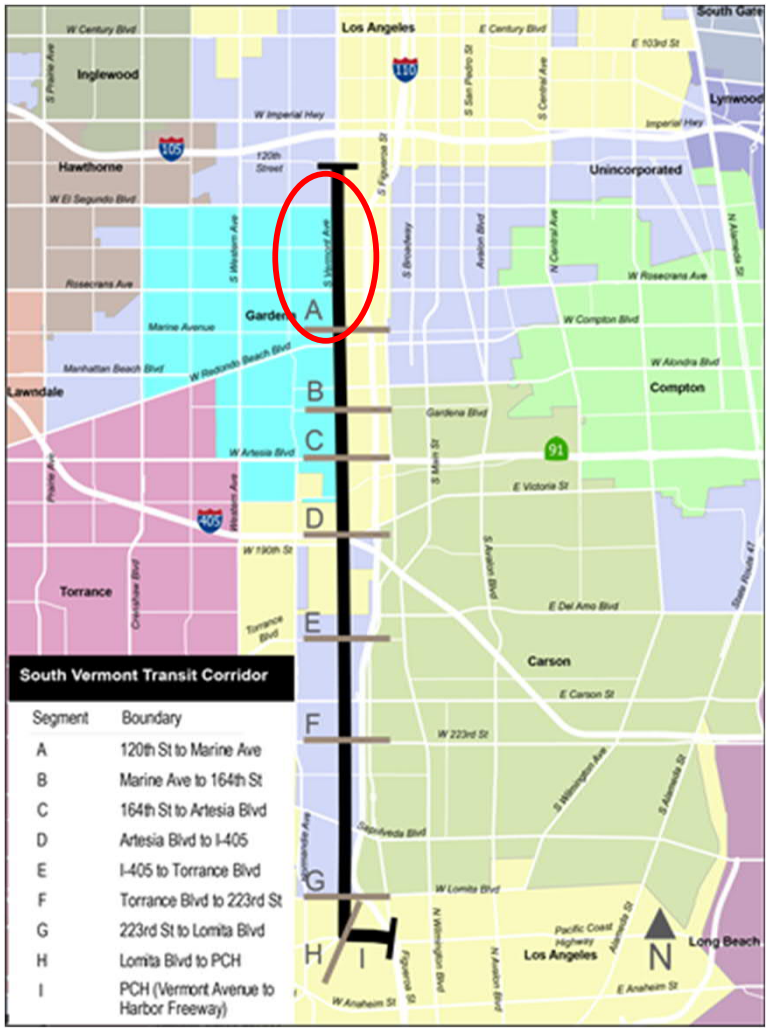
Stations - South Vermont Corridor	BRT	LRT	HRT
120th Street (North Vermont Corridor)	X		
El Segundo Boulevard	X	X	X
Rosecrans Avenue	X	X	X
Redondo Beach Boulevard	X	X	
164th Street/Gardena Boulevard	X	X	X
182nd Street/Harbor Gateway Transit Center	X	X	X
190th Street	X	X	X
Torrance Boulevard	X		
Carson Street	X	X	X
Sepulveda Boulevard	X	X	X
Pacific Coast Highway (BRT only)	X		
PCH/I-110 (on PCH)	X	X	X
LA Harbor College (BRT only, optional)	X		

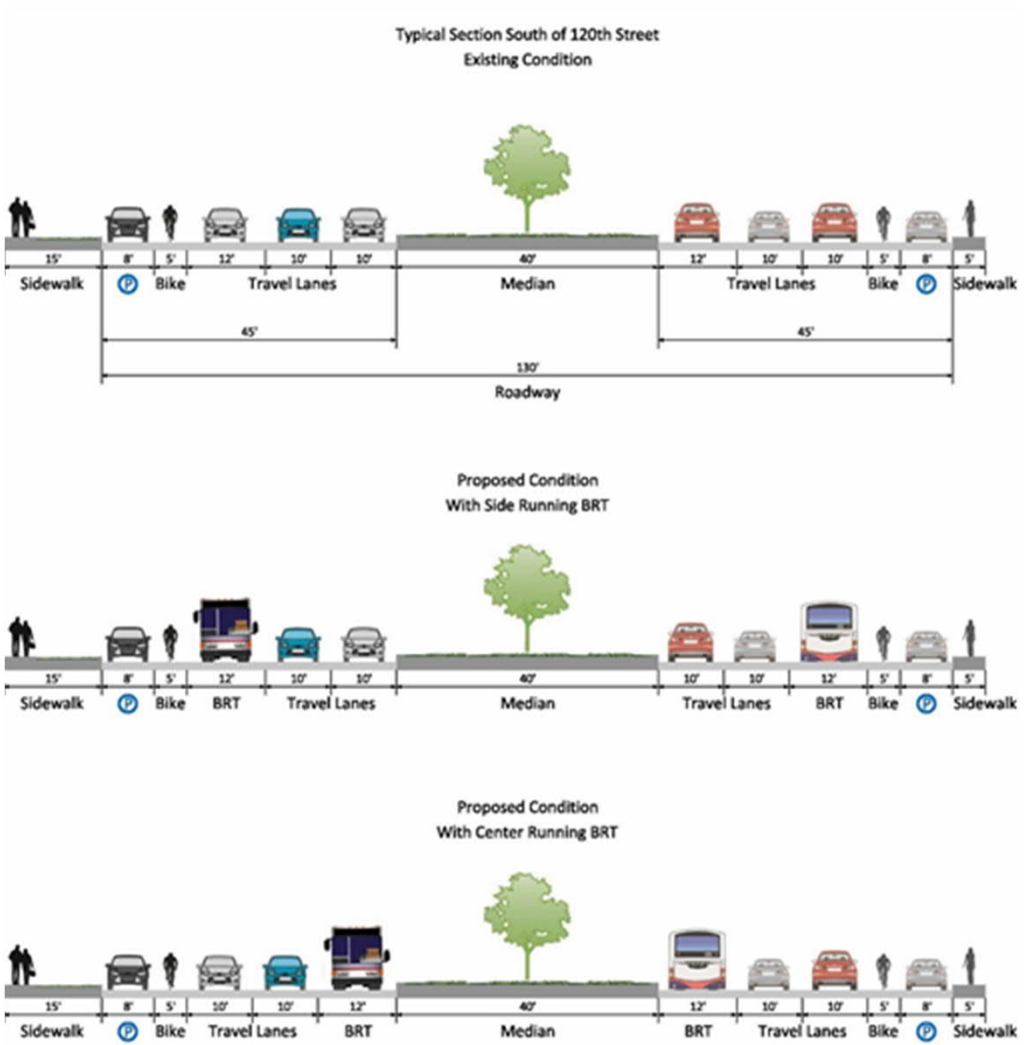
BRT: 12 stations
LRT: 9 stations
HRT: 8 stations



Preliminary Bus Rapid Transit (BRT) Concepts

> Segment A (120th Street to Marine Avenue)





