North Central Texas Council of Governments

DART let's go.

DART Red & Blue Line Corridors Last Mile Connections Project

Final Report

City of Richardson

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1. Introduction

One of the biggest challenges our nation's transit agencies face is finding a way to increase ridership in light of limited revenues. As is the case with many American cities, large portions of Dallas and its adjacent suburban areas have a relatively low population density level, which may make travel by transit a less viable option.

As an indication of these preferences, population density has been growing near transit stations along the Dallas Area Rapid Transit (DART) Blue and Red lines in the cities of Dallas, Garland, Plano, and Richardson. As ridership increases, the effects of existing gaps in infrastructure or barriers to pedestrian and bicycle accessibility at DART stations becomes more evident. These barriers have the potential to suppress the demand for rail traffic, increase motorized traffic to and from the rail stations, or increase safety risks for the roadway's most vulnerable users.

Coordination between transit agencies and city transportation offices is necessary in targeting first and last mile improvements that produce the greatest benefits while planning for anticipated costs. In support of these efforts, the North Central Texas Council of Governments (NCTCOG) initiated this study to verify exiting needs and to prioritize identified improvements for twenty-eight stations and their adjacent developed areas within the cities of Dallas, Garland, Plano, and Richardson.

1.1 Objectives

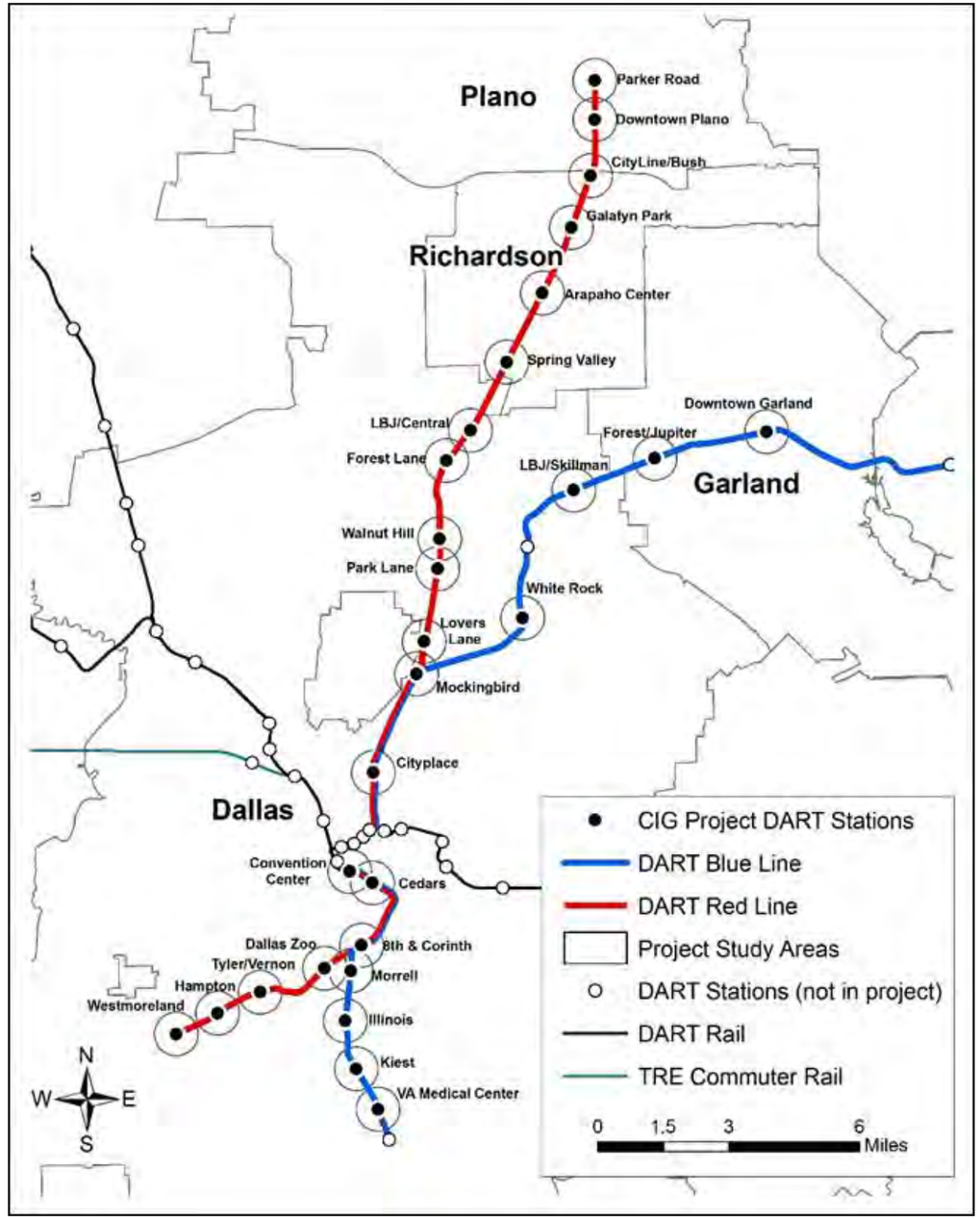
The project's objective is to provide opportunities for the greatest number of additional people to walk or bike to DART stations by identifying necessary sidewalk, shared use path, crosswalk connections, and related infrastructure within and surrounding the various DART stations. This was accomplished by:

- Conducting field investigation of existing pedestrian and bicycle infrastructure in the study area.
- Verifying the need for recommended pedestrian and bicycle improvements in priority corridors identified by NCTCOG to improve access and connectivity to light rail stations for the greatest number and density of residents and workers, thus increasing potential transit ridership.
- Identifying additional improvements based on field review, as necessary.
- Reviewing and updating NCTCOG's prior draft project prioritization of improvements based on information gathered during field review, engineering judgment, and criteria to be coordinated with City and DART staff stakeholders.
- Developing opinions of probable cost, and schematics for key pedestrian and bicycle improvements at rail stations and along prioritized routes to stations.

1.2 Study Area

The study area focused on the twenty-eight DART light rail stations built prior to 2004, included in the Red and Blue Line Platform Extension Project corridors, as shown in Figure 1.

Figure 1: Map of Study Area DART Stations



These stations are part of the Federal Transit Administration (FTA) Core Capacity Enhancement Capital Investment Grant, which made them eligible for FTA planning funds. Per FTA guidance, the one-half mile radius from the station is the effective planning area for transit-oriented development (TOD). These DART rail stations and their adjacent developed areas are located in the cities of Dallas, Garland, Plano, and Richardson.

While the intent of the planning work was to create corridor-level planning recommendations, not all areas surrounding all stations were reviewed using the same level of detail as part of this study; rather, strategic streets and sites within a broad selection of stations that were expected to be most cost effective were targeted for more thorough review.

1.3 Station Numbering & Report Organization

The system developed to organize improvements identified in the deliverables is illustrated in Figure 2. Each red or blue colored box in the figure represents a Red or Blue Line DART station respectively, arranged geographically from north to south. Purple boxes represent stations where the Red and Blue Lines run concurrently on the same alignment. Two-digit alpha-numeric codes assigned to each station are shown to the left of each box.

This report is organized for specific use by the City of Richardson. Other volumes of this report have been provided to other project stakeholders (NCTCOG, DART, Dallas, Garland, and Plano) which include similar details relevent to their jurisdictions. Figures common to all volumes of the report are numbered 1, 2, 3, etc. Figures specific to the City of Richardson have figure numbers beginning with the code (1C, 2A, 2B, or 2C) assigned to each station.

1.4 Station Area Half-Mile Boundaries

The CityLine Bush station is the only station half-mile area in the project that is divided by a City boundary. As such, information about this station is repeated in both the Plano and Richardson versions of the report.

The half-mile radii of some stations overlap. In most cases, the overlapping areas were divided equally between the two (or three) station areas for ease of reporting.

In the case of the small overlap between the Parker Road and Downtown Plano Stations, the entire overlap area was assigned to Downtown Plano. This was because, with the two stations being near the north end of the Red Line, it was determined that potential riders

Figure 2: Project Station Numbering Schematic

City	Station ID	Red Line	Station ID	Blue Line
Plano	1A	Parker Road		
	1B	Downtown Plano		
Richardson	1C	City Line/Bush		
	2A	Galatyn Park		
	2B	Arapaho Center		
	2C	Spring Valley		
Garland			3A	**Downtown Garland***
			3B	**Forest/Jupiter***
Dallas	3C	LBJ/Central		
	3D	Forest Lane		
	4A	Walnut Hill		
	4B	Park Lane	4E	LBJ/Skillman
	4C	**Lovers Lane***	4F	White Rock
	4D	Mockingbird		
	8A	Cityplace		
	8B	Convention Center		
	8C	Cedars		
	5A	8th & Corinth		
	5B	**Dallas Zoo***	5C	Morrell
	6A	Tyler Vernon	7A	Illinois
	6B	Hampton	7B	Kiest
	6C	Westmoreland	7C	VA Medical Center

*** Station with high priority improvements for 15% design**

in this area would be highly unlikely to walk north to the Parker Road Station only to then travel south.

2. Methodology

The consultant group conducted field investigations for each of the twenty-eight DART station properties and surrounding one-half mile areas within the study area to examine existing conditions of pedestrian and bicycle infrastructure and to determine potential improvements. Field visits for each station were made between July 2018 and January 2019. Specific dates are listed in Appendix A.

2.1 Field Survey (DART Station Properties)

The consultant group documented the existing pedestrian, bicycle, bus, and motor vehicle circulation and patterns, as well as the wayfinding, signage, and lighting at each station. Potential station-area improvements were then identified, including sidewalks, curb cuts, crosswalks, shared use paths, lighting and wayfinding, among others.

In many locations, signage for motorized and nonmotorized users needs to be updated in order to conform with the Manual on Uniform Traffic Control Devices (MUTCD).

Many pedestrian facilities were observed to be non-compliant with Americans with Disabilities Act (ADA) regulations. While a full inventory of all ADA infrastructure was outside the scope of this study, some example problems have been identified in the recommendations. It is recommended that DART conduct complete accessibility reviews to identify and correct all such concerns within DART station properties.

Review of the CityLine Bush Station was conducted while remaining cognizant of future connectivity to the DART Silver Line Commuter Rail (Cotton Belt) Project, currently in development.

2.2 Field Survey (Half-Mile Radii)

Inventories were developed of all proposed improvements within one-quarter mile of each station. Streets within one-quarter mile where existing sidewalks had been preliminarily identified as acceptable condition by NCTCOG were reviewed quickly by a combination of walking, biking, and/or driving. Within one-half mile of each station, the consultant team also reviewed corridors labeled as "Primary Routes" on NCTCOG's prior in-house mapping.

The primary focus of data collection efforts was information about major barriers to walking or biking to the stations. These included:

- Missing sidewalk links
- Unprotected crossings
- Multi-lane crossings
- Fences & landscaping
- Proximity to high-speed auto traffic

Map data from previous projects was reviewed revealing many locations where existing conditions had changed since NCTCOG's initial analysis. For example, recent sidewalk damage resulted in some additional gaps. Other gaps previously inventoried by NCTCOG had since been constructed by adjacent development or City/TxDOT projects.

2.3 Sidewalk Condition Classification

Existing sidewalk conditions were classified as acceptable or unaccaptable. As shown by the examples in Figure 3 on page 4, acceptable sidewalk was categorized as either "Excellent/Good" or "Fair." Unacceptable conditions included both "Poor" and "Nonexistent" sidewalk.

2.4 Incorporation of Other Data Sources

In some cases, additional improvements were constructed *after* the field work and were identified while conducting further review for prioritization on Google Maps aerial or Street View images. When such improvements were identified, the ArcGIS files were updated accordingly. However, other changes may have occurred between this review in Summer 2019 and the date of this report.

Information on several other sidewalk characteristics was compiled using Google Maps Street View in the office prior to the field visits and then verified by field personnel. For sidewalk segments, these characteristics included:

- Actual and effective sidewalk widths (accounting for obstructions such as utility poles)
- Type & width of buffer between sidewalk & street
- Presence & width of on-street parking, bike lanes & shoulder
- Presence of curb & gutter
- Posted speed limit
- Presence of lighting
- Number of adjacent travel lanes
- Adjacent land use category

The consultant team identified where sidewalk gaps are planned to be filled with shared use paths by reviewing NCTCOG's 2045 Regional Veloweb alignments adopted by the Regional Transportation Council. These were updated based on input from each city stakeholder about their most recent plans.

2.5 Identifying Crosswalks for Improvements

NCTCOG's prior in-house work identifying sidewalk gaps did not make any special considerations for crosswalks as distinct types of gaps in the pedestrian network. As part of this study, the consultants evaluated crosswalks at key locations, including:

- Existing signed and/or marked crosswalks crossing streets without signal or stop-sign control on the approaches being crossed.
- Unmarked/unsigned crossings of arterial or collector streets along radial lines to/from the station.
- Unmarked/unsigned crossings of arterial or collector streets not along radial lines to/from the station, but adjacent to significant pedestrian generators such as DART bus stops with significant levels of ridership, estimated by daily boarding and alighting data provided by DART.

Different types of field data were collected for signalized and unsignalized crosswalks during the field visits. At traffic signals, data collection included the number of lanes crossed in each direction, as well as the presence or absence of:

- Lighting
- Median refuge area
- Pedestrian ramps
- Countdown pedestrian signals
- Accessible pedestrian signals (APS)
- Pushbuttons (and if they were functional)

At unsignalized crosswalks, additional data collection items included:

- Whether the crosswalk had stop control for vehicular traffic or was uncontrolled.
- A two-minute count of traffic volumes crossing the crosswalk for locations where other daily traffic data from City or TxDOT sources was not available.
- Notes on any existing traffic control devices already present (such as signs, markings, or rectangular rapid flashing beacon (RRFB) assemblies.

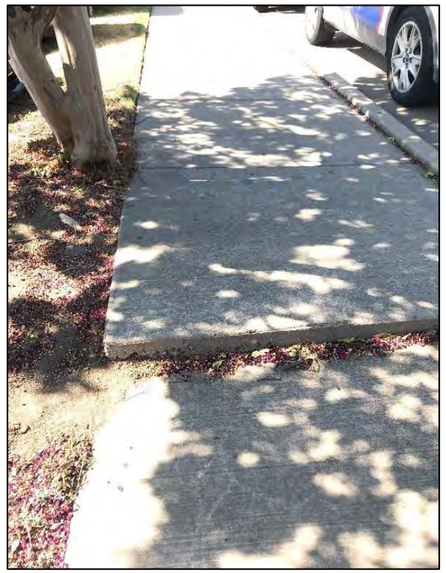
Each input for both sidewalk segments and crosswalks were considered later for use in evaluating and prioritizing improvements, though some data were ultimately not utilized in order to simplify the prioritization process. Data collection forms (including handwritten notes taken on maps and pre-filled tables) are found in Appendix B.

2.6 Crosswalk Improvement Selection

At existing or proposed crosswalks without existing stop sign or signal control, potential improvements were evaluated based on guidance in the Federal Highway Administration's (FHWA) recent publication, "Guide for Improving Pedestrian Safety at Uncontrolled Crossing Locations" (July 2018). This publication includes enhanced guidance on countermeasures that can or should be considered for uncontrolled crosswalks with various combinations of vehicular speed, traffic flow, and number of lanes to be crossed. A selection table reproduced from this publication and additional details about how the consultant team used it to develop crosswalk improvement recommendations are found in Appendix C.

Improvement options evaluated by this methodology include high visibility crosswalk markings, parking restrictions on the crosswalk approach, upgrading lighting, pedestrian crossing warning signs, "Advance Yield Here for Pedestrian" signs, curb extensions, median pedestrian refuge islands, rectangular rapid-flashing beacons (RRFB's), road diets, and pedestrian hybrid beacons. Road diets were only recommended if roadways would likely still have excess capacity after the lane reductions.

Figure 3: Sidewalk Condition Classification



Excellent/Good

- Functional for all users
- Meet all City & ADA standards (based on a superficial visual inspection only)

Fair

- May not be functional for some users, including those needing full ADA accessibility.
- Do not constitute gaps in the pedestrian network that would warrant replacement under funding programs designed to foster increased travel choices by walking and biking.
- May have moderate cracking & flaking with minimal uprooting or cracking.
- Minimal uplift by tree roots or other sources (estimated to be < 2" based on quick visual inspection)
- May warrant funding for accessibility upgrades under other programs designed specifically for that purpose or as part of cities' ADA Transition Plans
- Acceptable for the purposes of this project as being useful for a significant portion of the public who may be able to use them to travel to/from DART station.

Poor

- Poses potential hazards for all users.
- Severe cracking & flaking, with major uprooting & more significant trip hazards (vertical elevation differences > 2")
- Difficult to use by those pushing a wheelchair, cart, or stroller.
- Would require complete removal & replacement of at least one sidewalk panel.
- A few locations where steps had been consciously built into the sidewalk were also considered gaps.

Nonexistent

- Includes longer gaps of a City block or more
- Also some locations where individual panels were completely missing

- For vertical incongruities < 2", assumed that maintenance programs can make sidewalk passable to wheelchairs & strollers by providing asphalt wedges and/or grinding off corners < half depth of typical four-inch sidewalk slab.
- Since this project is targeting improvements that can be addressed by funding for new construction rather than maintenance funding, any trip hazards < 2" were assumed to be corrected by maintenance activities & therefore did not counts as gaps

A Microsoft Excel spreadsheet was created to automate the methodology and quickly produce a list of potentially recommended improvements given the inputs entered for each candidate crosswalk improvement location to be considered for the project. The analyst in each case still used engineering judgment to select which countermeasure options would ultimately be recommended. The inputs, options, recommendations, and notes are tabulated in tables found in Appendix D.

2.7 Stakeholder Involvement

Coordination meetings were conducted with all technical stakeholders including staff from the cities of Dallas, Plano, Garland, and Richardson, as well as staff from DART and NCTCOG to review the recommendations, and for information specific to their jurisdiction and background knowledge of study locations, as needed. Meetings with the public were not held as part of this work.

2.8 Half-Mile Area Improvement Prioritization – Initial Trial Method

To provide opportunities for the greatest number of additional people to walk or bike to DART stations by constructing sidewalk, shared use path, crosswalk connections, and related infrastructure, the prioritization of identified improvements was structured to provide balance between estimating this objective accurately and applying the methodology to a large study area.

Initially, a prioritization approach that attempted to track as closely as possible to potential ridership increases was tested for the Parker Road Station in Plano, with adjustments for safety, key destination access, and equity. Though some of the elements of this initial prioritization methodology were ultimately not included in this study, they are documented in Appendix E as being potentially useful for later studies on a smaller scale. Also, many of the assumptions and methodologies explained in Appendix E were retained in the ultimate methodology.

2.9 Half-Mile Area Improvement Prioritization – Final Methodology

The prioritization process used to score potential projects placed significant emphasis upon distance to/from the station and the number of (density) of persons on parcels that could be connected by constructing new infrastructure—the potential new riders who could access the DART station. The study did not attempt to correlate how many people would actually use DART if the walking and bicycling routes to the rail station were improved.

Figure 4: **Employment and Population "Tributary" to Sidewalk & Crosswalk Improvements**

Table 1 on page 6 identifies the criteria and weighting applied to rank potential projects. Additional details about the final methodology scoring process, including figures illustrating scoring for Plano's Parker Road Station, are provided in Appendix F. Highlights for each category and percent weight in the scoring system are as follows:

Tributary Employment & Population (50%): Each sidewalk and crosswalk improvement was scored based on the total employment plus population that would be "tributary" to the station via the improvement once all proposed improvements are constructed.

Figure 4 illustrates the concept of tributary employment and population. It shows the parcels in the Parker Road Station area, with darker shades of gray representing higher population/employment totals. Note that, while some of the improvements shown in Figure 4 differ from the final recommendations, the principles illustrated still apply.

In the figure, each sidewalk and crosswalk improvement link is shown in different colors depending on the total employment plus population that would be "tributary" to the station via the improvement once all proposed improvements are constructed. The tributary employment plus population values are shown next to each link, with red links nearest the station having the highest values.

Distance (25%): Each improvement was scored based on distance to the station, measured linearly "as the crow flies" for simplicity. Improvements that connect directly to the station have a distance of 0.0 miles.

Trip Length Reduction (5%): Each improvement was evaluated based on the percentage reduction in walking distance to the station that would occur for the population of a representative reference parcel.

Access (5%): Land uses with a high proportion of visitors to employees and locations near bus routes received priority in the scoring for this criterion.

Table 1: Weighting Criteria for Scoring Sidewalk and Crosswalk Improvements

Category	Tributary Employment & Population	Distance	Trip Length Reduction	Access		Safety		Equity
						Crash History	Systemic Safety	
Weight	**50%**	**25%**	**5%**	**5%**		**5%**	**5%**	**5%**
Inputs	Parcel population & jobs, GIS Network Analyst runs	Distance from Station	% Change in Pedestrian Trip Length	Other Nearby Destinations	Bus Routes	Number of nearby crashes in 5-year period	Posted Speed Limit	Environmental Justice Index
Description	Potential riders "upstream" of specific sidewalk or crosswalk improvements	Distance from individual improvements to station, measured "as the crow flies"	Measured for densest or farthest reference parcel tributary to each specific sidewalk or crosswalk improvement	Number of key destinations (hospitals, clinics, urgent care, schools, government buildings, courthouses, senior living, community centers, gardens, grocery stores, malls, supercenters, hotels, motels, entertainment, fine arts, parks, landmarks, athletic facilities, places of worship, libraries, museums, bus stops with > 25 daily boardings) within 250 feet of each improvement	Number of bus routes within 50 feet of each improvement that are also > 1/4 mile from station (Up to 3 points from bus routes but max. 5 points overall for key destinations and bus routes)	Number of crashes within 250 ft of improvement in 5-year period	Posted speed limit of parallel street or street being crossed	Designation of Above/Below Regional Average Percentage for Minority & Low-Income Populations
High Criteria/ Scoring Range	9,430 - 11,787 (20 to 25 points)	0 to 1/8 mile (25 to 19 points)	40-100% (5 points)	5+ destinations (5 points)	3+ routes (3 points)	5+ crashes (5 points)	≥ 45 mph (5 points)	Above Average for Both Minority and Low-Income (5 points)
Medium High Criteria/ Scoring Range	7,073 - 9,429 (15 to 20 points)	1/8 to 1/4 mile (18 to 13 points)	20-40% (3-4 points)	3-4 destinations (3-4 points)	2 routes (2 points)	3-4 crashes (3-4 points)	35-40 mph (3-4 points)	Above Average for Minority or Low-Income (3 points)
Medium Low Criteria/ Scoring Range	2,358 - 7,072 (5 to 15 points)	1/4 to 3/8 mile (12 to 6 points)	1-20% (1-2 points)	1-2 destinations (1-2 points)	1 route (1 point)	1-2 crashes (1-2 points)	25-30 mph (1-2 points)	
Low Criteria/ Scoring Range	0 - 2,357 (0 to 5 points)	3/8 to 1/2 mile (5 to 0 points)	0% (0 points)	No other destinations (0 points)	0 routes (0 points)	0 crashes (0 points)	≤ 20 mph (0 points)	Below Average for Minority and Low-Income (0 points)

Crash History (5%): A GIS shapefile was used containing the point location of all reported bicycle and pedestrian crash locations for the study area from 2013 to 2017. While the scope of this project did not include pedestrian volume data collection, the crash data was observed to serve as somewhat of a surrogate for pedestrian demand. Therefore, a cluster of crashes may be more indicative of a place where many people walk than of a place that's more dangerous to walk in terms of the risk to individual pedestrians.

Systemic Safety (5%): A more recent development in transportation safety that is designed to combat the drawbacks of traditional crash analysis is the concept of "systemic safety" which refers to approaches that are data driven and network-wide. This approach considered improvements at locations with similar characteristics to high crash locations, even if the locations where improvements are to be considered or proposed don't themselves have significant crash history.

As a measure of systemic safety, the project team opted to use the posted speed limit of the roadway adjacent to sidewalk improvements or crossed by crosswalk improvements. Vehicular speed is regarded as correlating well to safety outcomes in bicycle and pedestrian crashes.

Equity (5%): The equity criterion emphasized improving communities with populations that have not historically received equal access to resources. The consultants were provided spatial data for the project area with NCTCOG's Environmental Justice Index (EJI) to comply with federal rules for identifying Environmental Justice populations. The EJI is based on data from the 2013-2017 American Community Survey, aggregated at the census block level. Each census block is categorized if the percentage of its residents is higher than the regional average for minority population, low income, or both.

2.10 Gaps to Remain

The consulting team categorized some locations where gaps in the pedestrian network had been identified by NCTCOG during preliminary GIS work to be gaps to remain for the final project listing. This decision was based on field conditions that would be impractical or undesireable to implement or would make sidewalk construction extremely cost-prohibitive. Examples are detailed in Appendix F.

2.11 Improvement Numbering

Each proposed improvement, usually consisting of a single crosswalk or segment of sidewalk along a single city street block, was assigned a unique project-wide identification number for reference. The identification number consisted of:

- A two-digit code for the station area, matching the codes shown in Figure 2 earlier (For example, 1C for CityLine Bush, 2A for Galatyn Park, 2B for Arapaho Center and 2C for Spring Valley).
- A two-letter abbreviation for the station name for easier reference (For example, CB for CityLine Bush, GP for Galatyn Park, AC Arapaho Center and SV for Spring Valley).
- A two-letter code for the type of improvement (SW for sidewalk, CW for crosswalk, RP for repair, VW for Regional Veloweb, SP for shared use path, GP for gap to remain).
- A two- or three-digit number unique to identify the improvement location on project mapping. In addition to the VW improvement type code described in the bullet above, Regional Veloweb shared use path links have an improvement location number beginning with the letter V (V01, V02, etc.) to differentiate them from other improvements since they were numbered separately beginning at 1.

2.12 Prioritization Scoring

The consulting team evaluated each proposed improvement for the seven criteria described in Section 2.9 and Table 1. The proposed improvements were scored, and then sorted based the combined overall score. Possible total values ranged from 0-100 points. Additional details are included in Appendix F.

For each city (Dallas, Garland, Plano, and Richardson) separate scales were set for dividing improvements of varying scores into high, medium, and low-priority categories, but remained consistent for all stations within that city. The thresholds between high- and medium priority and medium- and low-priority were set such that approximately one-third of improvements for each city were allocated into each category. For half-mile areas surrounding DART rail stations in Richardson, the scoring ranges were as follows:

- High Priority = 22 to 100 points
- Medium Priority = 15 to 21 points
- Low Priority = 0 to 14 points

The City of Richardson after initial review of the results directed a number of changes in priority designation for individual improvements to depart from the above scoring ranges. The highest scoring improvement evaluated in Richardson was 2B-AC-SW-36, a segment of sidewalk along Central Expy southwest of the station between Collins Blvd and Arapaho Rd. This improvement received a score of 54 points.

3. Improvement Recommendations

The following sections include project mapping and opinions of probable construction costs for existing and proposed conditions, and improvements that have been identified to improve pedestrian and bicyclist access to the stations.

3.1 DART Station Property Recommendations & Opinions of Probable Construction Cost (OPCC)

The first figure in each set for individual station properties on pages 9, 12, 14 and 18 illustrates the station area including DART property limits, existing sidewalks, Regional Veloweb shared use paths and local shared use paths in and around each station.

The figures on pages 10-11, 15-17 and 19-20 show photographs of existing conditions at the same locations, referenced by matching, numbered orange stars. In many cases, the field photographs are enhanced with graphics to illustrate the proposed signing, pavement markings, or other traffic control devices that are recommended.

For each station, opinions of probable construction cost (OPCC's) were developed for each improvement, unless otherwise noted. The following cost components (totaling 25%) were applied to all costs, as directed and approved by both NCTCOG and DART:

- 10% design fee
- 4% mobilization
- 4% for landscaping allowance
- 2% for Erosion & Sediment Control Allowance
- 3% for traffic control
- 2% extra contingency for federal aid project

For additional details about the OPCC's, see Appendix G and Section 3.3 later in this report.

3.1.1 CityLine Bush Station (on DART Property)

Figure 1C-1.1 on page 9 identifies ten improvements recommended at CityLine Bush Station on DART property. Note that the station platform itself and all improvements located south of the President George Bush Tpk (PGBT) centerline are located in the City of Richardson, while all other improvements located north of the President George Bush Tpk (PGBT) centerline are located in the City of in Plano. Figures 1C-1.2 and 1C-1.3 on pages 10-11 illustrate existing conditions at the ten improvement locations. Several of the improvements discussed are at the boundary of DART's right-of-way and would therefore require coordination between DART, TxDOT, NTTA and/or the Cities of Plano and Richardson. (TxDOT maintains the PGBT frontage roads as SH 190). These improvements are also discussed in the figures and tables associated with Section 3.2 of this report (page 21) detailing off-station improvements.

The recommended improvements include:

- Constructing enhanced crosswalks for crossing the PGBT westbound frontage road at Crawford Rd/Topridge Dr and just east of the DART track crossing. See items 3a and 8 in Figure 1C-1.1. Enhanced conspicuity for crossing pedestrians and bicyclists is needed due to the high speeds permitted on the frontage roads and the large apartment complexes recently constructed on the north side of the PGBT. The crossing east of the DART tracks is being constructed as part of the Cotton Belt Trail construction.
- Providing short, more direct sidewalk paths connecting to adjacent private property to follow observed worn paths in the grass indicating existing pedestrian demand. See items 3 and 6 in Figure 1C-1.1. Coordination with adjacent property owners would be required.
- Adding and improving ADA ramps for better wheelchair access on the station platform.
- Adding pedestrian warning signs at crosswalks to the station platform.

Refer to the figures for additional details.

DART's Silver Line project will provide future commuter rail service beginning in late 2022 between DFW Airport and the new Shiloh Road Station east of the CityLine Bush Station. Many of the sidewalk connections in and around the existing CityLine Bush Station platform, including the last two items in the bulleted list above, will be reconstructed in the near future as part of the Silver Line project.

The total OPCC for the DART improvements in Richardson is approximately $83,000. This excludes costs for improvements 1C-CB-ST-07 and 1C-CB-ST-10, which are located in the City of Plano and/or will be constructed as part of the Silver Line Project.

Improvements 1C-CB-ST-08 and 1C-CB-ST-09 were integral to the half-mile area analysis undertaken in Section 3.2 and are therfore quantified together with off-site improvements as shared costs between DART, the City of Plano, and the City of Richardson. Only the portion of the cost assumed to be DART's responsibility is included here. Tables listing the estimated costs for individual improvements, as well as line item calculations, are included in Appendix H.

3.1.2 Galatyn Park Station (on DART Property)

Figure 2A-1.1 on page 12 identifies one improvement recommended at the Galatyn Park Station on DART property, as well as existing conditions at the improvement location.

A new sidewalk connecting the existing Central Trail on the south end of the DART train platform is needed. This connection is already planned and funded under DART's ongoing Red and Blue Line Platform Extension Project. Refer to the figure for additional details. There is no estimated cost for this improvement since it is already included in a funded project.

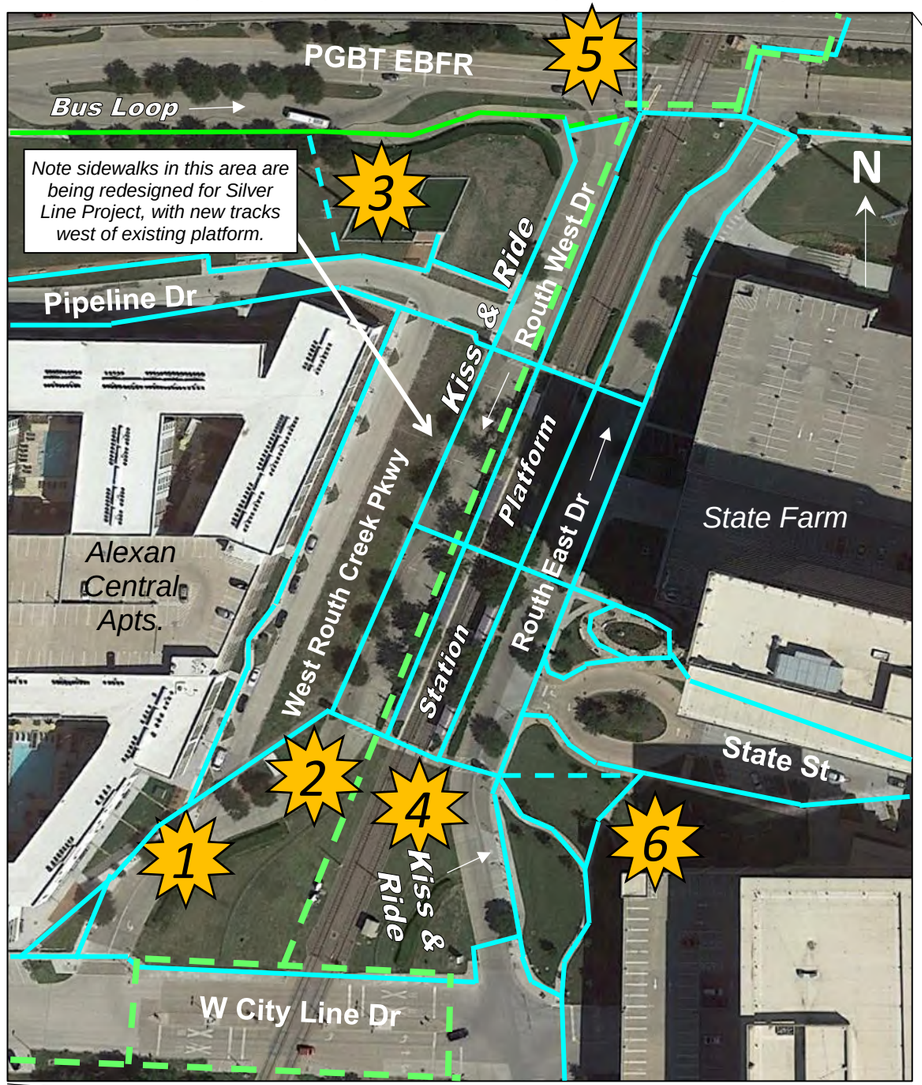
CityLine/Bush Station Recommended Access Improvements

Total for All Recommendations at Station: **$152,600 (=$69,600 in Plano + $83,000 in Richardson)**

North Central Texas Council of Governments

DART Red & Blue Line Corridors Last Mile Connections

Number	Description
1	The Dallas tourism "BiG" sign on Routh West Dr just south of the station should be reversed to face the opposite direction or the sign should be relocated to a safer position. The sign faces the street, a poor orientation since those taking photographs of others posing at the sign will be tempted to stand in the travel lanes.
2	Widen the ADA ramp to Routh West Dr from the south end of the platform to allow wheelchair users to bypass the large vine sculpture blocking the top of the ramp.
3	Coordinate with adjacent property owner to add a direct sidewalk connection between train platform & bus loop. A worn path in the grass ("goat trail") exists between the southwest corner of the Alexan Central Apartments dog park on Pipeline Dr and the DART bus stops along the PGBT eastbound frontage road. This is the most direct route between the train station platform and the bus stops, shorter than walking north along Routh West Dr and the frontage road. See improvement 1C-CB-SW-071.
4	Add pedestrian warning signs on the right-hand side of the roadway at the six crosswalks to the station platform across Routh East Dr and Routh West Dr. Existing signs are mounted on the left-hand side only. Add missing ADA ramps at two of the same locations.
5	Repair the sidewalk panel where settlement has created a trip hazard near the pedestrian pushbutton on the north side of the President George Bush Turnpike (PGBT) eastbound frontage road at Routh West Dr.



