LAMBETH ENGINEERING ASSOCIATES PLLC

Parking Analysis

To: Eli Borek
Petra Development

From: Christy Lambeth, P.E., PTOE
Lambeth Engineering Associates, PLLC, *F-19508*

Date: December 26, 2021

Re: Parking Analysis for 1027 S. Riverfront at Riverfront Boulevard and Dearborn Street in Dallas, Texas; *Lambeth #110DAL*

Introduction

The services of Lambeth Engineering Associates, PLLC, (herein Lambeth Engineering) were retained to conduct a parking analysis for the proposed multifamily and childcare center at 1027 S. Riverfront Boulevard, southwest of the Riverfront Boulevard/Dearborn Street intersection in Dallas, Texas.

The property is currently zoned PD 784, with SUP 1484, and the PD is being amended to accommodate the proposed development. The purpose of this study is to project the parking demand for the planned affordable housing development and to validate the proposed parking requirement.

As shown in this analysis, the projected peak parking demand for the residential portion of the development is 173 spaces. **The recommended parking rate for the PD is one space per unit for affordable housing.**

Project Description

The proposed site is planned to be an affordable housing development containing 173 units in a seven-story building. There will be 80 one-bedroom units, 76 two-bedroom units, and 17 three-bedroom units, for a total of 283 bedrooms—of which 90% will be affordable and 10% will be market rate.

A 4,219-SF childcare facility is also planned on the southern portion of the site.

The site is located less than 1,000 feet from the upcoming high-speed rail station. Although the rail station is not currently in place, plans are underway. The site is located within the City of Dallas' targeted area to increase residential homes in proximity to the high-speed rail station. Excerpts from the City of Dallas November 13, 2017 *High Speed Rail Update – Station Zone Assessment* are provided in the **Appendix**.

Parking Supply

The site is planned to have 197 on-site parking spaces.

Code Parking Requirement

Multifamily

PD 784 defers to City of Dallas Chapter 51A-4.200. Section 4.200 does not specify parking for affordable housing, but Section 4.209(b)(5) requires one space per bedroom, or 283 spaces, plus 0.25 spaces if resident parking is restricted. Resident parking is not assigned, therefore, 283 spaces would be required for the 173 units based on Section 51A-4.209(b)(5).

Although PD 784 references Chapter 51A—4.200, if other sections could be considered, the City of Dallas Section 4.1107(c)(2) requires 1.25 spaces per dwelling unit for mixed-income housing, resulting in 216 residential parking spaces.

Section 4.1103(a)(15) notes transit proximity is "development within one-half mile of a transit station, including trolley stops, train stations, transfer centers, transfer locations, transit centers, and any transit stop with a climate-controlled waiting area." For mixed-income developments with transit proximity, one space per dwelling unit is required, resulting in a requirement of 173 parking spaces since the high-speed rail station is going to be less than one-half mile from the site. At least 15 percent of the required parking must be available for guest parking.

When considering the City's parking requirement for mixed-income housing near a transit center, 173 parking spaces would be required for the multifamily portion of the development, of which 26 spaces must be available for guests.

Childcare

City of Dallas Section 4.204(3) requires one space per 500 SF for the childcare facility, resulting in a parking requirement of 8 spaces.

Total

PD 784 defers to Section 51A-4.200, which requires a total of 291 parking spaces for the site.

If PD 784 allowed consideration of affordable housing parking per Section 4.1103(a)(15) in addition to Section 4.200 and the upcoming transit center may be taken into consideration, then a total of 181 parking spaces would be required for the site.

Recommended Parking Requirements

ITE

In order to project actual parking demands, this analysis uses the *Parking Generation Manual, 5th Edition,* by the Institute of Transportation Engineers (ITE), which provides parking rates based upon observed sites throughout the U.S. The *Parking Generation Manual* provides the peak parking demand for the study sites.

