A Proposed Design Alternative for Inserting Dedicated Light Rail Transit Lanes and Other Facilities in a Constrained Arterial Roadway

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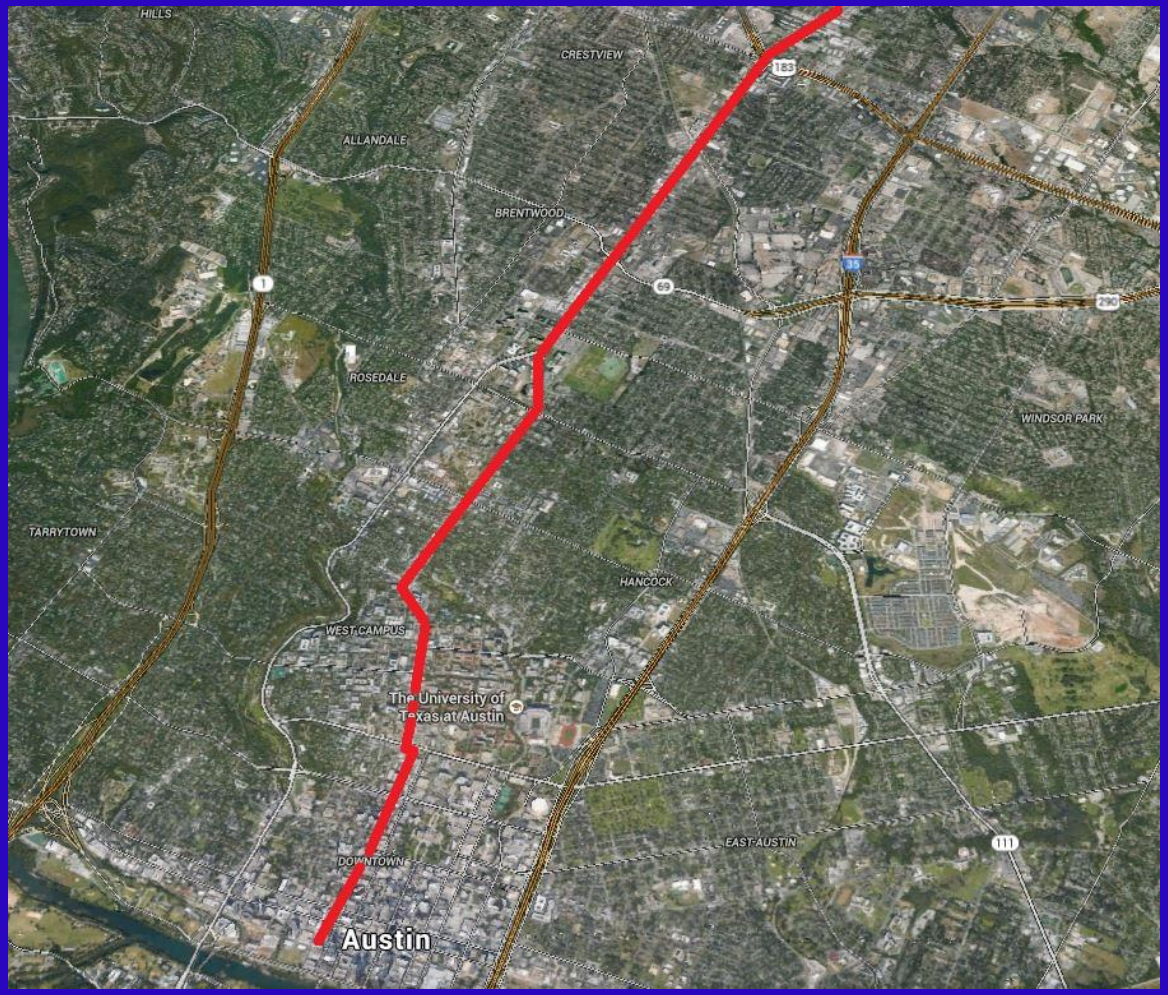
Basic Problem