NOT TO SCALE

Number	Description
6	Coordinate with the adjacent property owner to construct a short segment of sidewalk for more direct travel between the southern crosswalk to the train platform and the south sidewalk along State St. A "goat trail" cuts the corner where the existing sidewalk is offset from the crosswalk, indicating existing pedestrian demand.

Legend

Sidewalk/Crosswalk

Existing

Proposed

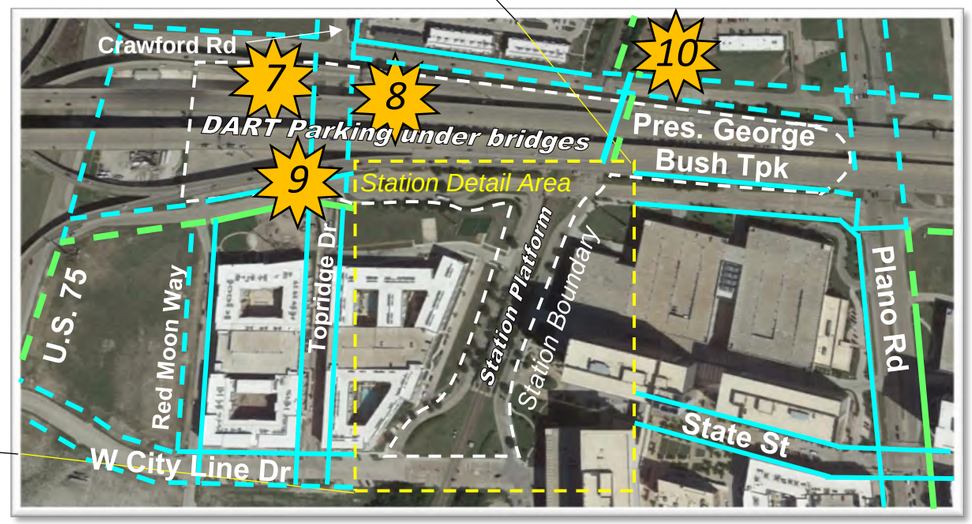
Regional Veloweb

Existing

Proposed

Number	Description
7	Construct a new, short segment of sidewalk on the west side of the Crawford Rd/Topridge Dr crossing under the PGBT, near the north end of the underpass adjacent to the PGBT westbound frontage road (WBFR). Add marked, signed crosswalks across both legs of the WBFR. The existing sidewalk on the west side extends north from the EBFR but ends just south of the WBFR. Provide pedestrian hybrid beacon with advance "Yield Here to Pedestrians" signing for crossing PGBT westbound frontage road. See also half-mile area improvements 1C-CB-CW-042 and 1C-CB-CW-043 for more information.
8	Add sidewalk on east side of Crawford Rd/Topridge Rd between PGBT frontage roads. See also improvement 1C-CB-CW-056 in the half-mile improvements map & matrix.
9	Add a crosswalk across the east leg of the PGBT Eastbound Frontage Road (EBFR) at Topridge Dr. Provide pedestrian hybrid beacon with advance "Yield Here to Pedestrians" signing. See also half-mile area improvement 1C-CB-CW-059.
10	Construct a crosswalk across the PGBT WBFR just east of the track crossing. Also, consider adding a traffic signal here similar to the existing signal on the PGBT EBFR, with care taken to coordinate with the adjacent railroad crossing gates. A crosswalk west of the tracks that will be removed with the Silver Line construction currently has only pedestrian warning signs and ramps. These changes will provide safer access to the DART station for residents of apartments on the north side of the westbound frontage road. See half-mile area improvement 1C-CB-CW-045 for more information.
General	Many pedestrian ramps in the station area are missing detectable warning surfaces, which should be added.

Location:



Not for Construction

FIGURE 1C-1.1 **JULY 2020**

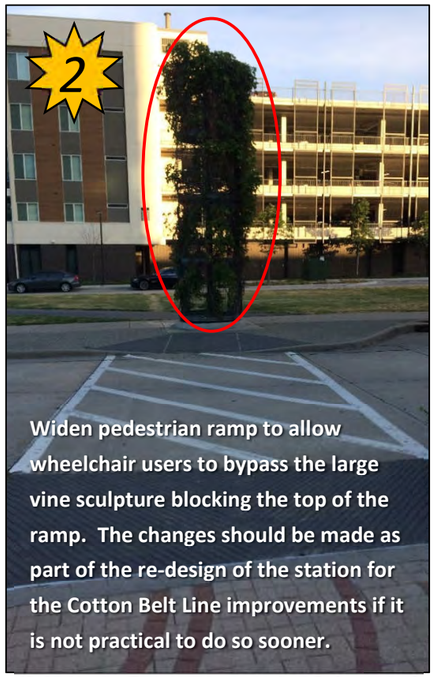
LEE ENGINEERING

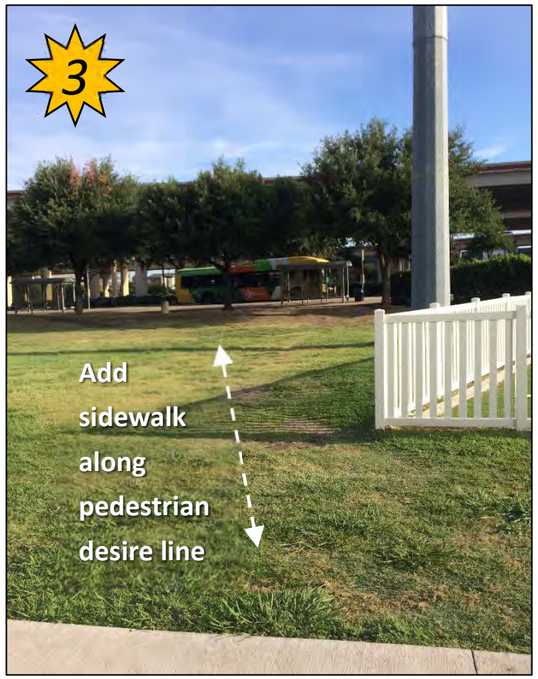
30 YEARS OF EXCELLENCE

CityLine/Bush Station Existing Conditions at Improvement Locations

North Central Texas Council of Governments

DART Red & Blue Line Corridors Last Mile Connections





Not for Construction

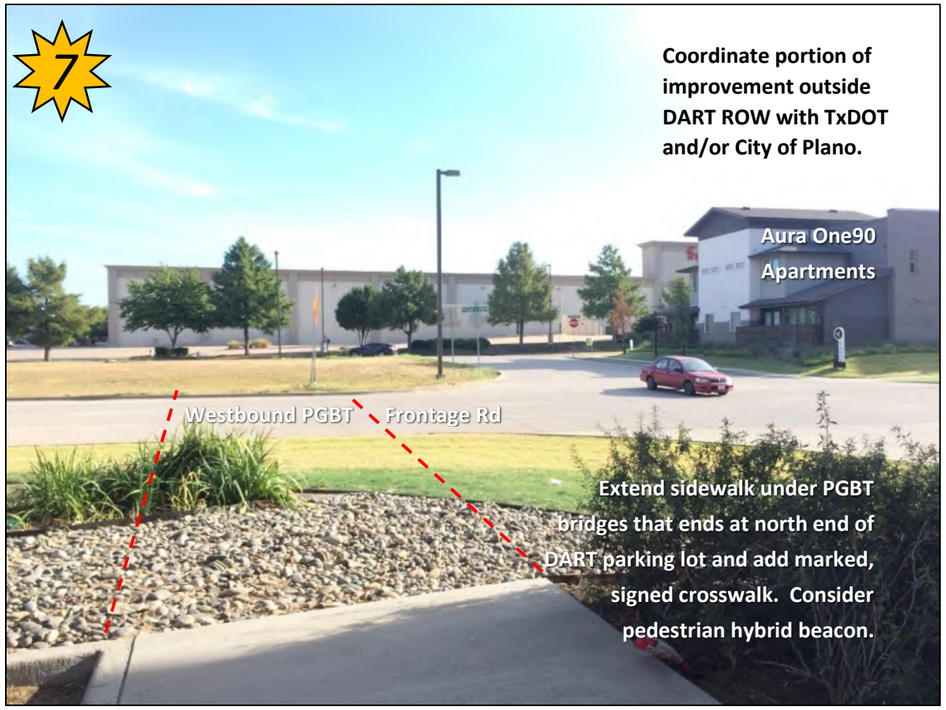
FIGURE 1C-1.2 **DECEMBER 2020**

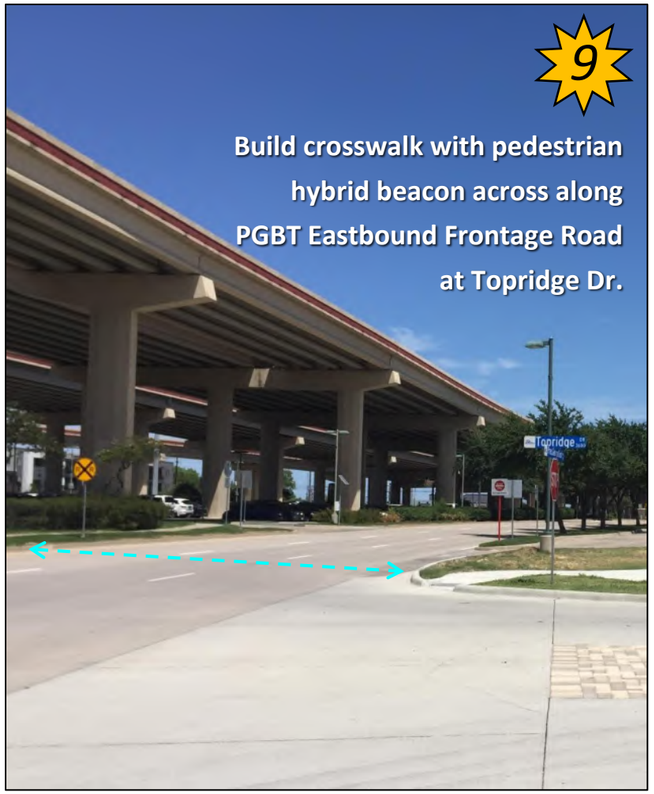
LEE ENGINEERING 30 YEARS OF EXCELLENCE

CityLine/Bush Station Existing Conditions at Improvement Locations

North Central Texas Council of Governments

DART Red & Blue Line Corridors Last Mile Connections





Not for Construction

FIGURE 1C-1.3 **JULY 2020**

LEE ENGINEERING 30 YEARS OF EXCELLENCE

Galatyn Park Station Recommended Access Improvement

North Central Texas Council of Governments

DART Red & Blue Line Corridors Last Mile Connections

Number	Description
1	Build sidewalk connection to the existing Central Trail on the south end of the DART train platform. This connection is already planned and funded under DART's ongoing Red and Blue Platform Extension Project.

DRAFT – Not for Construction

FIGURE 2A-1.1 **MAY 2020**

LEE ENGINEERING 30 YEARS OF EXCELLENCE

3.1.3 Arapaho Center Station (on DART Property)

Figure 2B-1.1 on page 14 identifies thirteen improvements recommended at Arapaho Center Station on DART property. Figures 2B-1.2 through 2B-1.4 on pages 15-17 illustrate existing conditions at the thirteen improvement locations.

A worn path in the landscaping between the west end of the bus loop and the pedestrian tunnel indicates existing demand for more convenient movement improvement 2B-AC-ST-09). A direct path and new crosswalks are recommended, along with consolidating the existing bus stops to make space.

The existing pedestrian ramps to the station platform on the west side of the deep tunnel under Greenville Ave (location 10a) have too long of an uninterrupted grade for people using manual wheelchairs. DART should coordinate with the City of Richardson to revise the recent addition of an at-grade crosswalk across Greenville Ave to include an accessible path to the station on the west side to bypass or replace the recently-built stairs (location 10b).

The under-utilized parking lot on the east side of the site should be developed as a Transit-Oriented Development (TOD), consistent with recent City of Richardson Innovation Quarter Plan. DART and the City of Richardson are considering moving the Kiss & Ride and Bus Loops to the west side of Greenville Ave as part of the station redevelopment.

Other recommended improvements include:

- Building new sidewalk connecting the train platform to the U.S. 75 northbound frontage road, including new safety fence between the sidewalk and the tracks (improvement 2B-AC-ST-13).
- Updating or relocating signs to meet MUTCD standards and adding or refreshing crosswalk striping.
- Installing pedestrian lighting for areas where tree cover makes for dark nighttime conditions (improvements 2B-AC-ST-04 and 2B-AC-ST-05).
- Relocating existing bike parking located far from the train platform (location 2a) to the locations near the station (location 2c). A few parking spaces may need to be removed.

Refer to the figures for additional details. The total OPCC for the DART improvements is approximately $170,000. Tables listing the estimated costs for individual improvements, as well as line item calculations, are included in Appendix H.

3.1.4 Spring Valley Station (on DART Property)

Figure 2C-1.1 on page 18 identifies nine improvements recommended at Spring Valley Station on DART property. Figures 2C-1.2 through 2C-1.3 on pages 19-20 illustrate existing conditions at the nine improvement locations.

Some pedestrians were observed crossing Spring Valley Rd, a busy six-lane arterial, directly below the rail overpass instead of at the adjacent signalized crosswalks at Lingco Dr to the west or Spring Valley Rd to the east. DART should coordinate with the City of Richardson to consider installing anti-climb median fencing (improvement 2C-SV-ST-9) along the median of Spring Valley Rd in front of the DART station to ensure pedestrians cross at the crosswalks.

DART should also coordinate relocation of the bus stop on Lingco Dr to the downstream side of the crosswalk between the station platform and the Park & Ride lot (improvement 2C-SV-ST-2). The current location of the bus stop upstream of the crosswalk creates unnecessary potential for visibility obstructions between bus drivers and crossing pedestrians.

Other recommended improvements include:

- Installing pedestrian lighting for an area where tree cover makes for dark nighttime conditions (improvement 2C-SV-ST-6).
- Updating or relocating signs to meet MUTCD standards.
- Fixing pedestrian trip hazards.

Refer to the figures for additional details. The total OPCC for the DART improvements is approximately $240,000. Tables listing the estimated costs for individual improvements, as well as line item calculations, are included in Appendix H.

Arapaho Center Station Recommended Access Improvements

North Central Texas Council of Governments

DART Red & Blue Line Corridors Last Mile Connections

Number	Description
1	Change the arrow direction of "PEDESTRIANS USE UNDERPASS" sign to pointing "through" instead of pointing to the left.
2a-2c	Move the existing bike parking that is located far from the train platform (location 2a) to the corner of the lot near the station and the grassy area between the fence for the tracks and the trail south of the platform (location 2c). A few parking spaces may need to be removed. Bikes chained on the fence near the ticket machine (location 2b) are evidence of demand for more conveniently located bike parking.
3	Redevelop the under-utilized parking lot on the east side of the site as a Transit-Oriented Development (TOD), consistent with recent City of Richardson Innovation Quarter Plan. The City of Richardson and DART are also considering moving the Kiss & Ride and Bus Loops to the west side of Greenville Ave as part of the station redevelopment.
4-5	Add pedestrian lighting for area where tree cover makes for dark nighttime conditions.
6	Update "DO NOT ENTER" signs to meet MUTCD standards. Increase the size of STOP SIGN to obscure the shape of signs mounted on the other side.
7-8	Add crosswalk striping parallel to and on either side of the decorative brick crosswalks to make them high-visibility crosswalks and to properly define them as legal crosswalks where pedestrians have the right-of-way.
9	Create a more direct path between west end of bus loop and pedestrian tunnel to encourage its use. Worn path in landscaping here shows pedestrian desire line. Build new crosswalk across bus loop and stairs down to pedestrian tunnel path (longer path already exists for ADA compliance). Consolidate existing bus stops along the bus loop if necessary to make space for crosswalk.
10	The existing pedestrian ramp from the tunnel under Greenville Avenue to the station platform (location 10a) has too long of an uninterrupted grade for people using manual wheelchairs. Since level platform breaks for resting locations would require lengthening the ramp and necessitate extensive additional excavation, the City of Richardson and DART are instead planning to revise the recent addition of an at-grade crosswalk across Greenville Ave to include an accessible path to the station on the west side to bypass or replace the recently-built stairs (location 10b).
11	Replace the existing "Rail Station Access" sign with a fence-mounted sign with an arrow pointing diagonally down and reading "Pedestrians Use Tunnel." (The existing sign appears to direct pedestrians to jump the fence).
12	Update the "PEDESTRIANS USE UNDERPASS" sign to make the arrow a "U-Turn" instead of pointing to the left.
13	Build sidewalk connecting train platform to U.S. 75 frontage road. Pedestrian safety fencing will need to be installed between the new sidewalk and tracks. See half-mile area improvements 2B-AC-SW-037 for more details.

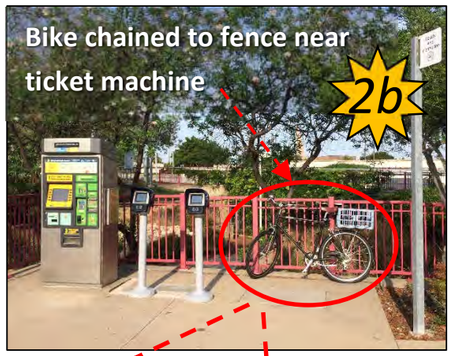
Not for Construction

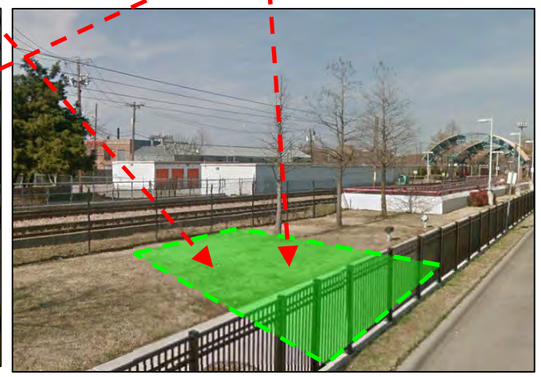
FIGURE 2B-1.1 NOT TO SCALE **DECEMBER 2020**

LEE ENGINEERING 30 YEARS OF EXCELLENCE

Arapaho Center Station Existing Conditions at Improvement Locations

North Central Texas Council of Governments
DART Red & Blue Line Corridors Last Mile Connections





Move bike parking to the corner of the lot near the station (closer to train platform)

Not for Construction

FIGURE 2B-1.2 **DECEMBER 2020**

LEE ENGINEERING

Arapaho Center Station Existing Conditions at Improvement Locations

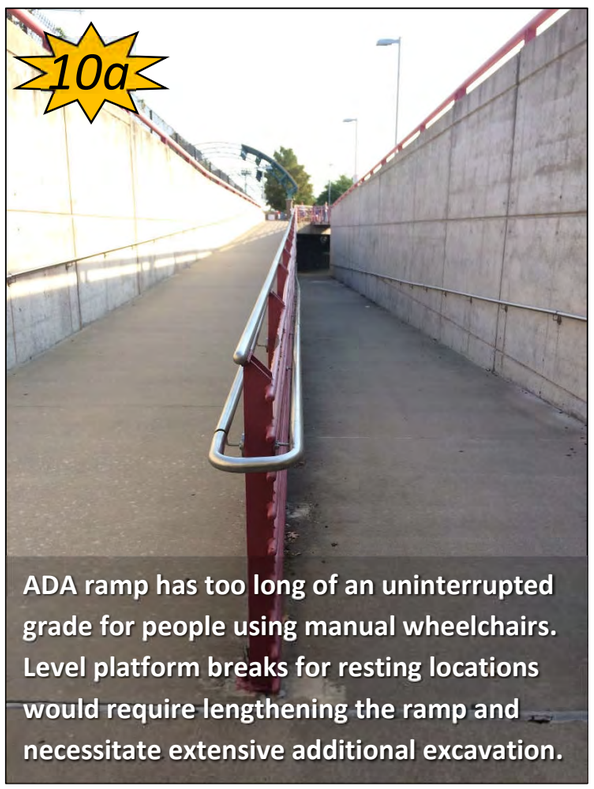
North Central Texas Council of Governments

DART Red & Blue Line Corridors Last Mile Connections

Create a more direct path between west end of bus loop and pedestrian tunnel to encourage its use. Worn path in landscaping here shows pedestrian desire line. Build new crosswalk across bus loop and stairs down to pedestrian tunnel path (longer path already exists for ADA compliance). Consolidate existing bus stops along the bus loop if necessary to make space for crosswalk.

R5-1

Replace the existing "Rail Station Access" sign with a fence-mounted sign. Mount the sign parallel to the fence facing the sidewalk instead of perpendicular to the fence. (The existing sign appears to direct pedestrians to jump the fence or go around it).



Not for Construction

FIGURE 2B-1.3 **DECEMBER 2020**

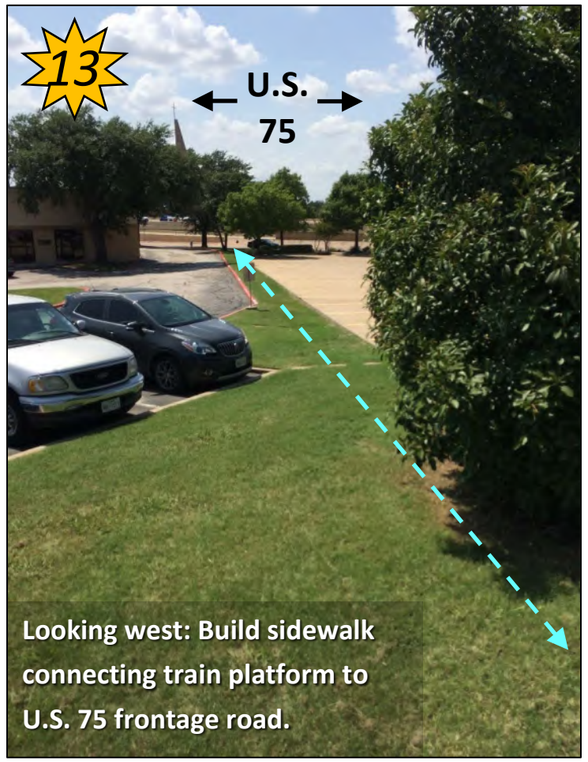
LEE ENGINEERING 30 YEARS OF EXCELLENCE

Arapaho Center Station Existing Conditions at Improvement Locations

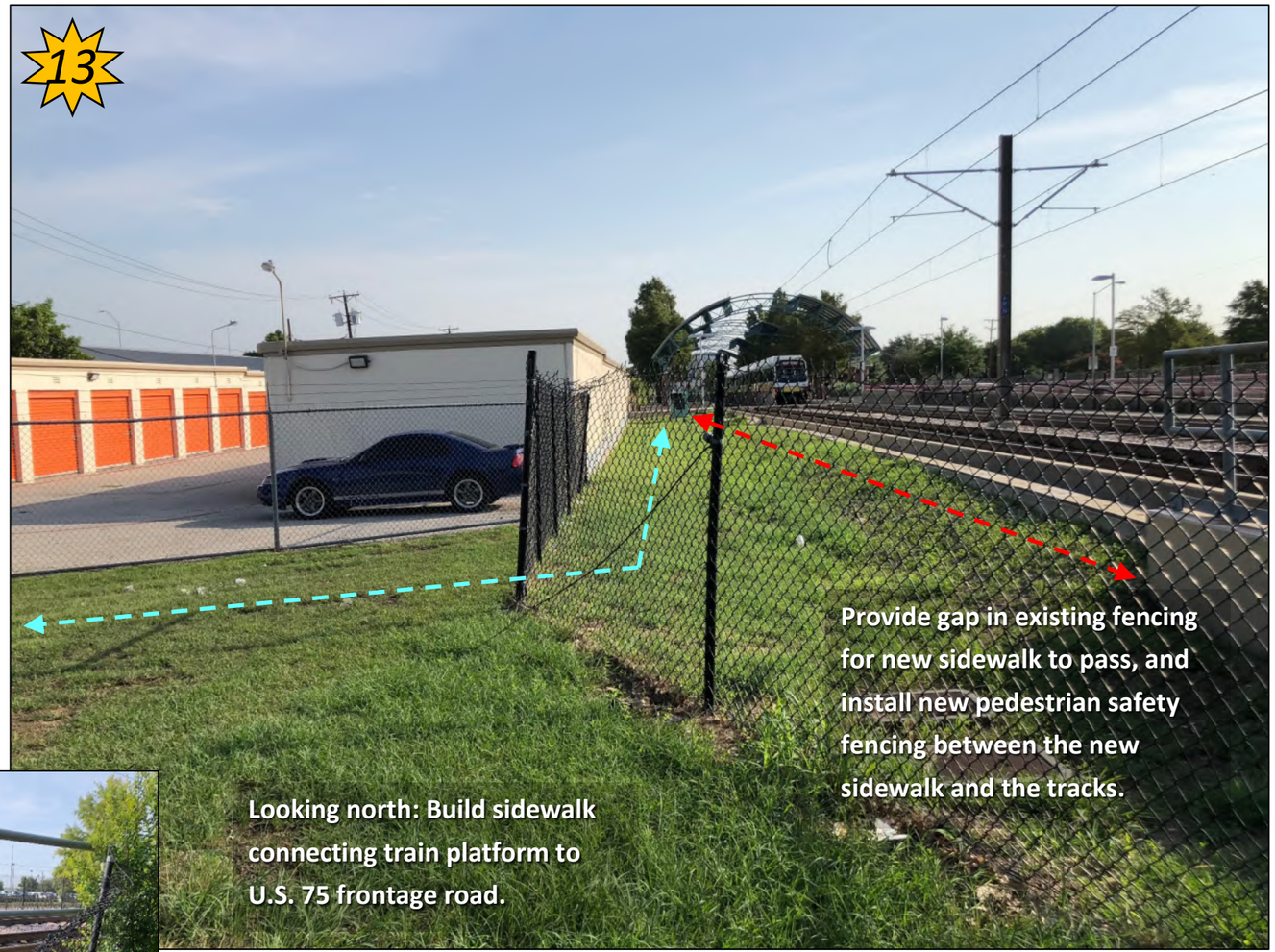
North Central Texas Council of Governments

DART Red & Blue Line Corridors Last Mile Connections

Arrow direction of "PEDESTRIANS USE UNDERPASS" sign should be "U-Turn" instead of pointing to the left



Looking west: Build sidewalk connecting train platform to U.S. 75 frontage road.



Looking north: Build sidewalk connecting train platform to U.S. 75 frontage road.

Provide gap in existing fencing for new sidewalk to pass, and install new pedestrian safety fencing between the new sidewalk and the tracks.

➢ Picture at upper right taken from this location at left, where damaged fence and box used as stepping stool indicate existing pedestrian demand for this travel route.

FIGURE 2B-1.4 **MAY 2020**

Not for Construction

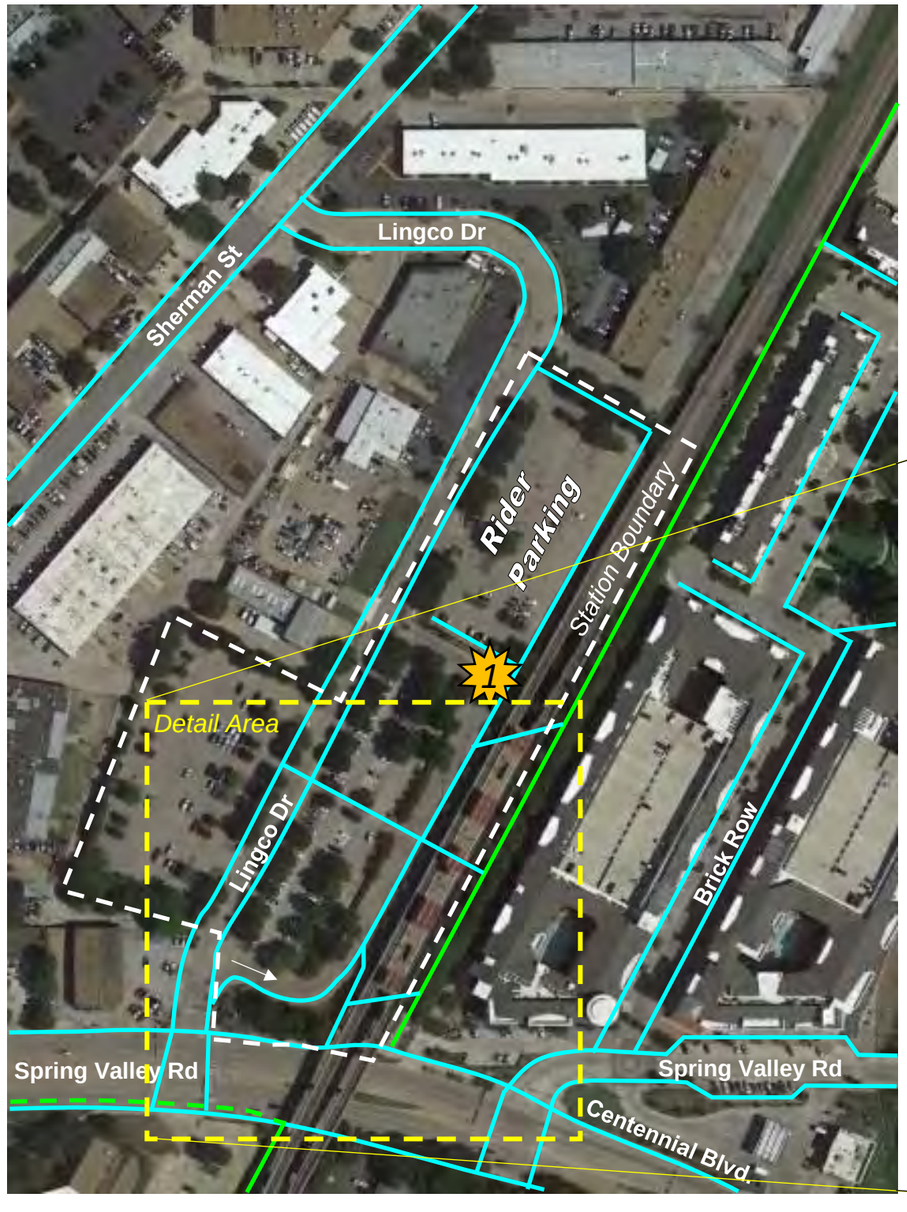
LEE ENGINEERING 30 YEARS OF EXCELLENCE

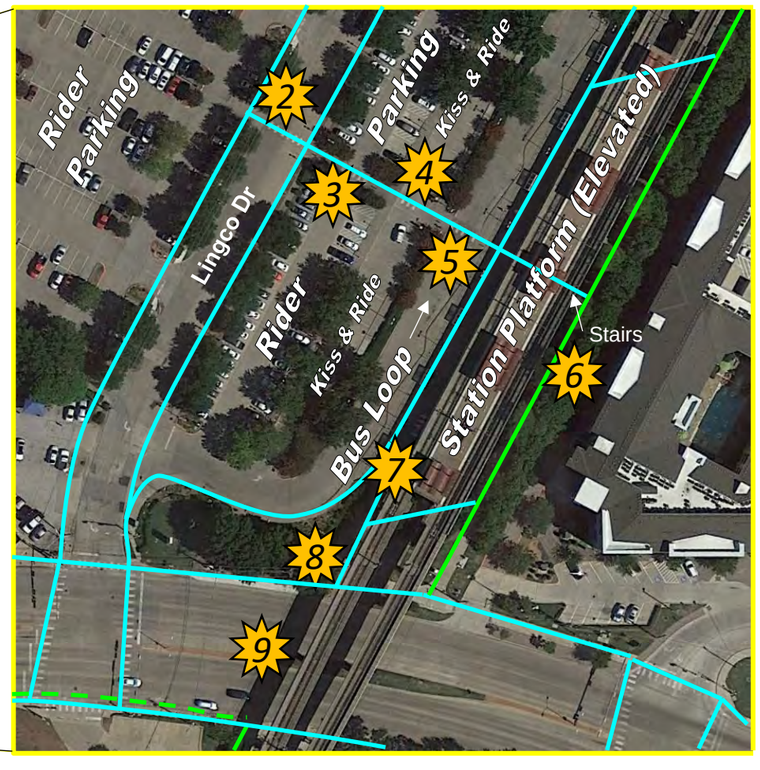
Spring Valley Station Recommended Access Improvements

North Central Texas Council of Governments

DART Red & Blue Line Corridors Last Mile Connections

N





Number	Description
1	Correct pedestrian trip hazard.
2	Relocate bus stop to the far side of the crosswalk to ensure pedestrian safety.
3-5	Update pedestrian warning signs to meet MUTCD standards. The existing signs are fading, have the wrong panel shape, and do not have supplemental arrow plaques as required to meet MUTCD standards.
6	Install pedestrian lighting along the Central Trail near the station.
7	Update “DO NOT ENTER” signs to meet MUTCD standards.
8	Correct pedestrian trip hazard.
9	Install median fence along Spring Valley Road in front of DART station to ensure pedestrians cross at the crosswalks.