The *Parking Generation Manual* includes uses for affordable housing and has data available considering general urban/suburban and dense multiuse urban. The ITE *Parking Generation Manual* notes that study sites with at least 75 percent of the dwelling units designated as affordable are also included in the "affordable housing" land use category. The proposed site has 90 percent affordable, therefore, would also fall in the affordable housing category.

As shown in **Table 1**, based upon the *average* ITE rates, a parking demand of 153 spaces is projected for the residential portion of the site, which is a rate of **0.54 spaces per bedroom**.

The peak parking demand for residents is at night, when the childcare facility is closed. The planned parking supply of 197 spaces exceeds the projected parking demand for every affordable housing scenario except the 85th percentile of affordable housing in an urban/suburban area, which does not take into account close proximity to a light rail station.

Table 1. Projected Parking Demand (ITE)

ITE No.	Description	ITE Parking Rate (Spaces per Bedroom)		Projected Riverfront Parking Demand (Spaces)	
		Average Peak Parking Demand	85th Percentile Peak Parking Demand	Average Peak Parking Demand	85th Percentile Peak Parking Demand
223	Affordable Housing, General Urban/Suburban, Weekday	0.54	0.82	153	232
223	Affordable Housing, General Urban/Suburban, Saturday	0.27	--	76	--
223	Affordable Housing, Dense Multi-Use Urban, Weekday	0.30	0.46	85	130
223	Affordable Housing, Dense Multi-Use Urban, Saturday	0.30	0.45	85	127
221	*Multifamily Housing (Mid-Rise) Dense Mutli-Use Urban, < 1/2 Mile to Rail Transit, Weekday*	*0.50*	*0.67*	*142*	*190*

Observations

Lambeth conducted parking observations at three (3) affordable housing, multifamily developments. The total number of bedrooms was not available, so the number of units was compared. The peak parking rate was 1.06 space per unit, and the average rate was 0.96 spaces per unit. Based on observations, the parking demand for the residential portion of the site is one space per bedroom, which results in a projected parking demand of 173 parking spaces for the residential portion of the site.

Proposed Parking Requirement

A parking requirement of one space per unit is recommend for the proposed affordable housing development. The proposed parking requirement results in a requirement of 173 parking spaces for the proposed development, as summarized in the table below.

Table 2. Proposed Required Parking

# Bedrooms or Use	Total Units or SF	Req'd Spaces per Unit	Number of Units	Req'd Spaces per Unit	Required Parking (Spaces)
1 Bedroom	80	1.15	80	1	80
2 Bedroom	76	1.65	76	1	76
3 Bedroom	17	2.00	17	1	17
Residential Total:	173 Units 283 Bedrooms	--	173 Units 283 Bedrooms	--	173 Spaces
Childcare	4,219	1 Space per 500 SF			8 Spaces
				Total:	181 Spaces
				Supply:	197 Spaces
				Surplus:	16 Spaces

Summary

Lambeth Engineering conducted a parking analysis for the proposed development at 1207 S. Riverfront Boulevard, southwest of the Riverfront Boulevard/Dearborn Street intersection in Dallas, Texas. The site is less than 1,000 feet from the upcoming high-speed rail station. The City of Dallas requires 291 parking spaces for the site; however, the PD defers to 51A-4.200, which does not account for affordable housing or being near a transit center. In addition, based upon actual parking data provided in the ITE *Parking Generation Manual*, the code requires more parking than is needed for affordable housing in an urban setting. Considering 51A's affordable housing section and if the future transit center were constructed, the City would require 181 spaces for the site.

Based upon ITE's actual parking data and Lambeth's affordable housing observations in Dallas, a peak parking demand of 173 spaces is projected for the residential portion of the site, which occurs at nighttime when the daycare center is closed.

The proposed rate of one parking space per unit for the affordable housing development results in a parking requirement is 181 spaces. The proposed site meets the City's goals in providing affordable housing and developing near the future high-speed rail station. The peak, projected parking demand will be satisfied by the proposed parking requirements.