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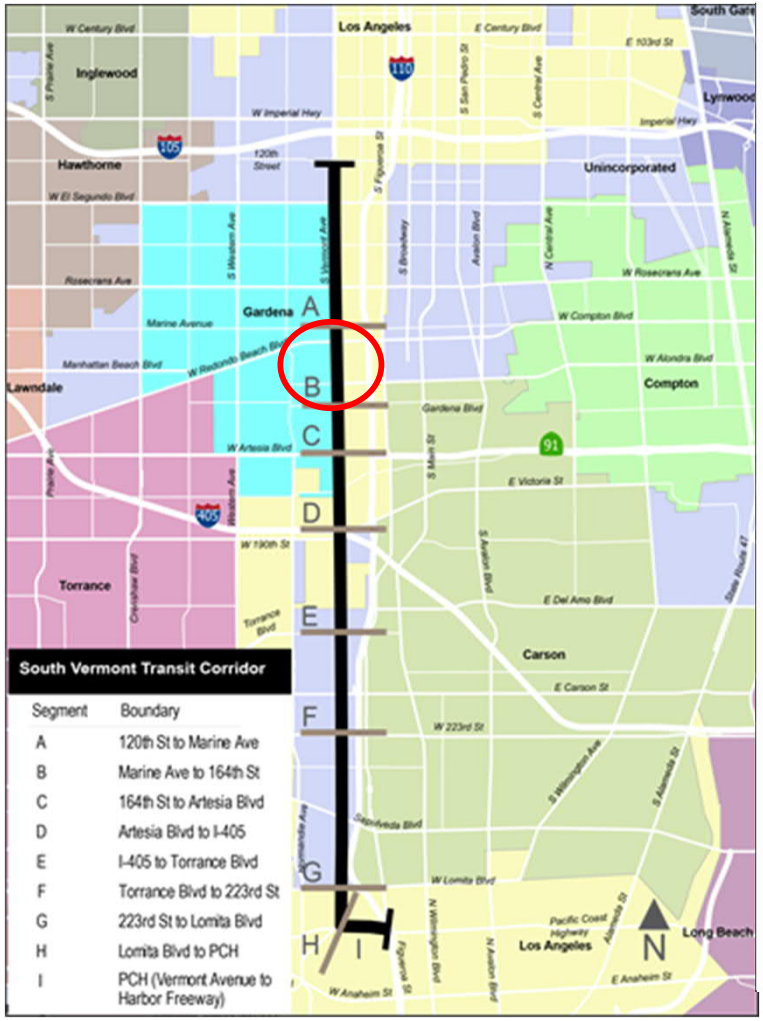
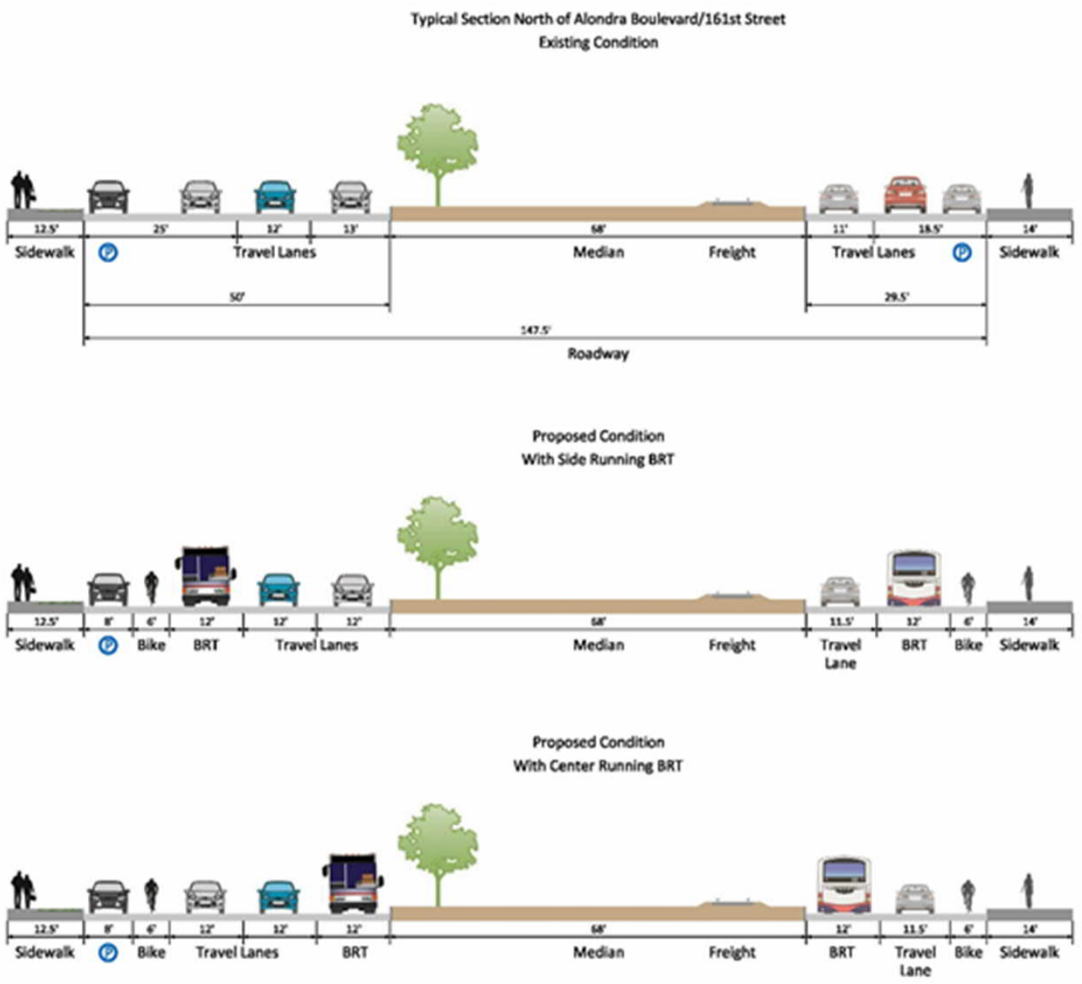
Preliminary Bus Rapid Transit (BRT) Concepts

> Segment B (Marine Avenue to 164th Street)