Legend

Sidewalk/Crosswalk

Existing

Regional Veloweb

Existing

Proposed

DRAFT – Not for Construction

FIGURE 2C-1.1 NOT TO SCALE **MAY 2020**

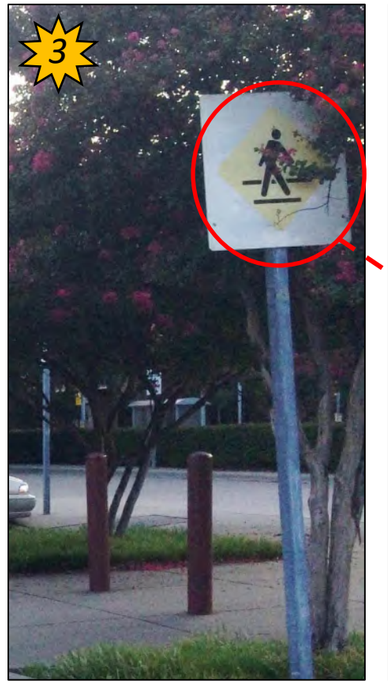
LEE ENGINEERING 30 YEARS OF EXCELLENCE

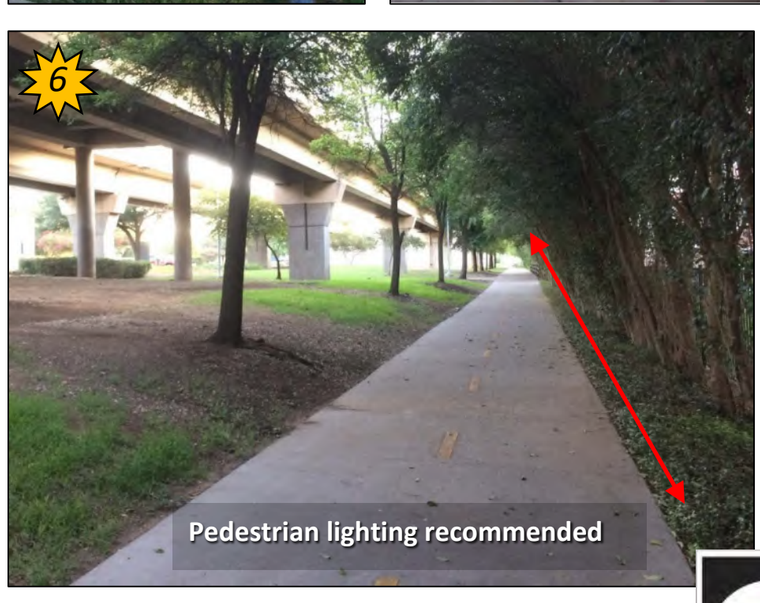
Spring Valley Station Existing Conditions at Improvement Locations

North Central Texas Council of Governments

DART Red & Blue Line Corridors Last Mile Connections

Relocate bus stop on southbound Lingco Drive to the far side of the crosswalk so buses do not obstruct visibility of crossing pedestrians.





W11-2
W16-7P

Replace non-standard signs with R2-1 signs from MUTCD. Signs should be retro-reflective for increased nighttime visibility. The sign panel shall be diamond-shaped instead of having an image of a diamond-shaped sign on a rectangular panel. Uniform signs reinforce driver respect as legitimate traffic control devices.

DRAFT – Not for Construction

FIGURE 2C-1.2 **MAY 2020**

LEE ENGINEERING

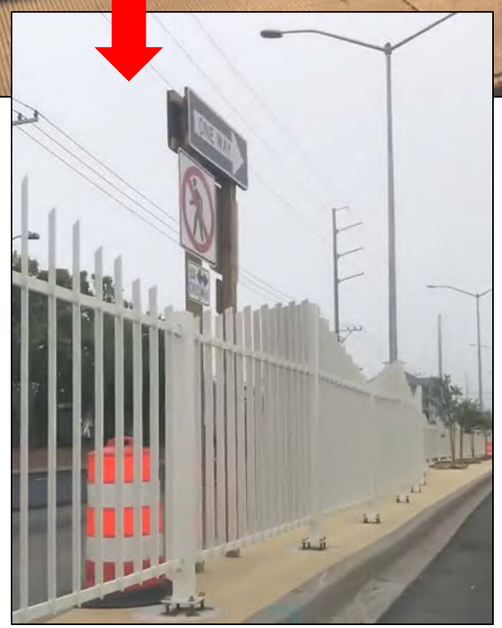
30 YEARS OF EXCELLENCE

Spring Valley Station Existing Conditions at Improvement Locations

North Central Texas Council of Governments

DART Red & Blue Line Corridors Last Mile Connections

R5-1



➢ Example of median fencing on arterial. (Note that the picture shown is only an example for reference, and no specific vendors are endorsed).

Image from Seagull Concrete and Fence, Ocean City, MD. https://www.facebook.com/SeagullFenceConcrete LLC/videos/1749627818436692/

DRAFT – Not for Construction

FIGURE 2C-1.3 **MAY 2020**

LEE ENGINEERING 30 YEARS OF EXCELLENCE

3.2 Half-Mile Area Recommendations

Figure 1C-2, Figure 2A-2, Figure 2B-2 and Figure 2C-2 on pages 22, 24 and 26-27 identify recommended high, medium- and low-priority improvements as separate construction packages for each station's half-mile area in Richardson. These figures are collectively referred to as phasing maps. High-priority improvements should be considered for Phase 1 of construction at each station. As funding is available the medium and low-priority improvements should be implemented either with the Phase 1 improvements or as part of future phases.

The legend for each map includes a brief summary of opinions of probable construction cost for each phase and station, which are described in greater detail in Section 3.3.

For additional context, Appendix I contains detailed maps of the recommendations for each station's half-mile area, including existing, planned, and funded regional and local shared use paths, as well as existing, planned and funded on-street bicycle networks.

In each phasing map, existing sidewalks are shown in light blue. The density of individual parcels' population plus employment are shown in grayscale, with darker colors representing higher values.

Proposed sidewalk and crosswalk improvements are shown in multiple colors, according to the assigned priority: red for high-priority (Phase 1), orange for medium-priority (Phase 2), and light pink for low-priority (Phase 3). Gaps to remain are shown in dark pink. For more details about these categories, refer to Appendix F.

Each high- medium- and low-priority improvement, along with all gaps to remain, are indicated by the boxed number labels near each improvement location. The lower right corner of each phasing map includes a legend that describes the abbreviations in the improvement ID codes, which can be used to cross-reference the improvement matrices that appear in Appendix J.

For solid red, orange, or light pink lines, the recommended improvement for a sidewalk gap is either a new or repaired 5-foot wide sidewalk or a new 10-foot shared use path along the length shown. Repairs are noted in the matrix notes for each improvement in Appendix J, and assume full removal of damaged, existing sidewalk prior to replacement.

For crosswalk gaps, the type of improvement recommended is shown with numbered circles located near each crosswalk. The numbers in the circles correspond to the legend of possible pedestrian safety countermeasures appearing at the upper right of the figure. More details about these improvements can be found in Section 2.6, as well as in Appendix C, Appendix D, and Appendix J. Treatments recommended somewhere on the phasing maps have a red box around them in the legend for easier reference.

The "Half Mile Area Improvements Matrices" appearing in Appendix J for each station list for each improvement the owner, improvement type, location, length, notes, priority score, and (in the case of high priority improvements not built by others) the opinion of probable construction cost. Additional information useful for interpreting the tables in Appendix J may be found in Appendix I.

3.2.1 CityLine Bush Station (Half-Mile Area)

Figure 1C-2 on page 22 shows the recommended improvements in the half-mile area around the Cityline Bush Station. Central Expy (U.S. 75), the President George Bush Tpk (SH 190) and K Ave/N Plano Rd all pose boundaries to multi-modal access to the station. While the station is located just south of the Richardson City line formed by the PGBT, new transit-oriented residential development has occurred north of the PGBT in Plano, with other undeveloped parcels expected to bring more such development. The current configuration of the Park & Ride lots located below the PGBT bridge structures is oriented primarily to serve DART riders driving to the station, with fewer accomodations for pedestrian and bicycle trips through the large parking lots.

Several sidewalks and connecting crosswalks should be built through and around the Park & Ride lots below the PGBT bridges. The high posted speed limits along the PGBT frontage roads create the need for high-visibility crosswalks. Therefore, pedestrian hybrid beacons are recommended at the Crawford Rd/Topridge Dr crossings of the PGBT frontage roads (1C-CB-CW-42, 1C-CB-CW-43, and 1C-CB-CW-59). Also, a pedestrian traffic signal is recommended for the crossing of the PGBT westbound frontage road just east of the DART tracks (1C-CB-CW-45). The existing crosswalk across the WBFR west of the tracks will be removed as part of the Silver Line Construction, which is still under design but will reconfigure other existing sidewalks and crosswalks in and around the station.

Three existing signalized intersections should receive pedestrian access improvements. Marked crosswalks and countdown, accessible pedestrian signals should be added at the intersections of Plano Pkwy with F Ave/Executive Dr and with K Ave. Though pedestrian indications are already present at the K Ave/N Plano Rd intersection with the PGBT frontage roads, sidewalks (1C-CB-SW-046, 1C-CB-SW-047, and 1C-CB-SW-061) need to be added so that pedestrian travel through these intersections can occur during all weather and for DART riders of different abilities.

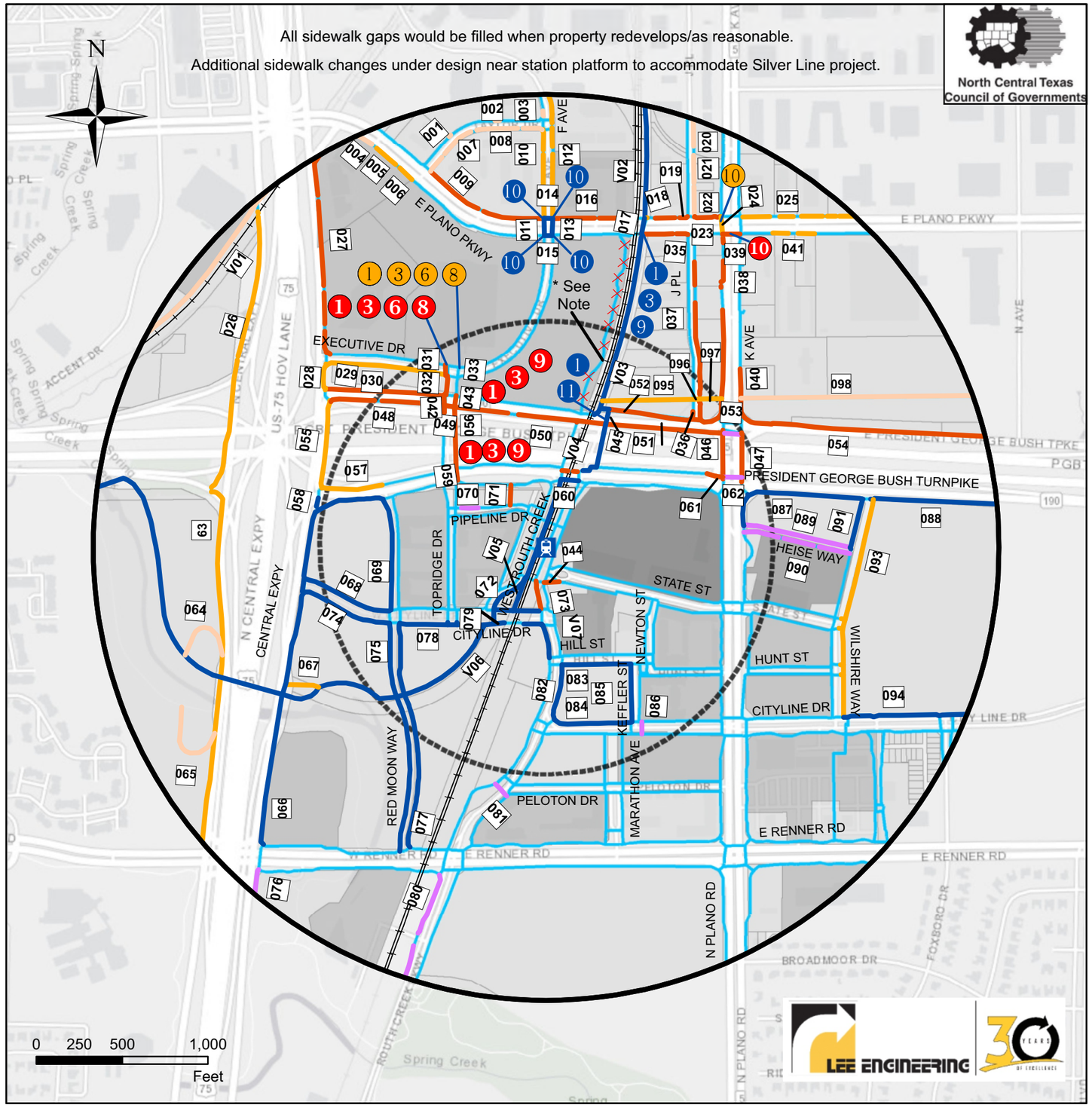
Most of the recommended improvements south of the station in Richardson are anticipated for construction by others, either as part of the Silver Line project, the ongoing development of CityLine, or other projects by the City of Richardson.

Additional details about other improvements recommended in Figure 1C-2, as well as challenges associated with the recommended gaps to remain, are included in the expanded narrative and matrix notes for Cityline Bush Station that can be found in Appendix I and Appendix J.

FTA DART Stations
Last Mile Connections
City Line Bush Station
November 2020

North Central Texas Council of Governments
DART Red & Blue Line Corridors Last Mile Connections

Figure 1C-2 Construction Packages



Legend

- DART Rail Station
- Railroad Track

Sidewalk

- Existing Sidewalk/Crosswalk

Proposed Sidewalk/ Crosswalk by Priority [1]	Richardson Construction Cost Estimate
High	$338,650
Medium	$1,153,800
Low	$306,900
	$1,799,350

- Built by Others
- Gap to Remain

Buffers
- 0.5 Mile Buffer
- 0.25 Mile Buffer

Existing Residential and Employment Population (Number of People)

Ppl
- 0 - 234
- 235 - 1049
- 1050 - 2586
- 2587 - 5364
- 5365 - 10339

*Note: Sidewalk to be removed to make way for DART Silver Line tracks.

Possible Pedestrian Safety Countermeasures

Unsignalized Crosswalk Improvements

Hi	Md	Lo	Oth	
1	1	1	1	Crosswalk Signs, Markings & Lighting
2	2	2	2	Raised Crosswalk
3	3	3	3	Advance "Yield Here" Sign
4	4	4	4	In-Street Pedestrian Crossing
5	5	5	5	Curb Extension
6	6	6	6	Pedestrian Refuge Island
7	7	7	7	Rectangular Rapid Flashing Beacon
8	8	8	8	Road Diet
9	9	9	9	Pedestrian Hybrid Beacon

Signalized Crosswalk Improvements

10	10	10	10	Add Marked Crosswalks & Provide Countdown, Accessible Pedestrian Signals
11	11	11	11	Traffic Signal

Improvement Code Legend (See Matrix)

1C-CB-SW-01

- 1C ← Station Number
- CB ← Station Abbreviation
- SW ← Sidewalk (or CW for Crosswalk)
- 01 ← Improvement Number (Matches [1] on Map)

LEE ENGINEERING 30 YEARS OF EXCELLENCE

3.2.2 Galatyn Park Station (Half-Mile Area)

Figure 2A-2 on page 24 identifies the recommended improvements in the half-mile area around the Galatyn Park Station. Central Expy (U.S. 75) currently blocks all bicycle and pedestrian travel to and from the west since the only bridge that crosses it within the half-mile area, on Galatyn Pkwy, does not include sidewalk. A DART shuttle (Route 824) connects the station to areas west of U.S. 75 at 15- to 20-minute intervals during weekday peak hours.

The City of Richardson should consider improved bicycle and pedestrian access across U.S. 75. Many pedestrians and cyclists would likely prefer the increased convenience of a sidewalk connection over the 15- to 20-minute intervals provided by DART Bus Route 824. A sidewalk connection would also be available at mid-day, night or on weekends.

The Galatyn Pkwy bridge would either need to be widened to provide sidewalk, or a road diet would need to be implemented. Narrowing lanes from 11 feet wide to 10 feet wide could provide space for a minimal 4-ft wide sidewalk on one side of the bridge only.

A better alternative for a road diet may be to reconsider the lane geometry of the tight-diamond interchange. Northbound and southbound vehicular through movements from the ramps are unnecessary and can be eliminated. The interchange could then potentially be converted to a diverging diamond interchange (DDI) configuration with a single lane in each of the eastbound and westbound directions.

This configuration would require a median, but sidewalk could then be provided either along one side of the bridge or (as is relatively common in the DDI configuration) in the median between opposing lanes, each traveling in a counterflow direction. Drainage, lane striping, and signal phasing changes would also be neeed on the bridge approaches and ramp intersections.

Geometric and capacity studies would be needed to validate the concept, incorporating projected future conditions with build-out of adjacent developments. However, the concept holds potential since DDI's frequently outperform traditional tight diamond interchanges by a large margin and/or with fewer lanes.

In addition to the bridge improvement and new sidewalk in some locations to fill network gaps, other recommended improvements include:

- New crosswalks with rectangular rapid-flashing beacons (RRFB's) for crossing Glenville Dr at two locations (improvement 2A-GP-CW-67 and 68) across a long stretch where the street has no other controlled crossings. The northern location would connect existing sidewalk from the station to the Infosys corporate campus, but would require coordination with the private property owner to extend sidewalk to the building front doors.
- Marked crosswalks, pedestrian ramps, pedestrian warning signs, yield lines, advanced yield signing and/or crosswalk lighting for several locations along N Collins Blvd, E Lookout Dr and Lakeside Blvd (improvements 2A-GP-CW-08-09, 12-13, 58, 80 and 83). In several of these locations, white crosswalk lines are required parallel to existing brick crosswalks to establish a visible and legally enforceable crosswalk.
- Marked, signed, and lit crosswalks across Palisades Blvd at South Gate Dr (improvements 2A-GP-CW-26 and 27). Consider curb extensions or a median refuge island in the wide 34-ft roadway. Care should be taken to provide advance warning signs in the eastbound direction due to the crest vertical curve in the roadway to the west. Or, the potential also exists for revising traffic signage to make the north-south route primary. In addition, the Palisades master plan does include the possibility of Palisades Blvd abandonment east of Empire Dr.
- White edge lines on the outside of brick crosswalks at the roundabout entries and exits where Lakeside Blvd intersects Lawnview Dr (improvements 2A-GP-CW-81, 82 and 85). Also, the only way to reach the roundabout crosswalks from adjacent sidewalks is via stairs to/from the sidewalks above. Explore alternatives for ADA-compliant access, and add pedestrian ramps at each crosswalk.

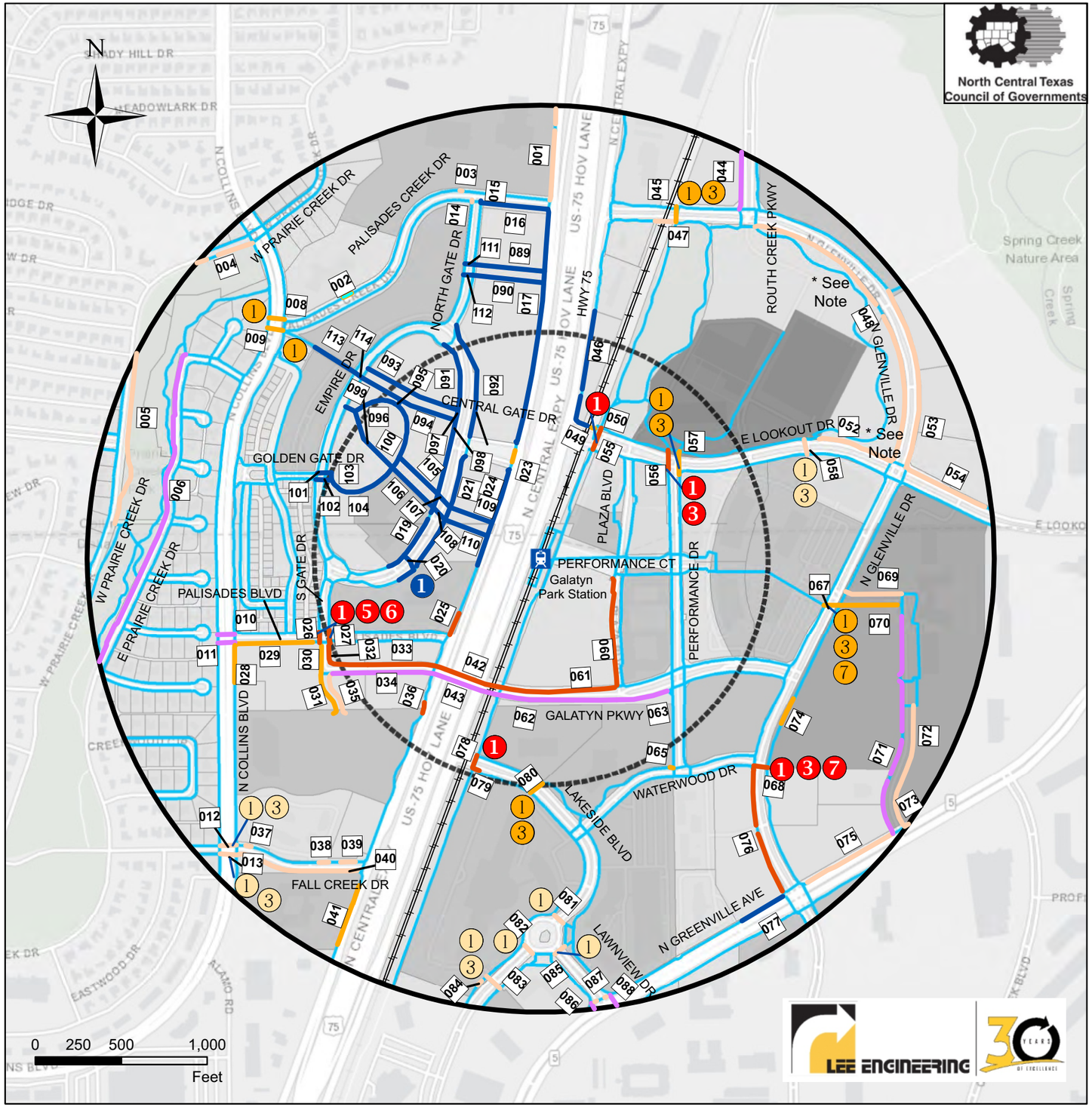
Many missing sidewalks will be constructed by the Palisades development as it is completed just west of Central Expy and the station. The developer will bear the cost for these improvements.

Additional details about other improvements recommended in Figure 2A-2, as well as challenges associated with the recommended gaps to remain, are included in the expanded narrative and matrix notes for Galatyn Park Station that can be found in Appendix I and Appendix J.

FTA DART Stations Last Mile Connections
Galatyn Park Station
November 2020

North Central Texas Council of Governments
DART Red & Blue Line Corridors Last Mile Connections

Figure 2A-2 Construction Packages



Legend

- DART Rail Station
- Railroad Track

Sidewalk

- Existing Sidewalk/Crosswalk

Proposed Sidewalk/ Crosswalk by Priority [1]	Construction Cost Estimate
High	$3,550,700
Medium	$532,400
Low	$2,529,500
	$6,612,600

- Built by Others
- Gap to Remain

Buffers

- 0.5 Mile Buffer
- 0.25 Mile Buffer

Existing Residential and Employment Population (Number of People)

Ppl

- 0 - 234
- 235 - 1049
- 1050 - 2586
- 2587 - 5364
- 5365 - 10339

*Note: Existing path is a well-graded but soft-surface walking trail. If adjacent development does not upgrade it to a concrete sidewalk, consider upgrading and/or building new sidewalk closer to the Glenville Dr curbline.

Possible Pedestrian Safety Countermeasures

Unsignalized Crosswalk Improvements

Hi	Md	Lo	Oth	
1	1	1	1	Crosswalk Signs, Markings & Lighting
2	2	2	2	Raised Crosswalk
3	3	3	3	Advance "Yield Here" Sign
4	4	4	4	In-Street Pedestrian Crossing
5	5	5	5	Curb Extension
6	6	6	6	Pedestrian Refuge Island
7	7	7	7	Rectangular Rapid Flashing Beacon
8	8	8	8	Road Diet
9	9	9	9	Pedestrian Hybrid Beacon

Signalized Crosswalk Improvements

10	10	10	10	Add Marked Crosswalks & Provide Countdown, Accessible Pedestrian Signals
11	11	11	11	Traffic Signal

Improvement Code Legend (See Matrix)
2A-GP-SW-01
2A ← Station Number
GP ← Station Abbreviation
SW ← Sidewalk (or CW for Crosswalk)
01 ← Improvement Number (Matches [1] on Map)

3.2.3 Arapaho Center Station (Half-Mile Area)

Figure 2B-2 on page 26 identifies the recommended improvements in the half-mile area around the Arapaho Center Station. Central Expy (U.S. 75), Collins Blvd, and Arapaho Rd are all arterials that provide barriers to multi-modal travel to and from the station.

Coordination between the City, DART, and adjacent private property owners would be required to construct a sidewalk connection southwest of the train platform to connect more directly to the U.S. 75 northbound frontage road and the businesses located there (improvement 2B-AC-SW-37). Also highly recommended is the construction of sidewalk fronting several of those businesses farther south (improvement 2B-AC-SW-37).

A shared use pathway as part of the Regional Veloweb network is planned along the Kansas City Southern rail line entering the north part of the study area and connecting to Collins Blvd west of U.S. 75 (improvement 2B-AC-VW-V01). A sidewalk connecting this improvement and the existing sidewalk along the west side of Collins Blvd to the sidewalk along the U.S. 75 southbound frontage road should be constructed as well (improvement 2B-AC-SW-03).

The City of Richardson plans to implement a road diet on the Collins Blvd bridge that will allow for wider sidewalks and protected bike lanes. The project should include signed and marked crosswalks with pedestrian-actuated rectangular rapid-flashing beacons (RRFB's) for crossing each of the four ramps between Collins Blvd and the U.S. 75 frontage roads, since the geometry of these ramps is conducive to high vehicular speeds.

Two new crosswalks are recommended for crossing Richardson Dr. One is recommended south of Monte Blaine Ln (improvement 2B-AC-CW-55), where the existing sidewalk on the west side ends, so the crosswalk will provide an alternate route via new and proposed sidewalk on the west side. The other crosswalk location (improvement 2B-AC-CW-53) aligns with an existing break in the hedges that aligns with the east end of Jolee St.

Both crosswalks must be designed carefully to maximize sight distance around the hedges and the tree-lined horizontal curves in the roadway geometry. Both should include yield lines and "Yield Here to Pedestrians" signing in each direction to mitigate risk of dual threat situation for pedestrians. Give strong consideration to installing pedestrian-actuated rectangular rapid flashing beacons (RRFB's), particularly due to the sight distance limitations. A road diet to introduce curb extensions and/or a median refuge island for pedestrians might also be considered to increase available pedestrian sight distance.

Additional details about other improvements recommended in Figure 2B-2, as well as challenges associated with the recommended gaps to remain, are included in the expanded narrative and matrix notes for Arapaho Center Station that can be found in Appendix I and Appendix J.

3.2.4 Spring Valley Station (Half-Mile Area)

Figure 2C-2 on page 27 identifies the recommended improvements in the half-mile area around the Spring Valley Station. U.S. 75, Spring Valley Rd, and Centennial Blvd are major arterials that pose barriers to bicycle and pedestrian travel, though signalized crossings generally provide good access opportunities. Access to the transit-oriented development east of the station is good with new sidewalk, though somewhat indirect. Several gaps in the sidewalk are present along the U.S. 75 frontage roads and along the neighborhood streets east of Greenville Ave.

In addition to building sidewalk to fill gaps in the network, the recommended improvements include:

- At the west end of McKamy Springs Ct, consider providing short break in the existing fence to provide a sidewalk connection to the Central Trail. This would provide a shorter walking distance to the station for many apartment and townhome residents to the east. The City of Richardson indicates they will need to work with the property owner on whether they have a desire for this improvement.

- New or improved crosswalks across Lingco Dr between the station platform and park & ride lot, across Sherman St at Lingco Dr, and across Greenville Ave at Pittman St (improvements 2C-SV-CW-16, 17 and 38). Yield lines and signing, and a pedestrian refuge island are recommended at the Lingco Dr and Greenville Ave crossings, while pedestrian-actuauted RRFB's are recommended at Lingco Dr. The Lingco Dr crossing should be coordinated with DART, as discussed in Section 3.1.4.

- New yield lines and signing for the two lanes in each direction approaching the existing signed and marked crosswalk across Greenville Ave at E Phillips St, near the northeast half-mile area boundary (improvements 2C-SV-CW-30 and 31). Consider adding a pedestrian hybrid beacon if warranted by a study of pedestrian volumes during arrival and dismissal times for the First Baptist Church of Hamilton Park and the Richardson ISD Math Science Technology magnet school, both located nearby to the east.

- White crosswalk lines parallel to the existing patterned concrete crosswalk across Buckngham Rd at the Central Trail crossing (improvement 2C-SV-CW-27). Add pedestrian warning signs and yield lines and signing. Consider a traffic signal, particularly in conjunction with the future extension of the Central Trail south of Buckingham Rd. A full traffic signal should be considered instead of a RRFB or pedestrian hybrid beacon due to the adjacency to the existing DART railroad crossing gates and potential driver confusion with alternative meanings of flashing red lights.

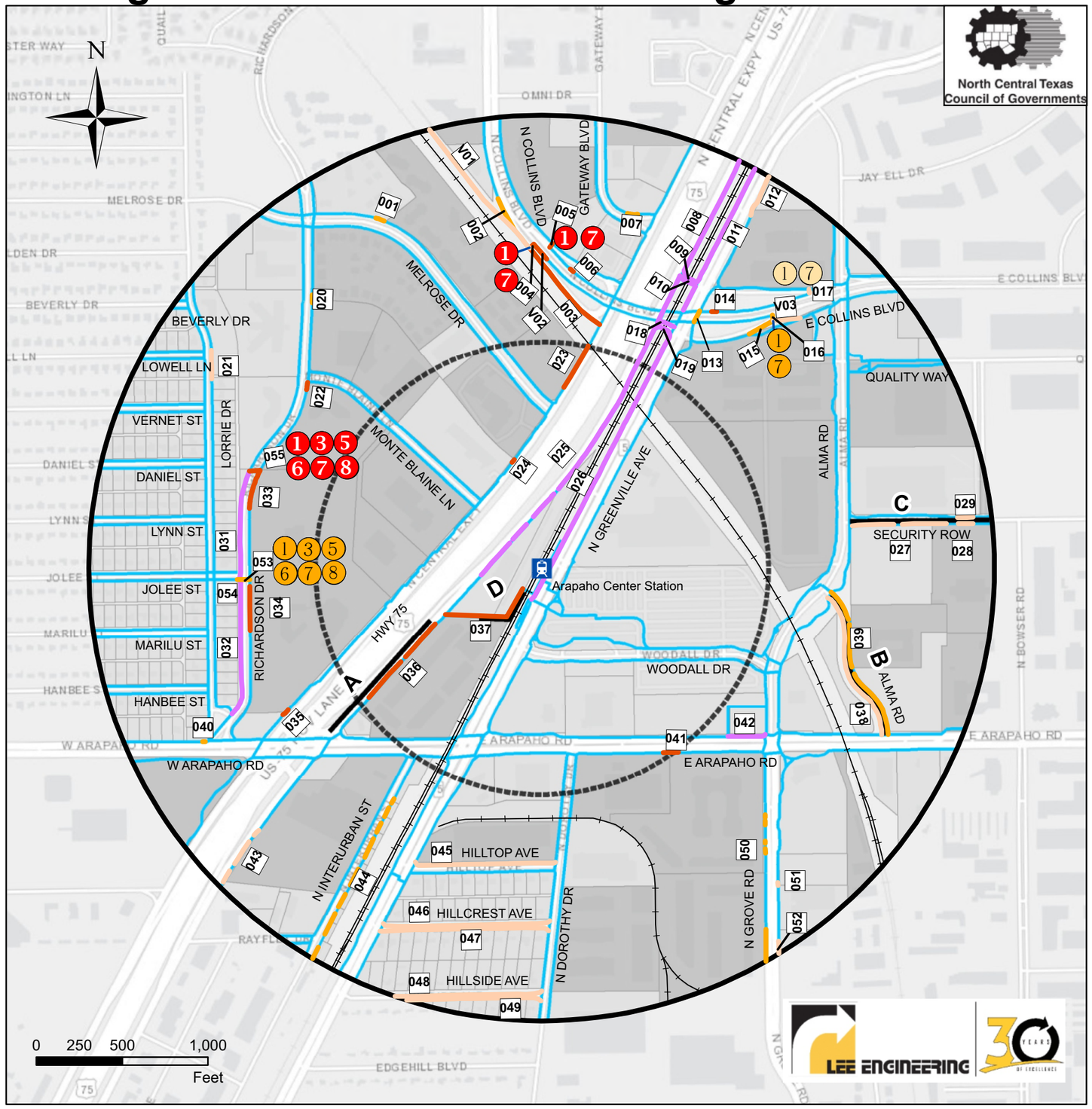
As discussed in Section 3.1.4, some pedestrians were observed crossing Spring Valley Rd directly below the rail overpass instead of at the adjacent signalized crosswalks 200 feet in either direction. A crosswalk improvement for more direct pedestrian travel along the trail would pose an undue constraint on vehicular signal coordination given the short distance to the signalized crosswalks. The City of Richardson should coordinate with DART to consider adjusting the location of bus stops and installing aesthetic anti-climb median fencing (improvement 2C-SV-GR-25) along the median of Spring Valley Rd in front of the DART station to ensure pedestrians cross at the crosswalks.

