



North Lamar/Guadalupe Connector Corridor



METRO



projectconnect

Enhancements

Short-term improvements to keep Austin moving.



Mobility Hubs



MetroRapid



MetroRail



MetroExpress

Investments

Long-term projects to support our future.



Commuters



Connectors



Circulators

Project Connect

Project Connect is a plan to create a system of high-capacity transit options that will connect people, places, and opportunities in an affordable, efficient, and sustainable way. Two teams have been working closely with residents, workers, and community groups to address our short and long-term needs.

The **Enhancements Team** is working to identify projects that will ensure our existing transit network will operate efficiently as the Austin area grows. The enhancement projects will improve MetroRail, MetroRapid, and MetroExpress services, as well as create Mobility Hubs across the area.

The **Investments Team** is developing plans for a transit system capable of maximizing the amount of people that can move through key corridors. Introducing new transit options will create a more balanced transportation system that benefits all Austinites.

Connectors

The Connector investment corridors are intended to serve multiple trip purposes and connect people with activity centers primarily within Central Austin.

Over 30 corridors were identified by reviewing plans and studies completed by Capital Metro and its partners. Those corridors were narrowed down through a tiered evaluation process that explored each corridor's potential to successfully implement HCT.

The eight Connector corridors advanced to Phase 2 are:

- North Lamar/Guadalupe
- South Congress
- Riverside
- South Lamar
- Manor/Dean Keeton*
- Highland/Trinity/Red River
- 7th/Lake Austin

**The MLK connector corridor was included with Manor/Dean Keeton as an alignment option*

Key Terms

HCT	High Capacity Transit
ROW	Right-of-Way
LRT	Light Rail Transit
BRT	Bus Rapid Transit
CVC	Capitol View Corridor
TOD	Transit Oriented Development
P&R	Park & Ride
TC	Transit Center
PER	Preliminary Engineering Report
UT	University of Texas
ACC	Austin Community College

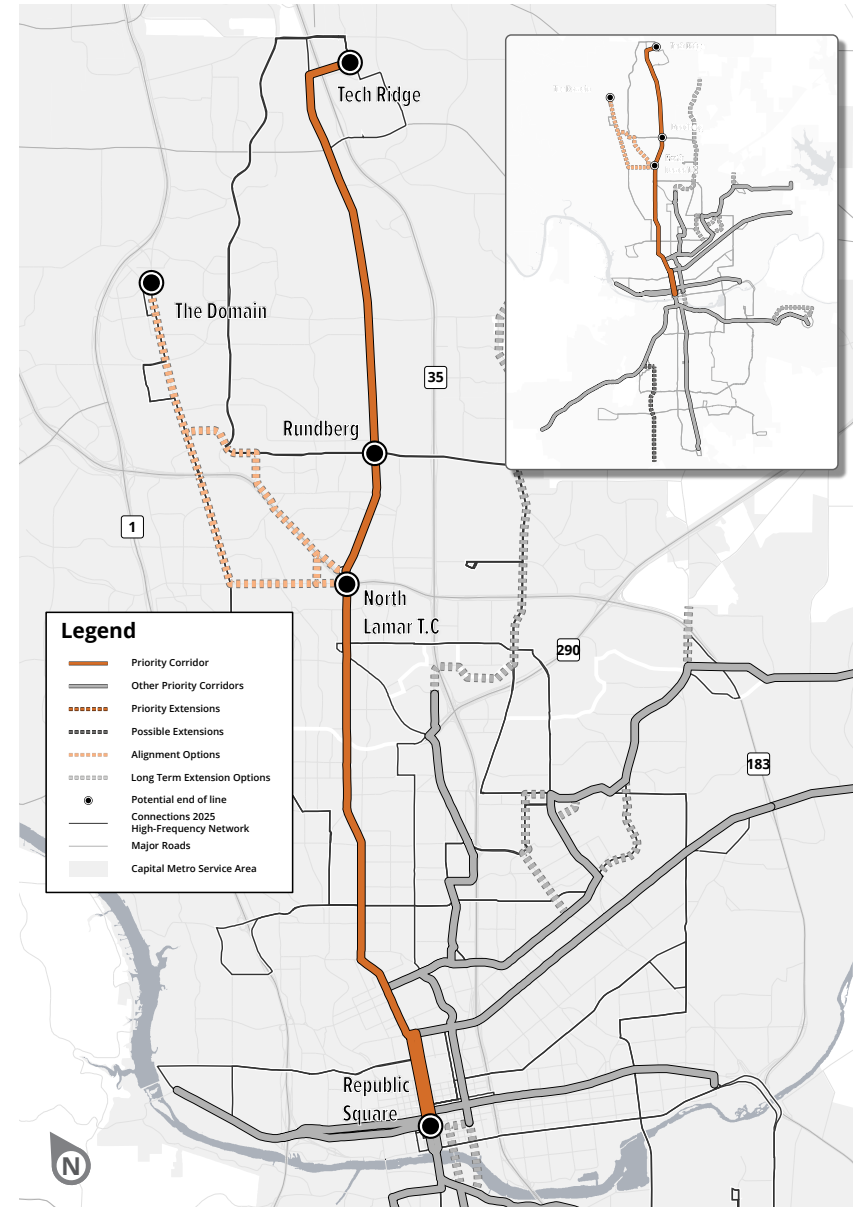


Corridor Overview

The North Lamar/Guadalupe Corridor has been one of the most critical transportation arteries in Austin for over a century. Phase 2 of Project Connect considered the 12 miles of the corridor stretching from Tech Ridge Park & Ride in North Austin to Republic Square in Downtown. The corridor connects many of Austin's most important destinations, including Downtown, the State Capitol, University of Texas, and several major state agency offices between 38th and Crestview.

Corridor Quick Look

Corridor Start and Endpoints:	Tech Ridge to Downtown Austin
Corridor Length:	12.05 Miles
Existing Transit Services:	Routes 1, 275, 481, 801
Current Bus Ridership:	8,837
Jobs (1/2 Mile from Stations):	126,681 Jobs
Residents (1/2 Mile from Stations):	57,937 Residents
Zero-Car Households:	2,393 Households
Households Below Poverty:	7,137 Households
2016 Mobility Bond Eligibility?	Yes (183 to Howard)
Bike Lanes	Yes (Guadalupe); None (Lamar)
Sidewalks	Continuous (S of 183); Intermittent (N of 183)
ROW Constraints	Few (N of Airport); Many (S of Airport)





Corridor Character

(Tech Ridge to North Lamar Transit Center)



Tech Ridge

A potential terminus for the corridor, this area is a fast-growing part of the region with connectivity to existing and planned regional transit services.