- How to insert 2 dedicated lanes of light rail transit (LRT) in a heavy-traffic major arterial travel corridor with severely constrained right-of-way (ROW) width, while maintaining 2 traffic lanes in each direction…

Austin's Guadalupe-Lamar Corridor: Busiest Central-City Arterial Corridor, But With Only 80-Foot ROW Width

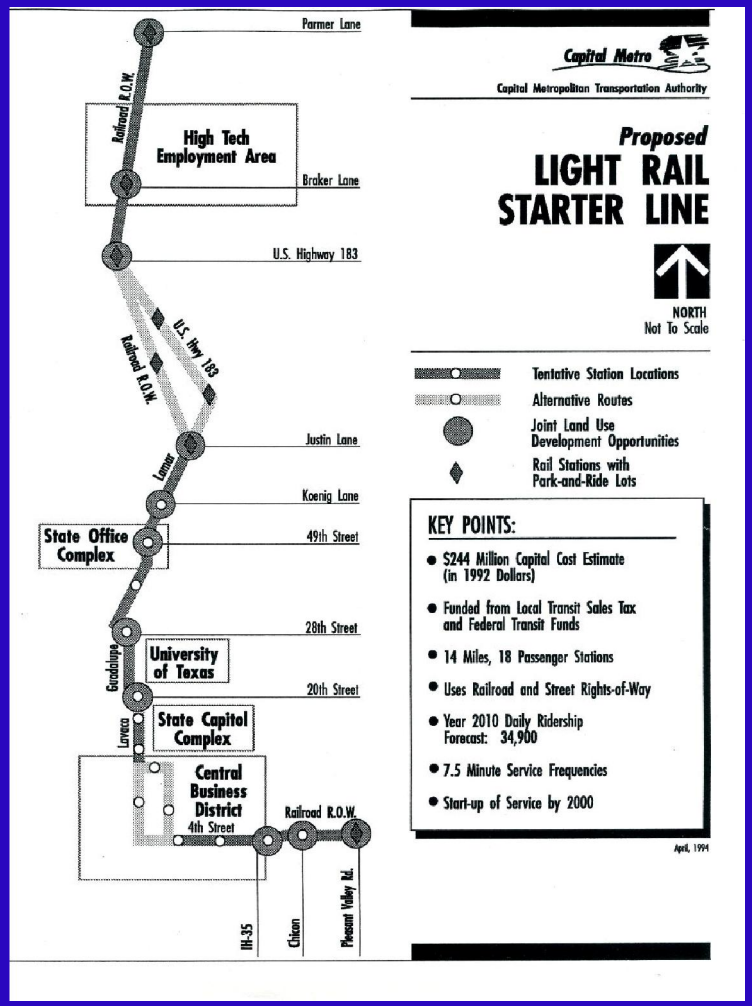
Photo: L. Henry

Guadalupe-Lamar Corridor: North Lamar Blvd. to Guadalupe St



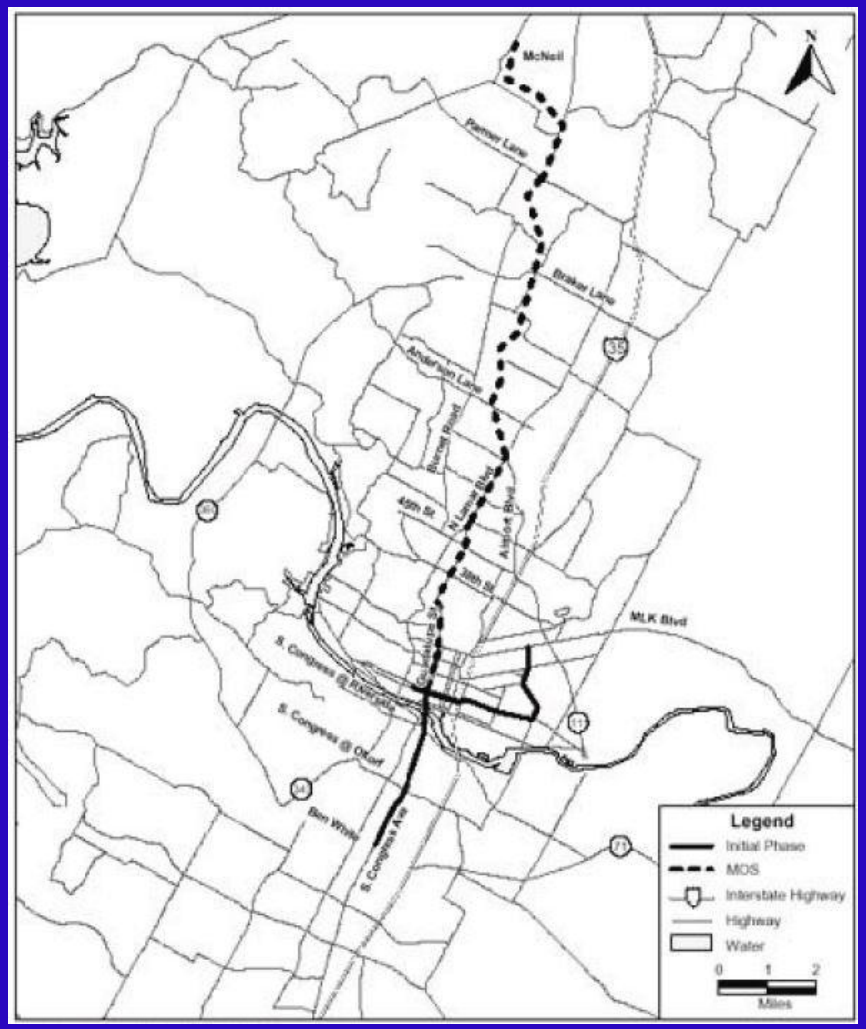
Graphic: Austin Rail Now

Proposed LRT Plan (CMTA, 1994)