Additional details about other improvements recommended in Figure 2C-2, as well as challenges associated with the recommended gaps to remain, are included in the expanded narrative and matrix notes for Spring Valley Station that can be found in Appendix I and Appendix J.

FTA DART Stations
Last Mile Connections
Arapaho Center Station
November 2020

North Central Texas Council of Governments
DART Red & Blue Line Corridors Last Mile Connections

Figure 2B-2 Construction Packages



Legend

- DART Rail Station
- Railroad Track

Sidewalk

- Existing Sidewalk/Crosswalk

Proposed Sidewalk/ Crosswalk by Priority [1]	Construction Cost Estimate
High	$481,600
Medium	$513,800
Low	$1,501,100
	$2,496,500

- Built by Others
- Gap to Remain

Buffers
- 0.5 Mile Buffer
- 0.25 Mile Buffer

Existing Residential and Employment Population (Number of People)

Ppl
- 0 - 234
- 235 - 1049
- 1050 - 2586
- 2587 - 5364
- 5365 - 10339

Possible Pedestrian Safety Countermeasures

Unsignalized Crosswalk Improvements

Hi	Md	Lo	Oth	
1	1	1	1	Crosswalk Signs, Markings & Lighting
2	2	2	2	Raised Crosswalk
3	3	3	3	Advance "Yield Here" Sign
4	4	4	4	In-Street Pedestrian Crossing
5	5	5	5	Curb Extension
6	6	6	6	Pedestrian Refuge Island
7	7	7	7	Rectangular Rapid Flashing Beacon
8	8	8	8	Road Diet
9	9	9	9	Pedestrian Hybrid Beacon

Signalized Crosswalk Improvements

10	10	10	10	Add Marked Crosswalks & Provide Countdown, Accessible Pedestrian Signals
11	11	11	11	Traffic Signal

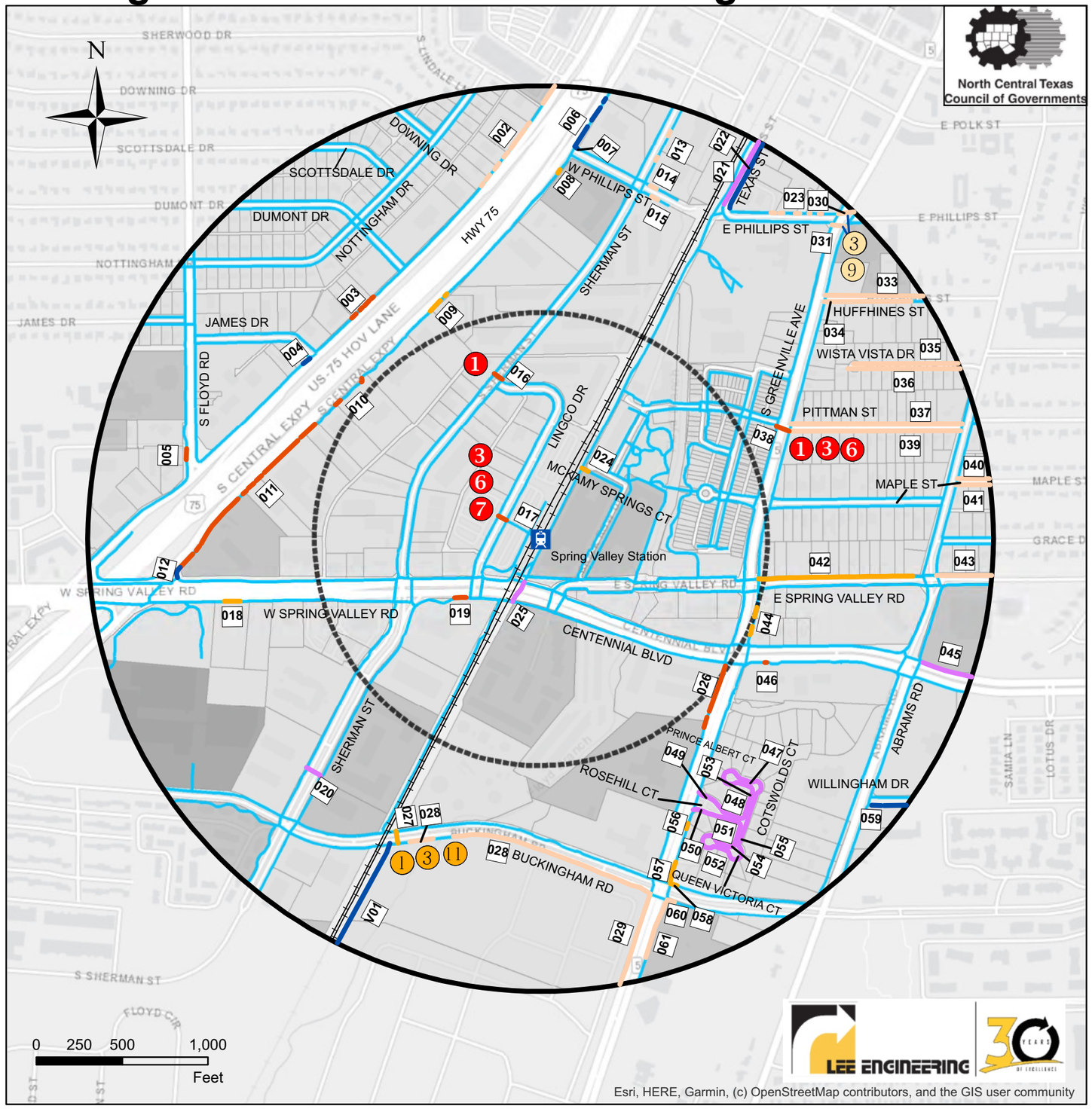
Improvement Code Legend (See Matrix)
2B-AC-SW-01
2B ← Station Number
AC ← Station Abbreviation
SW ← Sidewalk (or CW for Crosswalk)
01 ← Improvement Number (Matches [1] on Map)

LEE ENGINEERING

FTA DART Stations
Last Mile Connections
Spring Valley Station
November 2020

North Central Texas Council of Governments
DART Red & Blue Line Corridors Last Mile Connections

Figure 2C-2 Construction Packages



Legend

- DART Rail Station
- Railroad Track

Sidewalk

- Existing Sidewalk/Crosswalk

Proposed Sidewalk/ Crosswalk by Priority [1]	Construction Cost Estimate
High	$225,500
Medium	$215,500
Low	$1,265,600
	$1,706,600

- Built by Others
- Gap to Remain

Buffers
- 0.5 Mile Buffer
- 0.25 Mile Buffer

Existing Residential and Employment Population (Number of People)

Ppl
- 0 - 234
- 235 - 1049
- 1050 - 2586
- 2587 - 5364
- 5365 - 10339

Possible Pedestrian Safety Countermeasures

Unsignalized Crosswalk Improvements

Hi	Md	Lo	Oth	
1	1	1	1	Crosswalk Signs, Markings & Lighting
2	2	2	2	Raised Crosswalk
3	3	3	3	Advance "Yield Here" Sign
4	4	4	4	In-Street Pedestrian Crossing
5	5	5	5	Curb Extension
6	6	6	6	Pedestrian Refuge Island
7	7	7	7	Rectangular Rapid Flashing Beacon
8	8	8	8	Road Diet
9	9	9	9	Pedestrian Hybrid Beacon

Signalized Crosswalk Improvements

10	10	10	10	Add Marked Crosswalks & Provide Countdown, Accessible Pedestrian Signals
11	11	11	11	Traffic Signal

Improvement Code Legend (See Matrix)
2C-SV-SW-01
2C ← Station Number
SV ← Station Abbreviation
SW ← Sidewalk (or CW for Crosswalk)
01 ← Improvement Number (Matches [1] on Map)

3.3 Half-Mile Area Opinions of Probable Construction Cost

In addition to the Opinions of Probable Construction Cost (OPCC's) developed for the on-site improvements at DART Stations in Section 3.1, OPCC's were developed for nearly 1,100 separate high-priority improvements totalling nearly 58 linear miles in the half-mile areas surrounding each of the 28 DART stations within the study area.

OPCC's were developed in the half-mile areas for each high-priority improvement that was *not* assumed by City staff to be built by others (as part of another project by a developer, the City, TxDOT, etc.) in the near future. Aggregate OPCC's were developed for low- and medium-priority improvements by extrapolating average costs from the high-priority improvements.

Appendix G details the assumptions that were made in order to provide high-quality, yet preliminary OPCC's. Detailed unit price and quantity estimates for the individual high-priority Phase 1 half-mile area improvements are listed in Appendix K which supplement the OPCC's for the proposed DART property improvements in Plano provided in Appendix H. A summary of how overall cost estimates for low- and medium-priority Phase 2 and Phase 3 improvements were derived is also included in Appendix K.

The estimated cost of all projects in Richardson is summarized in Table 2. For convenience, grand total costs are provided in both 2020 dollars and 2025 dollars, assuming for 2025 a 4% annual escalation rate for all three phases. Costs presented in all other figures, tables, and appendices of this report reflect 2020 dollars only.

Table 2: Summary Opinion of Probable Construction Cost for Improvements in Richardson

Station No.	Station Area	DART Station Property	Half-Mile Area				
			High Priority (Phase 1)	Medium Priority (Phase 2)	Low Priority (Phase 3)	*Grand Totals (2020)*	*Grand Totals (2025)*
1C	CityLine Bush	$83,000	$338,650	$1,153,800	$306,900	*$1,882,350*	*$2,290,200*
2A	Galatyn Park	$0	$3,550,700	$532,400	$2,529,500	*$6,612,600*	*$8,045,300*
2B	Arapaho Center	$169,800	$481,600	$513,800	$1,501,100	*$2,666,300*	*$3,244,000*
2C	Spring Valley	$239,900	$225,500	$215,500	$1,265,600	*$1,946,500*	*$2,368,300*
City of Richardson Totals		*$492,700*	*$4,596,450*	*$2,415,500*	*$5,603,100*	*$13,107,750*	*$15,947,800*

As shown in Table 2, the 2020 total estimate for all improvements in Richardson is about $13.1 million. High-priority Phase 1 multi-modal access improvements within the half-mile station areas inside Richardson City limits are estimated to cost about $4.6 million. Of this total, about $493,000 would be the responsibility of DART on its station properties.

Medium- and low- priority costs for Phases 2 and 3 were estimated by developing more generalized unit costs for five types of improvements, based on all high-priority improvements City-wide. Tables 3-6 on pages 29-30 illustrate this procedure.

The first row in each table lists the total linear feet of high-priority sidewalk, sidewalk repair, and Veloweb/shared use path construction City-wide, along with the respective cost totals. It also lists the overall count and cost of crosswalks, classified as simple crosswalks (implemented with signs and markings ony) or other crosswalks (which include beacons, islands, or signals). The bottom two rows of each table show how the same unit rates per linear foot or per each crosswalk were used to extrapolate overall cost estimates for the medium- and low-priority improvements without estimating costs for individual locations in those categories.

For reference, the unit price of 5 ft-wide sidewalk alone was assumed at $35 per linear foot. The all-inclusive price per linear foot of sidewalk improvements (including items such as pedestrian ramps, utility relocation, retaining walls, driveway reconstruction, contingencies, etc.) was calculated for each of the high-priority improvements, ranging between a low of about $44/LF to a high of about $609/LF. Lower unit costs were associated with simple sidewalk improvements without obstacles, while higher unit costs were associated with higher densities of challenging conditions, especially along short segments.

Table 3: Opinion of Probable Construction Cost for CityLine Bush Station Half-Mile Area (Richardson Only/Excludes Plano)

Phase/ Priority	Sidewalks			Sidewalk Repairs			Veloweb/ Shared Use Paths			Simple Crosswalks			Other Crosswalks (with Beacon, Island or Signal)			
	Lin. Ft	Cost	~$/LF	Lin. Ft	Cost	~$/LF	Lin. Ft	Cost	~$/LF	#	Cost	~$/EA	#	Cost	~$/EA	Total Cost
High Priority (All Richardson)	5,175	$ 905,600	$ 175	1,125	$ 89,100	$ 80	120	$ 39,500	$ 330	4	$ 55,100	$ 13,775	10	$ 633,400	$ 63,340	***
Phase 1/ High*	1,080	$ 354,000	-	-	-	-	-	-	-	-	-	-	2	$ 180,500	-	***
Phase 2/ Medium**	2,265	$ 396,400	$ 175	-	-	$ 80	2,295	$ 757,400	$ 330	-	-	$ 13,775	-	-	$ 63,340	$ 1,153,800
Phase 3/ Low**	-	-	$ 175	-	-	$ 80	930	$ 306,900	$ 330	-	-	$ 13,775	-	-	$ 63,340	$ 306,900
	3,345	$ 750,400		-	-		3,225	$ 1,064,300		-	-		2	$ 180,500		***

** High priority cost opinions are based on field visits and bid item breakdowns, but without the benefit of survey, subsurface utility investigation, or other engineering information typically available for semi-final design.*

*** Medium- and low-priority cost opinions are not based on individual improvements, but instead extrapolated from cost/linear foot calculations for high-priority improvements; actual costs may vary significantly, especially for crosswalk improvements.*

**** Costs for All Richardson include costs attributed to DART and others in calculating average costs per unit length or crosswalk, while excluding costs for improvements on the Galatyn Pkwy bridge over U.S. 75, and therefore do not match other totals shown in Table 2.*

Table 4: Opinion of Probable Construction Cost for Galatyn Park Station Half-Mile Area

Phase/ Priority	Sidewalks			Sidewalk Repairs			Veloweb/ Shared Use Paths			Simple Crosswalks			Other Crosswalks (with Beacon, Island or Signal)			
	Lin. Ft	Cost	~$/LF	Lin. Ft	Cost	~$/LF	Lin. Ft	Cost	~$/LF	#	Cost	~$/EA	#	Cost	~$/EA	Total Cost
High Priority (All Richardson)	5,175	$ 905,600	$ 175	1,125	$ 89,100	$ 80	120	$ 39,500	$ 330	4	$ 55,100	$ 13,775	10	$ 633,400	$ 63,340	***
Phase 1/ High*	1,480	$ 37,400	-	10	$ 700	-	-	-	-	3	$ 15,100	-	3	$ 124,800	-	***
Phase 2/ Medium**	1,665	$ 291,400	$ 175	740	$ 59,200	$ 80	-	-	$ 330	4	$ 55,100	$ 13,775	2	$ 126,700	$ 63,340	$ 532,400
Phase 3/ Low**	5,540	$ 969,500	$ 175	210	$ 16,800	$ 80	2,890	$ 953,700	$ 330	6	$ 82,700	$ 13,775	8	$ 506,800	$ 63,340	$ 2,529,500
	8,685	$ 1,298,300		960	$ 76,700		2,890	$ 953,700		13	$ 152,900		13	$ 758,300		***

** High priority cost opinions are based on field visits and bid item breakdowns, but without the benefit of survey, subsurface utility investigation, or other engineering information typically available for semi-final design.*

*** Medium- and low-priority cost opinions are not based on individual improvements, but instead extrapolated from cost/linear foot calculations for high-priority improvements; actual costs may vary significantly, especially for crosswalk improvements.*

**** Costs for All Richardson include costs attributed to DART and others in calculating average costs per unit length or crosswalk, while excluding costs for improvements on the Galatyn Pkwy bridge over U.S. 75, and therefore do not match other totals shown in Table 2.*

Table 5: Opinion of Probable Construction Cost for Arapaho Center Station Half-Mile Area

Phase/ Priority	Sidewalks			Sidewalk Repairs			Veloweb/ Shared Use Paths			Simple Crosswalks			Other Crosswalks (with Beacon, Island or Signal)			
	Lin. Ft	Cost	~$/LF	Lin. Ft	Cost	~$/LF	Lin. Ft	Cost	~$/LF	#	Cost	~$/EA	#	Cost	~$/EA	Total Cost
High Priority (All Richardson)	5,175	$ 905,600	$ 175	1,125	$ 89,100	$ 80	120	$ 39,500	$ 330	4	$ 55,100	$ 13,775	10	$ 633,400	$ 63,340	***
Phase 1/ High*	1,085	$ 157,000	-	965	$ 64,800	-	120	$ 39,500	-	-	-	-	3	$ 220,300	-	$ 481,600
Phase 2/ Medium**	2,015	$ 352,700	$ 175	430	$ 34,400	$ 80	-	-	$ 330	-	-	$ 13,775	2	$ 126,700	$ 63,340	$ 513,800
Phase 3/ Low**	6,315	$ 1,105,200	$ 175	535	$ 42,800	$ 80	1,070	$ 353,100	$ 330	-	--	$ 13,775	-	-	$ 63,340	$ 1,501,100
	9,415	$ 1,614,900		1,930	$ 142,000		1,190	$ 392,600		-	-		5	$ 347,000		$ 2,496,500

** High priority cost opinions are based on field visits and bid item breakdowns, but without the benefit of survey, subsurface utility investigation, or other engineering information typically available for semi-final design.*

*** Medium- and low-priority cost opinions are not based on individual improvements, but instead extrapolated from cost/linear foot calculations for high-priority improvements; actual costs may vary significantly, especially for crosswalk improvements.*

**** Costs for All Richardson include costs attributed to DART and others in calculating average costs per unit length or crosswalk, while excluding costs for improvements on the Galatyn Pkwy bridge over U.S. 75, and therefore do not match other totals shown in Table 2.*

Table 6: Opinion of Probable Construction Cost for Spring Valley Station Half-Mile Area

Phase/ Priority	Sidewalks			Sidewalk Repairs			Veloweb/ Shared Use Paths			Simple Crosswalks			Other Crosswalks (with Beacon, Island or Signal)			
	Lin. Ft	Cost	~$/LF	Lin. Ft	Cost	~$/LF	Lin. Ft	Cost	~$/LF	#	Cost	~$/EA	#	Cost	~$/EA	Total Cost
High Priority (All Richardson)	5,175	$ 905,600	$ 175	1,125	$ 89,100	$ 80	120	$ 39,500	$ 330	4	$ 55,100	$ 13,775	10	$ 633,400	$ 63,340	***
Phase 1/ High*	1,530	$ 357,200	-	150	$ 23,600	-	-	-	-	1	$ 40,000	-	2	$ 107,800	-	***
Phase 2/ Medium**	325	$ 56,900	$ 175	1,190	$ 95,200	$80	-	-	$ 330	-	-	$ 13,775	1	$ 63,400	$ 63,340	$ 215,500
Phase 3/ Low**	6,824	$ 1,194,200	$ 175	100	$ 8,000	$80	-	-	$ 330	-	-	$ 13,775	1	$ 63,400	$ 63,340	$ 1,265,600
	8,679	$ 1,608,300		1,440	$126,800		-	-		1	$ 40,000		4	$ 234,600		***

** High priority cost opinions are based on field visits and bid item breakdowns, but without the benefit of survey, subsurface utility investigation, or other engineering information typically available for semi-final design.*

*** Medium- and low-priority cost opinions are not based on individual improvements, but instead extrapolated from cost/linear foot calculations for high-priority improvements; actual costs may vary significantly, especially for crosswalk improvements.*

**** Costs for All Richardson include costs attributed to DART and others in calculating average costs per unit length or crosswalk, while excluding costs for improvements on the Galatyn Pkwy bridge over U.S. 75, and therefore do not match other totals shown in Table 2.*

APPENDICES

APPENDIX A: Field Work Dates

DART Red & Blue Line Last Mile Connections Project

Project Schematic / Field Work Schedule

City	Red Line	Blue Line		
Plano	1A Parker Road July 3 & 25, 2018			
	1B Downtown Plano July 31, 2018		***Group 1***	
	1C City Line/Bush Aug. 7, 2018			
Richardson	2A Galatyn Park Aug. 21, 2018			
	2B Arapaho Center Aug. 16, 2018		***Group 2***	
	2C Spring Valley Aug. 28, 2018			
Garland		3A **Downtown Garland*** Sept. 13 & 19, 2018		
		3B **Forest/Jupiter*** Sept. 20, 2018		
Dallas	3C LBJ/Central Sept. 20, 2018		***Group 3***	
	3D Forest Lane Sept. 27, 2018			
	4A Walnut Hill Oct. 4, 2018			
	4B Park Lane Oct. 11, 2018	4E LBJ/Skillman Oct. 30, 2018	***Group 4***	
	4C **Lovers Lane*** Oct. 22, 2018	4F White Rock Oct. 30, 2018		
	4D Mockingbird Oct. 22, 2018			
	8A Cityplace Nov. 29 & Dec. 5 & 11, 2018			
	8B Convention Center Dec. 18, 2018		***Group 8***	
	8C Cedars Jan. 8 & 9, 2019			
	5A 8th & Corinth Nov. 6, 2018		***Group 5***	
	5B **Dallas Zoo*** Nov. 6, 2018	5C Morrell Nov. 13, 2018		
	6A Tyler Vernon Nov. 13, 2018	7A Illinois Nov. 27 & Dec. 5, 2018		
	6B Hampton Nov. 15, 2018	7B Kiest Nov. 27, 2018		
	6C Westmoreland Nov. 15, 2018	7C VA Medical Center Nov. 29, 2018		
	Group 6	***Group 7***		

Dates listed are dates when field work was conducted at each station property and surrounding 1/2 mile radius.

Station Group Identification

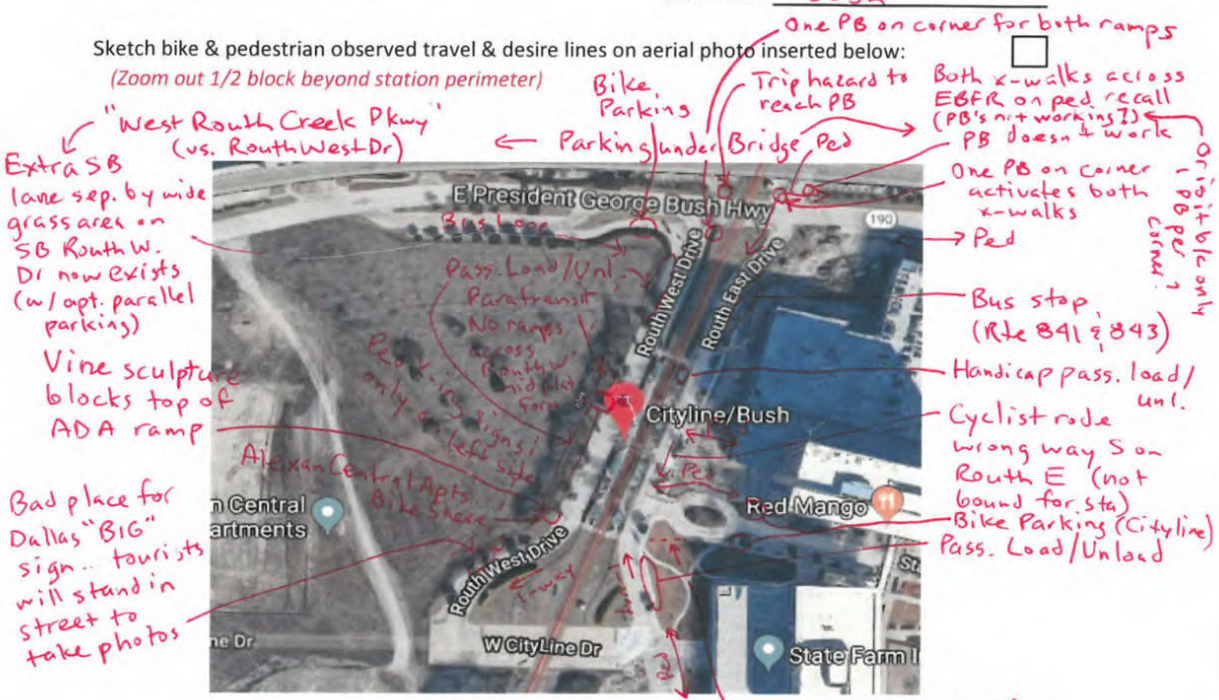
*** Station with high priority improvements for 15% design**

APPENDIX B: Data Collection Maps & Forms

DART Red & Blue Line Last Mile Connections Project
Field Data Checklist - Stations

Date 8/7/18
Station Cityline / Bush
Staff Name Josh

Sketch bike & pedestrian observed travel & desire lines on aerial photo inserted below:
(Zoom out 1/2 block beyond station perimeter)



Are any desire lines missing a marked crossing location on a perimeter street, especially if mid-block? *(If Yes, note on sketch and add line with "New" link ID on Crossings Checklist)* — Y (N)

Note bike parking locations (covered vs. rack vs. bikeshare) No bike parking seen (but dockless bike share yes) — Y N

Do any travel routes differ significantly from linear desire lines? See goat trail notes on larger station map. Incl. parking areas

Note car & bus circulation patterns & conflict points

Bike and ped desire lines continuously lit? (Note where if not). — Y (N)

Trip hazards? Yes, see notes

Landscaping barriers? One, see note (ADA barrier only)

Fences? N

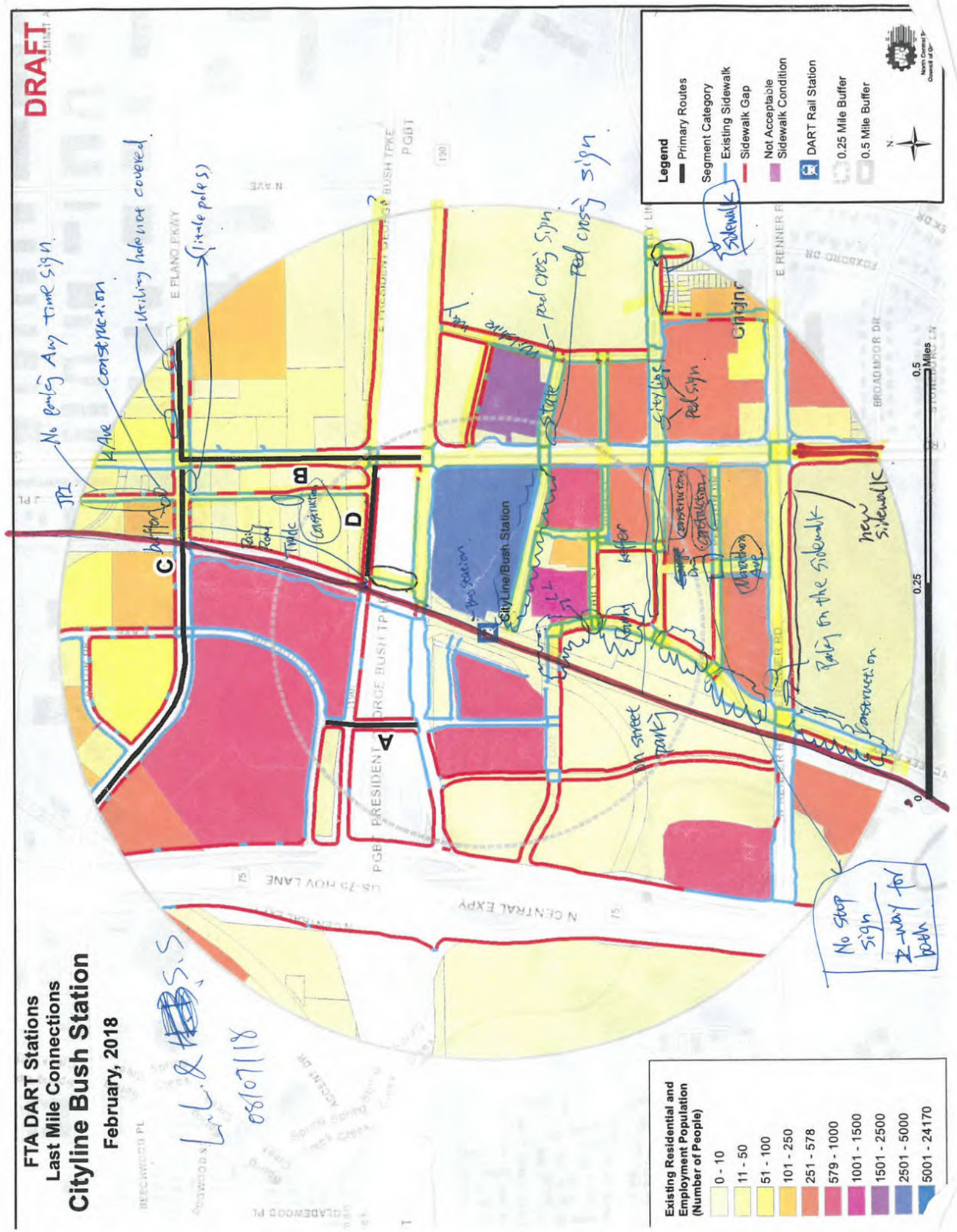
Absent ramps? N, but very few ramps have det. warn. surf.