Source: Urban Music Fest 2018

Walnut Creek

The large footprint of this park results in limited opportunity to serve residential or employment between Parmer and Braker.



Source: HikeltBaby 2018



Source: Google Earth Street View

Rundberg

Existing shopping centers could be transformed into station-adjacent anchors for the existing high-density neighborhoods near Rundberg & Rutland.



Source: Google Earth Street View

North Lamar Transit Center (NLTC)

One of Cap Metro's busiest transfer stations, NLTC could be an important station on a N Lamar/ Guadalupe HCT line. This station has the potential to become Mobility Hub with access to variety of transportation options.

Chinatown

Provides access to a diverse multi-ethnic shopping environment.



Source: Google Earth Street View





Corridor Character

(North Lamar Transit Center to Republic Square)





Source: 365things Austin 2015

University of Texas

UT is one of the largest trip generators in the region, with over 50,000 students and nearly 20,000 employees at the main campus.



Source: Statesman 2014

Downtown

The heart of the region, downtown Austin has seen tremendous growth in both employment and residents recently, and features the expanding State Capitol Complex.

West Campus

This area is among the most densely populated in Texas, with tens of thousands of residential units recently built or under construction.



Source: Scion Group 2015



HCT Options

Service Assumptions

To better gauge the level of investment warranted along the North Lamar/Guadalupe corridor, the project team created options that assumed different combinations of transit service and guideway profiles. Transit service profiles were developed that would satisfy a range of potential transit demand depending on the capacity and frequency of the vehicles. Vehicles have a wide range of person carrying capacity, but also have different limitations on the space needed at stations, operating speed, or type of guideway required. The lower investment option assumes smaller vehicles operating individually, while the higher investment option assumes larger vehicles operating in pairs.



Source: Getty 2018, Shenzhen AV HCT



Source: NACTO 2018, Nantes Busway



Source: Rail Life 2018, Tempe LRT



Source: Jon Bell 2013, DART

Emerging Technologies

New technologies, such as autonomous or electric transit vehicles, may introduce new efficiencies for HCT. Autonomous vehicle (AV) technology could be adapted to both bus and rail vehicles and will be considered as Capital Metro advances each corridor through the project development process and as the technology evolves.

Lower Investment Service Assumptions

Vehicle Assumption	Up to 100 people per vehicle
Peak Frequency	10 Min (6 vehicles/hour)
Off-Peak Frequency	20 Min (3 vehicles/hour)
Peak Capacity	600 passengers/hour/direction

Higher Investment Service Assumptions

Vehicle Assumption	Up to 225 people per vehicle, two vehicles per pair
Peak Frequency	10 Min (12 vehicles/hour)
Off-Peak Frequency	20 Min (6 vehicles/hour)
Peak Capacity	2,700 passengers/hr/direction



HCT Options

Guideway Assumptions

The project team tested three guideway profile options on the North Lamar/Guadalupe corridor that were combined with the service profiles to generate a range of HCT performance indicators.

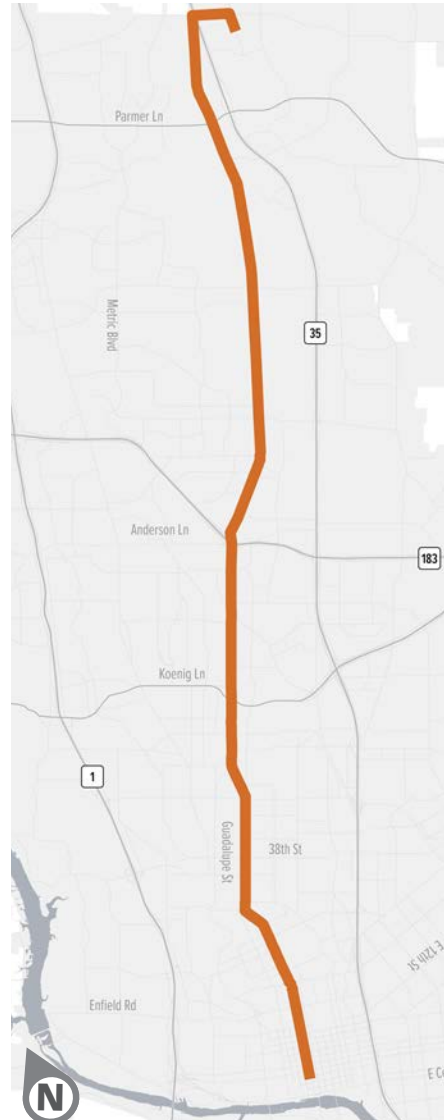
The lower investment options assumes 100% of the dedicated guideway is at street level.

The medium investment option introduces grade separation at key locations to overcome physical barriers - in this case, elevated at the north end of the corridor to cross IH 35 and at the Airport/Lamar/Red Line crossing.