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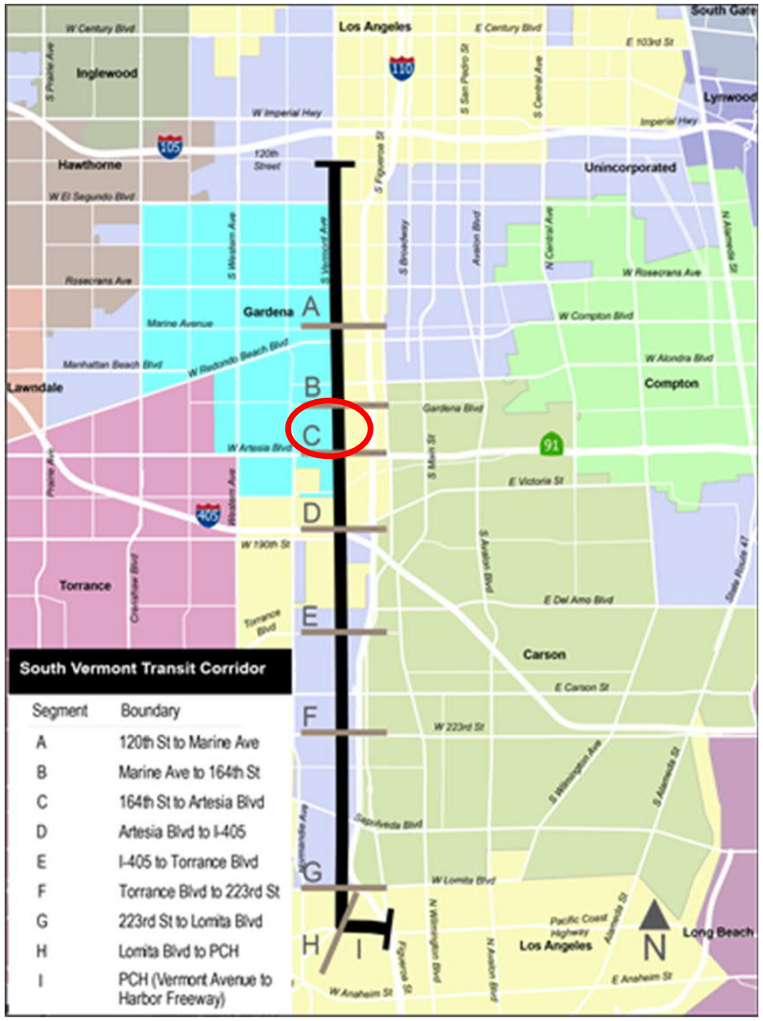
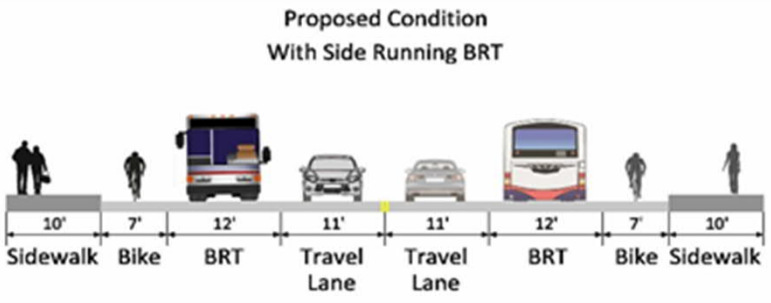
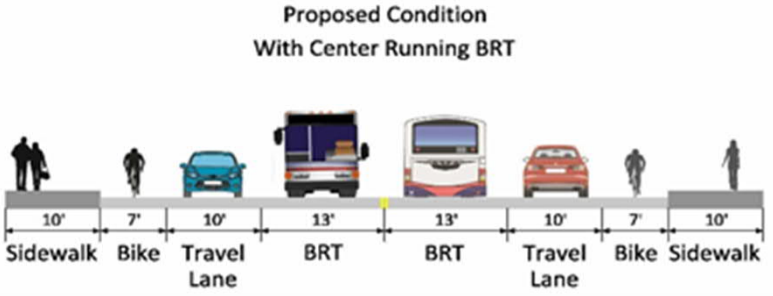
Preliminary Bus Rapid Transit (BRT) Concepts

> Segment C (164th Street to Artesia Boulevard/SR-91)







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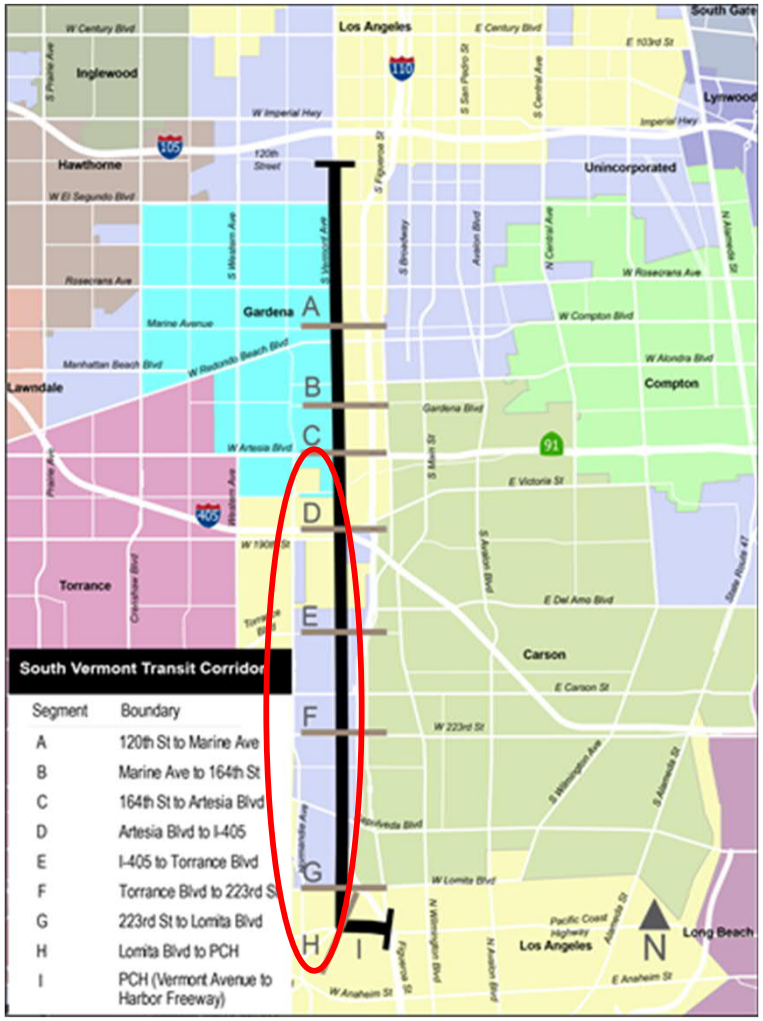
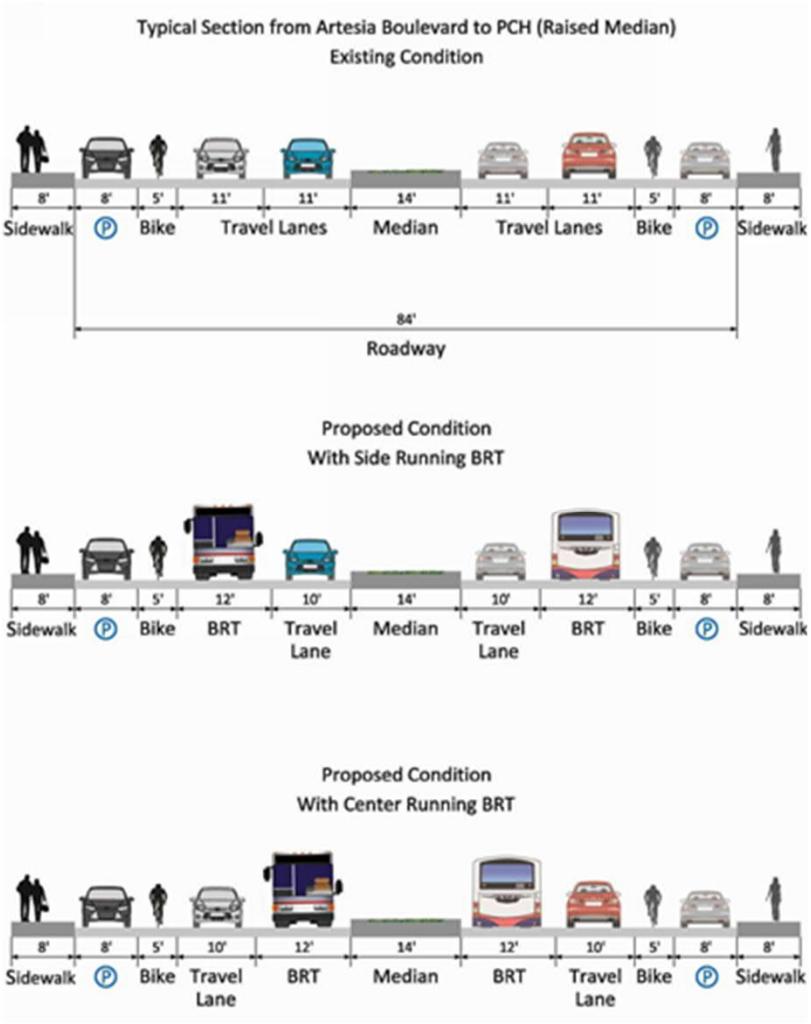
Preliminary Bus Rapid Transit (BRT) Concepts