Bike/Pedestrian sight distance problems? N

Review questions (Post Construction Column) from p. 6-7 of Ped RSA Checklist

Other Notes:

LEE ENGINEERING



FTA DART Stations
Last Mile Connections

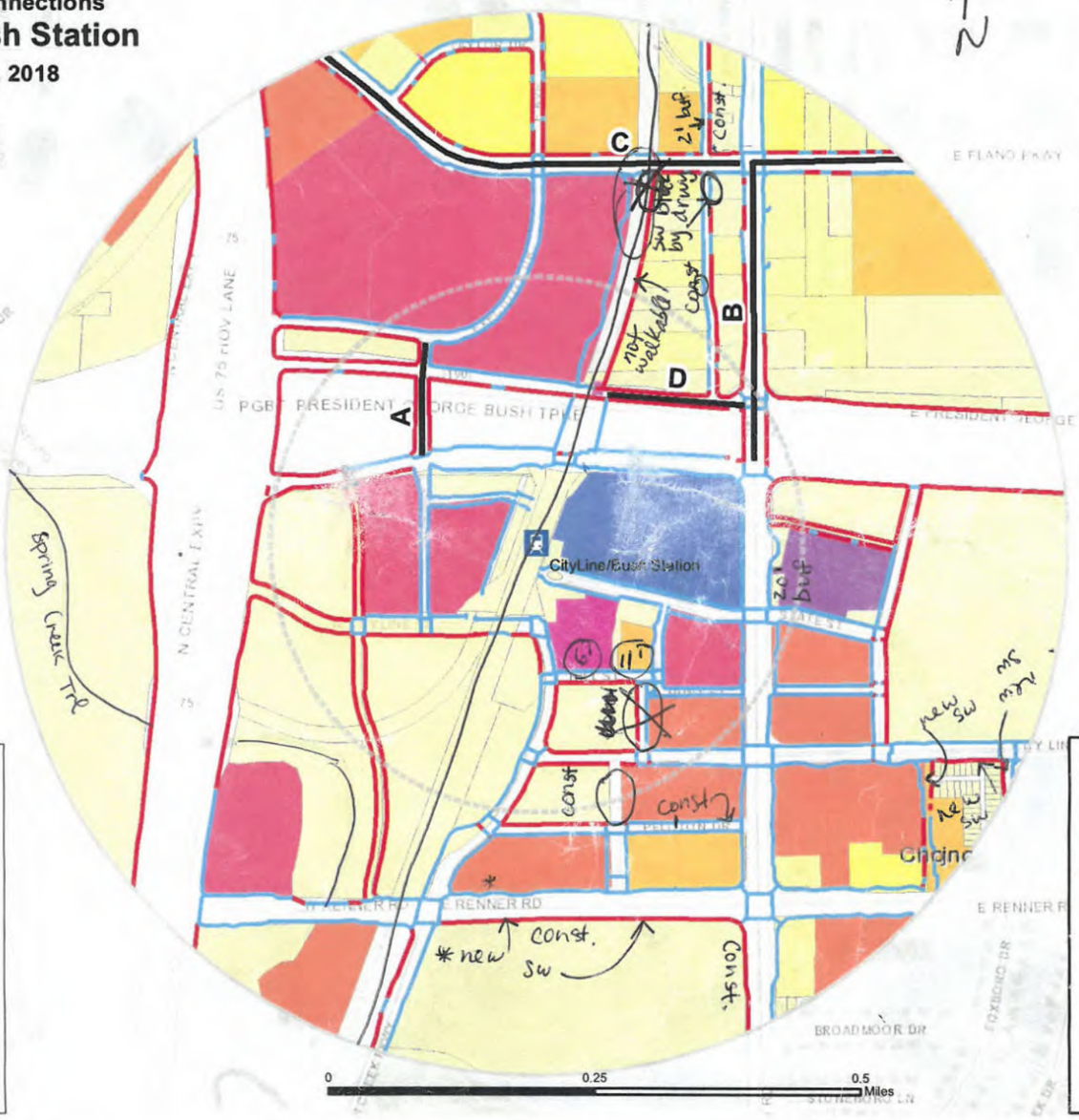
Cityline Bush Station

February, 2018

DRAFT

8/7/18

Site no



Existing Residential and Employment Population (Number of People)

- 0 - 10
- 11 - 50
- 51 - 100
- 101 - 250
- 251 - 578
- 579 - 1000
- 1001 - 1500
- 1501 - 2500
- 2501 - 5000
- 5001 - 24170

Legend

- Primary Routes

Segment Category

- Existing Sidewalk
- Sidewalk Gap
- Not Acceptable Sidewalk Condition
- DART Rail Station
- 0.25 Mile Buffer
- 0.5 Mile Buffer

North Central Texas Council of Governments

FTA DART Stations
Last Mile Connections
Cityline Bush Station
February, 2018
DRAFT

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- 0 - 10
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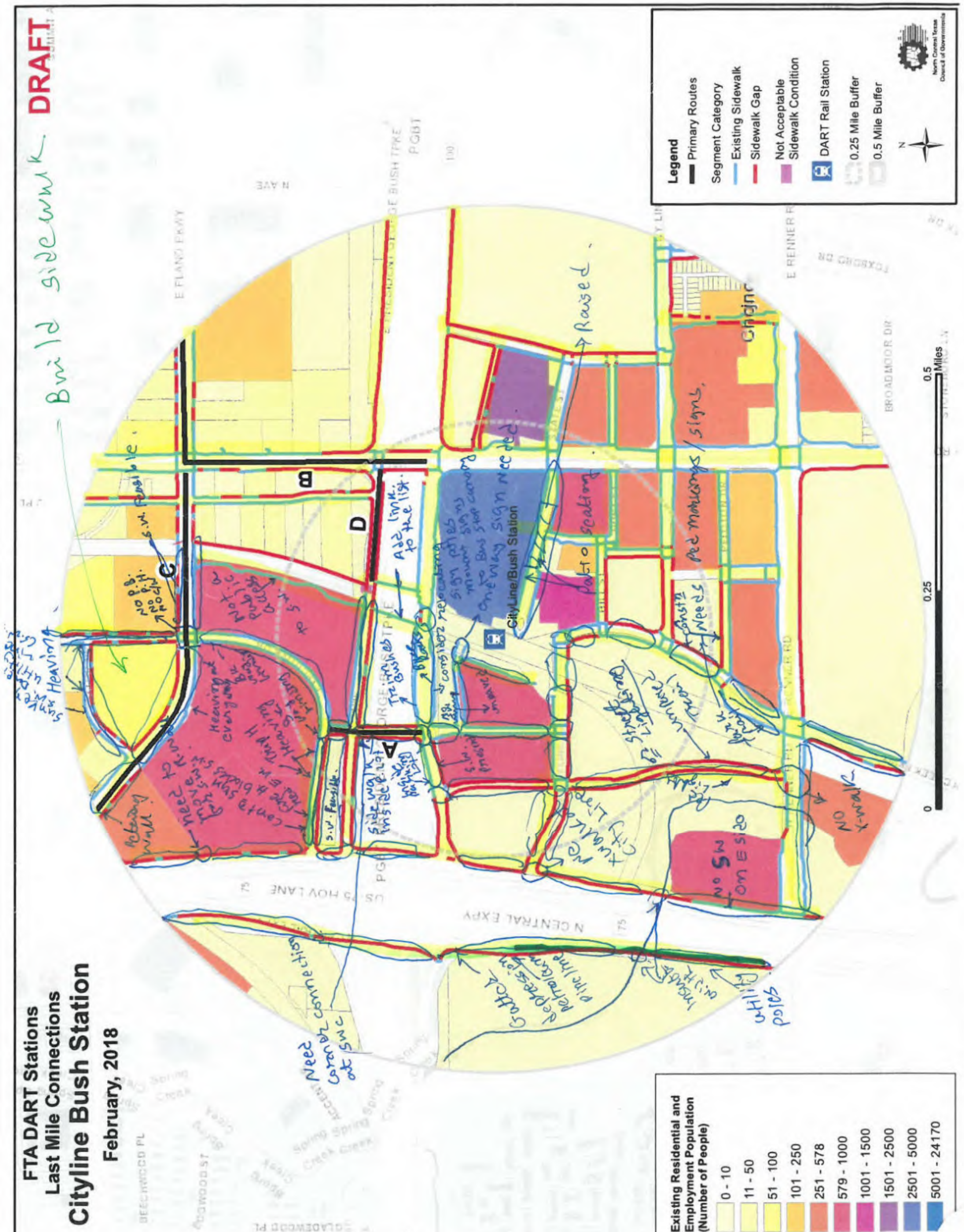
North Central Texas Council of Governments



8/7/8 Cityline. S.S. & L.L.

Group Link	Link ID	Street Name	From Street	To Street	Side of Street	Sidewalk Width (ft) Actual	Sidewalk Width (ft) Eff.	Curb & Gutter?	Buffer Type	Buffer Width	Prevailing Speed or Speed Limit (mph)	Street Widths (ft) On-Street Parking	Bike Lane	Shoulder	No. of Lanes*	If One-Way, Dir. of Travel	Land Use	Lighting?	Condition Selection
172.1SG	9462	Routh Creek Pkwy	South Boundary	E Renner Rd	W	0	0	Y	N	0		8	0	0	2	-	2	N	
172.2	9452	Routh Creek Pkwy	South Boundary	E Renner Rd	E	10	10	Y	L	15		0	0	0	4	-	2	N	
172.3	9137	Routh Creek Pkwy	E Renner Rd	Hill Street	W	10	10	Y	L	15		8	0	0	2	-	2	N	
172.4	9235	Routh Creek Pkwy	E Renner Rd	Peloton Dr	E	10	10	Y	L	15		0	0	0	4	-	2	N	
172.5SG	9316	Routh Creek Pkwy	Peloton Dr	Hill Street	E	0	0	Y	N	0		8	0	0	2	-	2	N	N
173.1SG	9135	Routh Creek Pkwy	Hill Street	W CityLine Dr	W	0	0	Y	N	0		0	0	0	3	-	2	N	N
173.2SG	9233	Routh East Dr	W CityLine Dr	Dart Station	W	0	0	Y	N	0		0	0	0	1	N	2	N	N
173.3	8842	Routh East Dr	Dart Station	Dart Station	W	15	15	Y	N	0		0	0	0	1	N	2	Y	
173.4SG	8738	Routh East Dr	Dart Station	E President GB Hwy EB	W	0	0	Y	N	0		0	0	0	1	N	2	Y	N
174.1	8848	Routh East Dr	Hill Street	Dart Station	E	6	6	Y	N	0		0	0	0	1	N	2	Y	
174.2	8849	Routh East Dr	Dart Station	Dart Station	E	20	8	Y	N	0		0	0	0	1	N	2	Y	
174.3	9152	Routh East Dr	Dart Station	E President GB Hwy EB	E	10	10	Y	N	0	bus St.	0	0	0	1	N	2	N	E/G
175.1	8847	Routh West Dr	W CityLine Dr	E President GB Hwy EB	W	20	10	Y	S	10		0	0	0	1	S	2	N	
175.2SG	9132	Routh West Dr	W CityLine Dr	Dart Station	E	0	0	Y	N	0		0	0	0	1	S	2	Y	N
175.3	8843	Routh West Dr	Dart Station	Dart Station	E	20	8	Y	N	0		8	0	0	1	S	2	Y	
175.4	8740	Routh West Dr	Dart Station	E President GB Hwy EB	E	10	10	Y	N	0		0	0	0	1	S	2	N	
176.1	9327	Wilshire Way	E President GB Hwy EB	Heise Way	W	0	0	Y	N	0		0	0	0	2	-	2	N	N
176.2SG	9330	Wilshire Way	E President GB Hwy EB	Heise Way	E	0	0	Y	N	0		0	0	0	2	-	2	N	N
176.3	9438	Wilshire Way	Heise Way	State St	W	12	12	Y	N	0		0	0	0	2	-	2	Y	E/G
176.2SG	9330	Wilshire Way	Heise Way	State St	E	0	0	Y	N	0		0	0	0	2	-	2	N	N
176.4	9429	Wilshire Way	State St	E Cityline Dr	W	8	8	Y	N	0		40	0	0	2	-	2	N	E/G
176.5SG	9504	Wilshire Way	State St	E Cityline Dr	E	0	0	Y	N	0		40	0	0	2	-	2	N	N
177.1SG		Heise Way	Wilshire Way	N Plano Rd	N	0	0	Y	N	0		0	0	0	2	-	2	N	N
177.2		Heise Way	Wilshire Way	N Plano Rd	S	0	0	Y	N	0		0	0	0	2	-	2	N	N
177.3	9434	State St	Wilshire Way	N Plano Rd	N	10	10	Y	L	4		Y	0	0	2	-	2	N	E/G
177.4	9428	State St	Wilshire Way	N Plano Rd	S	13	13	Y	L	4		Y	0	0	2	-	2	N	↓
177.5	9158	State St	N Plano Rd	Routh East Drive	N			Y				0	0	0	2	-	2	N	
177.6	9164	State St	N Plano Rd	Routh East Drive	S			Y				0	0	0	2	-	2	N	
177.6	9163	Newton St	State St	Hill Street	W	6	6	Y	L	4		0	0	0	2	-	2	Y	E/G
177.7	9174	Newton St	State St	Hill Street	E	7	7	Y	L	4		Y	0	0	2	-	2	Y	E/G
178.1	9179	Hill St	Routh Creek Pkwy	Newton St	N	11	11	Y	L	6	30	Y	0	0	2	-	2	N	E/G
178.2	9287	Hill St	Routh Creek Pkwy	Newton St	S	0	0	Y	N	0	30	0	0	0	2	-	2	N	N
177.7	9174	Hunt St	Newton St	N Plano Rd	N	10	10	Y	N	0		0	0	0	2	-	2	Y	E/G
179.1	9280	Hunt St	Newton St	N Plano Rd	S	9.5	9.5	Y	N	0		0	0	0	2	-	2	Y	E/G
179.2SG	9294	Keffler St	Hill Street	E Cityline Dr	W	0	0	Y	N	0		8	0	0	2	-	2	N	N
179.3	9285	Keffler St	Hill Street	E Cityline Dr	E	4	4	Y	L	10		8	0	0	2	-	2	N	E/G
179.4SG		E City Line Dr	Routh Creek Pkwy	Keffler St	N	0	0	Y	N	0	30	0	0	0	2	-	2	N	N
179.5	9305	E City Line Dr	Keffler St	N Plano Rd	N	10	10	Y	N	0	↓	0	0	0	2	-	2	N	E/G
172.5SG	9244	E City Line Dr	Routh Creek Pkwy	Keffler St	S	4	4	Y	N	0		0	0	0	2	-	2	N	E/G
168.6SG		E City Line Dr	Keffler St	N Plano Rd	S	0	0	Y	N	0		0	0	0	2	-	2	N	N
168.5SG	9396	E City Line Dr	N Plano Rd	Wilshire Way	N	10	10	Y	N	0		0	0	0	2	-	2	N	N
172.6		E City Line Dr	Wilshire Way	East Boundary	N	4	4	Y	N	0		0	0	0	2	-	2	N	const.
172.7	9342	E City Line Dr	N Plano Rd	East Boundary	S	4	4	Y	N	0		0	0	0	2	-	2	N	E/G
172.8SG		E City Line Dr	N Plano Rd	East Boundary	N	0	0	Y	N	0		0	0	0	2	-	2	N	N
173.1		Peloton Dr	Routh Creek Pkwy	Marathon Ave	N	0	0	Y	N	0		0	0	0	2	-	2	N	
173.2		Peloton Dr	Routh Creek Pkwy	Marathon Ave	S	12	12	Y	L	4		Y	0	0	2	-	2	N	E/G
173.3		Peloton Dr	Marathon Ave	N Plano Rd	N	0	0	Y	N	0		Y	0	0	2	-	2	Y	E/G
173.4		Peloton Dr	Marathon Ave	N Plano Rd	S	12	12	Y	N	0		0	0	0	2	-	2	Y	E/G
173.5		Marathon Ave	Peloton Dr	E Renner Rd	W	12	12	Y	L	2		0	0	0	2	-	2	Y	↓
173.6		Marathon Ave	Peloton Dr	E Renner Rd	E	13	13	Y	L	2		0	0	0	2	-	2	Y	
174.1SG		Red Moon Way	E Pres George Bush HWY	W CityLine Dr	W	0	0	Y	N	0		0	0	0	2	-	2	N	N
174.2SG		Red Moon Way	E Pres George Bush HWY	W CityLine Dr	E	0	0	Y	N	0		0	0	0	2	-	2	N	N
174.3SG		Red Moon Way	W CityLine Dr	E Renner Rd	W	0	0	Y	N	0		0	0	0	2	-	2	N	N
174.4SG		Red Moon Way	W CityLine Dr	E Renner Rd	E	0	0	Y	N	0		0	0	0	2	-	2	N	N
174.5SG		W CityLine Dr	N Central EXPY	Red Moon Way	N	0	0	Y	N	0		0	0	0	2	-	2	N	N
174.3SG		W CityLine Dr	N Central EXPY	Red Moon Way	S	0	0	Y	N	0		0	0	0	2	-	2	N	N
175.1		W CityLine Dr	Red Moon Way	Topridge Dr	N			Y				20	0	0	2	-	2	N	
175.2SG		W CityLine Dr	Red Moon Way	Topridge Dr	S	0	0	Y	N	0		20	0	0	2	-	2	N	N
175.3		W CityLine Dr	Topridge Dr	Routh West Drive	N			Y				20	0	0	2	-	2	N	
175.4SG		W CityLine Dr	Topridge Dr	Routh West Drive	S	0	0	Y	N	0		20	0	0	2	-	2	N	N
175.5		W CityLine Dr	Routh West Drive	Routh East Drive	N			Y				0	0	0	2	-	2	N	
175.6SG		W CityLine Dr	Routh West Drive	Routh East Drive	S	0	0	Y	N	0		0	0	0	2	-	2	N	N
176.1SG		N Central Expy	North boundary	E Pres George Bush HWY	W	0	0	Y	N	0		0	0	0	4	S	3		N
176.2SG		N Central Expy	E Pres George Bush HWY	South boundary	W	0	0	Y	N	0		0	0	0	4	S	3		N
176.3SG		N Central Expy	North boundary	E Pres George Bush HWY	E	0	0	Y	N	0		0	0	0	4	N	3		N
176.4SG		N Central Expy	W CityLine Dr	E Renner Rd	E	0	0	Y	N	0		0	0	0	4	N	3		N
		City Line Market dw	City Line	Renner	W	4	4	Y	L	10		0	0	0	2	-	1 2 3 4 (2 circled)	N	E/G
					E	4	4	Y	L	10		0	0	0	2	-	1 2 3 4 (2 circled)	N	E/G
								Y									1 2 3 4		
								Y									1 2 3 4		
		Foxboro	City Line	S. bound.	W	5.5	5.5	Y	L	4		Y	0	0	2	-	1 2 3 4 (2 circled)	N	↓
					E	6	6	Y	N	0		Y	0	0	2	-	1 2 3 4 (2 circled)	N	
								Y									1 2 3 4		
								Y									1 2 3 4		
								Y									1 2 3 4		
								Y									1 2 3 4		
								Y									1 2 3 4		
								Y									1 2 3 4		
								Y									1 2 3 4		

For Side of Street, choose:
N NE
S SE
E NW
W SW

Buffer Types:
N = None
S = Solid Surface
L = Landscaped
T = Landscaped w/ Trees
V = Vertical (retaining wall)

LEE ENGINEERING

Land Use Codes:
1 = Residential, central business districts (CBD), neighborhood commercial,parks and other public facilities, governmental buildings/plazas,offices/office parks
2 = Low density development, rural subdivisions, un-incorporated communities, strip commercial, mixed employment
3 = Light industrial, big-box/auto-oriented commercial
4 = Heavy industrial, intermodal facilities, freeway interchanges

See http://www.oregon.gov/ODOT/Planning/Documents/APMv2_Ch14.pdf (Sect. 14.5) for more details.

8/7/18

DART Red & Blue Line Last Mile Connections Project

Field Data Checklist - Sidewalks

Date 8/7/18 Station Area **Cityline/Bush** Staff Name S.S & L.L.

Group Link	Link ID	Street Name	From Street	To Street	Side of Street	Sidewalk Width (ft) Actual	Sidewalk Width (ft) Eff.	Curb & Gutter?	Buffer Type	Buffer Width	Prevailing Speed or Speed Limit (mph)	Street Widths (ft) On-Street Parking	Street Widths (ft) Bike Lane	Street Widths (ft) Shoulder	Street Widths (ft) No. of Lanes*	If One-Way, Dir. of Travel	Land Use	Lighting?	Condition Selection
150.1	8772	F Ave	North boundary	Taylor Dr	W	4	4	Y	L	3		0	0	10	2	-	3	N	
150.2SG	8955	F Ave	North boundary	Taylor Dr	E	0	0	Y	N	0		0	0	10	2	-	3	N	N
150.3SG	8950	F Ave	Taylor Dr	E Plano Pkwy	W	0	0	Y	N	0		0	0	10	2	-	3	N	N
150.4SG	8958	F Ave	Taylor Dr	E Plano Pkwy	E	0	0	Y	N	0		0	0	10	2	-	3	N	N
150.5	8769	Executive 600	E Plano Pkwy	Crawford	W	4	4	Y	L	3		0	0	0	4	-	2	N	
150.7	8973	Executive 600	E Plano Pkwy	Crawford	E	6	6	Y	L	1		0	0	0	4	-	2	Y	
150.6	8745	Executive 600	Crawford	Central EXPY	N	4	4	Y	L	3		0	0	0	4	-	2	N	
150.8SG	9047	Executive 600	Crawford	Central EXPY	S	0	0	Y	N	0		0	0	0	4	-	2	N	N
160.1	8777	Taylor Dr	F Ave	E Plano Pkwy	N	4	4	Y	L	7		0	0	10	2	-	3	N	
160.2SG	9037	Taylor Dr	F Ave	E Plano Pkwy	S	0	0	Y	N	0		0	0	10	2	-	3	N	N
161.1SG	9048	Crawford Rd	Executive 600	E President GB Hwy WB	W	0	0	Y	N	0	25	0	0	0	4	-	3	N	N
161.2	8978	Crawford Rd	Executive 600	E President GB Hwy WB	E	6	6	Y	N	0	25	0	0	0	4	-	3	N	
161.3SG	9059	Crawford Rd	E President GB Hwy WB	E President GB Hwy EB	W	0	0	Y	N	0	25	0	0	0	4	-	2	N	N
161.4SG	9558	Crawford Rd	E President GB Hwy WB	E President GB Hwy EB	E	0	0	Y	N	0	25	0	0	0	4	-	2	N	N
162.1	8834	E Plano Pkwy	West boundary	Taylor Dr	NE	4	4	Y	L	4	40	0	0	0	6	-	3	N	
162.2SG	8937	E Plano Pkwy	West boundary	Taylor Dr	SW	0	0	Y	N	0	40	0	0	0	6	-	3	N	N
163.2SG	8935	E Plano Pkwy	Taylor Dr	F Ave	N	0	0	Y	N	0	40	0	0	0	6	-	3	N	N
163.4	8790	E Plano Pkwy	Taylor Dr	F Ave	S	4	4	Y	L	4	40	0	0	0	6	-	3	N	
163.5SG	8980	E Plano Pkwy	F Ave	Railroad	N	0	0	Y	N	0	40	0	0	0	6	-	3	N	N
150.7	8973	E Plano Pkwy	F Ave	Railroad	S	6	6	Y	L	1	40	0	0	0	6	-	3	Y	
164.1	8768	E Plano Pkwy	Railroad	Railroad	N	6	6	Y	N	0	40	0	0	0	6	-	3	N	
164.2SG	8987	E Plano Pkwy	Railroad	K Ave	N	0	0	Y	N	0	40	0	0	0	6	-	3	N	N
164.3	8768	E Plano Pkwy	Railroad	Railroad	S	6	6	Y	N	0	40	0	0	0	6	-	3	N	
164.4SG	8981	E Plano Pkwy	Railroad	J Pl	S	0	0	Y	N	0	40	0	0	0	6	-	3	N	N
164.5	8812	E Plano Pkwy	J Pl	K Ave	S	8	6	Y	N	0	45	0	0	0	6	-	3	N	
164.6SG	9009	E Plano Pkwy	K Ave	East Boundary	N	0	0	Y	N	0	45	0	0	0	6	-	3	N	N
164.7	8919	E Plano Pkwy	K Ave	QT	S	8	6	Y	N	0	45	0	0	0	6	-	3	N	
164.8SG	8920	E Plano Pkwy	QT	drainage	S	0	0	Y	N	0	45	0	0	0	6	-	3	N	N
164.9	8754	E Plano Pkwy	drainage	East Boundary	S	4	4	Y	L	12	45	0	0	0	6	-	3	N	
176.1	8818	J Pl	North boundary	E Plano Pkwy	W			Y									2		
176.2SG	8993	J Pl	North boundary	E Plano Pkwy	E	0	0	Y								-	2	N	N
176.3	8803	J Pl	E Plano Pkwy	E President GB Hwy WB	W			Y								-	2		
176.4	8799	J Pl	E Plano Pkwy	Open Lot	E			Y								-	2		
176.5SG	9024	J Pl	Open Lot	shop	E	0	0	Y								-	2	N	N
176.6	9025	J Pl	shop	Open Lot	E			Y								-	2		
176.7SG	9026	J Pl	Open Lot	E President GB Hwy WB	E	0	0	Y								-	2	N	N
165.1	8800	K Ave	North boundary	E Plano Pkwy	W	4	4	Y	L	8	40	0	0	0	6	-	3	N	
165.2	8822	K Ave	E Plano Pkwy	Prime Time Ins Service	W	4	4	Y	L	4	40	0	0	0	6	-	3	N	
165.3SG	9019	K Ave	Prime Time Ins Service	Bund Wok	W	0	0	Y	N	0	40	0	0	0	6	-	3	N	N
165.4	9022	K Ave	Bund Wok	Bund Wok	W	4	4	Y	L	12	40	0	0	0	6	-	3	N	
165.5SG	9023	K Ave	Bund Wok	E President GB Hwy WB	W	0	0	Y	N	0	40	0	0	0	6	-	3	N	N
166.1	8765	K Ave	North boundary	E Plano Pkwy	E	4	4	Y	N	0	40	0	0	0	6	-	3	N	
166.2	8910	K Ave	E Plano Pkwy	Sherman Williams Paints	E	4	4	Y	N	0	40	0	0	0	6	-	3	N	
166.3	8915	K Ave	Sherman Williams Paints	United Tool Solutions	E	4	4	Y	L	2.5	40	0	0	0	6	-	3	N	N
166.4SG	9032	K Ave	United Tool Solutions	E President GB Hwy WB	E	0	0	Y	N	0	40	0	0	0	7	-	3	N	
167.1SG	9084	K Ave	E President GB Hwy WB	E President GB Hwy EB	W	0	0	Y	N	0	40	0	0	0	9	-	4	N	N
167.2SG	9324	K Ave	E President GB Hwy WB	E President GB Hwy EB	E	0	0	Y	N	0	40	0	0	0	9	-	4	N	N
168.1	9160	K Ave	E President GB Hwy EB	State St	W	4	4	Y	L	6	40	0	0	0	8	-	4	N	
168.2SG	9328	K Ave	E President GB Hwy EB	Heise Way	E	0	0	Y	N	0	40	0	0	0	8	-	4	N	N
168.3	9443	K Ave	Heise Way	State St	E	7	7	Y	L	4	40	0	0	0	6	-	3	N	
168.4	9169	K Ave	State St	E CityLine Dr	W	4	4	Y	L	6	40	0	0	0	6	-	3	N	
168.5SG	9432	K Ave	State St	E CityLine Dr	E	0	0	Y	N	0	40	0	0	0	6	-	3	N	N
168.6SG	9304	K Ave	E CityLine Dr	Peloton Dr	W	0	0	Y	N	0	40	0	0	0	6	-	3	N	N
168.7	9253	K Ave	Peloton Dr	E Renner Rd	W	4	4	Y	L	12	40	0	0	0	7	-	3	N	
168.8	9351	K Ave	E CityLine Dr	E Renner Rd	E	6	6	Y	L	4	40	0	0	0	6	-	3	N	
169.1SG	9451	K Ave	E Renner Rd	South boundary	W	0	0	Y	N	0	40	0	0	0	8	-	3	N	N
169.2	8816	K Ave	E Renner Rd	South boundary	E	5	5	Y	L	1	40	0	0	0	8	-	3	N	
170.1SG	9029	E President GB Hwy WB	East boundary	K Ave	N	0	0	Y	N	0		0	0	0	3	W	4	N	N
170.2SG	9070	E President GB Hwy WB	K Ave	Railroad	N	0	0	Y	N	0		0	0	0	3	W	4	N	N
170.3SG	8979	E President GB Hwy WB	Railroad	Crawford	N	5	5	Y	L	10		0	0	0	3	W	4	N	
170.4SG	9046	E President GB Hwy WB	Crawford	Central (US 75)	N	0	0	Y	N	0		0	0	0	3	W	4	N	
170.5SG	9326	E President GB Hwy EB	East boundary	K Ave	S	0	0	Y	N	0		0	0	0	3	E	4	N	N
170.6	9154	E President GB Hwy EB	K Ave	Routh East Drive	S	4	4	Y	L	6		0	0	0	5	E	4	N	
170.7	9110	E President GB Hwy EB	Routh East Drive	Routh West Drive	S	8	8	Y	N	0		0	0	0	3	E	4	N	
170.8	8742	E President GB Hwy EB	Routh West Drive	Topridge Dr	S	12	6	Y	N	0		0	0	0	2	E	4	N	
170.9SG	9188	E President GB Hwy EB	Topridge Dr	Central (US 75)	S	12	6	Y	N	0		0	0	0	3	E	4	N	N
171.1	9358	E Renner Rd	East boundary	N Plano Rd	N	12	12	Y	L	6		0	0	0	8	-	3	N	
171.2	9255	E Renner Rd	N Plano Rd	Routh Creek Pkwy	N	12	12	Y	L	15		0	0	0	8	-	3	Y	
171.3	9138	W Renner Rd	Routh Creek Pkwy	Red Moon Way	N	10	10	Y	L	2		0	0	0	7	-	3	N	
171.4SG	9115	W Renner Rd	Red Moon Way	Central (US 75)	N	0	0	Y	N	0		0	0	0	6	-	3	N	N
171.5	8816	E Renner Rd	East boundary	N Plano Rd	S	5	5	Y	L	3		0	0	0	8	-	3	Y	
169.1SG	9451	E Renner Rd	N Plano Rd	Routh Creek Pkwy	S	0	0	Y	N	0		0	0	0	8	-	3	N	N
171.6	9460	W Renner Rd	Routh Creek Pkwy	Red Moon Dr	S	10	10	Y	N	0		0	0	0	7	-	3	N	
171.7	9455	W Renner Rd	Red Moon Dr	construction	S	4	4	Y	L	4		0	0	0	6	-	3	N	
171.8SG	9458	W Renner Rd	construction	Central (US 75)	S	0	0	Y	N	0		0	0	0	6	-	3	N	N

For Side of Street, choose:
N NE
S SE
E NW
W SW

Buffer Types:
N = None
S = Solid Surface
L = Landscaped
T = Landscaped w/ Trees
V = Vertical (retaining wall)

LEE ENGINEERING

Land Use Codes:
1 = Residential, central business districts (CBD), neighborhood commercial,parks and other public facilities, governmental buildings/plazas,offices/office parks
2 = Low density development, rural subdivisions, un-incorporated communities, strip commercial, mixed employment
3 = Light industrial, big-box/auto-oriented commercial
4 = Heavy industrial, intermodal facilities, freeway interchanges See http://www.oregon.gov/ODOT/Planning/Documents/APMv2_Ch14.pdf (Sect. 14.5) for more details.