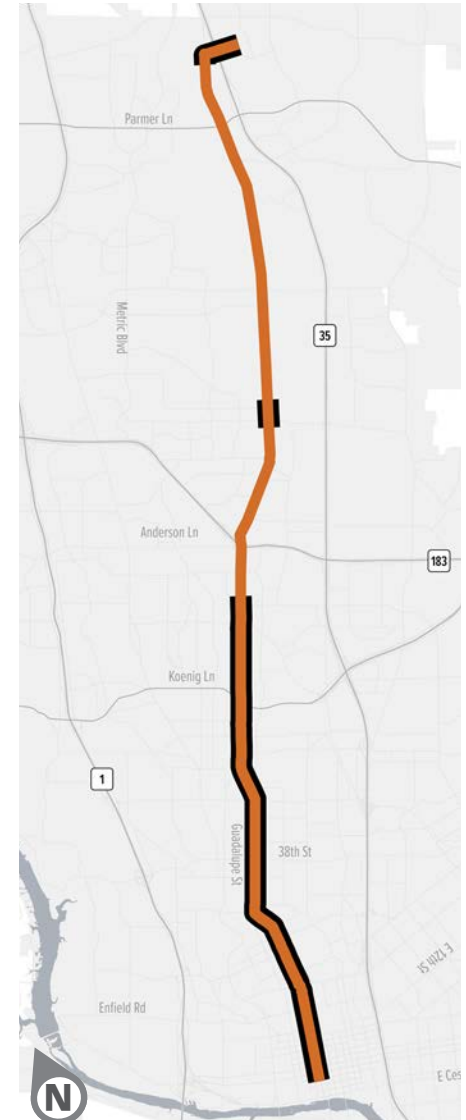
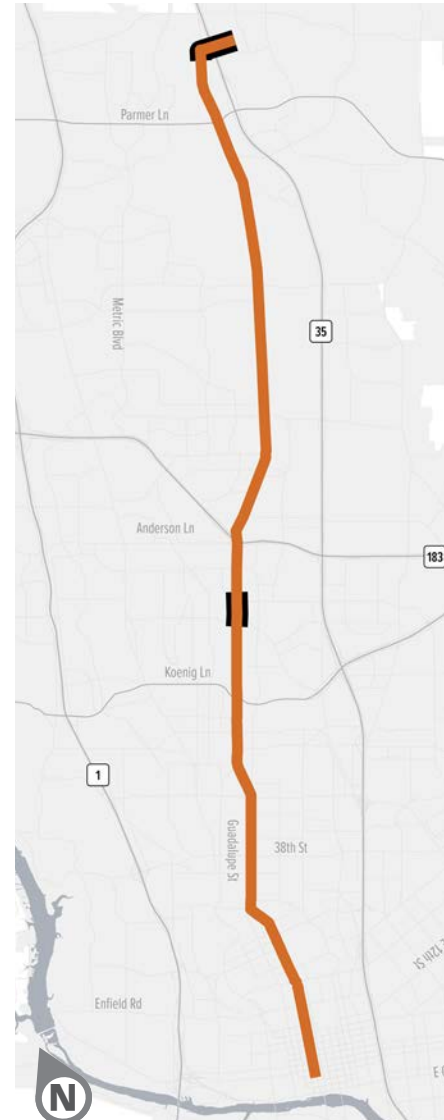
The higher investment option includes additional grade separation where ROW or roadway operations are constrained - at the Rutland/Rundberg intersection and from Airport Blvd south to the terminus of the corridor.



Lower Investment



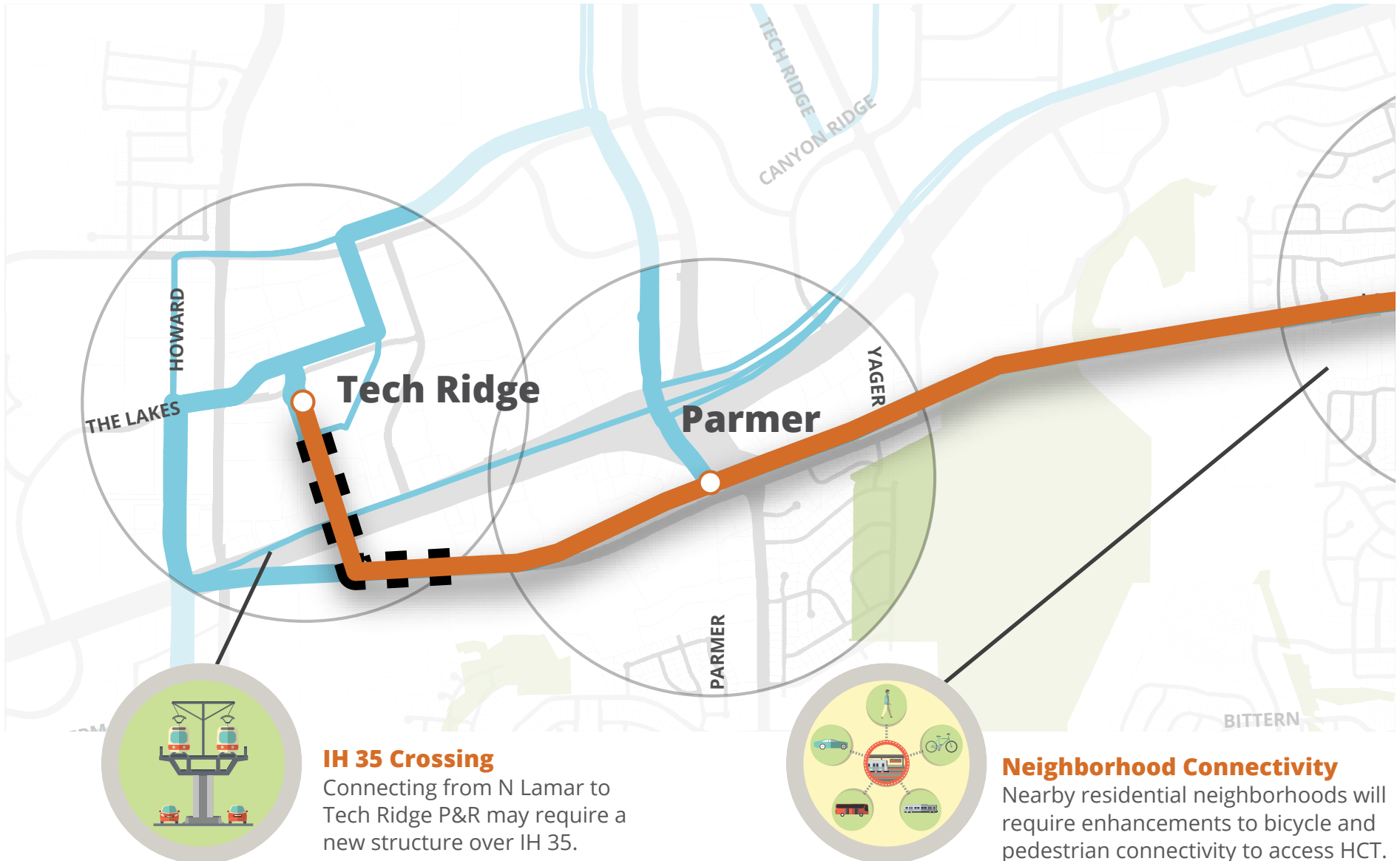
Higher Investment





HCT Overview

(Tech Ridge to North Lamar Transit Center)