> Segments D, E, F, G and H (Artesia Boulevard/SR-91 to PCH)



With Raised Median



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Preliminary Bus Rapid Transit (BRT) Concepts

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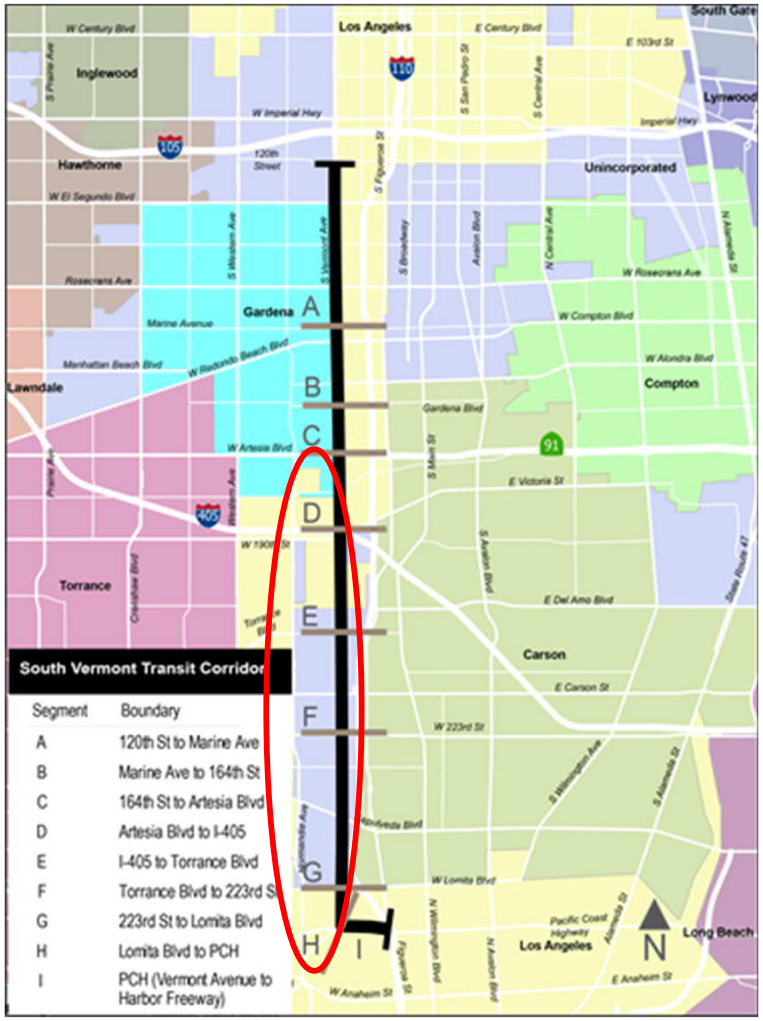
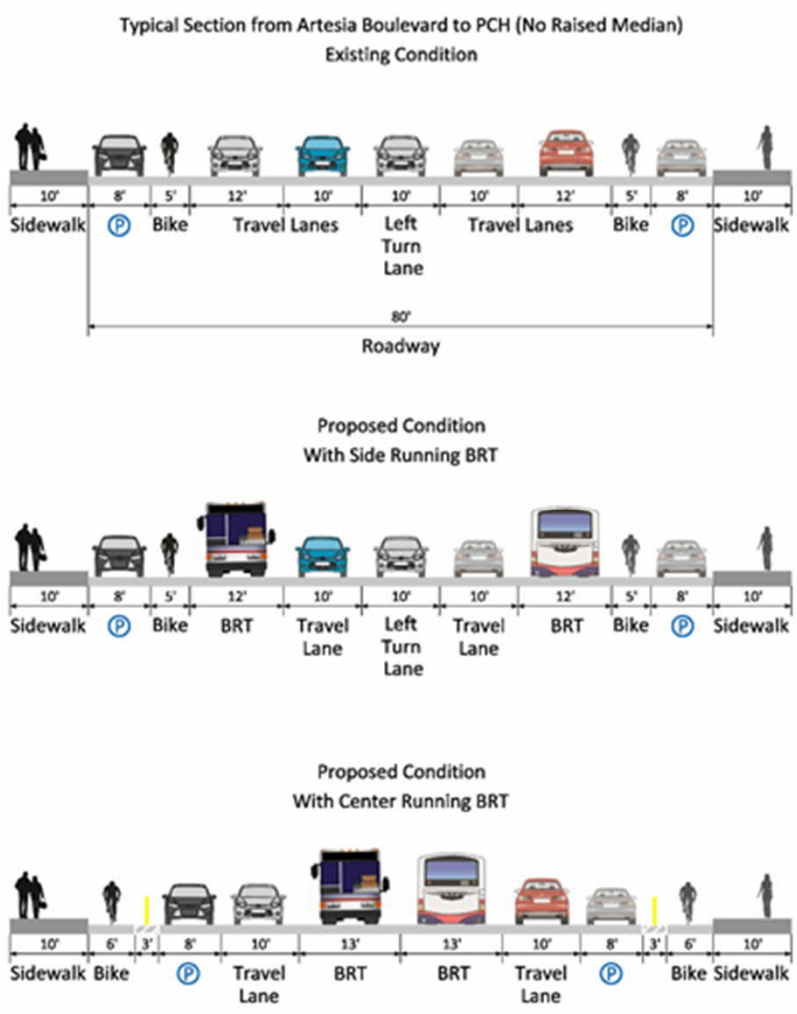