DART Red & Blue Line Last Mile Connections Project

Field Data Checklist - Sidewalks

Date Station Area **Cityline/Bush** Staff Name

For Side of Street, choose:
N NE
S SE
E NW
W SW

Buffer Types:
N = None
S = Solid Surface
L = Landscaped
T = Landscaped w/ Trees
V = Vertical (retaining wall)

LEE ENGINEERING

Land Use Codes:
1 = Residential, central business districts (CBD), neighborhood commercial,parks and other public facilities, governmental buildings/plazas,offices/office parks
2 = Low density development, rural subdivisions, un-incorporated communities, strip commercial, mixed employment
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DART Red & Blue Line Last Mile Connections Project — Date — Station Area — Staff Name

Field Data Checklist - Sidewalks

Group Link	Link ID	Street Name	From Street	To Street	Side of Street	Sidewalk Width (ft) Actual	Sidewalk Width (ft) Eff.	Curb & Gutter?	Buffer Type	Buffer Width	Prevailing Speed or Speed Limit (mph)	Street Widths (ft) On-Street Parking	Street Widths (ft) Bike Lane	Street Widths (ft) Shoulder	Street Widths (ft) No. of Lanes*	If One-Way, Dir. of Travel	Land Use	Lighting?	Condition Selection
172.15G	9462	Routh Creek Pkwy	South Boundary	E Renner Rd	W	0	0	Y	N	0		8	0	0	2	-	2	N	
172.2	9452	Routh Creek Pkwy	South Boundary	E Renner Rd	E	10	10	Y	L	15		0	0	0	4	-	2	N	
172.3	9137	Routh Creek Pkwy	E Renner Rd	Hill Street	W	10	10	Y	L	15	30 A	8	0	0	2	-	1 2	N	E/Lc
172.4	9235	Routh Creek Pkwy	E Renner Rd	Peloton Dr	E	10	10	Y	L	15	30 A	0	0	0	4	-	1 2	N	E/Lc
172.55G	9316	Routh Creek Pkwy	Peloton Dr	Hill Street	W	10	10	Y	L	15	30 A	0	0	0	2	-	1 2	N	E/Lc
173.15G	9135	Routh Creek Pkwy	Hill Street	W CityLine Dr	W	10	10	Y	L	15	30 A	0	0	0	1	N	2	N	N
173.25G	9233	Routh East Dr	W CityLine Dr	Dart Station	W	0	0	Y	N	0		0	0	0	1	N	2	N	N
173.3	8842	Routh East Dr	Dart Station	Dart Station	W	15	15	Y	N	0		0	0	0	1	N	2	Y	
173.45G	8738	Routh East Dr	Dart Station	E President GB Hwy EB	W	0	0	Y	N	0		0	0	0	1	N	2	Y	N
174.1	8848	Routh East Dr	Hill Street	Dart Station	E	6	6	Y	N	0		0	0	0	1	N	2	Y	
174.2	8849	Routh East Dr	Dart Station	Dart Station	E	20	8	Y	N	0		0	0	0	1	N	2	Y	
174.3	9152	Routh East Dr	Dart Station	E President GB Hwy EB	E	10	8	Y	N	0		0	0	0	1	N	2	N	E/Lc
175.1	8847	Routh West Dr	W CityLine Dr	E President GB Hwy EB	W	20	10	Y	S	10		10	0	0	1	S	2	N	E/Lc
175.25G	9132	Routh West Dr	W CityLine Dr	Dart Station	E	0	0	Y	N	0		0	0	0	1	S	2	Y	N
175.3	8843	Routh West Dr	Dart Station	Dart Station	E	20	8	Y	N	0		8	0	0	1	S	2	Y	E/Lc
175.4	8740	Routh West Dr	Dart Station	E President GB Hwy EB	E	10	10	Y	N	0		0	0	0	1	S	2	N	E/Lc
176.1	9327	Wilshire Way	E President GB Hwy EB	Heise Way	W	0	0	Y	N	0		0	0	0	2	-	2	N	N
176.25G	9330	Wilshire Way	E President GB Hwy EB	Heise Way	E	0	0	Y	N	0		0	0	0	2	-	2	N	N
176.3	9438	Wilshire Way	Heise Way	State St	W			Y	N	0		0	0	0	2	-	2	N	
176.25G	9330	Wilshire Way	Heise Way	State St	E	0	0	Y	N	0		0	0	0	2	-	2	N	N
176.4	9429	Wilshire Way	State St	E Cityline Dr	W			Y	N	0		40	0	0	2	-	2	N	
176.55G	9504	Wilshire Way	State St	E Cityline Dr	E	0	0	Y	N	0		40	0	0	2	-	2	N	N
177.15G		Heise Way	Wilshire Way	N Plano Rd	N			Y				0	0	0	2	-	2	N	
177.2		Heise Way	Wilshire Way	N Plano Rd	S			Y				0	0	0	2	-	2	N	
177.3	9434	State St	Wilshire Way	N Plano Rd	N			Y				0	0	0	2	-	2	N	
177.4	9428	State St	Wilshire Way	N Plano Rd	S			Y				0	0	0	2	-	2	N	
177.5	9158	State St	N Plano Rd	Routh East Drive	N	20	4-10	Y	L	10	30 A	0	0	0	2	-	2	N	E/Lc
177.6	9164	State St	N Plano Rd	Routh East Drive	S	20	4-10	Y	L	10	30 A	0	0	0	2	-	2	N	E/Lc
177.6	9163	Newton St	State St	Hill Street	W			Y				0	0	0	2	-	2	N	
177.7	9174	Newton St	State St	Hill Street	E			Y				0	0	0	2	-	2	N	
178.1	9179	Hill St	Routh Creek Pkwy	Newton St	N			Y				0	0	0	2	-	2	N	
178.2	9287	Hill St	Routh Creek Pkwy	Newton St	S			Y				0	0	0	2	-	2	N	
177.7	9174	Hunt St	Newton St	N Plano Rd	N			Y				0	0	0	2	-	2	N	
179.1	9280	Hunt St	Newton St	N Plano Rd	S			Y				0	0	0	2	-	2	N	
179.25G	9294	Keffler St	Hill Street	E Cityline Dr	W	0	0	Y	N	0		0	0	0	2	-	2	N	N
179.3	9285	Keffler St	Hill Street	E Cityline Dr	E	4	4	Y				0	0	0	2	-	2	N	
179.45G		E City Line Dr	Routh Creek Pkwy	Keffler St	N	0	0	Y	N	0		0	0	0	2	-	2	N	N
179.5	9305	E City Line Dr	Keffler St	N Plano Rd	N	4	4	Y				0	0	0	2	-	2	N	
172.55G	9244	E City Line Dr	Routh Creek Pkwy	Keffler St	S	4	4	Y				0	0	0	2	-	2	N	
168.65G		E City Line Dr	Keffler St	N Plano Rd	S	0	0	Y	N	0		0	0	0	2	-	2	N	N
168.55G	9396	E City Line Dr	N Plano Rd	Wilshire Way	N	0	0	Y	N	0		0	0	0	2	-	2	N	N
172.6		E City Line Dr	Wilshire Way	East Boundary	N	4	4	Y				0	0	0	2	-	2	N	
172.7	9342	E City Line Dr	N Plano Rd	East Boundary	S	4	4	Y				0	0	0	2	-	2	N	
172.85G		E City Line Dr	N Plano Rd	East Boundary	S	0	0	Y	N	0		0	0	0	2	-	2	N	N
173.1		Peloton Dr	Routh Creek Pkwy	Marathon Ave	N			Y				0	0	0	2	-	2	N	
173.2		Peloton Dr	Routh Creek Pkwy	Marathon Ave	S			Y				0	0	0	2	-	2	N	
173.3		Peloton Dr	Marathon Ave	N Plano Rd	N			Y				0	0	0	2	-	2	N	
173.4		Peloton Dr	Marathon Ave	N Plano Rd	S			Y				0	0	0	2	-	2	N	
173.5		Marathon Ave	Peloton Dr	E Renner Rd	W			Y				0	0	0	2	-	2	N	
173.6		Marathon Ave	Peloton Dr	E Renner Rd	E			Y				0	0	0	2	-	2	N	
174.15G		Red Moon Way	E Pres George Bush HWY	W CityLine Dr	W	0	0	Y	N	0		0	0	0	2	-	2	N	N
174.25G		Red Moon Way	E Pres George Bush HWY	W CityLine Dr	E	0	0	Y	N	0		0	0	0	2	-	2	N	N
174.35G		Red Moon Way	W CityLine Dr	E Renner Rd	W	0	0	Y	N	0		0	0	0	2	-	2	N	N
174.45G		Red Moon Way	W CityLine Dr	E Renner Rd	E	0	0	Y	N	0		0	0	0	2	-	2	N	N
174.55G		W CityLine Dr	N Central EXPY	Red Moon Way	N	10	0	Y	N	0	30 A	0	0	0	2	-	2	N	N
174.35G		W CityLine Dr	N Central EXPY	Red Moon Way	S	0	0	Y	N	0	30 A	0	0	0	2	-	? 2 X	*N	N
175.1		W CityLine Dr	Red Moon Way	Topridge Dr	N			Y				20	0	0	2	-	? 2 X	*N	N
175.25G		W CityLine Dr	Red Moon Way	Topridge Dr	S	0	0	Y	N	0		20	0	0	2	-	2	N	N
175.3		W CityLine Dr	Topridge Dr	Routh West Drive	N			Y				20	0	0	2	-	2	N	
175.45G		W CityLine Dr	Topridge Dr	Routh West Drive	S	0	0	Y	N	0		20	0	0	2	-	2	N	N
175.5		W CityLine Dr	Routh West Drive	Routh East Drive	N			Y				0	0	0	2	-	2	N	
175.65G		W CityLine Dr	Routh West Drive	Routh East Drive	S	0	0	Y	N	0		0	0	0	2	-	2	N	N
176.15G		N Central Expy	North boundary	E Pres George Bush HWY	W	0	0	Y	N	0		0	0	0	4	S	3		N
176.25G		N Central Expy	E Pres George Bush HWY	South boundary	W	0	0	Y	N	0		0	0	0	4	S	3		N
176.35G		N Central Expy	North boundary	E Pres George Bush HWY	E	0	0	Y	N	0		0	0	0	4	N	3		N
176.45G		N Central Expy	W CityLine Dr	E Renner Rd	E	0	0	Y	N	0		0	0	0	4	N	3		N

For Side of Street, choose: N NE; S SE; E NW; W SW

Buffer Types: N = None; S = Solid Surface; L = Landscaped; T = Landscaped w/ Trees; V = Vertical (retaining wall)

Land Use Codes:
1 = Residential, central business districts (CBD), neighborhood commercial,parks and other public facilities, governmental buildings/plazas,offices/office parks
2 = Low density development, rural subdivisions, un-incorporated communities, strip commercial, mixed employment
3 = Light industrial, big-box/auto-oriented commercial
4 = Heavy industrial, intermodal facilities, freeway interchanges See http://www.oregon.gov/ODOT/Planning/Documents/APMv2_Ch14.pdf (Sect. 14.5) for more details.

LEE ENGINEERING

*All lanes for 2-way street

X = undeveloped * Unpaved S.W.
* Blocked by bus canopy/Pole
** Bus stop

X = undeveloped (under constr.)
** Patio Seating

DART Red & Blue Line Last Mile Connections Project
Field Data Checklist - Signalized Crossings

Date 08/07/2018 Station Area Cityline Staff Name L.L. & S.S

Link ID or "New"	Location Type (circle one)	Street Crossed	At/Between Street(s)	Int. Leg	Stop Control?	Lighting Present?	If No Stop Control (i.e. if Free or Signal): No. Lanes Crossed: Per Direction	No. Lanes Crossed: Total	Med. Refuge Width	Both Ped. Ramps Present?	If Signalized: Permitted: Left Turns?	Permitted: Right Turns?	Countdown Ped. Signals?	Pushbuttons: Functional?	Pushbuttons: w/ APS Signals?	>1 Refuge Island?	No. of Lanes Crossed at Once	>4 legs or high skew	Closed or limited x-walks	Channelized Right Turns	Photo(s)?	Notes
	I M	Roth E Dr	PGB Hwy S		N	N	1	1	N	Y	N	Y	Y	Y	N	N	1	N	N	N	✓	one-way
	I M	PGB Hwy	Roth E Dr	W	N	N	3	3	N	Y	Y	Y	Y	Y	N	N	3	N	N	N	✓	one-way
	I M	Roth E Dr	PGB Hwy	N	N	N	1	1	N	Y	N	N	Y	Y	N	N	1	N	N	N	✓	
	I M	PGB(WB)																			✓	
	I M	K Ave	Plano Pkwy	W	N	N	3	6	N	Y	Y	Y	N	N/A	N	N	6	N	N	N	✓	
	I M	K Ave	Plano Pkwy	E	N	N	3	6	N	Y	Y	Y	N	N/A	N	N	6	N	N	N	✓	
	I M	Plano Pkwy	K Ave	S		N	3	6	N	Y	Y	Y	N	Y	N	N	6	N	N	N	✓	
	I M	Plano Pkwy	K Ave	N	N	N	3	6	Y	Y	Y	Y	N	N/A	N	N	6	N	N	N	✓	
	I M	PGB(NB)	K Ave	W	N	Y	3	3	Y	Y	N/A	Y	N	Y	N	N	3	N	N	Y	✓	
	I M	K Ave	PGB(WB)	N	N	Y	3	6	Y	N	Y	Y	Y	Y	N	Y	3	N	N	N	✓	(one way No Ramp in the middle)
	I M	[illegible]	[illegible]	S	N	Y	3	6	Y	Y	Y	Y	Y	Y	N	N	4	N	N	N	✓	
	I M	PGB(EB)	K Ave	E	N	Y	3	3	Y	Y	Y	Y	Y	Y	N	N	3	N	N	N	✓	
	I M	Plano	State	W	N	Y	1	2	N	Y	Y	Y	Y	Y	N	N	2	N	N	N	✓	
	I M	Plano	State	E	N	Y	1	2	N	Y	Y	Y	Y	Y	N	N	2	N	N	N	✓	
	I M	State	Plano	S	N	Y	3	6	N	Y	Y	Y	Y	Y	N	N	7	N	N	N	✓	
	I M	Plano	City line	W	N	Y	2	4	N	Y	Y	Y	Y	N/A	N	N	4	N	N	N	✓	
	I M	Plano	City line	E	N	Y	2	4	N	Y	Y	Y	Y	Y	N	N	4	N	N	N	✓	
	I M	City line	Plano	N	N	Y	3	6	N	Y	Y	Y	Y	Y	N	N	8	N	N	N	✓	
	I M	City line	Plano	S	N	Y	3	6	N	Y	Y	Y	Y	Y	N	N	8	N	N	N	✓	
	I M	Plano	Renner	W	N	Y	3	6	Y	Y	Y	Y	Y	Y	N	N	8	N	N	N	✓	
	I M	Plano	Renner	E	N	Y	3	6	Y	Y	Y	Y	Y	Y	N	N	8	N	N	N	✓	No Ped button to cross WL.
	I M	Renner	Plano	N	N	Y	3	6	N	Y	Y	Y	Y	Y	N	N	8	N	N	Y	✓	
	I M	Renner	Plano	S	N	Y	3	6	N	Y	Y	Y	Y	Y	N	N	8	N	N	Y	✓	
	I M	Renner	Roth Creek	N	N	Y	1	2	4	Y	Y	Y	Y	Y	N	N	4	N	N	N	✓	
	I M	Renner	Roth Creek	S	N	Y	2	4	4	Y	Y	Y	Y	Y	N	N	4	N	N	N	✓	
	I M	Roth Creek	Renner Rd	E	N	Y	3	6	N	Y	Y	Y	Y	Y	N	N	8	N	N	N	✓	No marked Cw on the WL.
	I M	Roth Creek	Renner Rd	W	N	Y	3	6	N	Y	Y	Y	Y	Y	N	N	8	N	N	N	✓	
	I M	[illegible]	[illegible]	N	N	Y	3	6	N	Y												
	I M																					
	I M																					
	I M																					
	I M																					
	I M																					

Choose:
I = Intersection
M = Mid-Block

For Int. Leg, choose:
N NE
S SE
E NW
W SW
(N/A for mid-block)

Buffer Types:
N = None
S = Solid Surface
L = Landscaped
T = Landscaped w/ Trees
V = Vertical (retaining wall)

*All lanes for 2-way street

Legend:
Complete in office, confirm in field
Confirm in field

LEE ENGINEERING

See http://www.oregon.gov/ODOT/Planning/Documents/APMv2_Ch14.pdf (Sect. 14.5) for more details.
Consider adding items from Page 9 of https://www.fhwa.dot.gov/innovation/everydaycounts/edc_4/guide_to_improve_uncontrolled_crossings.pdf

DART Red & Blue Line Last Mile Connections Project
Field Data Checklist - Signalized Crossings

Date _____ Station Area _____ Staff Name _____

Link ID or "New"	Location Type (circle one)	Street Crossed	At/Between Street(s)	Int. Leg	Stop Control?	Lighting Present?	If Signalized: No. Lanes Crossed: Per Direction	No. Lanes Crossed: Total	Med. Refuge Width	Both Ped. Ramps Present?	Permitted: Left Turns?	Permitted: Right Turns?	Countdown Ped. Signals?	Pushbuttons: Functional?	Pushbuttons: w/ APS Signals?	>1 Refuge Island?	No. of Lanes Crossed at Once	>4 legs or high skew	Closed or limited x-walks	Channelized Right Turns	Photo(s)?	Notes
	I M	E Plano Pkwy	K Ave	W			3	7									7					
	I M	E Plano Pkwy	K Ave	E			3	7									7					
	I M	K Ave	E Plano Pkwy	N			3	7									7					
	I M	K Ave	E Plano Pkwy	S			3	7									7					
	I M	K Ave	E President GB Hwy WB																			
	I M	E President GB Hwy WB	RR	W		Y	3	6	—	Y	N	N	Y	Y	N	N	3	N	N	N	Y	
	I M	E President GB Hwy WB	K Ave	E													7					
	I M	K Ave	E President GB Hwy EB																			
	I M	E President GB Hwy EB	K Ave	W			3	7									7					
	I M	E President GB Hwy EB	K Ave	E			3	7									7					
	I M	K Ave	State St	N			3	7									7					
	I M	K Ave	State St	S			3	7									7					
	I M	State St	K Ave	W			1	3									3					
	I M	State St	K Ave	E			1	3									3					
	I M	K Ave	E City Line Dr	N			3	7									7					
	I M	K Ave	E City Line Dr	S			3	7									7					
	I M	E City Line Dr	K Ave	W			1	3									3					
	I M	E City Line Dr	K Ave	E			1	3									3					
	I M	K Ave	E Renner Rd	N			3	7														
	I M	K Ave	E Renner Rd	S			3	7														
	I M	E Renner Rd	K Ave	W			4	8														
	I M	E Renner Rd	K Ave	E			4	8														
	I M																					
	I M	190 NBFR	W of Travis	N	No	Yes	3	3	—	Yes	N	N										
	I M																					
	I M	Plano Pkwy	E Ave/Exit	E	N	N	3	7	—	N	Y	Y	N	N/A	N/A	N/A	7	N	Y	N	Y	↑
	I M			SW	N	N	3	7	—	N	Y	Y	N	N/A	N/A	N/A	7	N	Y	N	Y	No X.W.K
	I M	E Ave/Exit	P. Pkwy NB	N	N	N	1	2	—	N	Y	Y	N	N/A	N/A	N/A	7	N	Y	N	Y	
	I M			SW	N	N	1	2	—	Y	Y	Y	N	N/A	N/A	N/A	7	N	Y	N	Y	↓
	I M	City line	Top Bridge	E	N	N	2	4	—	Y	Y	Y										
	I M			W	N	N	2	4	—	Y	Y	Y										
	I M																					
	I M																					
	I M	North West	NBFR	S	N	N																
	I M																					
	I M	NBFR	Renner	N	—		3	3	—	Y	N	N	Y	Y	Y	—	3	—	—	N		
	I M			S	—		3	3	—	Y	Y	Y	Y	Y	Y	—	3	—	—	N		
	I M																					
	I M	Renner	NBFR	E	—		3	7	9	Y	Y	Y	Y	Y	Y	—	4	—	—	Y		
	I M																					
	I M																					
	I M																					
	I M																					

Choose:
I = Intersection
M = Mid-Block

For Int. Leg, choose:
N NE
S SE
E NW
W SW
(N/A for mid-block)

Buffer Types:
N = None
S = Solid Surface
L = Landscaped
T = Landscaped w/ Trees
V = Vertical (retaining wall)

* NU Ramps on N side.

*All lanes for 2-way street

Legend:
Complete in office, confirm in field
Confirm in field

LEE ENGINEERING

See http://www.oregon.gov/ODOT/Planning/Documents/APMv2_Ch14.pdf (Sect. 14.5) for more details.
Consider adding items from Page 9 of https://www.fhwa.dot.gov/innovation/everydaycounts/edc_4/guide_to_improve_uncontrolled_crossings.pdf

DART Red & Blue Line Last Mile Connections Project
Field Data Checklist - Unsignalized Crossings

Date

Station Area

Staff Name

Link ID or "New"	Location Type (circle one)	Street Crossed	At/Between Street(s)	Int. Leg	Stop Control?	Lighting Present?	If No Stop Control (i.e. if Free or Signal): No. Lanes Crossed: Per Direction	No. Lanes Crossed: Total	Med. Refuge Width	Both Ped. Ramps Present?	If Unsignalized with no Stop Control (i.e. Free): Speed Limit (mph)	One Way?	2-Min. Traffic Count*: Time	2-Min. Traffic Count*: Volume	Treatment present (circle all)	Photo(s)?	Notes
	I M	Executive Dr	Crawford Rd	S	N	N	1	2	0	Y	30A	Y N	17	8:40	Mkg RSg RRFB InSgn Cex RCwk		No SW on W side
	[✓ I] M	Crawford Rd	E President GB Hwy WB	N	Y	Y	1	2	0	N	30A	Y [✓ N]			Mkg RSg RRFB InSgn Cex RCwk	Y	No S.W. on W side
	[✓ I] M	E President GB Hwy WB	Crawford Rd	W	N	Y	3	3	0	N		[✓ Y] N	9	8.25	Mkg RSg RRFB InSgn Cex RCwk	Y	
	I M	E President GB Hwy WB	Crawford Rd	E								Y N			Mkg RSg RRFB InSgn Cex RCwk		
	I M	Crawford Rd	E President GB Hwy EB	S								Y N			Mkg RSg RRFB InSgn Cex RCwk		
	I M	E President GB Hwy EB	Crawford Rd	W								Y N			Mkg RSg RRFB InSgn Cex RCwk		
	I M	E President GB Hwy EB	Crawford Rd	E								Y N			Mkg RSg RRFB InSgn Cex RCwk		
	I M	E Cityline Dr	Routh Creek Pkwy	W								Y N			Mkg RSg RRFB InSgn Cex RCwk		
	I M	Routh Creek Pkwy	E Cityline Dr	N								Y N			Mkg RSg RRFB InSgn Cex RCwk		
	I M	Routh Creek Pkwy	E Cityline Dr	S								Y N			Mkg RSg RRFB InSgn Cex RCwk		
	I M	W Cityline Dr	Routh West Dr	E								Y N			Mkg RSg RRFB InSgn Cex RCwk		
	I M	Routh Creek Pkwy	Hill St	N								Y N			Mkg RSg RRFB InSgn Cex RCwk		
	I M	Routh Creek Pkwy	Hill St	S								Y N			Mkg RSg RRFB InSgn Cex RCwk		
	I M	Hill St	Routh Creek Pkwy	E								Y N			Mkg RSg RRFB InSgn Cex RCwk		
	I M	Routh Creek Pkwy	Cityline Dr	N								Y N			Mkg RSg RRFB InSgn Cex RCwk		
	I M	Routh Creek Pkwy	Cityline Dr	S	Y	Y	3	3	—	Y	30A	Y [✓ N]	—		Mkg RSg RRFB InSgn Cex RCwk	Y	
	I M	Cityline Dr	Routh Creek Pkwy	E	Y	Y	3	3	—	Y	30	Y [✓ N]	—		Mkg RSg RRFB InSgn Cex RCwk	Y	
	I [✓ M]	190 ~~[illegible]~~ WBFR	W of RR	N	N	Y	3	3	—	Y		[✓ Y] N	9	8:23	Mkg RSg RRFB InSgn Cex RCwk	Y	Apt to St !!
	I M											Y N			Mkg RSg RRFB InSgn Cex RCwk		
	[✓ I] M	P. Pkwy	Tylor	E	N	N	3	6	—	N	40	Y [✓ N]	38	10:13	Mkg RSg RRFB InSgn Cex RCwk		
	I M			W	N	N	3	6	—	N	40	Y [✓ N]	38	10:13	Mkg RSg RRFB InSgn Cex RCwk		
	I M											Y N			Mkg RSg RRFB InSgn Cex RCwk		
	[✓ I] M	Top ridge	Pipe line	N	N	Y	1	2	—	Y	30A	Y [✓ N]	1	1:40	Mkg RSg RRFB InSgn Cex RCwk		
	I M			S	N	Y	1	2	—	Y	30A	Y [✓ N]	1	1:40	Mkg RSg RRFB InSgn Cex RCwk		
	I M	~~Top Ridge~~	~~City Line~~	E	N	Y	2	4	—	Y	30A	Y [✓ N]	4	1:45	Mkg RSg RRFB InSgn Cex RCwk		
	I M	City Line	Top Ridge	W	N	Y	2	4	—	Y	30A	Y [✓ N]	4	1:45	Mkg RSg RRFB InSgn Cex RCwk		
	I M											Y N			Mkg RSg RRFB InSgn Cex RCwk		
	I M	~~[illegible]~~ 190 EBFR	Red moon	E	N	Y	3	3	—	N		[✓ Y] N	9	2:20	Mkg RSg RRFB InSgn Cex RCwk		
	I M			W	N	N	3	3	—	N		[✓ Y] N	9	2:20	Mkg RSg RRFB InSgn Cex RCwk		
	I M											Y N			Mkg RSg RRFB InSgn Cex RCwk		
	I M	~~[illegible]~~ Cityline	Red moon	E	N	Y	2	4	—	Y	30A	Y [✓ N]	3	2:17	Mkg RSg RRFB InSgn Cex RCwk		
	I M			W	N	Y	2	4	—	Y	30A	Y [✓ N]	3	2:17	Mkg RSg RRFB InSgn Cex RCwk		
	I M											Y N			Mkg RSg RRFB InSgn Cex RCwk		
	I M	~~[illegible]~~										Y N			Mkg RSg RRFB InSgn Cex RCwk		
	I M											Y N			Mkg RSg RRFB InSgn Cex RCwk		
	I M	State	Newton	E	N	Y	1	2	0	Y	30A	Y [✓ N]	8	5:42	Mkg RSg RRFB InSgn Cex RCwk		
	I M			W	N	Y	1	2	6	Y	30A	Y [✓ N]	8	6:42	Mkg RSg RRFB InSgn Cex RCwk		
	I M											Y N			Mkg RSg RRFB InSgn Cex RCwk		
	I M											Y N			Mkg RSg RRFB InSgn Cex RCwk		
	I M											Y N			Mkg RSg RRFB InSgn Cex RCwk		
	I M											Y N			Mkg RSg RRFB InSgn Cex RCwk		
	I M											Y N			Mkg RSg RRFB InSgn Cex RCwk		
	I M											Y N			Mkg RSg RRFB InSgn Cex RCwk		
	I M											Y N			Mkg RSg RRFB InSgn Cex RCwk		
	I M											Y N			Mkg RSg RRFB InSgn Cex RCwk		

DART Red & Blue Line Last Mile Connections Project
Field Data Checklist - Unsignalized Crossings

08/07/18
~~08/16/18~~

Date ~~08/07/2018~~

Cityline

Station Area ~~Arapaho~~

Staff Name L.L ~~[illegible]~~ S.S

Link ID or "New"	Location Type (circle one)	Street Crossed	At/Between Street(s)	Int. Leg	Stop Control?	Lighting Present?	If No Stop Control (i.e. if Free or Signal): No. Lanes Crossed: Per Direction	No. Lanes Crossed: Total	Med. Refuge Width	Both Ped. Ramps Present?	If Unsignalized with no Stop Control (i.e. Free): Speed Limit (mph)	One Way?	2-Min. Traffic Count*: Time	2-Min. Traffic Count*: Volume	Treatment present (circle all)	Photo(s)?	Notes
	I M	Executive Dr	Crawford Rd	S								Y N			Mkg RSg RRFB InSgn Cex RCwk		
	I M	Crawford Rd	E President GB Hwy WB	N								Y N			Mkg RSg RRFB InSgn Cex RCwk		
	I M	E President GB Hwy WB	Crawford Rd	W								Y N			Mkg RSg RRFB InSgn Cex RCwk		
	I M	E President GB Hwy WB	Crawford Rd	E								Y N			Mkg RSg RRFB InSgn Cex RCwk		
	I M	Crawford Rd	E President GB Hwy EB	S								Y N			Mkg RSg RRFB InSgn Cex RCwk		
	I M	E President GB Hwy EB	Crawford Rd	W								Y N			Mkg RSg RRFB InSgn Cex RCwk		
	I M	E President GB Hwy EB	Crawford Rd	E								Y N			Mkg RSg RRFB InSgn Cex RCwk		
	I M	E Cityline Dr	Routh Creek Pkwy	W								Y N			Mkg RSg RRFB InSgn Cex RCwk		
	I M	Routh Creek Pkwy	E Cityline Dr	N								Y N			Mkg RSg RRFB InSgn Cex RCwk		
	I M	Routh Creek Pkwy	E Cityline Dr	S								Y N			Mkg RSg RRFB InSgn Cex RCwk		
	I M	W Cityline Dr	Routh West Dr	E								Y N			Mkg RSg RRFB InSgn Cex RCwk		
	I M	Routh Creek Pkwy	Hill St	N								Y N			Mkg RSg RRFB InSgn Cex RCwk		
	I M	Routh Creek Pkwy	Hill St	S								Y N			Mkg RSg RRFB InSgn Cex RCwk		
	I M	Hill St	Routh Creek Pkwy	E								Y N			Mkg RSg RRFB InSgn Cex RCwk		
	I M	Routh Creek Pkwy	Cityline Dr	N								Y N			Mkg RSg RRFB InSgn Cex RCwk		
	I M	Routh Creek Pkwy	Cityline Dr	S								Y N			Mkg RSg RRFB InSgn Cex RCwk		
	I M	Cityline Dr	Routh Creek Pkwy	E								Y N			Mkg RSg RRFB InSgn Cex RCwk		
	I M	~~E Plano Pkwy~~										Y N			Mkg RSg RRFB InSgn Cex RCwk		
	I M	E Plano Parkway	JPI	S	N	N	4	8	N	Y	40/35	Y [✓ N]	8:51	65	Mkg RSg RRFB InSgn Cex RCwk		lighty in the middle of WL
	I M	E Plano Pkwy	JPI	N	N	N	4	8	N	Y	40/35	Y [✓ N]	8:51	65	Mkg RSg RRFB InSgn Cex RCwk		
	I M	JPI	E Plano Pkwy	E	Y	N	1	2	N	Y	30	Y [✓ N]		~~[illegible]~~	Mkg RSg RRFB InSgn Cex RCwk		
	I M	JPI	E Plano Pkwy	W	Y	N	1	2	N	Y	30	Y [✓ N]			Mkg RSg RRFB InSgn Cex RCwk		
	I M	~~Plano Rd~~ Hunt	~~Hunt St~~ Plano	W	N	Y	3	6	Y	N	40	Y [✓ N]	10:47	35	Mkg RSg RRFB InSgn Cex RCwk		
	I M	Plano	Hunt	N	Y	Y	1	2	N	Y	30	Y [✓ N]	~~10:47~~	~~35~~	Mkg RSg RRFB InSgn Cex RCwk		
	I M	Plano	Hunt	S	Y	Y	1	2	N	Y	30	Y [✓ N]			Mkg RSg RRFB InSgn Cex RCwk		
	I M	Marathon Ave	Ranner	N	N	N	3	6	2	N	40	Y [✓ N]	11:12	75	Mkg RSg RRFB InSgn Cex RCwk		No Ped crosg marked
	I M	Ranner	Marathon	E	Y	N	1	2	N	Y	30	Y [✓ N]			Mkg RSg RRFB InSgn Cex RCwk		
	I M	Ranner	Marathon	W	Y	N	1	2	N	Y	30	Y [✓ N]			Mkg RSg RRFB InSgn Cex RCwk		
	I M	Red Moon	Ranner	N	N	Y	3	6	2	N	40	Y [✓ N]	11:29	64	Mkg RSg RRFB InSgn Cex RCwk		
	I M	Ranner	Red Moon	W	Y	Y	1	2	N	Y	30	Y [✓ N]			Mkg RSg RRFB InSgn Cex RCwk		
	I M	Ranner	Red Moon	E	Y	Y	1	2	N	Y	30	Y [✓ N]			Mkg RSg RRFB InSgn Cex RCwk		
	I M	Heise Rd	Plano Rd	E	N	Y	3	6	Y	N	40	Y [✓ N]	1:57	32	Mkg RSg RRFB InSgn Cex RCwk		no light on E Side
	I M	Plano Rd	Heise Rd	N	Y	N	1	2	0	Y	36	Y [✓ N]			Mkg RSg RRFB InSgn Cex RCwk		no Side walk markg
	I M	Plano Rd	Heise Rd	S	Y	N	1	2	0	Y	30	Y [✓ N]			Mkg RSg RRFB InSgn Cex RCwk		
	I M	JPI	PGB (WB)	N	N	N	3	3	N	N	?	Y [✓ N]	2:30	6	Mkg RSg RRFB InSgn Cex RCwk		(missg Sidewalk)
	I M	~~PGB (WB)~~	~~JPI~~									Y N			Mkg RSg RRFB InSgn Cex RCwk		
	I M	Red Moon	PGBT (EB)	S	N	Y	3	3	N	N	?	Y [✓ N]	2:44	4	Mkg RSg RRFB InSgn Cex RCwk		
	I M	PGBT (EB)	Red Moon	E	Y	Y	1	2	N	N	30	Y [✓ N]			Mkg RSg RRFB InSgn Cex RCwk		
	I M	PGBT (EB)	Red Moon	W	Y	Y	1	2	N	N	30	Y [✓ N]			Mkg RSg RRFB InSgn Cex RCwk		
	I M	Wilshire	PGBT (EB)	S	N	N	3	3	N	N	?	[✓ Y] N	3:06	23	Mkg RSg RRFB InSgn Cex RCwk		
	I M	~~PGBT (EB)~~	~~Wilshire~~	~~E~~								Y N			Mkg RSg RRFB InSgn Cex RCwk		TWLT in the middle
	I M	PGBT (EB)	Wilshire	W	Y	N	1	2	N	Y		Y [✓ N]			Mkg RSg RRFB InSgn Cex RCwk		
	I M	Heise	Wilshire	W	N	N	1	3	N	N	30	Y [✓ N]	3:10	4	Mkg RSg RRFB InSgn Cex RCwk		No Ramp, No marked crosswalk
	I M	Wilshire	Heise	N	Y	N	1	2	N	N	30	Y [✓ N]			Mkg RSg RRFB InSgn Cex RCwk		
	I M			S								Y N			Mkg RSg RRFB InSgn Cex RCwk		

(Unsignalized Crossings.)

08/~~[illegible]~~07/18. ~~[illegible]~~ Cityline Station L.L. & S.S.