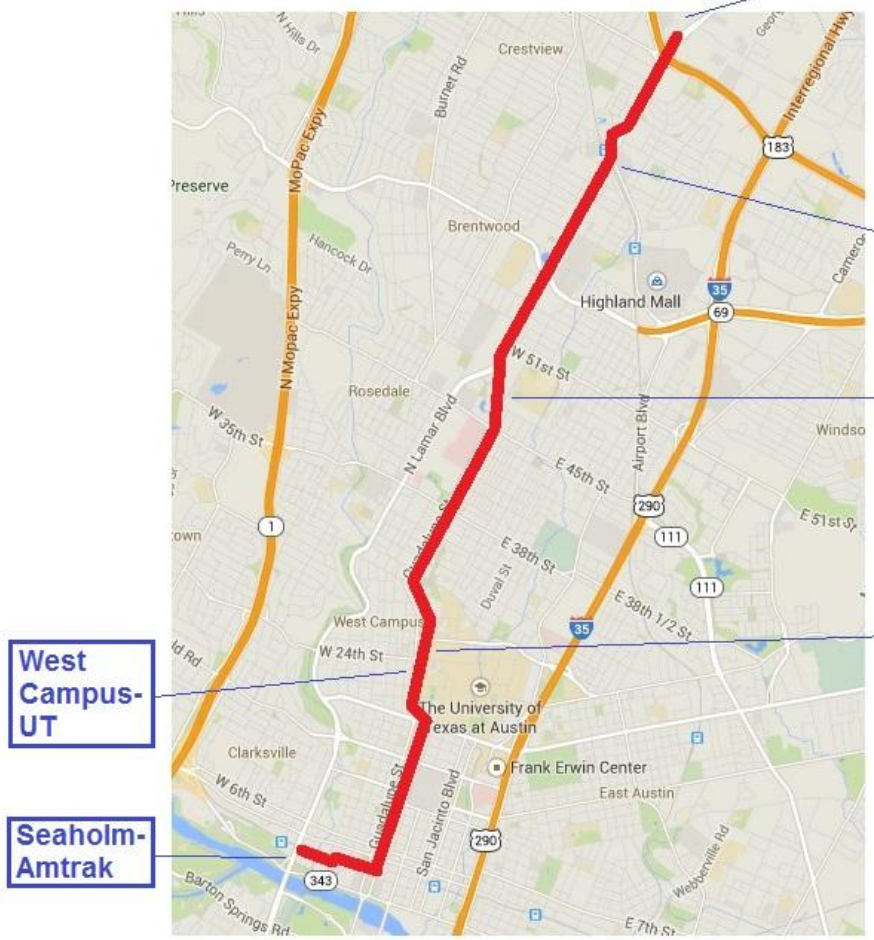
Graphic: Capital Metro

Proposed LRT Plan (CMTA/FTA, 2000)



Map: FTA

Proposed LRT Plan (Austin Rail Now, 2014)