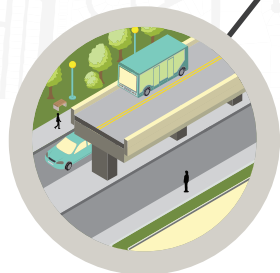
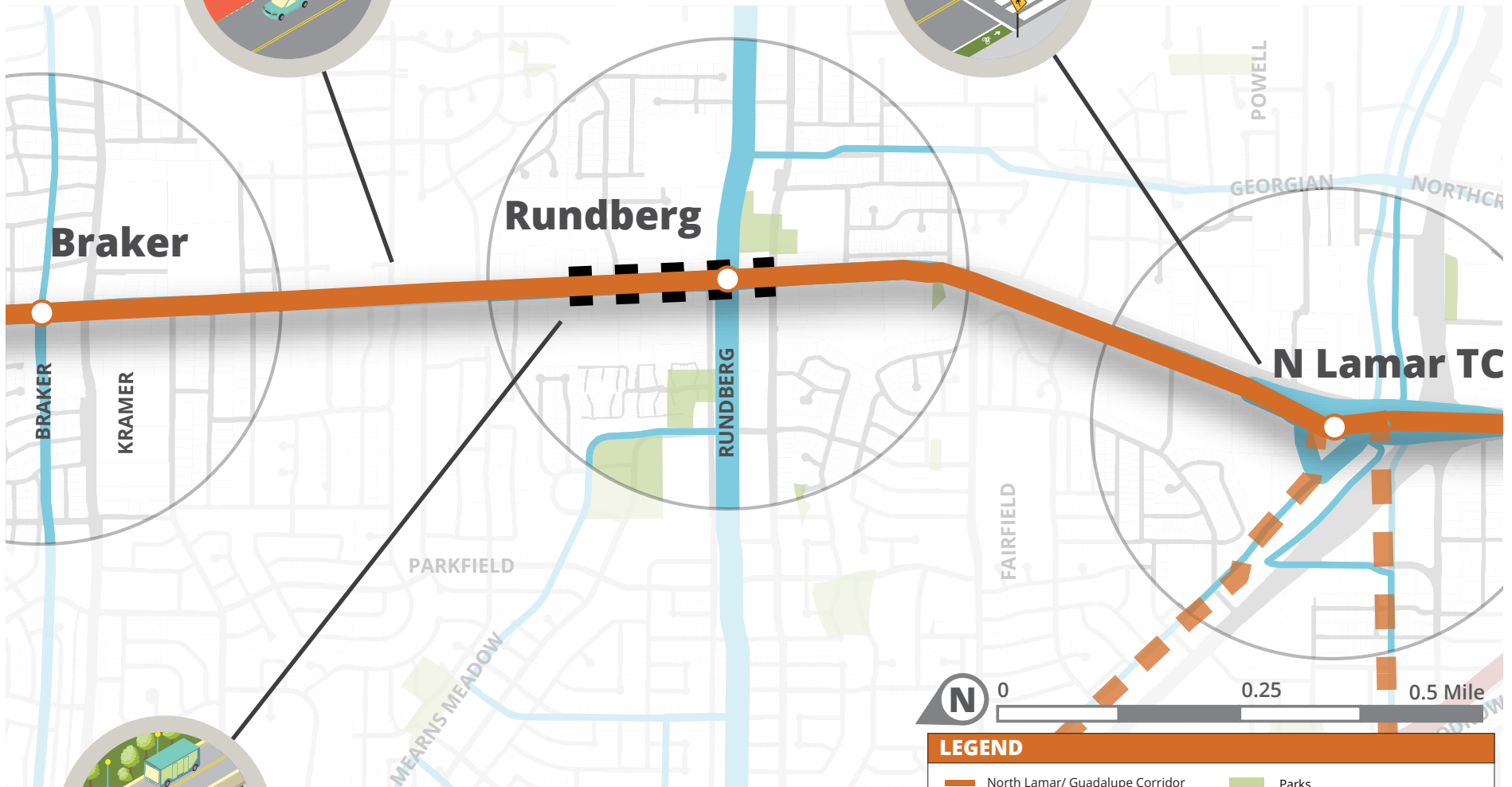
2016 Mobility Bond

Opportunities exist along N Lamar to coordinate HCT improvements with potential bond construction projects.



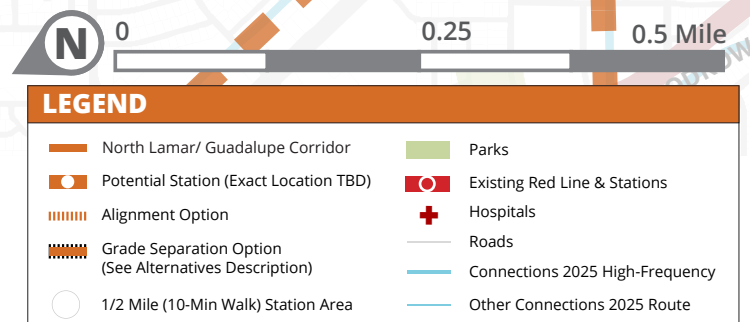
North Lamar Transit Center

Special attention will be given to pedestrian access from a HCT station to the NLTC.