Link ID or "New"	Location Type (circle one)	Street Crossed	At/Between Street(s)	Int. Leg	Stop Control?	Lighting Present?	No. Lanes Crossed Per Direction	Total	Med. Refuge Width	Both Ped. Ramps Present?	Speed Limit (mph)	One Way?	2-Min. Traffic Count* Time	Volume	Treatment present (circle all)	Photo(s)?	Notes
	I M	State	Wilshire	W	N	Y	1	2	0	Y	30	Y [✓ N]	3:17	4	Mkg RSg RRFB InSgn Cex RCwk	✓	
	I M	~~Wilshire~~	~~State~~	~~N~~	~~Y~~							Y N			Mkg RSg RRFB InSgn Cex RCwk		
	I M	Wilshire	State	S	Y	Y	1	2	0	Y	30	Y [✓ N]			Mkg RSg RRFB InSgn Cex RCwk	✓	
	I M	Wilshire	Cityline	N	N	Y	2	4	0	Y	30	Y [✓ N]	3:26	6	Mkg RSg RRFB InSgn Cex RCwk		ES has zigzag Ped cross
	I M	Hunt	Wilshire	W	N	Y	1	2	0	Y	30	Y [✓ N]	3:33	2	Mkg RSg RRFB InSgn Cex RCwk		light on the ES
	I M	Foxboro	City line	S	N	Y	2	4	0	Y	30	Y [✓ N]	3:36	5	Mkg RSg RRFB InSgn Cex RCwk		
	I M	City line	Foxboro	W	Y	Y	1	2	0	Y	30	Y [✓ N]			Mkg RSg RRFB InSgn Cex RCwk		
	I M	Keffler St	Cityline	N	N	Y	1	3	0	Y	30	Y [✓ N]	3:50	2	Mkg RSg RRFB InSgn Cex RCwk		2-way left turn in middle
	I M	City line	Keffler St.	E	Y	Y	1	2	0	Y	30	Y [✓ N]			Mkg RSg RRFB InSgn Cex RCwk		
	I M	Cityline Market Dr	City line	S	N	N	2	4	2	N	30	Y [✓ N]	4:11	6	Mkg RSg RRFB InSgn Cex RCwk		No Ramp on N
	I M	Peloton Dr	Plano Rd	W	N	Y	3	6	4	N	40	Y [✓ N]	4:18	56	Mkg RSg RRFB InSgn Cex RCwk		No Ramp on E
	I M	Plano Rd	Peloton	N	Y	Y	1	2	0	Y	30	Y [✓ N]			Mkg RSg RRFB InSgn Cex RCwk		
	I M	Peloton	Routh Creek	E	N	Y	1	2	0	Y	30	Y [✓ N]	4:28	6	Mkg RSg RRFB InSgn Cex RCwk		
	I M	Routh Creek	Peloton	S	Y	Y	1	2	0	N	30	Y [✓ N]			Mkg RSg RRFB InSgn Cex RCwk		No Ramp on WS.
	I M	Hill St	Routh Creek	E	N	Y	1	3	0	Y	30	Y [✓ N]	4:54	4	Mkg RSg RRFB InSgn Cex RCwk		
	I M	Routh Creek	Hill St	S	Y	Y	1	2	0	Y	30	Y [✓ N]			Mkg RSg RRFB InSgn Cex RCwk		
	I M	Keffler St	Hill St	S	N	Y	1	2	0	N	30	Y [✓ N]	4:58	2	Mkg RSg RRFB InSgn Cex RCwk		No Ramps on WS
	I M	Heise St	Wilshire	W	N	N	1	3	0	N	30	Y [✓ N]	5:30	7	Mkg RSg RRFB InSgn Cex RCwk		No Cross marking
	I M	Wilshire	Heise	N	Y	N	1	2	0	N	30	Y [✓ N]			Mkg RSg RRFB InSgn Cex RCwk		No light
	I M											Y N			Mkg RSg RRFB InSgn Cex RCwk		
	I M											Y N			Mkg RSg RRFB InSgn Cex RCwk		
	I M											Y N			Mkg RSg RRFB InSgn Cex RCwk		
	I M											Y N			Mkg RSg RRFB InSgn Cex RCwk		
	I M											Y N			Mkg RSg RRFB InSgn Cex RCwk		
	I M											Y N			Mkg RSg RRFB InSgn Cex RCwk		
	I M											Y N			Mkg RSg RRFB InSgn Cex RCwk		
	I M											Y N			Mkg RSg RRFB InSgn Cex RCwk		
	I M											Y N			Mkg RSg RRFB InSgn Cex RCwk		
	I M											Y N			Mkg RSg RRFB InSgn Cex RCwk		
	I M											Y N			Mkg RSg RRFB InSgn Cex RCwk		
	I M											Y N			Mkg RSg RRFB InSgn Cex RCwk		
	I M											Y N			Mkg RSg RRFB InSgn Cex RCwk		
	I M											Y N			Mkg RSg RRFB InSgn Cex RCwk		
	I M											Y N			Mkg RSg RRFB InSgn Cex RCwk		
	I M											Y N			Mkg RSg RRFB InSgn Cex RCwk		
	I M											Y N			Mkg RSg RRFB InSgn Cex RCwk		

Choose:
I = Intersection
M = Mid-Block

Legend:
☐ Complete in office, confirm in field
☐ Confirm in field

For Int. Leg, choose:
N NE
S SE
E NW
W SW
(N/A for mid-block)

* if ADT is not avail.

Condition Options:
Mkg = Markings
Rsg = Roadside signage
RRFB = Rapid Flash Rect. Beacon
InSgn = In-street signs
Cex = Curb extensions
RCwk = Raised crosswalk

See http://www.oregon.gov/ODOT/Planning/Documents/APMv2_Ch14.pdf (Sect. 14.5) for more details.
Consider adding items from Page 9 of https://www.fhwa.dot.gov/innovation/everydaycounts/edc_4/guide_to_improve_uncontrolled_crossings.pdf

LEE ENGINEERING

DART Red & Blue Line Last Mile Connections Project

Field Data Checklist - Sidewalk Gaps

Date 08/07/18
Station Cityline
Staff Name L.L & S.S
Location E Plano Pkwy JPI to

Instructions : When coding/confirming sidewalk condition of "Nonexistant" on sidewalk checklist, review the following and make notes here and/or on the sidewalk checklist.

What challenges are there to the feasibility/practicability of sidewalk?
Circle items below and add notes/sketches as applicable.

Utility poles? No

Underground utilities? maybe

Trees? Yes

Slopes? 0%

Other structures? No

Rail crossings? No

Business parking/access management issues? No

Insufficient bridge width? No

Take photos and notes to document. ✓

Other Notes:

northside of street

LEE ENGINEERING

DART Red & Blue Line Last Mile Connections Project
Field Data Checklist - Sidewalk Gaps

Date 08/07/18
Station Cityline
Staff Name L.C & S.S.
Location E. Plano Pkwy
811-Inwo to F Ave

Instructions : When coding/confirming sidewalk condition of "Nonexistant" on sidewalk checklist, review the following and make notes here and/or on the sidewalk checklist.

What challenges are there to the feasibility/practicability of sidewalk?
Circle items below and add notes/sketches as applicable.

Utility poles? No

Underground utilities? maybe

Trees? No

Slopes? 0-1.

Other structures? No

Rail crossings? No

Business parking/access management issues? No

Insufficient bridge width? No

Take photos and notes to document. ✓

Other Notes:

LEE ENGINEERING

DART Red & Blue Line Last Mile Connections Project
Field Data Checklist - Sidewalk Gaps

Date 08/07/18
Station Cityline
Staff Name L.C & S.S.
Location E. Plano Pkwy
Railroad to JPJ

Instructions : When coding/confirming sidewalk condition of "Nonexistant" on sidewalk checklist, review the following and make notes here and/or on the sidewalk checklist.

What challenges are there to the feasibility/practicability of sidewalk?
Circle items below and add notes/sketches as applicable.

Utility poles? No

Underground utilities? maybe

Trees? maybe/yes

Slopes? 2-1.

Other structures? No

Rail crossings? No

Business parking/access management issues? No

Insufficient bridge width? No

Take photos and notes to document. ✓

Other Notes:

LEE ENGINEERING

DART Red & Blue Line Last Mile Connections Project
Field Data Checklist - Sidewalk Gaps

Date 08/07/18
Station City line
Staff Name L.L & S.S.
Location Plano Rd
City line to ~~Renner~~ Peloton (west) WB

Instructions : When coding/confirming sidewalk condition of "Nonexistant" on sidewalk checklist, review the following and make notes here and/or on the sidewalk checklist.

What challenges are there to the feasibility/practicability of sidewalk?
Circle items below and add notes/sketches as applicable.

Utility poles? No

Underground utilities? maybe

Trees? No

Slopes? No

Other structures? No

Rail crossings? No

Business parking/access management issues? No

Insufficient bridge width? No

Take photos and notes to document. ✓

Other Notes:

LEE ENGINEERING

DART Red & Blue Line Last Mile Connections Project
Field Data Checklist - Sidewalk Gaps

Date 08/07/18
Station City line
Staff Name L.L. & S.S.
Location Plano Rd
Renner to S. bound. WB (west)

Instructions : When coding/confirming sidewalk condition of "Nonexistant" on sidewalk checklist, review the following and make notes here and/or on the sidewalk checklist.

What challenges are there to the feasibility/practicability of sidewalk?
Circle items below and add notes/sketches as applicable.

Utility poles? No

Underground utilities? maybe

Trees? yes

Slopes? NO

Other structures? No

Rail crossings? No

Business parking/access management issues? No

Insufficient bridge width? No

Take photos and notes to document. ✓

Other Notes:
construction

LEE ENGINEERING

08/07/18
Cityline
LL. & SS.

Plano Rd/K Ave
ties to ~~Main~~ (least)
unite Tools dw

yes ~~No~~
maybe
NO
NO
NO
NO
NO
✓

DART Red & Blue Line Last Mile Connections Project
Field Data Checklist - Sidewalk Gaps

Date 8/7/18
Station City Line / Bush
Staff Name HB / CF
Location Plano Pkwy : R.R. to F Ave

Instructions : When coding/confirming sidewalk condition of "Nonexistant" on sidewalk checklist, review the following and make notes here and/or on the sidewalk checklist.

What challenges are there to the feasibility/practicability of sidewalk?
Circle items below and add notes/sketches as applicable.

Utility poles? No

Underground utilities? Fiber / water

Trees? No (out side 4-5')

Slopes? N

Other structures? ~~No~~ Fire Hydrant

Rail crossings? N

Business parking/access management issues? N

Insufficient bridge width? N

Take photos and notes to document.

Other Notes:

LEE ENGINEERING

DART Red & Blue Line Last Mile Connections Project
Field Data Checklist - Sidewalk Gaps

Date 8/7/18
Station
Staff Name Curtis
Location Plano Pkwy : Taylor to FAve
Northside

Instructions : When coding/confirming sidewalk condition of "Nonexistant" on sidewalk checklist, review the following and make notes here and/or on the sidewalk checklist.

What challenges are there to the feasibility/practicability of sidewalk?
Circle items below and add notes/sketches as applicable.

Utility poles?

Underground utilities? telephone cable

Trees?

Slopes?

Other structures?

Rail crossings?

Business parking/access management issues? Dry across from Fry's

Insufficient bridge width?

Take photos and notes to document.

Other Notes:

LEE ENGINEERING

DART Red & Blue Line Last Mile Connections Project
Field Data Checklist - Sidewalk Gaps

Date 08/07/18
Station Cityline
Staff Name L.L. RSS
Location E Plano Pkwy
QT ~~[illegible]~~ to drainage
~~Southside~~ 30 north

Instructions : When coding/confirming sidewalk condition of "Nonexistant" on sidewalk checklist, review the following and make notes here and/or on the sidewalk checklist.

What challenges are there to the feasibility/practicability of sidewalk?
Circle items below and add notes/sketches as applicable.

Utility poles? No

Underground utilities? maybe

Trees? NO

Slopes? 0%

Other structures? No

Rail crossings? No

Business parking/access management issues? No

Insufficient bridge width? No

Take photos and notes to document. ✓

Other Notes:
Southside

LEE ENGINEERING

DART Red & Blue Line Last Mile Connections Project
Field Data Checklist - Sidewalk Gaps

Date 08/07/18
Station Cityline
Staff Name L.L & S.S
Location E Plano Pkwy
E bound to K Ave

Instructions : When coding/confirming sidewalk condition of "Nonexistant" on sidewalk checklist, review the following and make notes here and/or on the sidewalk checklist.

What challenges are there to the feasibility/practicability of sidewalk?
Circle items below and add notes/sketches as applicable.

Utility poles? No

Underground utilities? maybe

Trees? No

Slopes? No

Other structures? No

Rail crossings? No

Business parking/access management issues? No

Insufficient bridge width? No

Take photos and notes to document. ✓

Other Notes:
- uncovered utility
- open drainage pipe

LEE ENGINEERING

DART Red & Blue Line Last Mile Connections Project
Field Data Checklist - Sidewalk Gaps

Date 08/07/18
Station Cityline
Staff Name L.L & S.S
Location PGB Hwy (WB)
Between Routh West Dr. to JPI

Instructions : When coding/confirming sidewalk condition of "Nonexistant" on sidewalk checklist, review the following and make notes here and/or on the sidewalk checklist.

What challenges are there to the feasibility/practicability of sidewalk?
Circle items below and add notes/sketches as applicable.

Utility poles? No

Underground utilities? Maybe

Trees? No.

Slopes? 2% ?

Other structures? No

Rail crossings? No

Business parking/access management issues? No

Insufficient bridge width? No

Take photos and notes to document. ✓

Other Notes:

LEE ENGINEERING

DART Red & Blue Line Last Mile Connections Project
Field Data Checklist - Sidewalk Gaps

Date 08/07/18
Station City line
Staff Name L.L. & S.S.
Location PBG US75 to Red Moon (south)

Instructions : When coding/confirming sidewalk condition of "Nonexistant" on sidewalk checklist, review the following and make notes here and/or on the sidewalk checklist.

What challenges are there to the feasibility/practicability of sidewalk?
Circle items below and add notes/sketches as applicable.

Utility poles? No
Underground utilities? Maybe
Trees? No
Slopes? No
Other structures? No
Rail crossings? No
Business parking/access management issues? No
Insufficient bridge width? No
Take photos and notes to document. ✓

Other Notes:
- brand new sw from Red Moon to

LEE ENGINEERING

DART Red & Blue Line Last Mile Connections Project
Field Data Checklist - Sidewalk Gaps

Date 08/07/18
Station City line
Staff Name L.L. & S.S.
Location PBG, Plano/K Ave to E. bound. (south; north)

Instructions : When coding/confirming sidewalk condition of "Nonexistant" on sidewalk checklist, review the following and make notes here and/or on the sidewalk checklist.

What challenges are there to the feasibility/practicability of sidewalk?
Circle items below and add notes/sketches as applicable.

Utility poles? No
Underground utilities? No
Trees? No
Slopes? No
Other structures? No
Rail crossings? No
Business parking/access management issues? No
Insufficient bridge width? No
Take photos and notes to document. ✓

Other Notes:

LEE ENGINEERING

DART Red & Blue Line Last Mile Connections Project
Field Data Checklist - Sidewalk Gaps

Date 08/07/18
Station Cityline
Staff Name L.L&S.S
Location JPI - PnB to

Instructions : When coding/confirming sidewalk condition of "Nonexistant" on sidewalk checklist, review the following and make notes here and/or on the sidewalk checklist.

What challenges are there to the feasibility/practicability of sidewalk?
Circle items below and add notes/sketches as applicable.

Utility poles? No

Underground utilities? maybe

Trees? No

Slopes? 0%

Other structures? No

Rail crossings? No

Business parking/access management issues? No

Insufficient bridge width? No

Take photos and notes to document. ✓

Other Notes:

LEE ENGINEERING

DART Red & Blue Line Last Mile Connections Project
Field Data Checklist - Sidewalk Gaps

Date 08/07/18
Station Cityline
Staff Name L.L&S.S
Location JPI - shop to open lot east side of street

Instructions : When coding/confirming sidewalk condition of "Nonexistant" on sidewalk checklist, review the following and make notes here and/or on the sidewalk checklist.

What challenges are there to the feasibility/practicability of sidewalk?
Circle items below and add notes/sketches as applicable.

Utility poles? No

Underground utilities? maybe

Trees? No

Slopes? 0%

Other structures? No

Rail crossings? No

Business parking/access management issues? No

Insufficient bridge width? No

Take photos and notes to document. ✓

Other Notes:

LEE ENGINEERING

DART Red & Blue Line Last Mile Connections Project
Field Data Checklist - Sidewalk Gaps

Date 08/07/18
Station City line
Staff Name L.L. & S.S
Location JPI – Plano Pkwy to N boundary

Instructions : When coding/confirming sidewalk condition of "Nonexistant" on sidewalk checklist, review the following and make notes here and/or on the sidewalk checklist.

What challenges are there to the feasibility/practicability of sidewalk?
Circle items below and add notes/sketches as applicable.

Utility poles? No
Underground utilities? maybe
Trees? No
Slopes? 0 /.
Other structures? No
Rail crossings? No
Business parking/access management issues? No
Insufficient bridge width? No
Take photos and notes to document. ✓

Other Notes:
- construction
- No Parking ~~Any~~ Time

LEE ENGINEERING

DART Red & Blue Line Last Mile Connections Project
Field Data Checklist - Sidewalk Gaps

Date 08/07/18
Station City line
Staff Name L.L. & S.S
Location Wilshire PBC to Hess

Instructions : When coding/confirming sidewalk condition of "Nonexistant" on sidewalk checklist, review the following and make notes here and/or on the sidewalk checklist.

What challenges are there to the feasibility/practicability of sidewalk?
Circle items below and add notes/sketches as applicable.

Utility poles? No
Underground utilities? No
Trees? No
Slopes? No
Other structures? No
Rail crossings? No
Business parking/access management issues? No
Insufficient bridge width? No
Take photos and notes to document. ✓

Other Notes:
east & west sides

LEE ENGINEERING

DART Red & Blue Line Last Mile Connections Project
Field Data Checklist - Sidewalk Gaps

Date 08/07/18
Station City line
Staff Name L.L & S.S
Location Wilshire Hersh to City line (east)

Instructions : When coding/confirming sidewalk condition of "Nonexistant" on sidewalk checklist, review the following and make notes here and/or on the sidewalk checklist.

What challenges are there to the feasibility/practicability of sidewalk?
Circle items below and add notes/sketches as applicable.

Utility poles? yes
Underground utilities? maybe
Trees? No
Slopes? No
Other structures? No
Rail crossings? No
Business parking/access management issues? No
Insufficient bridge width? No
Take photos and notes to document. ✓

Other Notes:

LEE ENGINEERING

DART Red & Blue Line Last Mile Connections Project
Field Data Checklist - Sidewalk Gaps

Date 08/07/18
Station City line
Staff Name L.L. & S.S.
Location ~~Parking~~ Peleton ~~garage~~ garage dw Plano to ~~Preston~~ (north)

Instructions : When coding/confirming sidewalk condition of "Nonexistant" on sidewalk checklist, review the following and make notes here and/or on the sidewalk checklist.

What challenges are there to the feasibility/practicability of sidewalk?
Circle items below and add notes/sketches as applicable.

Utility poles? No
Underground utilities? ~~No~~ maybe
Trees? No
Slopes? No
Other structures? No
Rail crossings? No
Business parking/access management issues? No
Insufficient bridge width? No
Take photos and notes to document. ✓

Other Notes:
- const.

LEE ENGINEERING

DART Red & Blue Line Last Mile Connections Project
Field Data Checklist - Sidewalk Gaps

Date 08/07/18
Station City line
Staff Name L.L & S.S.
Location ~~E Plano~~ K Ave E Plano to Prime Time Ins. ~~WB~~ (west)

Instructions : When coding/confirming sidewalk condition of "Nonexistant" on sidewalk checklist, review the following and make notes here and/or on the sidewalk checklist.

What challenges are there to the feasibility/practicability of sidewalk?
Circle items below and add notes/sketches as applicable.

Utility poles? No
Underground utilities? maybe
Trees? No
Slopes? No
Other structures? No
Rail crossings? No
Business parking/access management issues? No
Insufficient bridge width? No
Take photos and notes to document. ✓

Other Notes:
- fire hyd

LEE ENGINEERING

DART Red & Blue Line Last Mile Connections Project
Field Data Checklist - Sidewalk Gaps

Date 08/07/18
Station City line
Staff Name L.L. & S.S.
Location K Ave, Prime Time Ins to Bond ~~WB~~ (west)

Instructions : When coding/confirming sidewalk condition of "Nonexistant" on sidewalk checklist, review the following and make notes here and/or on the sidewalk checklist.

What challenges are there to the feasibility/practicability of sidewalk?
Circle items below and add notes/sketches as applicable.

Utility poles? No
Underground utilities? maybe
Trees? No
Slopes? No
Other structures? No
Rail crossings? No
Business parking/access management issues? No
Insufficient bridge width? No
Take photos and notes to document. ✓

Other Notes:

LEE ENGINEERING

DART Red & Blue Line Last Mile Connections Project
Field Data Checklist - Sidewalk Gaps

Date 08/07/18
Station City Line
Staff Name L.C. & S.S.
Location E Ave, Bound WOK to PGrB (west)

Instructions : When coding/confirming sidewalk condition of "Nonexistant" on sidewalk checklist, review the following and make notes here and/or on the sidewalk checklist.

What challenges are there to the feasibility/practicability of sidewalk?
Circle items below and add notes/sketches as applicable.

Utility poles? No
Underground utilities? ~~No~~ maybe
Trees? No
Slopes? No
Other structures? No
Rail crossings? No
Business parking/access management issues? No
Insufficient bridge width? No
Take photos and notes to document. ✓

Other Notes:

DART Red & Blue Line Last Mile Connections Project
Field Data Checklist - Sidewalk Gaps

Date 08/07/18
Station City Line
Staff Name L.C. & S.S.
Location US 75 central Renner to S. bound (east)

Instructions : When coding/confirming sidewalk condition of "Nonexistant" on sidewalk checklist, review the following and make notes here and/or on the sidewalk checklist.

What challenges are there to the feasibility/practicability of sidewalk?
Circle items below and add notes/sketches as applicable.

Utility poles? No
Underground utilities? maybe
Trees? No
Slopes? No
Other structures? No
Rail crossings? No
Business parking/access management issues? No
Insufficient bridge width? No
Take photos and notes to document. ✓

Other Notes:

08/07/18
Cityline
L.L & S.S.

Renner Rd
Routh Creek to standard City Line
(South)

yes

maybe

yes

NO

NO

NO

✓

- construction
- brand new sw

08/07/18
Cityline
LL&SS

City Line
Keffler to Routh Creek
~~Cross~~ north, south

yes

maybe

NO

NO

NO

NO

✓

- Const. on south side
- brand new sw from Keffler to City Apt. entrance

08/07/18
Cityline
LL & SS

Keffler
thiel to City Place (west)

yes (lighting)
maybe
NO
No
No
No
No
No

- construction

08/07/18
Cityline
LL & SS

Keffler
thiel to City Place (west)

NO
maybe
NO
NO
No
No
No
No

- dog park

08/07/18
City line
LL & SS

Hess, Wilshire to Plano Rd

NO

maybe

yes

NO

No

NO

No

✓

DART Red & Blue Line Last Mile Connections Project
Field Data Checklist - Sidewalk Gaps

Date 8/7/18
Station ~~08~~ C.L. /B
Staff Name MB/CF
Location E bdry Tyler to P.P. E and W sides.

Instructions : When coding/confirming sidewalk condition of "Nonexistant" on sidewalk checklist, review the following and make notes here and/or on the sidewalk checklist.

What challenges are there to the feasibility/practicability of sidewalk?
Circle items below and add notes/sketches as applicable.

Utility poles? No

Underground utilities? May be (Fiber)

Trees? No (back 6-8')

Slopes? No

Other structures? No

Rail crossings? No

Business parking/access management issues? No

Insufficient bridge width? N/A

Take photos and notes to document.

Other Notes:

may need to relocate signs and UPS mail box.
E side: High slope bet'n Tyler and N. Drive of building 80.
E side: Trees and slope. bet'n Tyler and S. Drive of building 720.

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DART Red & Blue Line Last Mile Connections Project
Field Data Checklist - Sidewalk Gaps

Date 8/7/18
Station C.L. / B.
Staff Name HB/CF
Location E side of F Ave/ N. Boundary to Tylor.

Instructions : When coding/confirming sidewalk condition of "Nonexistant" on sidewalk checklist, review the following and make notes here and/or on the sidewalk checklist.

What challenges are there to the feasibility/practicability of sidewalk?
Circle items below and add notes/sketches as applicable.

Utility poles? No

Underground utilities? Yes Fiber.

Trees? Yes.

Slopes? Yes.

Other structures? Signs. Fire Hydrants.

Rail crossings? No

Business parking/access management issues? No

Insufficient bridge width? N/A

Take photos and notes to document.

Other Notes:

LEE ENGINEERING

DART Red & Blue Line Last Mile Connections Project
Field Data Checklist - Sidewalk Gaps

Date 8/7/18
Station C.L. / B
Staff Name HB/CF
Location E side of Tylor bet F Ave to Plano Pkwy.

Instructions : When coding/confirming sidewalk condition of "Nonexistant" on sidewalk checklist, review the following and make notes here and/or on the sidewalk checklist.

What challenges are there to the feasibility/practicability of sidewalk?
Circle items below and add notes/sketches as applicable.

Utility poles? No

Underground utilities? may be.

Trees? Yes.

Slopes? No

Other structures? No

Rail crossings? No

Business parking/access management issues? No

Insufficient bridge width? N/A

Take photos and notes to document.

Other Notes:

LEE ENGINEERING

DART Red & Blue Line Last Mile Connections Project
Field Data Checklist - Sidewalk Gaps

Date 8/7/18
Station C.L./B
Staff Name HB/CF
Location S. side Plano Pkwy bet? W. Limn to Tyo8y

Instructions : When coding/confirming sidewalk condition of "Nonexistant" on sidewalk checklist, review the following and make notes here and/or on the sidewalk checklist.

What challenges are there to the feasibility/practicability of sidewalk?
Circle items below and add notes/sketches as applicable.

Utility poles? N

Underground utilities? Yes. Fiber sprinklers

Trees? Some

Slopes? N

Other structures? signs

Rail crossings? NO

Business parking/access management issues? No

Insufficient bridge width? N/A

Take photos and notes to document.

Other Notes:

LEE ENGINEERING

DART Red & Blue Line Last Mile Connections Project
Field Data Checklist - Sidewalk Gaps

Date 8/7/18
Station C.L/B
Staff Name HB/CF
Location Central NBFR/~~SB~~FR ~~PGBT~~ to Plano Pkwy

Instructions : When coding/confirming sidewalk condition of "Nonexistant" on sidewalk checklist, review the following and make notes here and/or on the sidewalk checklist.

What challenges are there to the feasibility/practicability of sidewalk?
Circle items below and add notes/sketches as applicable.

Utility poles? No NBFR | No SBFR.

Underground utilities? Fiber | Fiber

Trees? No

Slopes? at north side of Lot 66G (NCX) | Longitudinal slopes bet? trucks and RR. Yes.

Other structures? sign ~~pole~~ pole retaining wall

Rail crossings? No

Business parking/access management issues? NO | No

Insufficient bridge width? N/A | N/A.

Take photos and notes to document.

Other Notes: Need move retaining wall back at N. side of building 660 (NCX)

LEE ENGINEERING

DART Red & Blue Line Last Mile Connections Project
Field Data Checklist - Sidewalk Gaps

Date _____
Station _____
Staff Name _____
Location @ central Expy PGBT to ~~Rentwood~~ Creek.

Instructions : When coding/confirming sidewalk condition of "Nonexistant" on sidewalk checklist, review the following and make notes here and/or on the sidewalk checklist.

What challenges are there to the feasibility/practicability of sidewalk?
Circle items below and add notes/sketches as applicable.

Utility poles?	NBFR	EBFR
Underground utilities?	may be	out side 10'
Trees?	No	yes fiber, Petroleum
Slopes?	No	No
Other structures?	signs	some signes
Rail crossings?	No	No
Business parking/access management issues?	No	
Insufficient bridge width?	at creek	~~No~~ at creek.

Take photos and notes to document.

Other Notes:

DART Red & Blue Line Last Mile Connections Project
Field Data Checklist - Sidewalk Gaps

Date 8/7/18
Station C.L / B
Staff Name HB / CF
Location PGBT between Crozdale and central

Instructions : When coding/confirming sidewalk condition of "Nonexistant" on sidewalk checklist, review the following and make notes here and/or on the sidewalk checklist.

What challenges are there to the feasibility/practicability of sidewalk?
Circle items below and add notes/sketches as applicable.

Utility poles?	N side No	S. side.
Underground utilities?	may be.	
Trees?	No	
Slopes?	No	
Other structures?	Signs	
Rail crossings?	No	
Business parking/access management issues?	NO	
Insufficient bridge width?	NO	

Take photos and notes to document.

Other Notes:

DART Red & Blue Line Last Mile Connections Project
Field Data Checklist - Sidewalk Gaps

Date 8/7/18
Station CL / R
Staff Name ITB / CF
Location 190 EB FR NBFR to Red Moon

Instructions : When coding/confirming sidewalk condition of "Nonexistant" on sidewalk checklist, review the following and make notes here and/or on the sidewalk checklist.

What challenges are there to the feasibility/practicability of sidewalk?
Circle items below and add notes/sketches as applicable.

	N-side	S-side
Utility poles?	No	No
Underground utilities?	May be	May be.
Trees?	No	No
Slopes?	No	~~No~~ Yes
Other structures?	No	No
Rail crossings?	No	No
Business parking/access management issues?	No	No
Insufficient bridge width?	N/A	N/A

Take photos and notes to document.

Other Notes:

St. Name	Red Moon city limit & Renner	Ruth Cr Peloton to S. Limit W-side	R. Cr. Peloton to Hill E-side	Ruth Cr Hill to W.C.L. W-side
U. Pole	No	No	No	Yes
U. Utility	May be	No	May be	May be
Trees	No	No	No	No
slopes	No	No	No	No
other struc.	No	No	No	No
R.R. X	No	No	No	No
Parking Acc. mngt	No	No	No	No
Photos	Yes	Yes	Yes.	Yes
Notes	Unpaved S.W. on E side.	Not enough width on bridge	Either under constn or feasible.	

LEE ENGINEERING

DART Red & Blue Line Last Mile Connections Project
Field Data Checklist - Stations

Date 8/21/18
Station Galatyn Park
Staff Name Josh

Sketch bike & pedestrian observed travel & desire lines on aerial photo inserted below: ☐
(Zoom out 1/2 block beyond station perimeter)

	Y	N
Are any desire lines missing a marked crossing location on a perimeter street, especially if mid-block? *(If Yes, note on sketch and add line with "New" link ID on Crossings Checklist)*	☐	☑
Note bike parking locations (covered vs. rack vs. bikeshare) One location, south end		
Do any travel routes differ significantly from linear desire lines? South end Bike rack	☑	☐
Note car & bus circulation patterns & conflict points Based on Frontage Rds.		
Bike and ped desire lines continuously lit? (Note where if not).	☑	☐
Trip hazards?	☐	☑
Landscaping barriers?	☐	☑
Fences?	☐	☑
Absent ramps? Central platform	☑	☐
Bike/Pedestrian sight distance problems?	☐	☑
Review questions (Post Construction Column) from p. 6-7 of Ped RSA Checklist	☐	☐
Other Notes:		