Graphic: Austin Rail Now

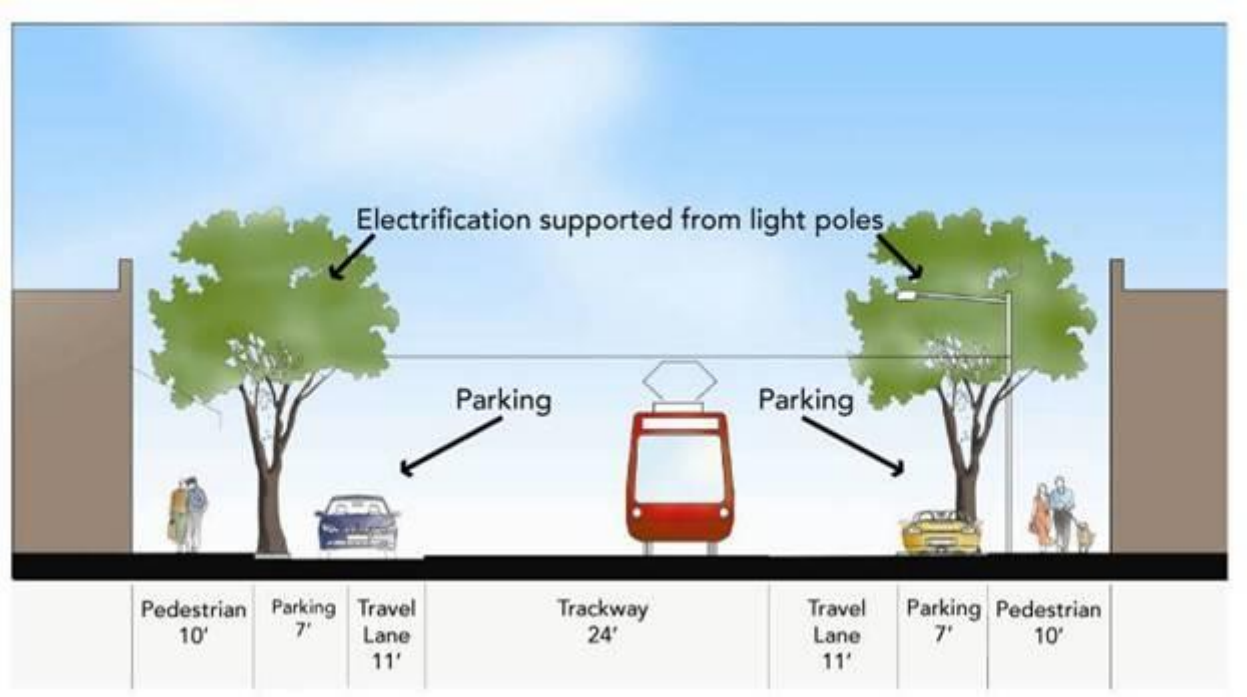
So … How to squeeze in 2 dedicated LRT tracks and keep 4 traffic lanes plus pedestrian facilities?