Rutland/Rundberg

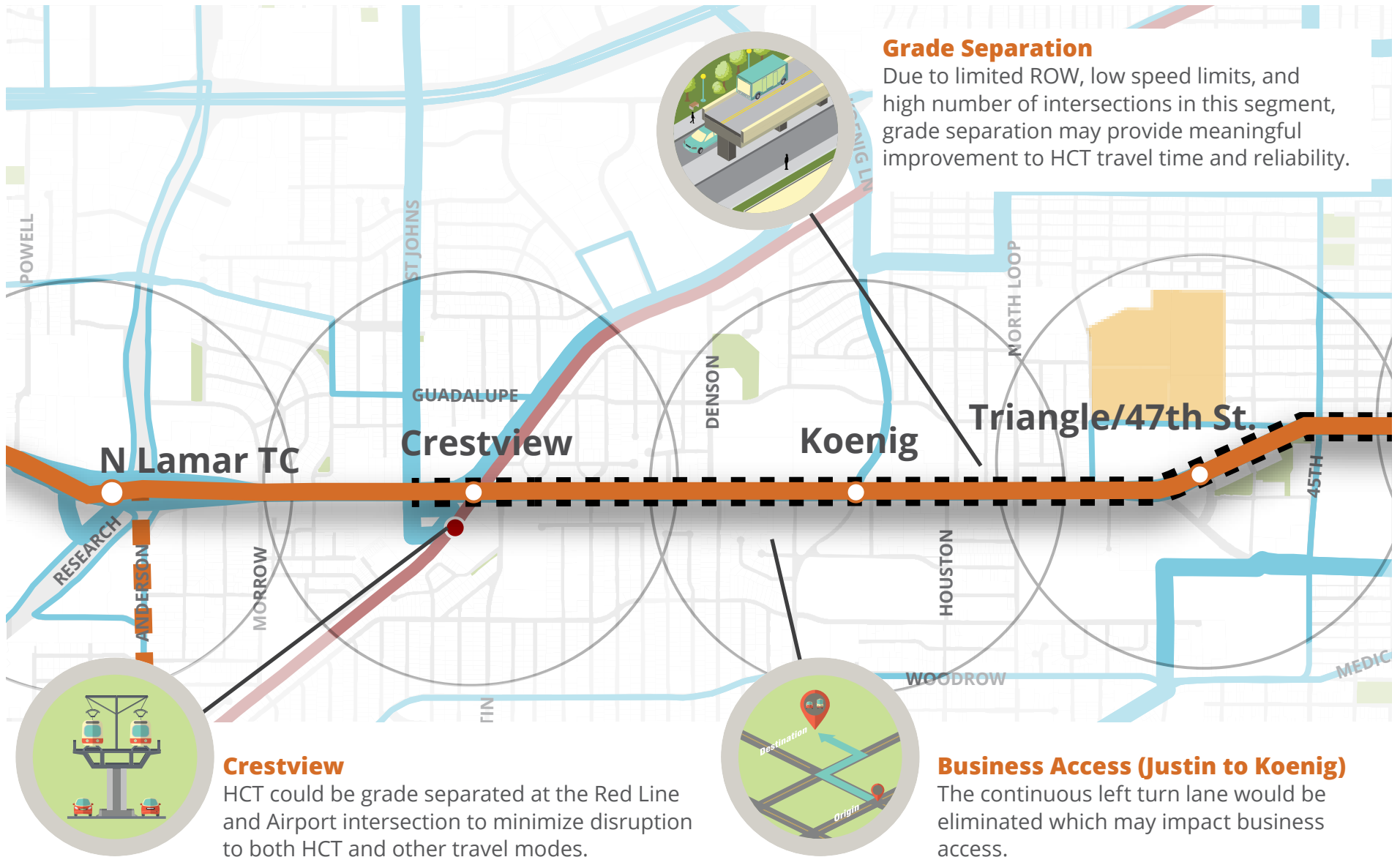
Close spacing of Rutland and Rundberg intersections will require further study to accommodate the HCT station.

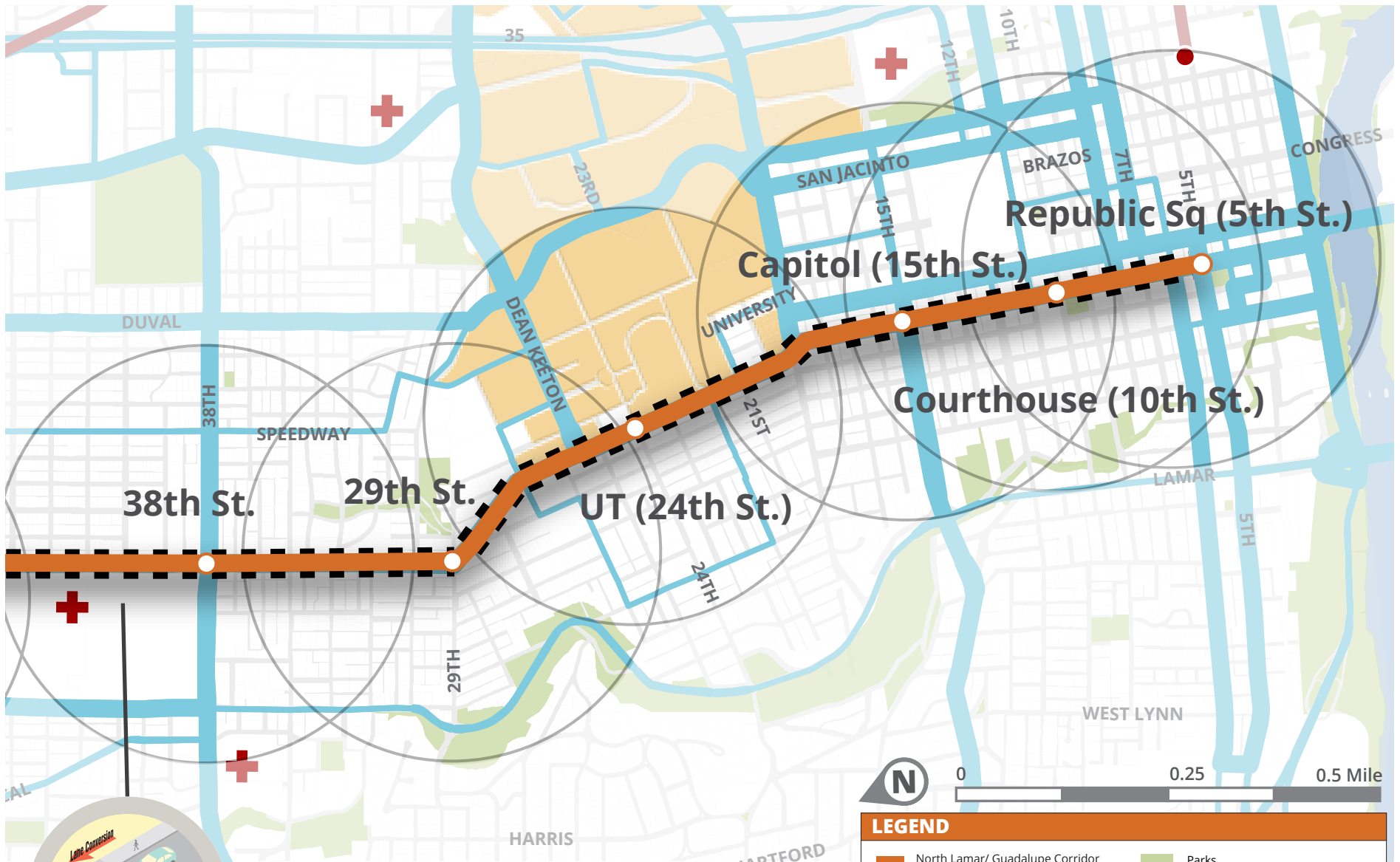




HCT Overview

(North Lamar Transit Center to Republic Square)





LEGEND	
	North Lamar/ Guadalupe Corridor
	Potential Station (Exact Location TBD)
	Alignment Option
	Grade Separation Option (See Alternatives Description)
	1/2 Mile (10-Min Walk) Station Area
	Parks
	Existing Red Line & Stations
	Hospitals
	Roads
	Connections 2025 High-Frequency
	Other Connections 2025 Route



Austin State Hospital Vicinity

With the ASH campus west of Guadalupe, street-level HCT could run along the west edge of the ROW to minimize impacts to turning movements.