Without Raised Median



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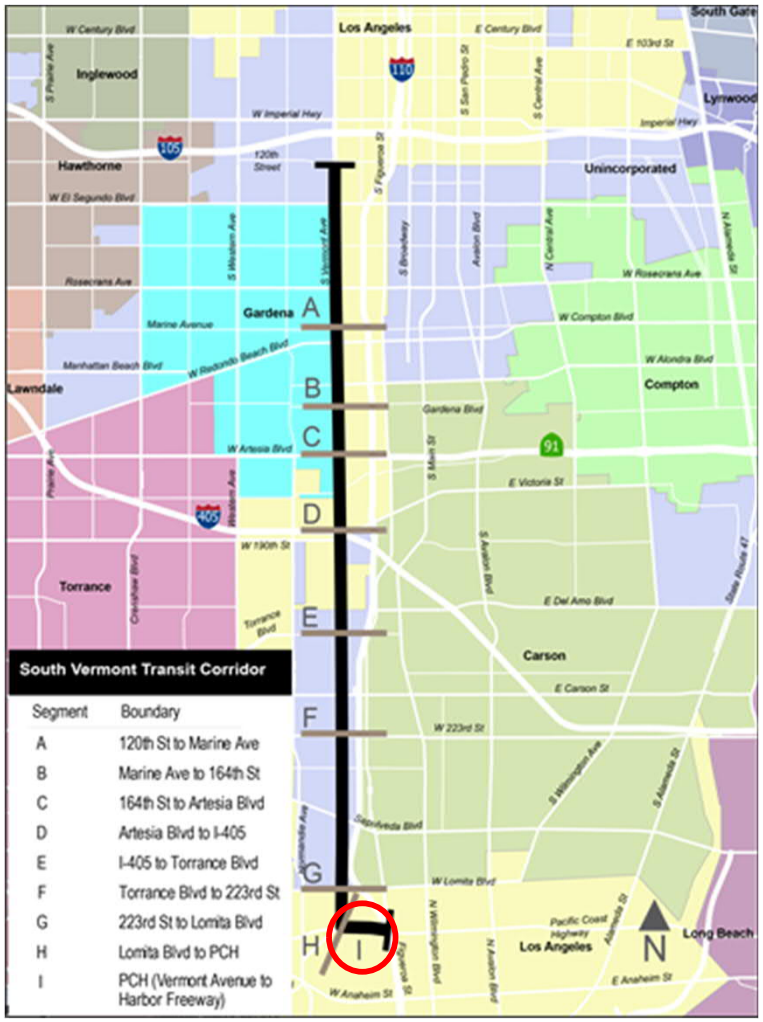
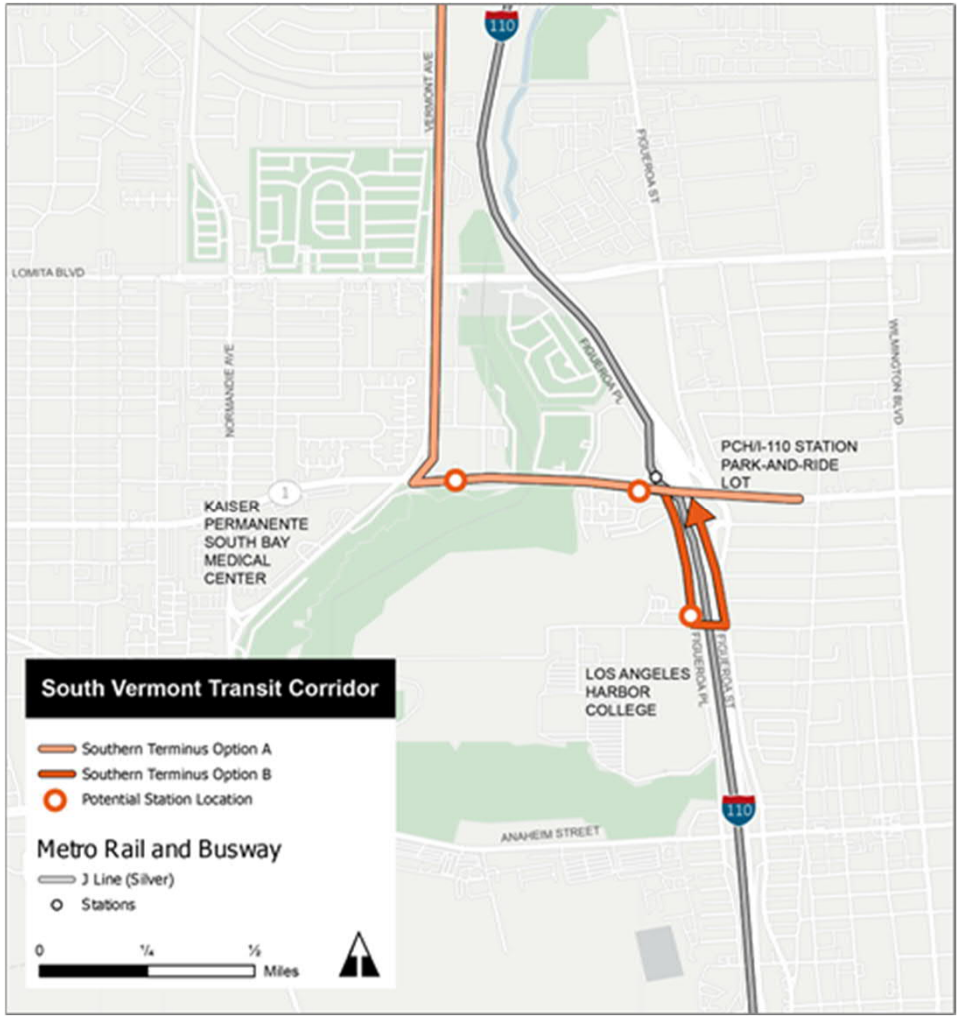
Preliminary Bus Rapid Transit (BRT) Concepts

> Southern Terminus





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Side Running Bus Rapid Transit (BRT) Summary

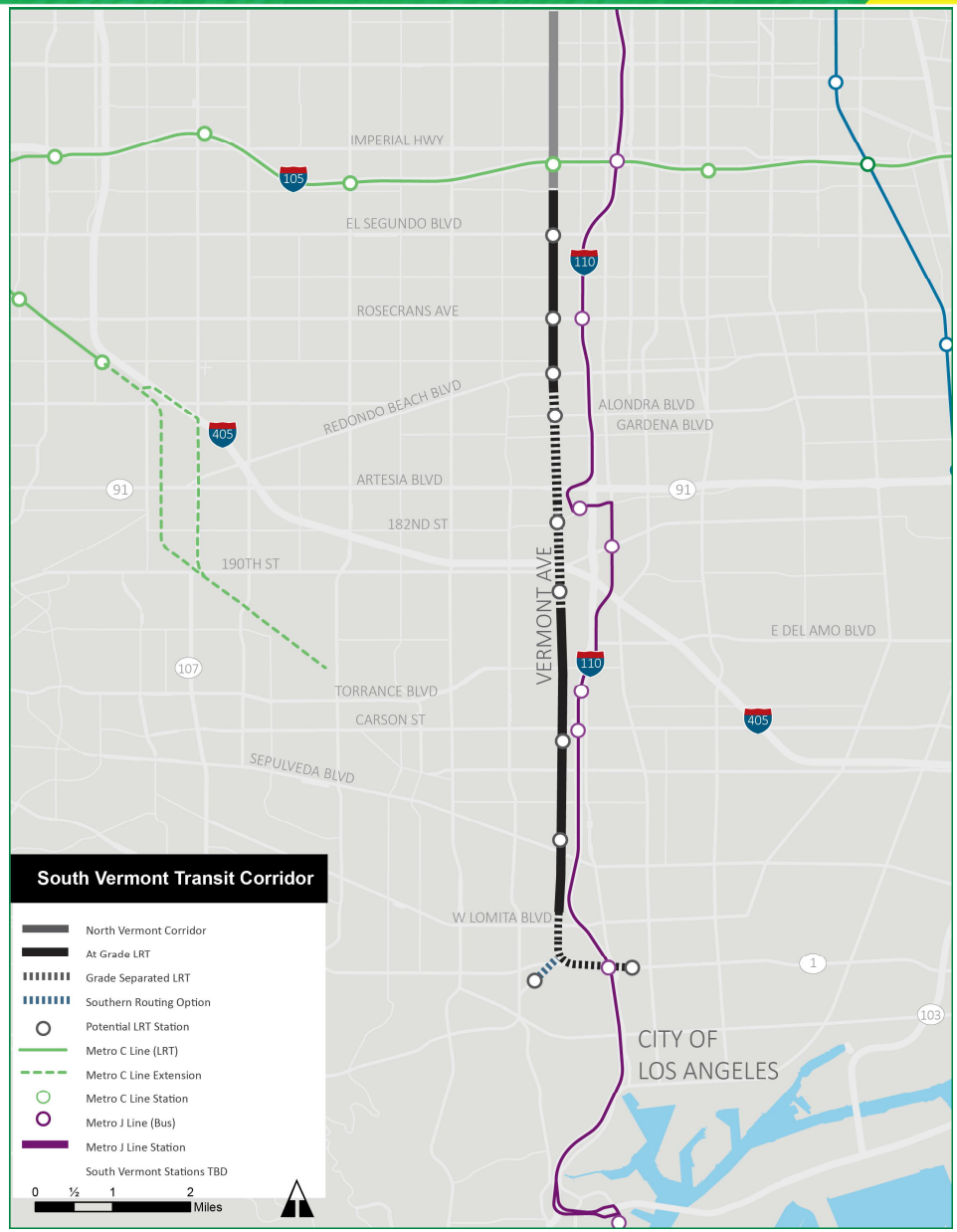
- Can generally be accommodated along the corridor.
- Less physical roadway modification required than Center Running BRT.
- No impact to existing left turns intersections without signals.
- Potential impacts include:
  - On-street parking removal or property acquisition in selected segments to close gaps in the existing bike network.
  - Dual left turn lanes at Artesia Boulevard reduced to single turn lanes.
  - Some existing raised medians to be narrowed or removed.
  - Some far side stations would have driveway conflicts. Multiple options for resolution.
- Actual impacts to be determined in subsequent design stages.