END

Appendix

High Speed Rail Update – Station Zone Assessment

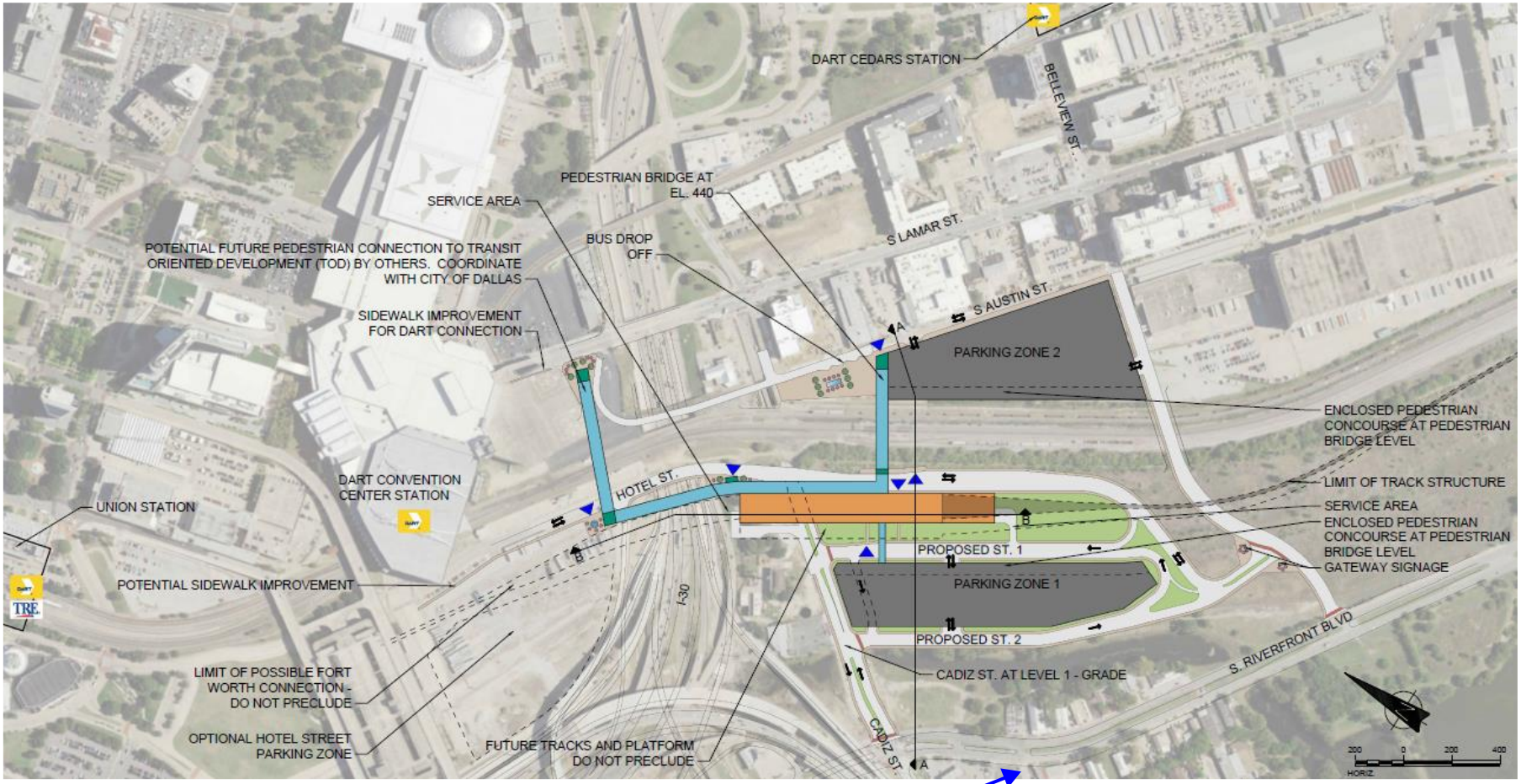
Mobility Solutions, Infrastructure and Sustainability