Extension Opportunity

The Domain

The Domain area is billed as Austin's "Second Downtown". The area between Metric Blvd, US 183, Mopac, and Walnut Creek is part of the North Burnet/ Gateway Neighborhood Plan, which envisions a transformation from mostly low-rise industrial facilities and warehouses to a dynamic, high-density, mixed-use regional center. The Domain has proven to be a catalyst for numerous high-density redevelopment projects in the area, including the forthcoming redevelopment of the IBM campus across Burnet Road, which could feature another five million sqft of new mixed-

use development. Several companies have recently announced high-profile leases at or near the Domain, further enhancing the profile of the area as the region's second largest job hub outside of the Downtown/ Capitol/UT core.

Given the high concentration of jobs and the transit-supportive redevelopment vision for the area, one or more of Project Connect's Connector Corridors could be expanded to serve this area directly and connect to existing services in the region such as the existing MetroRapid 803 and Red Line commuter rail. The two most likely options for connecting the N Lamar corridor to the Domain are:

US 183/Rundberg/Burnet

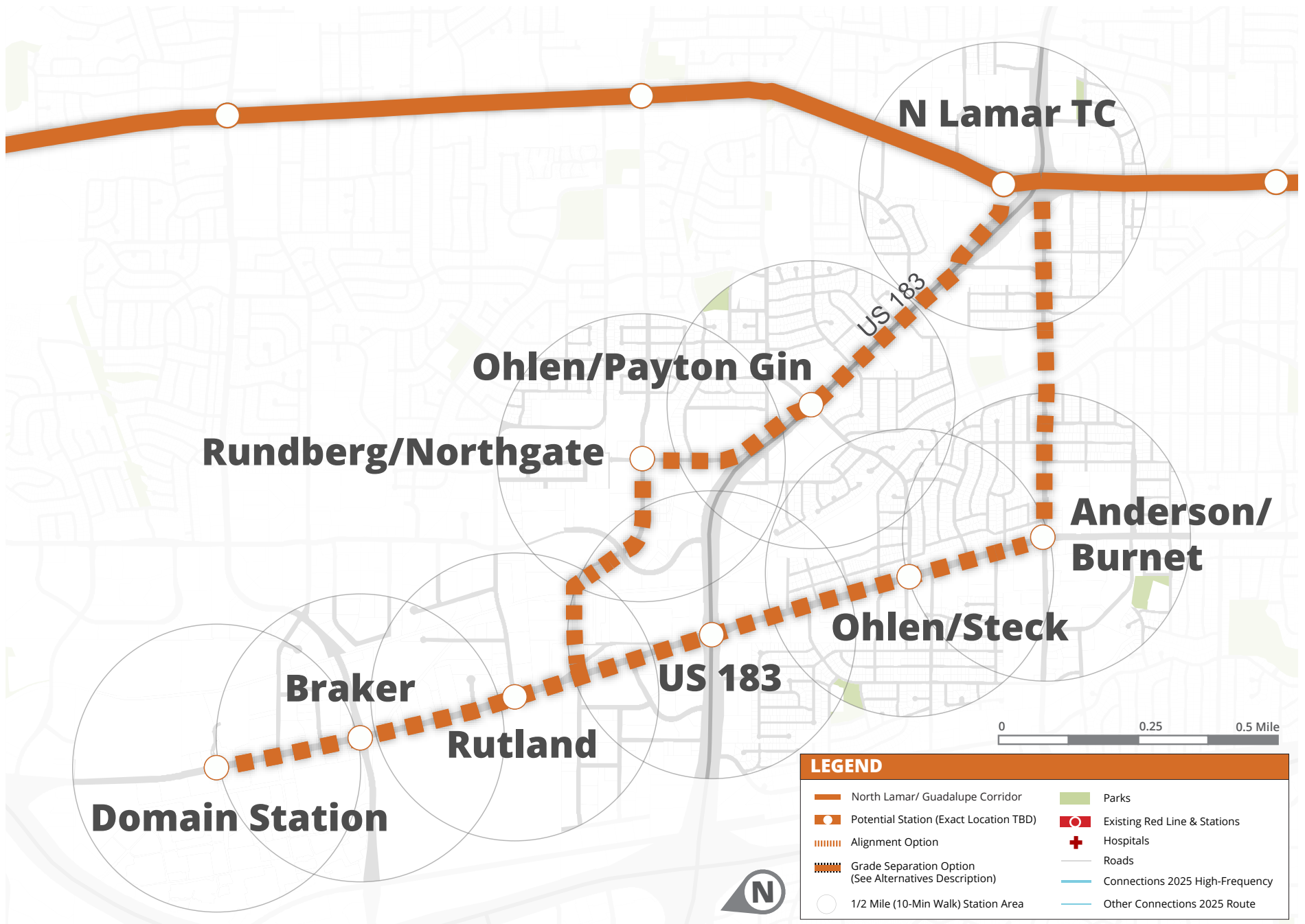
Potential to partner with TxDOT to use extensive ROW along US 183 from Lamar to Burnet to connect to Northgate Blvd and Rundberg Ln, where a station could be built to connect existing apartments to the multiple job opportunities found along the rest of the corridor. High capacity transit (HCT) could join Burnet Road to reach the Domain, taking advantage of dedicated lanes envisioned by the City of Austin's N Burnet corridor plan, which is eligible for 2016 mobility bond construction funding.

Anderson Ln/Burnet

The other most likely option would be to deviate from N Lamar at Anderson Lane. This would provide an opportunity to add a station near the Anderson/Burnet intersection, which could transform into a transit supportive node of mixed-use development. Although the City of Austin's N Burnet Corridor Plan does not envision dedicated transit facilities south of US 183, ample ROW exists to construct HCT and maintain existing travel and bicycle lanes and improve pedestrian amenities.