Center Running Bus Rapid Transit (BRT) Summary

- Can generally be accommodated along the corridor.
- Less conflict with general traffic compared to Side Running BRT, better BRT operations.
- Potential impacts include:
  - On-street parking removal or property acquisition in selected segments to close gaps in the existing bike network.
  - Dual left turn lanes at Artesia Boulevard reduced to single turn lanes.
  - All existing raised medians to be modified or removed.
  - Changes to circulation patterns (left turns at intersections without signals displaced).
  - Roadway widening/property impacts at 168th Street to provide left turn movements. No widening required if left turn is restricted.
- Actual impacts to be determined in subsequent design stages.

Preliminary Light Rail Transit (LRT) Concept

- Same vehicle as Metro's current LRT lines
- Two tracks, center-running, primarily at street level (at-grade)
- Grade separations are proposed at two segments to minimize permanent impacts



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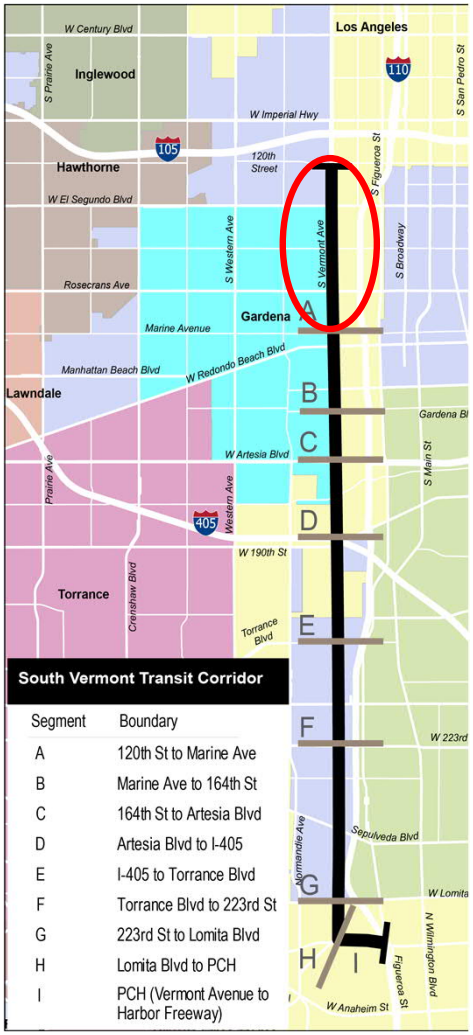
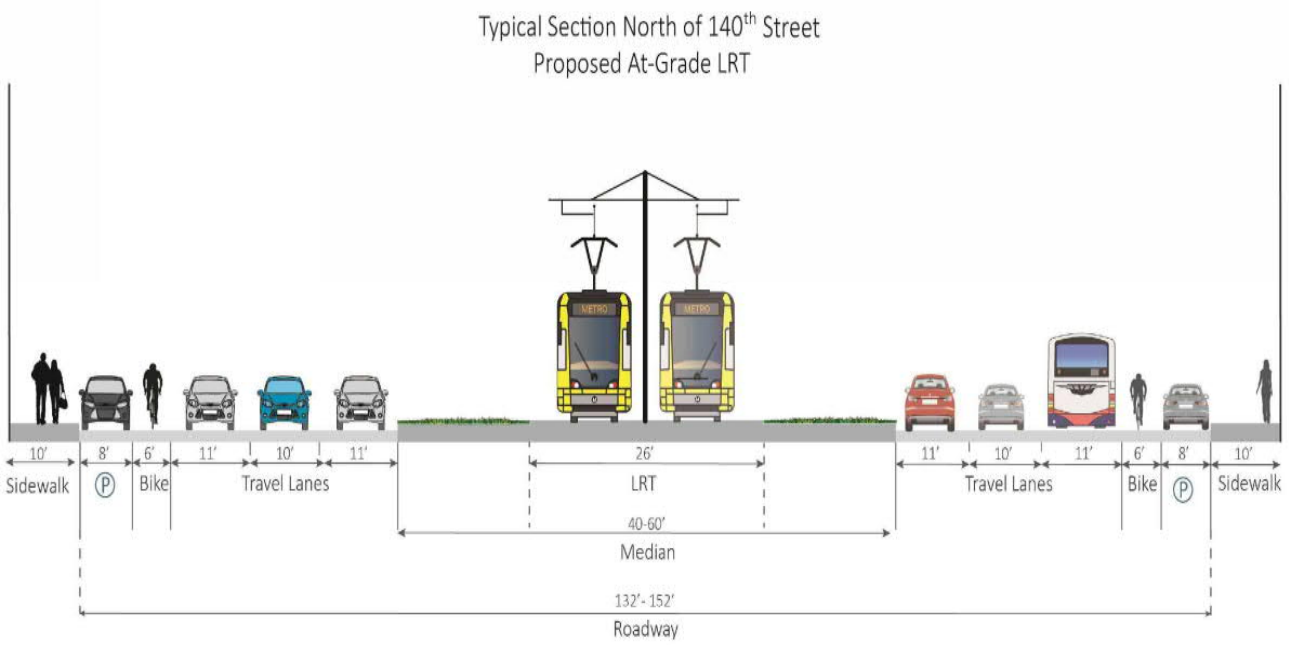
Preliminary Light Rail Transit (LRT) Concept



> At-grade LRT Guideway: 120th Street to Marine Avenue



Preliminary Light Rail Transit (LRT) Concept

> Grade-separated between Redondo Beach Blvd and Knox St to avoid permanent impacts to traffic, access, and right of way (ROW)