November 13, 2017

Mark Duebner,
Project Manager

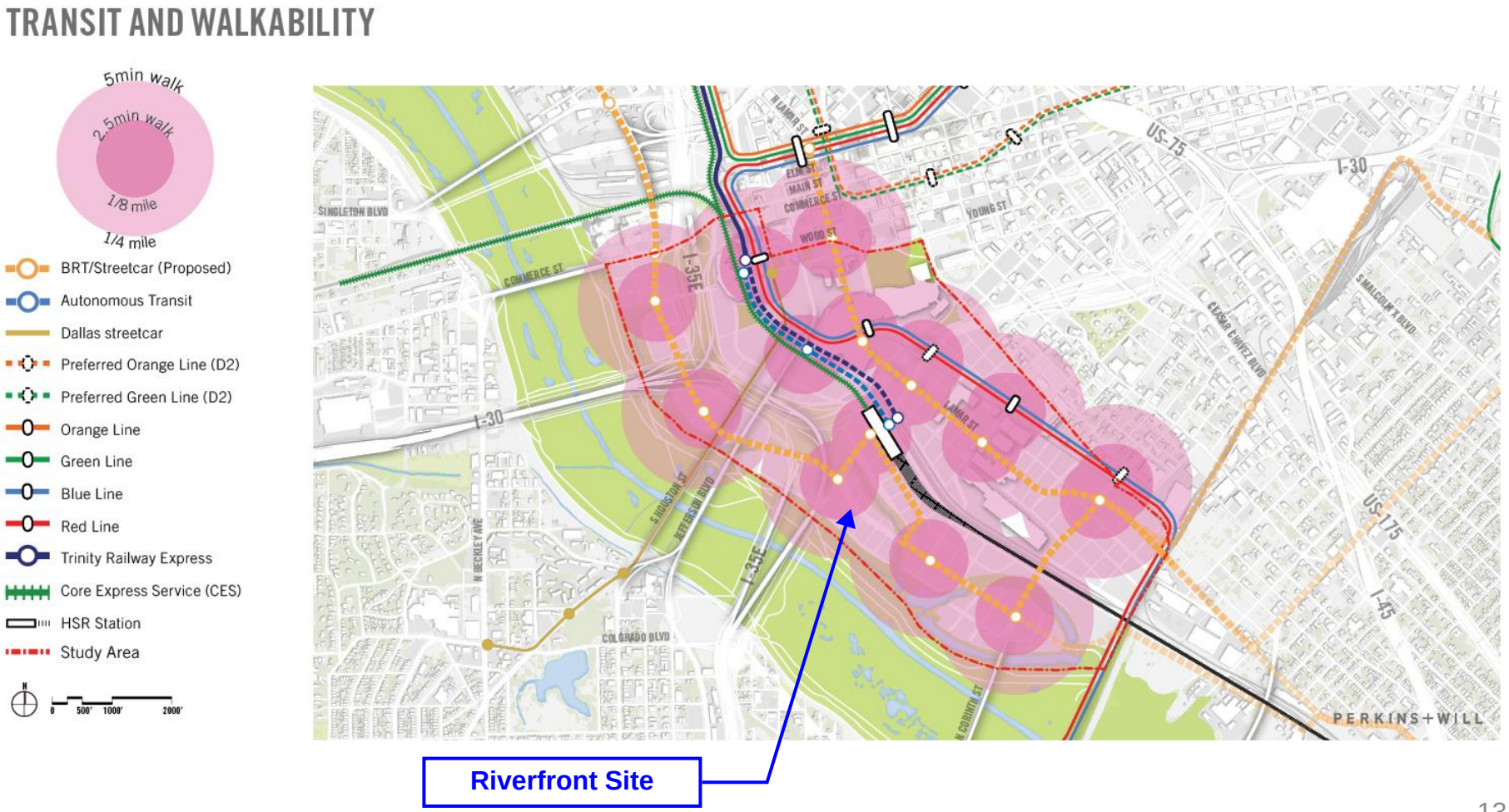
City of Dallas

High Speed Rail Station



Riverfront Site

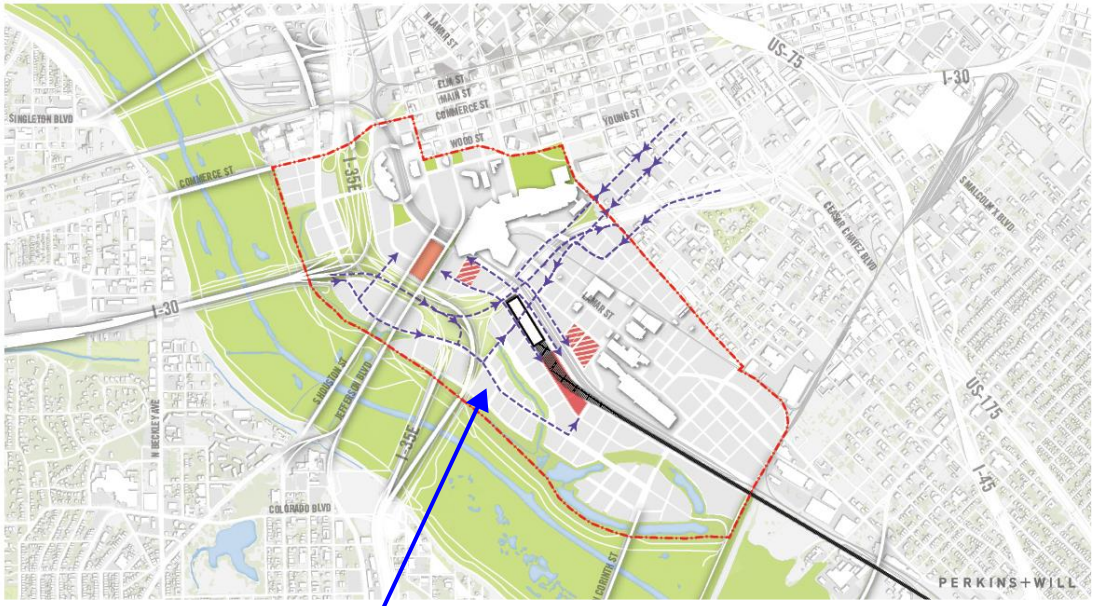
Multi-modal Transportation Connections



Infrastructure and Circulation

VEHICULAR ACCESS

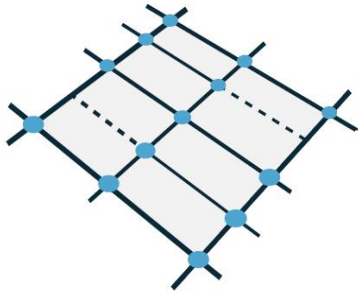
ACCESS AND PARKING



- Vehicular Access
- Existing Parking
- Interim Parking
- Potential Parking Facilities
- HSR Station
- Study Area