Source: Endeavor 2018





Street Sections

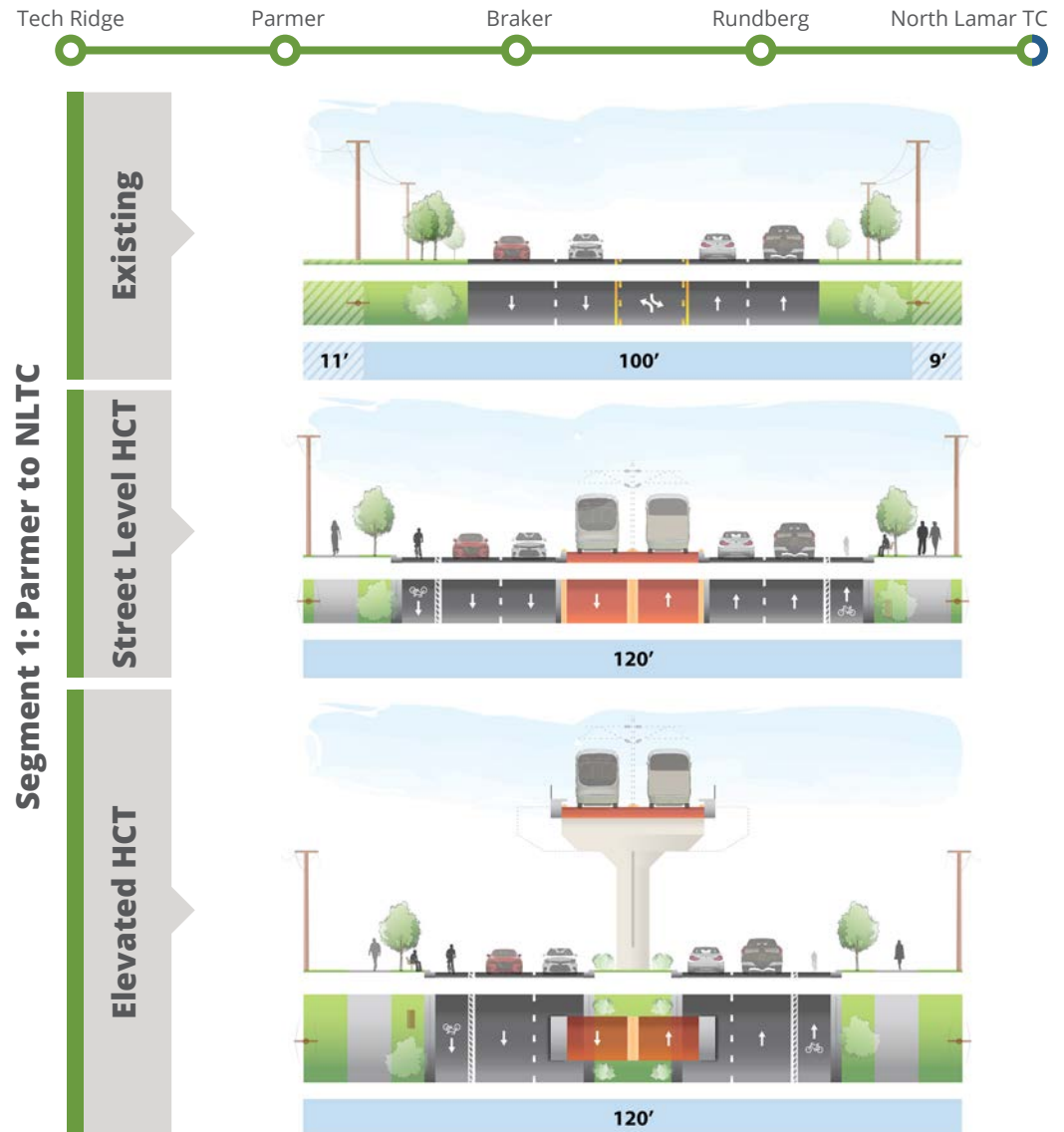
North of US 183, the 100' to 120' of ROW along Lamar provides ample room to accommodate the existing two travel lanes in each direction and add many of the enhanced streetscape elements envisioned by the City of Austin's North Lamar Corridor Plan, including bike lanes and wide sidewalks as shown in Segment 1. Some of these elements may be constrained at locations where ROW is 100' and/or at station locations or streets where left turn movements are desired.

South of Justin Lane, the profile of N Lamar narrows to between 70' and 80' of available ROW. In order to maintain two lanes of travel, street-level high capacity transit (HCT) will require acquisition of additional ROW as shown in the second graphic of Segment 2 (with larger impacts at station locations or streets with left turns). Elevated transit would lessen the need to acquire additional ROW and could enhance transit travel time and reliability in this segment, but would cost more and produce a strong visual impact on the corridor.

Like N Lamar south of Justin, Guadalupe between Lamar and 29th features 70'-80' of ROW and carries two travel lanes in each direction, bike lanes in each direction, and a center turn lane as seen in Segment 3. ROW impacts for street level transit in this segment could be less severe, however, if one lane of travel were removed. This profile would also maintain bike lanes and/or on-street parking where appropriate.

The last segment of the corridor – Guadalupe through the Drag and Downtown – is be shared by several other corridors, and is addressed in a separate briefing book.

Segment 1: Parmer to NLTC



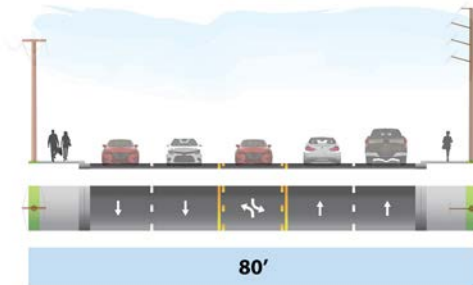


Segment 2: Justin to Guadalupe

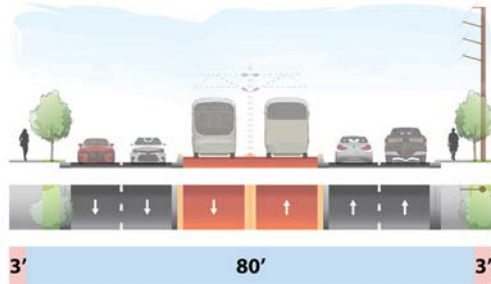
North Lamar TC Crestview Koenig Triangle/47th