Graphic: Be a Leader

San Francisco's N-Judah LRT Line on Judah St. Provides a Model

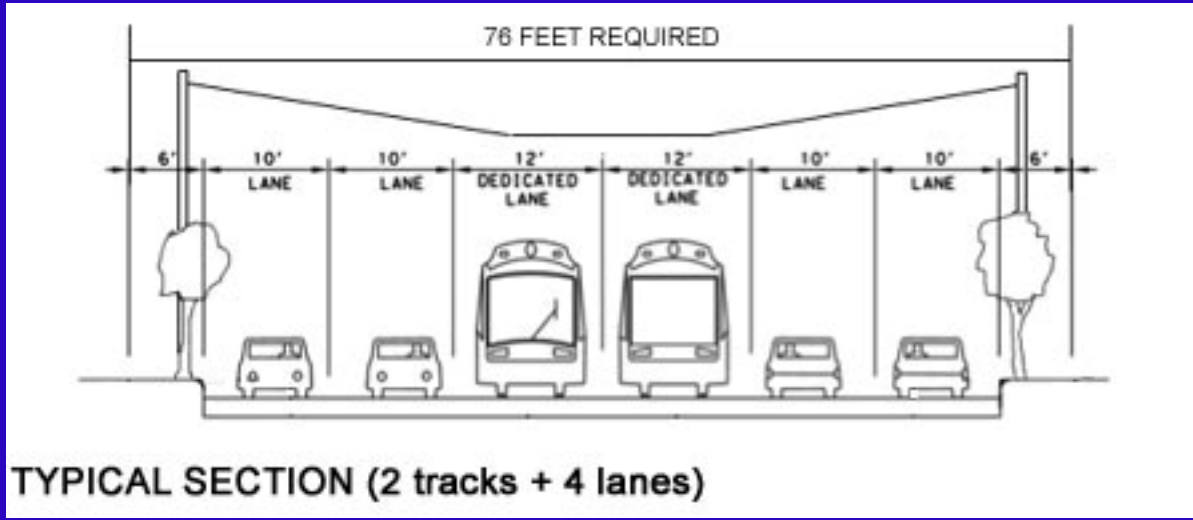
Photo: Eric Haas/NYCSubway.org

Similar Design Considered for Santa Monica Expo LRT Line



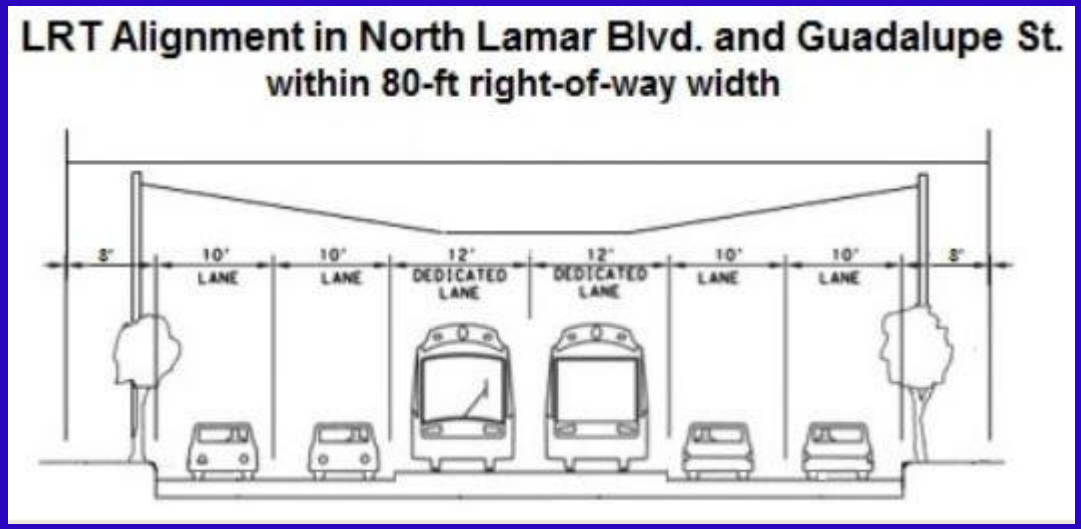
Graphic: City of Santa Monica

Similar Design Considered for Houston MetroRail in 76-Foot ROW



Graphic: Houston Metro

Proposed Solution for Austin's Guadalupe-Lamar Corridor



Graphic: Austin Rail Now

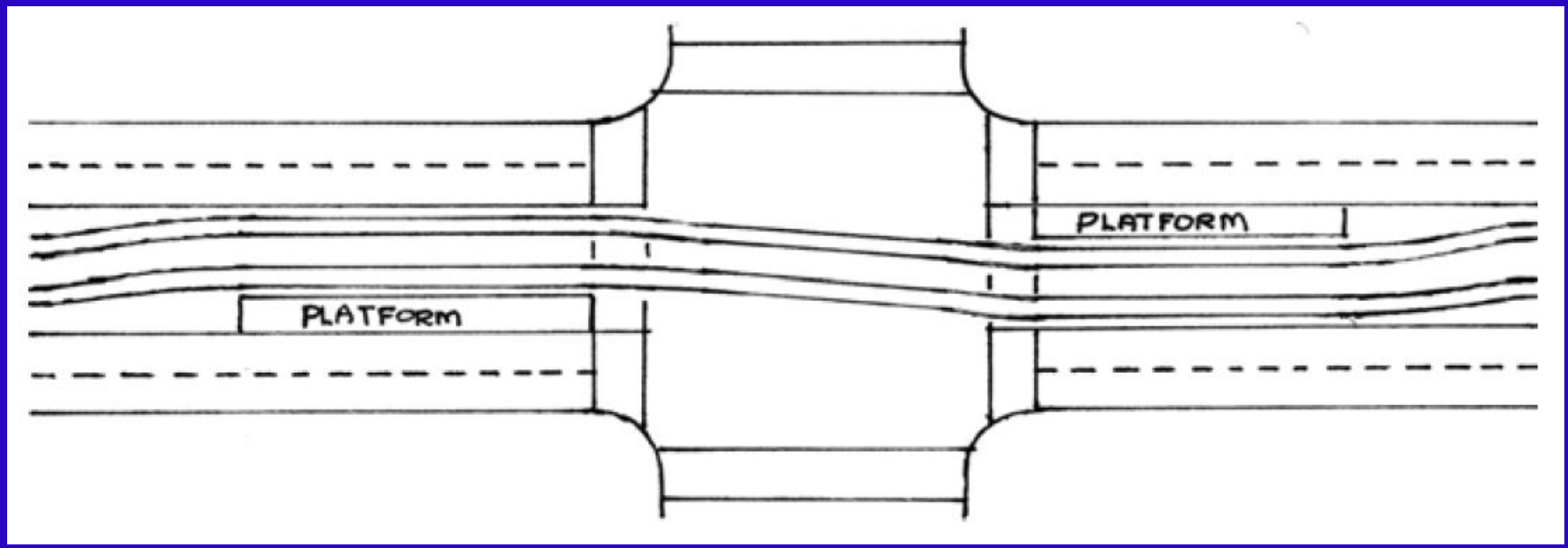
Result Might Look Similar to This…

Photo: Eric Haas/NYCSubway.org

Design Assumptions

- Side-mounted TES (power) masts
- 12-ft width for each trackway (could be reduced to 11.5-ft)
- 10-ft traffic lane widths (per NACTO), no turning lane
- 8-ft sidewalks shared with bikes, but main bike route on parallel street

Stations would straddle major intersections and require 10-ft additional ROW width for 300-ft each side of intersection



Graphic: Robert R. Clark

Example: Portland's MAX LRT along East Burnside St.

Graphic: Google Earth

Conclusion

- “Elements of this design may have applicability, potential adaptability, and transferability for a broad range of North American communities confronting similar design challenges.”

Further Information

Copy of paper:

LightRailNow.Wordpress.com

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