Riverfront Site

WALKABILITY

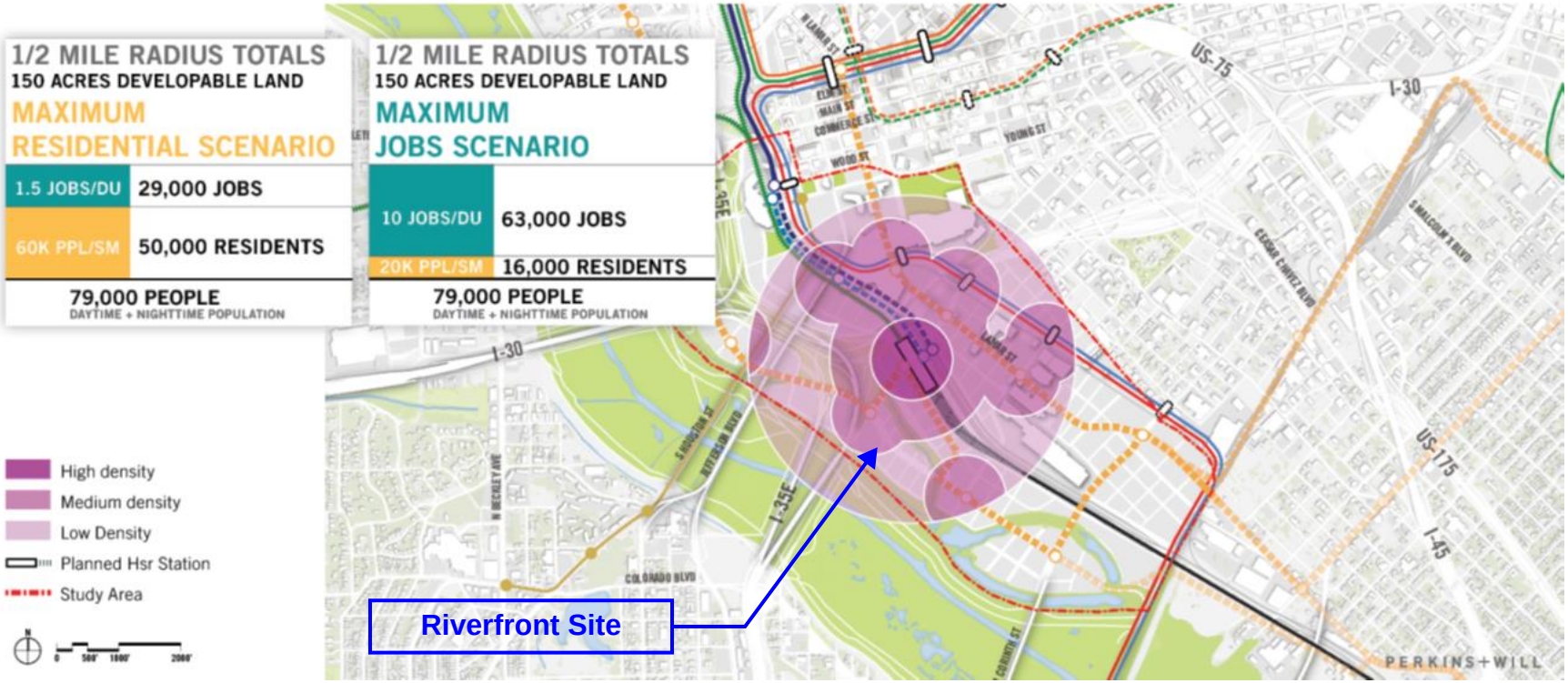


THE MOST WALKABLE DOWNTOWNS RANGE FROM:
140 - 400 INTERSECTIONS PER SQUARE MILE

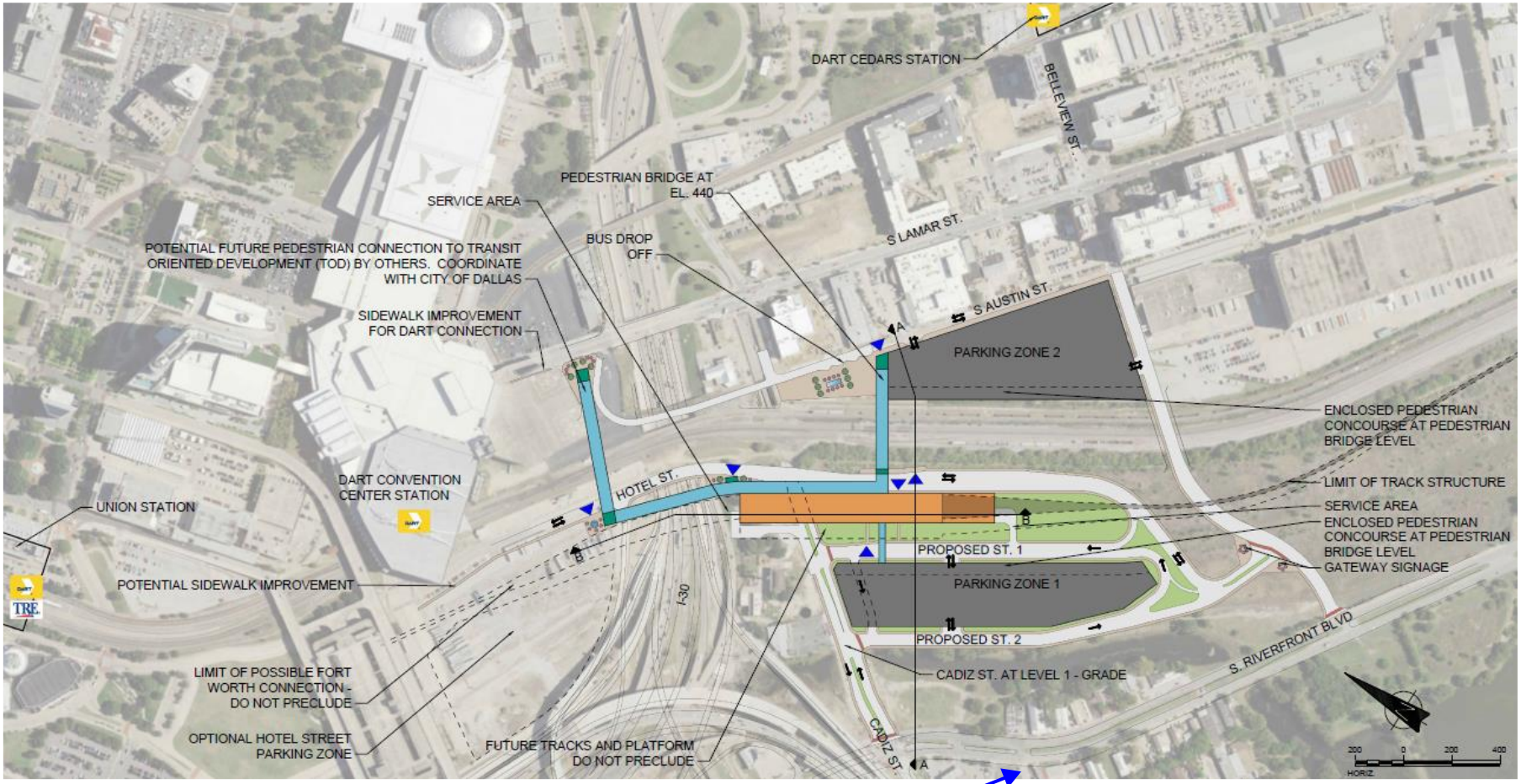
Revenue Enhancements

HIGH-SPEED RAIL DISTRICTS

JOBS AND RESIDENTIAL PROGRAM TARGETS



High Speed Rail Station



Riverfront Site

Date: Thursday, September 10, 2021
Time Observed: 12:30 AM - 2:30 AM
Observed by: Christy Lambeth

Multifamily, Affordable Housing

Location	Address	Parking Spaces					Parking Spaces per Unit
		Units	On-Site	On-Street	Total	Empty (On-Site)	
Bryan Place Apartments	3219 San Jacinto Street	21	15	2	17	3	0.81
Prairie Hill Townhomes	2016 N. Prairie Avenue	18	17	2	19	5	1.06
Santa Fe Trails	6318 Ridgecrest Road	88	83	7	90	62	1.02
						Average Parking Rate:	**0.96**