Gardena Blvd & UPRR Track
Narrowest roadway width

I-405 NB On-Ramp
Freeway access for NB Vermont traffic

Vermont Ave at Artesia Blvd/SR-91
Large high-volume intersection

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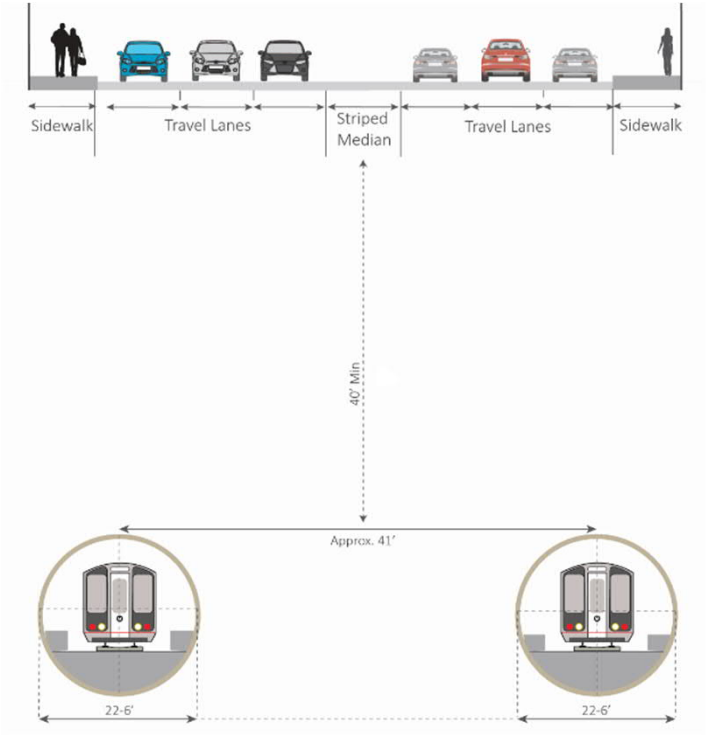
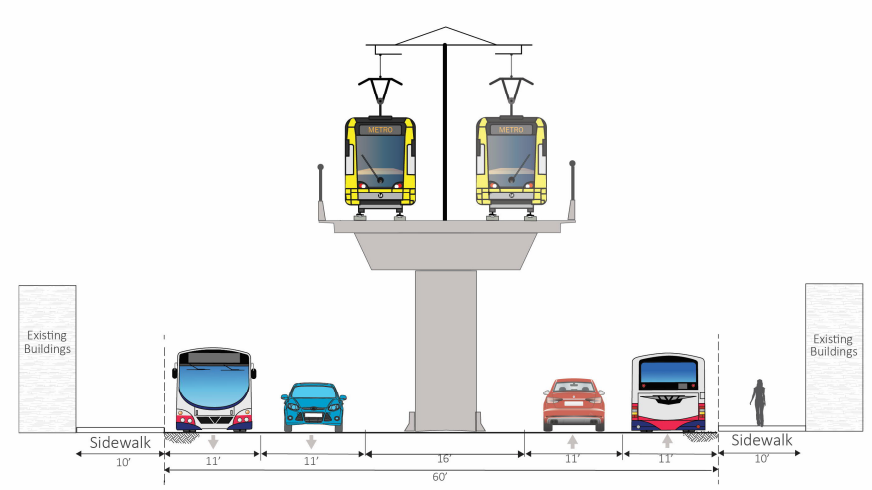
Preliminary Light Rail Transit (LRT) Concept

> Typical Grade-Separate cross sections





Recommended

Tunnel LRT Guideway

Option

Elevated LRT Guideway

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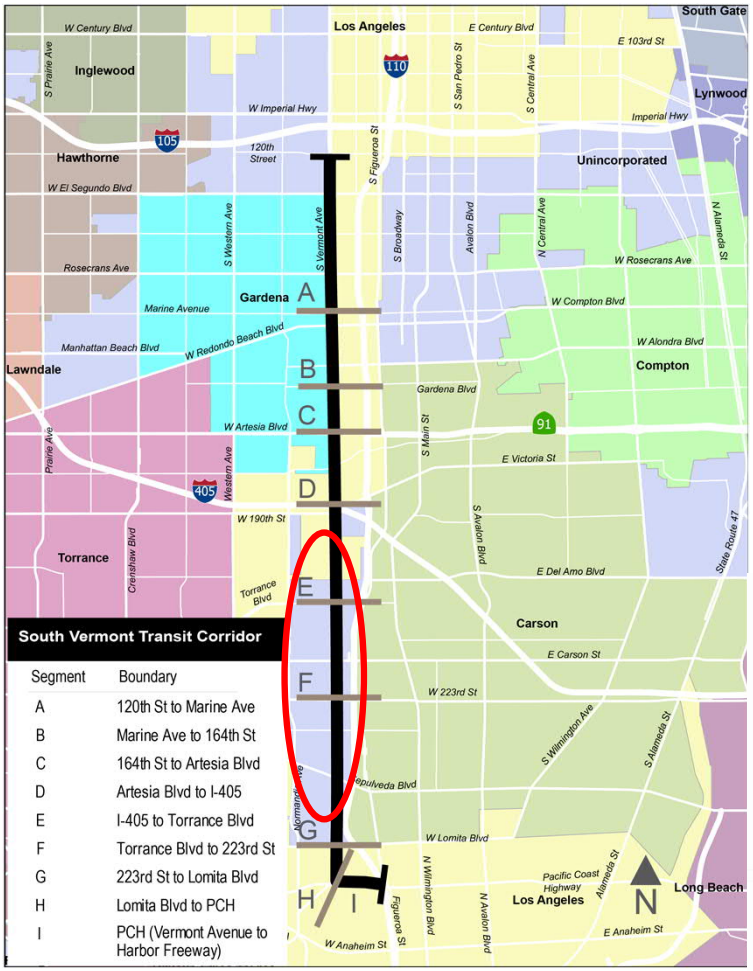
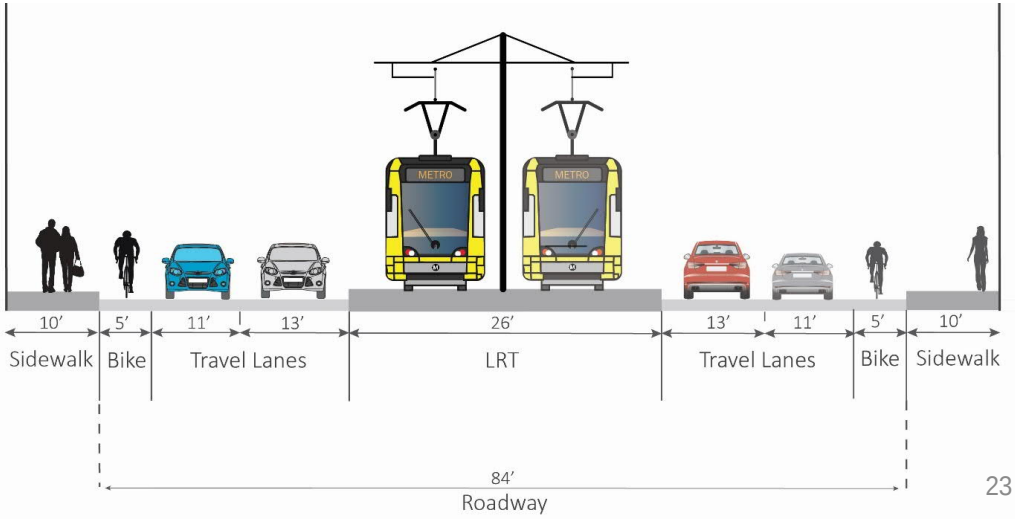
Preliminary Light Rail Transit (LRT) Concept