Segment 2: Justin to Guadalupe

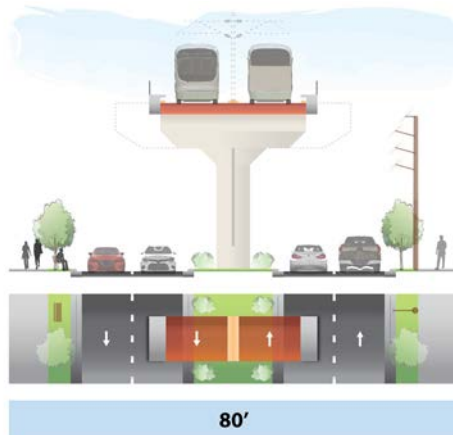
Existing



Street Level HCT



Elevated HCT

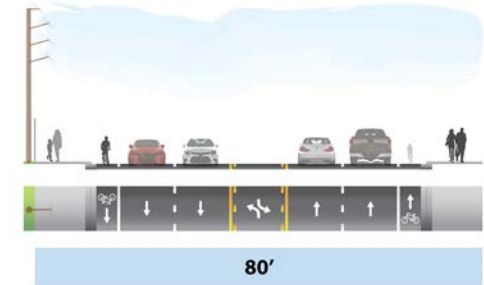


Segment 3: N Lamar to 29th

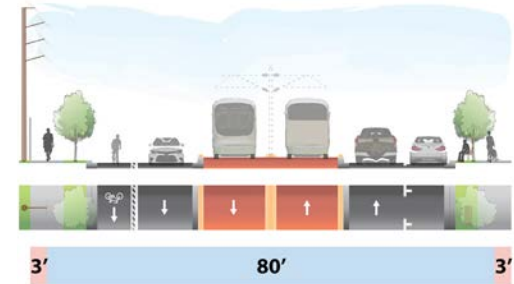
38th Street 29th Street

Segment 3: N Lamar to 29th

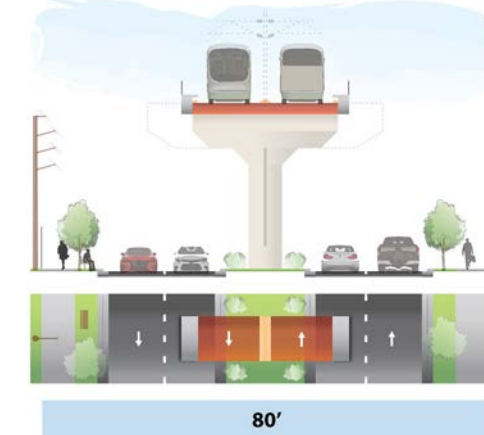
Existing



Street Level HCT



Elevated HCT





Comparing Corridor Options

Capital Metro evaluated the performance metrics for the test scenarios to further inform the evaluation process. Estimated costs were based on recent and similar modal and infrastructure investments in other U.S. cities. Anticipated ridership was obtained using FTA's Simplified Trips-on-Project Software (STOPS) model. Travel time was estimated using assumptions about roadway speed limits and grade separated HCT speed limits. Throughput capacities were based on vehicle capacities and service frequencies. ROW and travel lane impacts were based on the street sections analysis and are rated as low, moderate or high.

The results of these performance metrics suggest that the North Lamar/Guadalupe corridor can support a higher level of HCT investment. The significant ridership potential and ability for the corridor to function as the key transit spine for the region warrant larger investment in transit speed and reliability.

The project team will continue to gather feedback on community preference for the level of investment that can best serve North Lamar/Guadalupe as the Project Connect system plan is refined.

	Lower Investment	Higher Investment
Average Daily Boardings (2025):	17,500	30,000
Peak Hour Boardings:	750	1,260
Peak Hour Passenger Capacity:	600	2,700
Annual Trips (2025):	5.2M	8.8M
Capital Construction Cost (2018):	\$700M	\$2.44B
Annual Operations & Maintenance Cost (2018):	\$6.6M	\$21.5M
Travel Time:	34 min	23 min
ROW Impacts:	HIGH	LOW
Travel Lane Impacts:	HIGH	MOD

*Preliminary planning-level evaluation results; subject to change during preliminary engineering



Comparing Station Areas

The draft station analysis utilizes information collected from the FTA's Capital Investment Grant (CIG) program, Capital Metro's TOD Priority Tool, U.S. Census Bureau, CAMPO, and other sources to evaluate potential station locations along Project Connect's eight Connector Corridors. Seven metrics were chosen to rate the station areas according to national best practices and local conditions. An Overall Score of High, Medium, or Low was assigned based on the evaluation of these six metrics.

The North Lamar corridor contains several stations that score highly overall and within individual criteria. All stations south of 38th St feature walkable environments, high employment density, and plentiful connections to other modes of travel - all of which are highly conducive to successful HCT performance. With the exception of Rundberg, stations north of Crestview are less supportive of transit at present, although improvements to connectivity and walkability may be possible through coordination with the 2016 Mobility Bond corridor construction program.

	High	Medium	Low
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	Tech Ridge	Parmer	Braker	Rundberg	North Lamar TC	Crestview	Koenig	Triangle/47th	38th Street	29th Street	UT (24th Street)	Capitol (15th Street)	Courthouse (10th Street)	Republic 5th Street)
Overall Score	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>
Population Density	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>
Employment Density	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>
Major Destinations	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>
Transit Connectivity	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>
Affordability	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>
Walkability	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>
Market Strength	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>



Led by Capital Metro with support from the City of Austin.



Prepared by Alliance Transportation Group, AECOM, and Nelson\Nygaard Consulting Associates with support from Bronner Group and Robin O'Connell Design



Cover Image Source: Alliance Transportation Group

Want to learn more?

Go to [capmetro.org/projectconnect](https://www.capmetro.org/projectconnect) to read more about the work we're doing through Project Connect.

Tell us what you think, take the Phase 2 Survey!

<https://www.capmetroengage.org/en/provide-input>

Additional Project Connect briefing books:

High Capacity Transit 101 Briefing Book
Long-Term Investment Program Briefing Book and corridor flip books
Short-Term Investment Program Briefing Book and project flip books
Project Connect Funding and Financing Briefing Book