> Typical At-Grade Cross-Section in Southern Segment of Corridor



Vermont Avenue near Sepulveda Blvd



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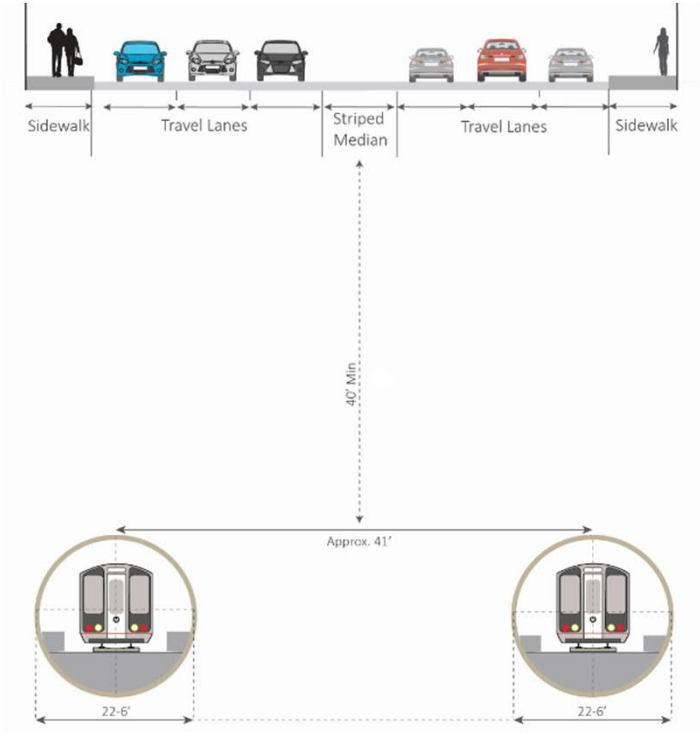
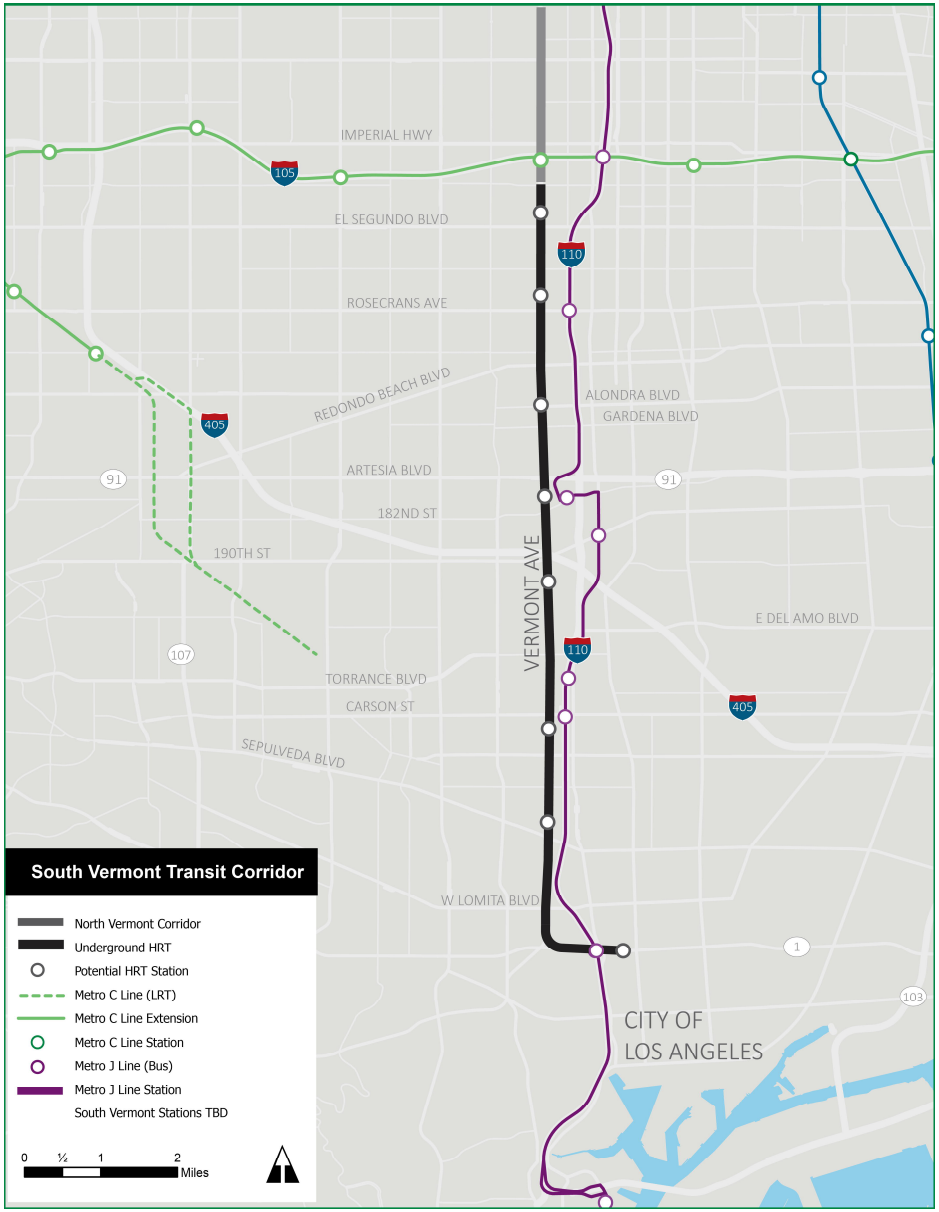
Preliminary Heavy Rail Transit (HRT) Concept

- Entirely underground, similar to B (Red) and D (Purple) Lines
- Twin-bored tunnel configuration





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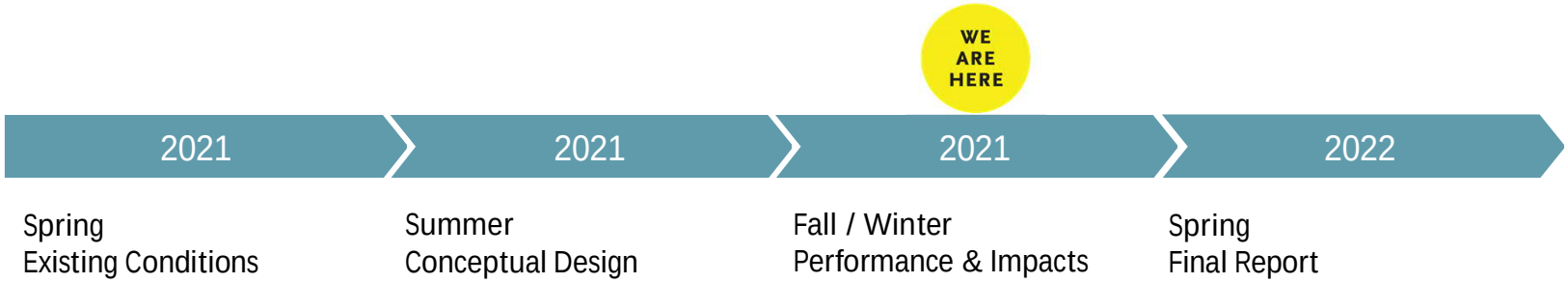
Study Timeline



> Study expected to take approximately 12-months to complete (March 2021 – March 2022)

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Next Steps

- Develop performance measures and identify impacts of the alternatives
- Develop cost estimates
- Identify potential opportunities for Transit-Oriented Communities (TOC) and develop first/last mile (FLM) improvements
- Final stakeholder community meeting to presents results of Study – Spring 2022
- Present findings to Metro Board – Spring 2022

Thank You!

Q & A