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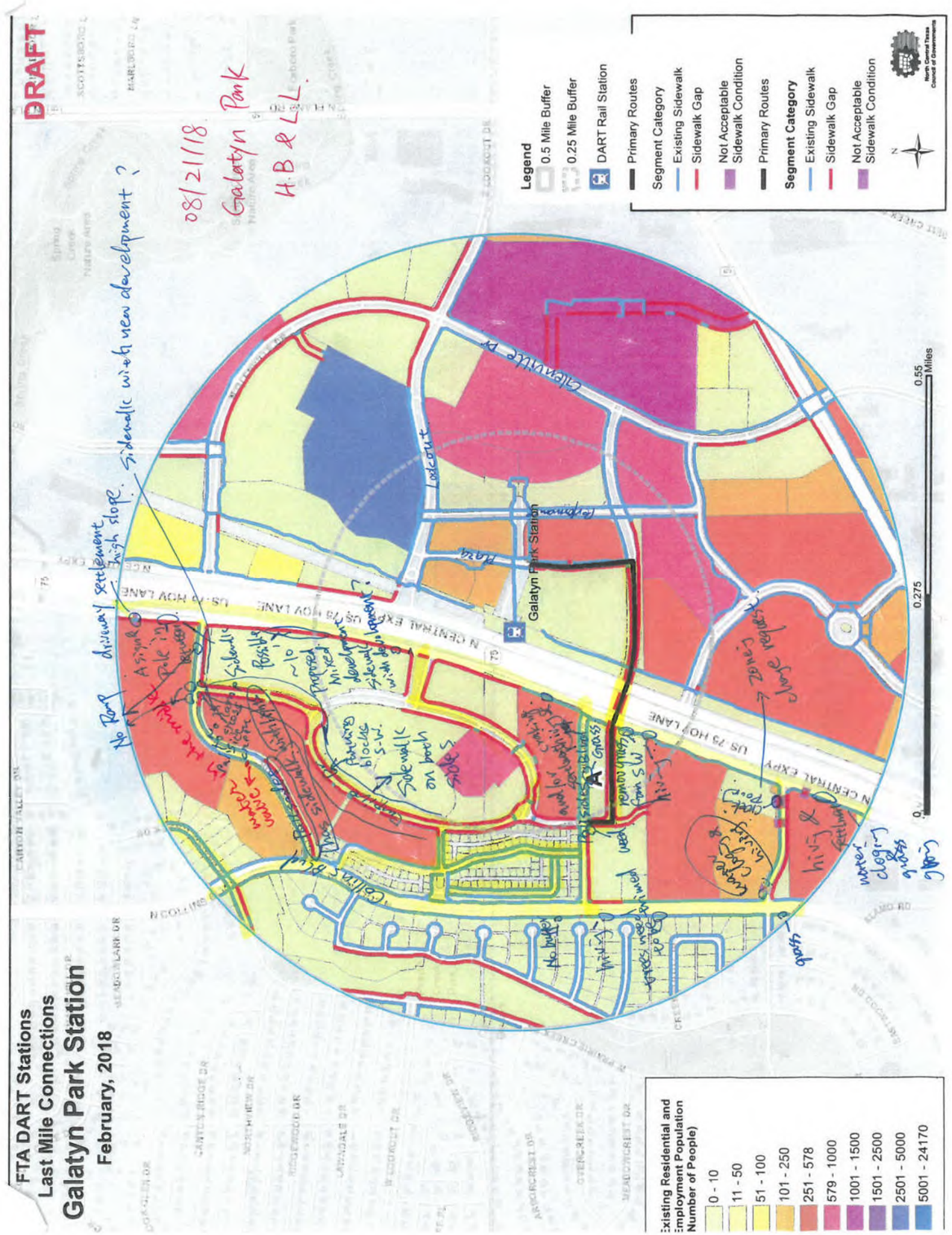
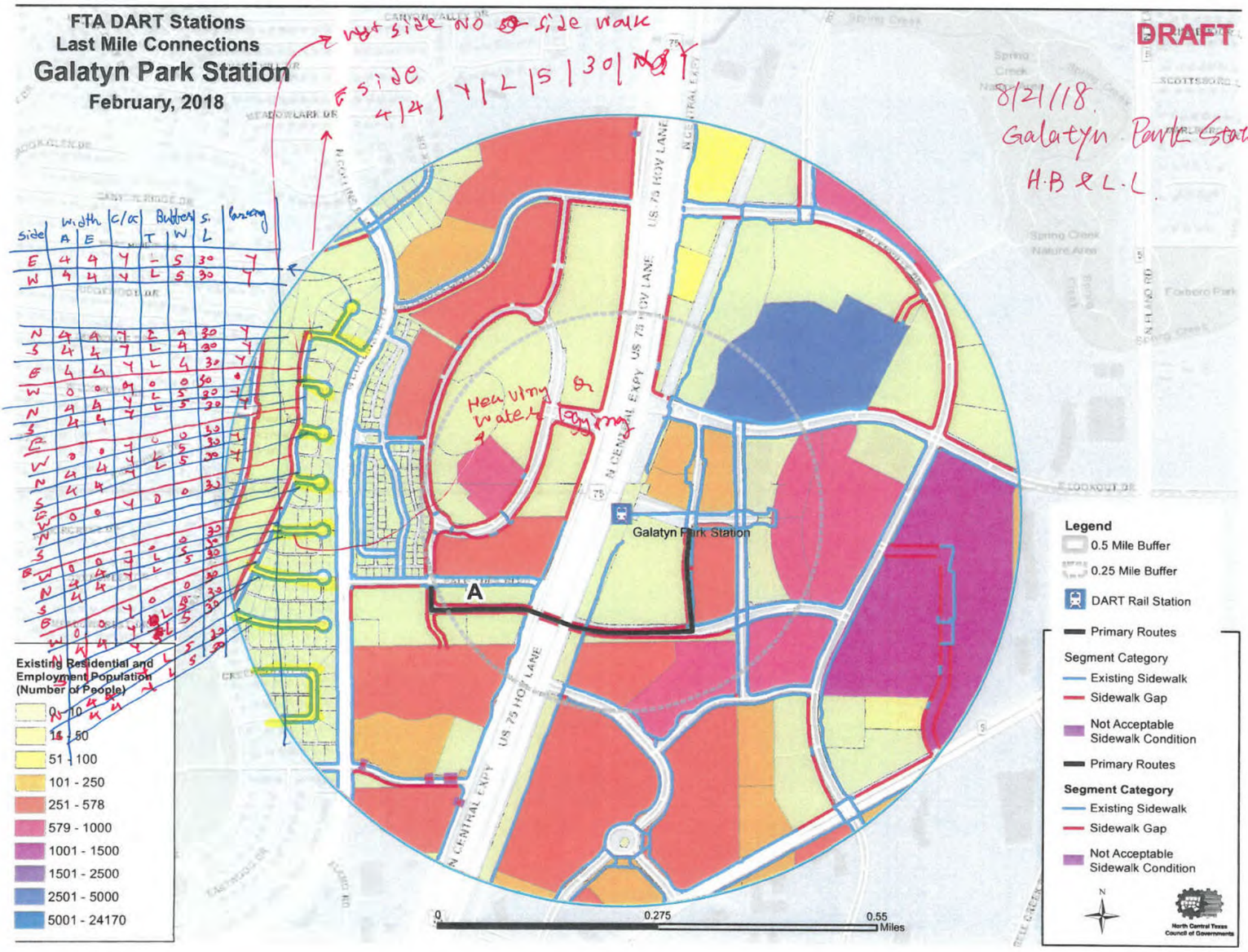
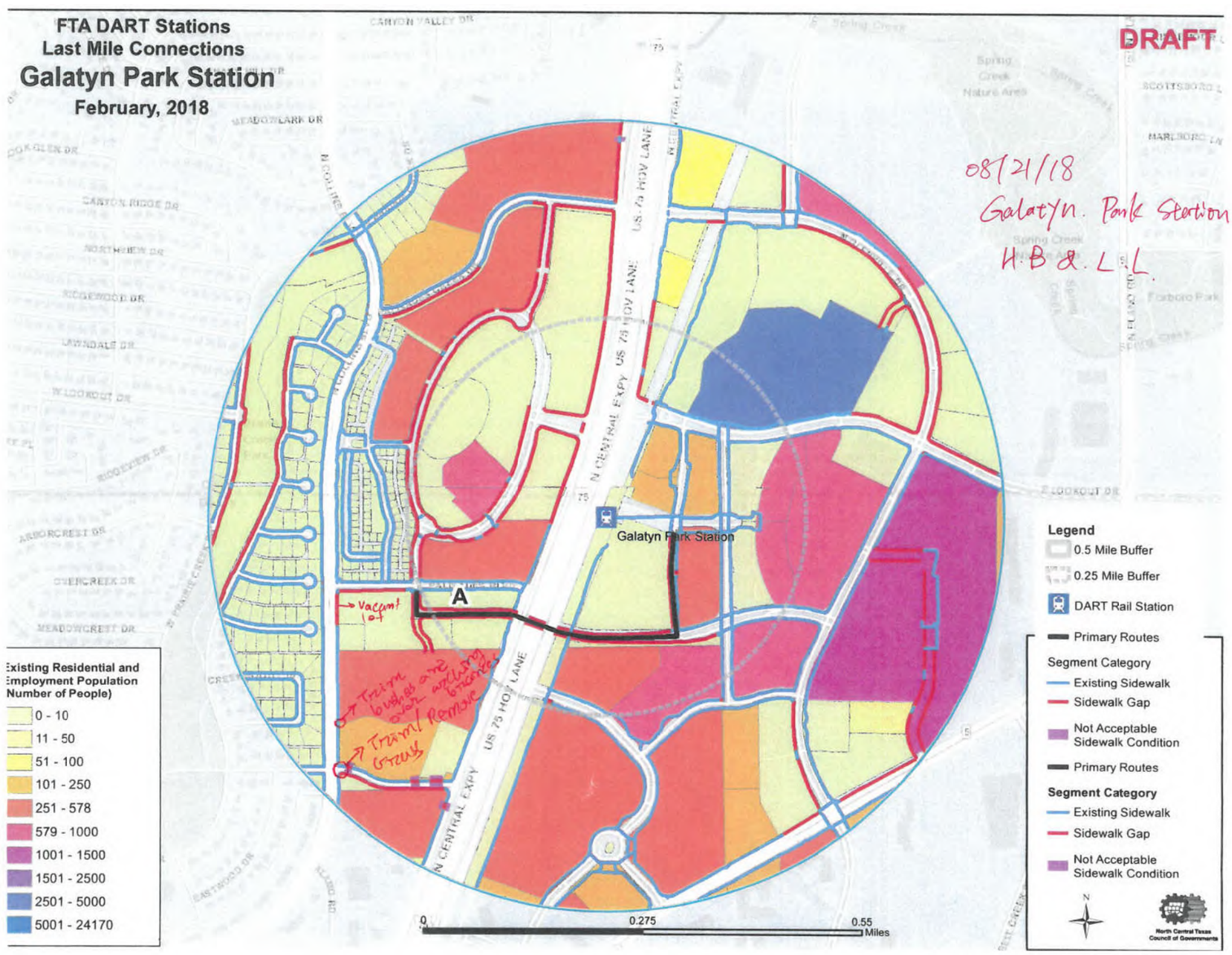



FTA DART Stations
Last Mile Connections
Galatyn Park Station
February, 2018
DRAFT
8/21/18.
Galatyn Park Station
H.B & L.L.
Galatyn Park Station
A
Existing Residential and Employment Population (Number of People)
0 - 10
11 - 50
51 - 100
101 - 250
251 - 578
579 - 1000
1001 - 1500
1501 - 2500
2501 - 5000
5001 - 24170
Legend
0.5 Mile Buffer
0.25 Mile Buffer
DART Rail Station
Primary Routes
Segment Category
Existing Sidewalk
Sidewalk Gap
Not Acceptable Sidewalk Condition
Primary Routes
Segment Category
Existing Sidewalk
Sidewalk Gap
Not Acceptable Sidewalk Condition
0
0.275
0.55
Miles
N
North Central Texas Council of Governments


FTA DART Stations
Last Mile Connections
Galatyn Park Station
February, 2018
DRAFT
08/21/18
Galatyn Park Station
H.B & L.L.
Galatyn Park Station
A
Existing Residential and Employment Population (Number of People)
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11 - 50
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101 - 250
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579 - 1000
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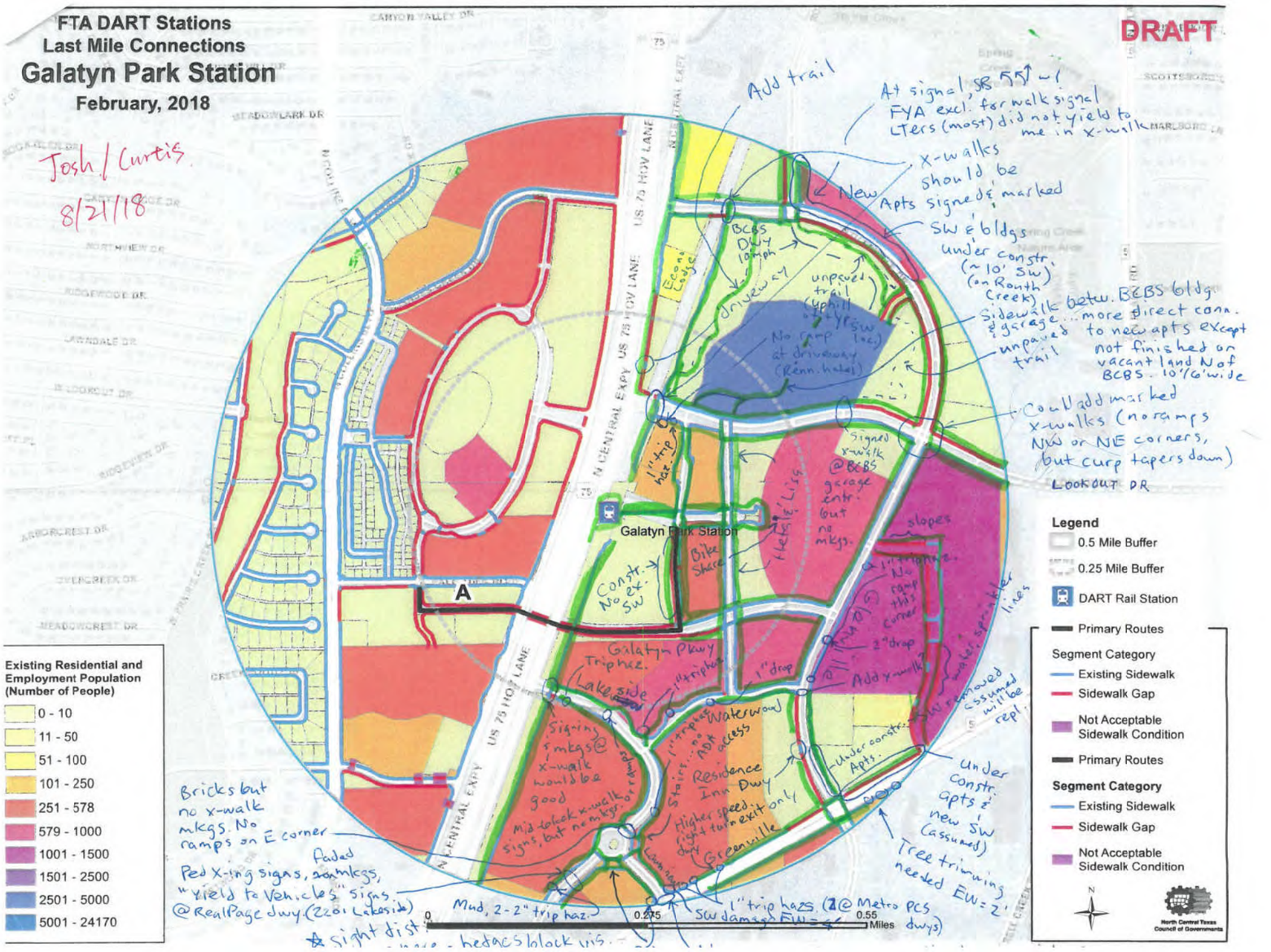
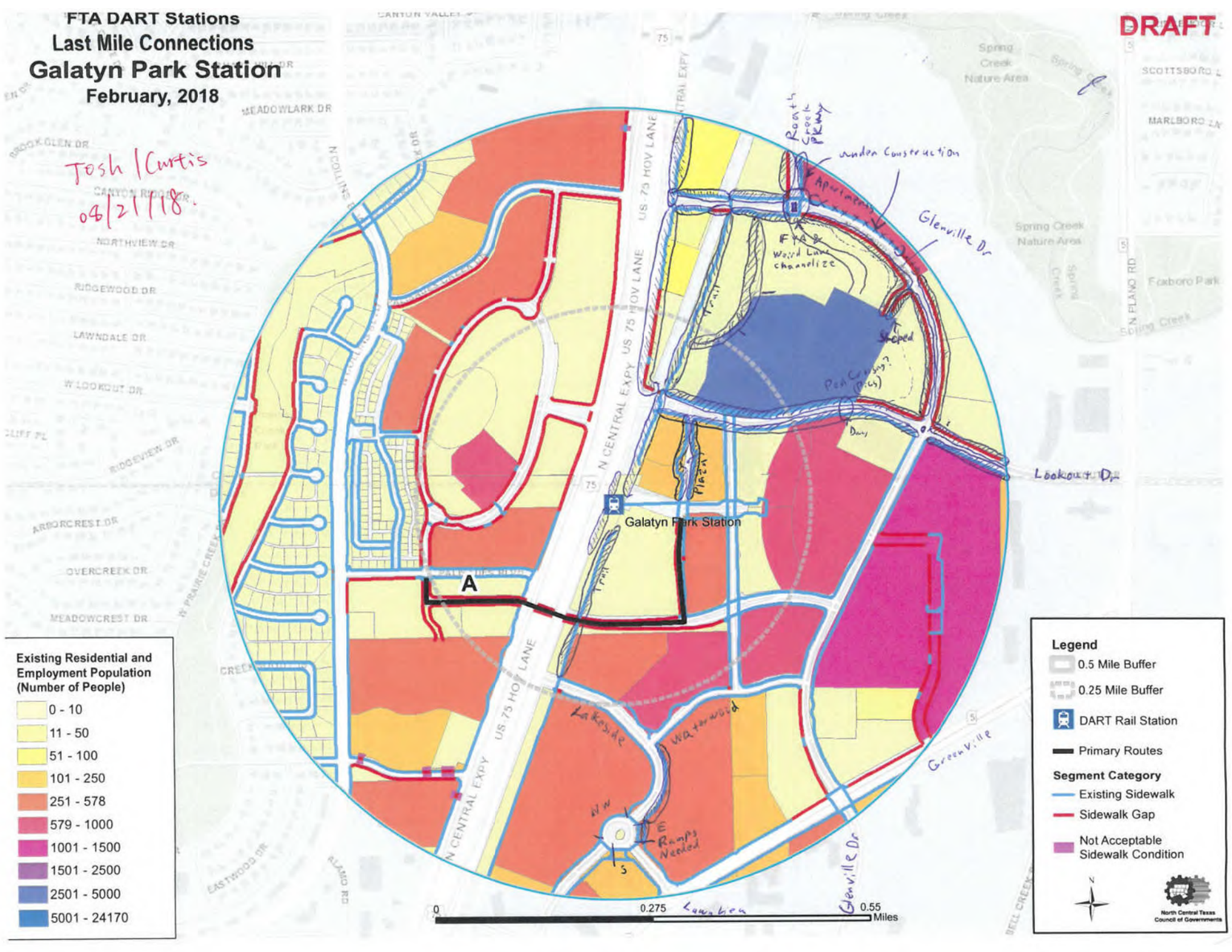
2501 - 5000
5001 - 24170
Legend
0.5 Mile Buffer
0.25 Mile Buffer
DART Rail Station
Primary Routes
Segment Category
Existing Sidewalk
Sidewalk Gap
Not Acceptable Sidewalk Condition
Primary Routes
Segment Category
Existing Sidewalk
Sidewalk Gap
Not Acceptable Sidewalk Condition
0
0.275
0.55
Miles
N
North Central Texas Council of Governments


FTA DART Stations
Last Mile Connections
Galatyn Park Station
February, 2018
DRAFT
Josh / Curtis
8/21/18
Galatyn Park Station
A
Existing Residential and Employment Population (Number of People)
0 - 10
11 - 50
51 - 100
101 - 250
251 - 578
579 - 1000
1001 - 1500
1501 - 2500
2501 - 5000
5001 - 24170
Legend
0.5 Mile Buffer
0.25 Mile Buffer
DART Rail Station
Primary Routes
Segment Category
Existing Sidewalk
Sidewalk Gap
Not Acceptable Sidewalk Condition
Primary Routes
Segment Category
Existing Sidewalk
Sidewalk Gap
Not Acceptable Sidewalk Condition
North Central Texas Council of Governments
0
0.275
0.55
Miles


FTA DART Stations
Last Mile Connections
Galatyn Park Station
February, 2018
DRAFT
Josh / Curtis
08/21/18.
Galatyn Park Station
A
Existing Residential and Employment Population (Number of People)
0 - 10
11 - 50
51 - 100
101 - 250
251 - 578
579 - 1000
1001 - 1500
1501 - 2500
2501 - 5000
5001 - 24170
Legend
0.5 Mile Buffer
0.25 Mile Buffer
DART Rail Station
Primary Routes
Segment Category
Existing Sidewalk
Sidewalk Gap
Not Acceptable Sidewalk Condition
North Central Texas Council of Governments
0
0.275
0.55
Miles

DART Red & Blue Line Last Mile Connections Project

Field Data Checklist - Sidewalks

Date 08/21/18 Galatyn Park Staff Name H.B & L.C.

Group Link	Link ID	Street Name	From Street	To Street	Side of Street	Sidewalk Width (ft) Actual	Sidewalk Width (ft) Eff.	Curb & Gutter?	Buffer Type	Buffer Width	Prevailing Speed or Speed Limit (mph)	Street Widths: On-Street Parking	Street Widths: Bike Lane	Street Widths: Shoulder	Street Widths: No. of Lanes*	If One-Way, Dir. of Travel	Lighting?	Condition Selection	Bicycle and Pedestrian Wayfinding?*	Notes
252.4	7821	Waterwood Dr	Performance Dr	Lakeside Blvd	SE	5	5	Y	L	4	30	0	0	0	4	-	N		Y N	
251.1	8270	Performance Dr	Waterwood Dr	Galatyn Pkwy	W	19	10	Y	N	0	30	16	0	0	4	-	Y		Y N	
253.2	8562	Performance Dr	Waterwood Dr	Galatyn Pkwy	E	10	10	Y	N	0	30	16	0	0	2	-	Y		Y N	
253.3	8630	Performance Dr	Galatyn Pkwy	Performance Court	W	20	10	Y	N	0	30	16	0	0	2	-	Y		Y N	
253.4	8086	Performance Dr	Galatyn Pkwy	Performance Court	E	20	10	Y	N	0	30	16	0	0	2	-	Y		Y N	
253.5	8356	Performance Dr	Performance Court	E Lookout Dr	W	20	10	Y	N	0	30	16	0	0	2	-	Y		Y N	
253.6	8360	Performance Dr	Performance Court	E Lookout Dr	E	20	10	Y	N	0	30	16	0	0	2	-	Y		Y N	
254.1SG	8638	Plaza Blvd	Galatyn Pkwy	Performance Court	W	0	0	Y	N	0	30	8	0	0	2	-	Y	N	Y N	
254.2	8626	Plaza Blvd	Galatyn Pkwy	Performance Court	E	4	4	Y	L	8	30	8	0	0	2	-	Y		Y N	small sidewalk gap
254.3	8213	Plaza Blvd	Performance Court	Building	W	4	4	Y	N	0	30	16	0	0	3	-	Y		Y N	
254.4	8620	Plaza Blvd	Performance Court	Building	E	4	0	Y	N	0	30	16	0	0	3	-	Y		Y N	parking interferes w access
254.5	8213	Plaza Blvd	Building	E Lookout Dr	W	10	10	Y	N	0	30	0	0	0	3	-	N		Y N	
254.6	8212	Plaza Blvd	Building	E Lookout Dr	E	6	3	Y	N	0	30	0	0	0	3	-	N		Y N	
255.1	8732	Railroad SE side	South Boundary	Lakeside Blvd	SE	10	10	Y	L	30									Y N	next to railroad
255.2	8200	Railroad SE side	Lakeside Blvd	Station	SE	10	10	Y	L	20									Y N	**poor map view**
255.3	8672	Railroad SE side	Station	E Lookout Dr	SE	10	10	Y	L	15									Y N	
255.4SG	8691	N Central Expy	E Lookout Dr	North Boundary	SE	0	0	Y	N	0	45	0	0	0	3	-	N	N	Y N	
256.1	8684	N Central Expy	South Boundary	Fall Creek Dr	NW	6	6	Y	N	0	45	0	0	0	4	-	N		Y N	
256.2	7795	N Central Expy	Fall Creek Dr	Driveway	NW	6	6	Y	N	0	45	0	0	0	4	-	N		Y N	
256.3	7852	N Central Expy	Driveway	Galatyn Pkwy	NW	4	4	Y	L	10	45	0	0	0	3	-	N		Y N	
256.3	7785	N Central Expy	Galatyn Pkwy	Palisades Blvd	NW	4	4	Y	L	12	45	0	0	0	3	-	N		Y N	wiggly sidewalk
256.5	8033	N Central Expy	Palisades Blvd	Parking Lot	NW	6	6	Y	N	0	45	0	0	0	3	-	N		Y N	
256.6SG	8691	N Central Expy	Parking Lot	Driveway	NW	0	0	Y	N	0	45	0	0	0	3	-	N		Y N	
256.7SG	8385	N Central Expy	Driveway	Side Road	NW	0	0	Y	N	0	45	0	0	0	3	-	N	N	Y N	
256.8SG	8389	N Central Expy	Side Road	North Boundary	NW	0	0	Y	N	0	45	0	0	0	3	-	N	N	Y N	
259.1	8035	Palisades Creek Dr	N Central Expy	North Gate Dr	N	5	5	Y	L	4	40	0	0	0	4	-	N		Y N	
259.2SG	8383	Palisades Creek Dr	N Central Expy	North Gate Dr	S	0	0	Y	N	0	40	0	0	0	4	-	N	N	Y N	
259.3	8166	Palisades Creek Dr	North Gate Dr	N Collins Blvd	NW	5	5	Y	L	4	40	0	0	0	4	-	N		Y N	
259.4	8395	Palisades Creek Dr	North Gate Dr	N Collins Blvd	SE	13	13	Y	L	14	40	0	0	0	4	-	N		Y N	
259.1SG	8458	North Gate Dr	Palisades Blvd	Roundabout	W	10	10	Y	L	8	40	16	0	0	3	-	N		Y N	*Not a Gap*
259.2SG	8461	North Gate Dr	Palisades Blvd	Roundabout	E	8	8	Y	L	8	40	16	0	0	3	-	N		Y N	under construction
257.5SG	8456	Empire Dr	Roundabout	Construction	NW	10	10	Y	L	10	40	16	0	0	2	-	N		Y N	
258.1	8448	Empire Dr	Roundabout	Construction	SE	8	8	Y	L	6	40	16	0	0	2	-	N		Y N	
257.5SG	8449	Empire Dr	Construction	Golden Gate Dr	W	0	0	Y	N	0	40	16	0	0	2	-	N	N	Y N	
258.1SG	8448	Empire Dr	Construction	Golden Gate Dr	E	0	0	Y	N	0	40	16	0	0	2	-	N	N	Y N	
258.2	8488	Empire Dr	Golden Gate Dr	Roundabout	W	8	8	Y	L	8	40	16	0	0	2	-	N		Y N	
258.1SG	8448	Empire Dr	Golden Gate Dr	Roundabout	E	8	8	Y	L	8	40	16	0	0	2	-	N		Y N	
SG	8387	Empire Dr	Roundabout	End	NW	0	0	Y	N	0	40	0	0	0	2	-	N	N	Y N	
SG	8388	Empire Dr	Roundabout	End	SE	0	0	Y	N	0	40	0	0	0	2	-	N	N	Y N	
257.5	8488	South Gate Dr	Roundabout	Palisades Creek Dr	W	0	0	Y	N	0	40	16	0	0	2	-	N		Y N	
257.6	8482	South Gate Dr	Roundabout	Palisades Creek Dr	E	0	0	Y	N	0	40	16	0	0	2	-	N		Y N	
257.1	7935	Palisades Blvd	N Central Expy	South Gate Dr	N	5	5	Y	L	3	40	0	0	0	4	-	N		Y N	
257.2	8501	Palisades Blvd	N Central Expy	South Gate Dr	S	5	5	Y	L	3	40	0	0	0	4	-	N		Y N	
257.3	8725	Palisades Blvd	South Gate Dr	N Collins Blvd	N	4	4	Y	L	9	40	9	0	0	2	-	N		Y N	
257.4	8583	Palisades Blvd	South Gate Dr	N Collins Blvd	S	0	0	Y	N	0	40	9	0	0	2	-	N	N	Y N	
260.1	8137	N Collins Blvd	South Boundary	Fall Creek Dr	W	4	4	Y	L	6	40	0	7 x 2	0	4	-	N		Y N	bike lane on each side (W&E)
261.1	7867	N Collins Blvd	South Boundary	Fall Creek Dr	E	4	4	Y	L	8	40	0	7 x 2	0	4	-	N		Y N	
260.2	8201	N Collins Blvd	Fall Creek Dr	Palisades Blvd	W	4.5	4.5	Y	L	6	40	0	7 x 2	0	4	-	N		Y N	
261.2	8204	N Collins Blvd	Fall Creek Dr	Water Tower	E	4.5	4.5	Y	L	4	40	0	7 x 2	0	4	-	N		Y N	
261.3SG	8583	N Collins Blvd	Water Tower	Palisades Blvd	E	0	0	Y	N	0	40	0	7 x 2	0	4	-	N		Y N	
260.3	8020	N Collins Blvd	Palisades Blvd	Golden Gate Dr	W	5	5	Y	L	3	40	0	7 x 2	0	4	-	N		Y N	
261.4	8386	N Collins Blvd	Palisades Blvd	Golden Gate Dr	E	9	9	Y	L	6	40	0	7 x 2	0	4	-	N		Y N	
260.4	8070	N Collins Blvd	Golden Gate Dr	Palisades Creek Dr	W	5	5	Y	L	3	40	0	7 x 2	0	4	-	N		Y N	
261.5	8400	N Collins Blvd	Golden Gate Dr	Palisades Creek Dr	E	9	9	Y	L	6	40	0	7 x 2	0	4	-	N		Y N	
260.5	7989	N Collins Blvd	Palisades Creek Dr	W Prarie Creek Dr	W	5	5	Y	L	3	40	0	7 x 2	0	4	-	N		Y N	
261.6	7962	N Collins Blvd	Palisades Creek Dr	W Prarie Creek Dr	E	4	4	Y	L	2	40	0	7 x 2	0	4	-	N		Y N	

For Side of Street, choose:
N NE
S SE
E NW
W SW

Buffer Types:
N = None
S = Solid Surface
L = Landscaped
T = Landscaped w/ Trees
V = Vertical (retaining wall)

*All lanes for 2-way street

Land Use Codes:
1 = Residential, central business districts (CBD), neighborhood commercial,parks and other public facilities, governmental buildings/plazas,offices/office parks
2 = Low density development, rural subdivisions, un-incorporated communities, strip commercial, mixed employment
3 = Light industrial, big-box/auto-oriented commercial
4 = Heavy industrial, intermodal facilities, freeway interchanges See http://www.oregon.gov/ODOT/Planning/Documents/APMv2_Ch14.pdf (Sect. 14.5) for more details.

LEE ENGINEERING

DART Red & Blue Line Last Mile Connections Project

Field Data Checklist - Sidewalks

Date 08/21/18 Galatyn Park Staff Name J.S & C.H

Group Link	Link ID	Street Name	From Street	To Street	Side of Street	Sidewalk Width (ft) Actual	Sidewalk Width (ft) Eff.	Curb & Gutter?	Buffer Type	Buffer Width	Prevailing Speed or Speed Limit (mph)	Street Widths: On-Street Parking	Street Widths: Bike Lane	Street Widths: Shoulder	Street Widths: No. of Lanes*	If One-Way, Dir. of Travel	Lighting?	Condition Selection	Bicycle and Pedestrian Wayfinding?*	Notes
252.4	7821	Waterwood Dr	Performance Dr	~~Lakeside Blvd~~ Galatyn Pkwy	SE	5	5	Y	L	4	30	0	0	0	4 2	-	N	E/G	Y(N)	
251.1	8270	Performance Dr	Waterwood Dr	Galatyn Pkwy	W	19	10	Y	N	0	30	16	0	0	4	-	Y		Y N	
253.2	8562	Performance Dr	Waterwood Dr	Galatyn Pkwy	E	10	10	Y	N	0	30	16	0	0	2	-	Y		Y N	
253.3	8630	Performance Dr	Galatyn Pkwy	Performance Court	W	20	10	Y	N	0	30	16	0	0	2	-	Y		Y N	
253.4	8086	Performance Dr	Galatyn Pkwy	Performance Court	E	20	10	Y	N	0	30	16	0	0	2	-	Y		Y N	
253.5	8356	Performance Dr	Performance Court	E Lookout Dr	W	20	10	Y	N	0	30	16	0	0	2	-	Y		Y N	
253.6	8360	Performance Dr	Performance Court	E Lookout Dr	E	20	10	Y	N	0	30	16	0	0	2	-	Y		Y N	
254.1SG	8638	Plaza Blvd	Galatyn Pkwy	Performance Court	W	0	0	Y	N	0	30	8	0	0	2	-	Y	N	Y N	
254.2	8626	Plaza Blvd	Galatyn Pkwy	Performance Court	E	4	4	Y	N L	8 0	30	8	0	0	2	-	Y		Y N	small sidewalk gap
254.3	8213	Plaza Blvd	Performance Court	Building	W	4	4	Y	N	0	30	16	0	0	3	-	Y	E	Y N	
254.4	8620	Plaza Blvd	Performance Court	Building	E	4	0	Y	N	0	30	16	0	0	3	-	Y	E	Y N	parking interferes w access
254.5	8213	Plaza Blvd	Building	E Lookout Dr	W	10	10	Y	N	0	30	0	0	0	3	-	N Y	E	Y N	
254.6	8212	Plaza Blvd	Building	E Lookout Dr	E	6	3	Y	N	0	30	0	0	0	3	-	N Y	E	Y N	
255.1	8732	Railroad SE side	South Boundary	Lakeside Blvd	SE	10	10	Y	L	30									Y N	next to railroad
255.2	8200	Railroad SE side	Lakeside Blvd	Station	SE	10	10	Y	L	20									Y N	**poor map view**
255.3	8672	Railroad SE side	Station	E Lookout Dr	SE	10	10	Y	L	15		—	—	—	—	—	Y	E/G	Y N	
255.4SG	8691	N Central Expy	E Lookout Dr	~~North Boundary~~ Fence	SE	0	0	Y	N	0	45	0	0	0	YA	N	N	N	Y N	3rd Boundary Ledge
256.1	8684	N Central Expy	South Boundary	Fall Creek Dr	NW	6	6	Y	N	0	45	0	0	0	4	-	N		Y N	
256.2	7795	N Central Expy	Fall Creek Dr	Driveway	NW	6	6	Y	N	0	45	0	0	0	3	-	N		Y N	
256.3	7852	N Central Expy	Driveway	Galatyn Pkwy	NW	4	4	Y	L	10	45	0	0	0	3	-	N		Y N	wiggly sidewalk
256.3	7785	N Central Expy	Galatyn Pkwy	Palisades Blvd	NW	4	4	Y	L	12	45	0	0	0	3	-	N		Y N	
256.5	8033	N Central Expy	Palisades Blvd	Parking Lot	NW	6	6	Y	N	0	45	0	0	0	3	-	N		Y N	
256.6SG	8691	N Central Expy	Parking Lot	Driveway	NW	0	0	Y	N	0	45	0	0	0	3	-	N	N	Y N	
256.7SG	8385	N Central Expy	Driveway	Side Road	NW	0	0	Y	N	0	45	0	0	0	3	-	N	N	Y N	
256.8SG	8389	N Central Expy	Side Road	North Boundary	NW	0	0	Y	N	0	45	0	0	0	3	-	N	N	Y N	
259.1	8035	Palisades Creek Dr	N Central Expy	North Gate Dr	N	5	5	Y	L	4	40	0	0	0	4	-	N		Y N	
259.2SG	8383	Palisades Creek Dr	N Central Expy	North Gate Dr	S	0	0	Y	N	0	40	0	0	0	4	-	N	N	Y N	
259.3	8166	Palisades Creek Dr	North Gate Dr	N Collins Blvd	NW	5	5	Y	L	4	40	0	0	0	4	-	N		Y N	
259.4	8395	Palisades Creek Dr	North Gate Dr	N Collins Blvd	SE	13	13	Y	L	14	40	0	0	0	4	-	N		Y N	
259.1SG	8458	North Gate Dr	Palisades Blvd	Roundabout	W	10	10	Y	L	8	40	16	0	0	3	-	N		Y N	*Not a Gap*
259.2SG	8461	North Gate Dr	Palisades Blvd	Roundabout	E	8	8	Y	L	8	40	16	0	0	3	-	N		Y N	under construction
257.5SG	8456	Empire Dr	Roundabout	Construction	NW	10	10	Y	L	10	40	16	0	0	2	-	N		Y N	
258.1	8448	Empire Dr	Roundabout	Construction	SE	8	8	Y	L	6	40	16	0	0	2	-	N		Y N	
257.5SG	8449	Empire Dr	Construction	Golden Gate Dr	W	0	0	Y	N	0	40	16	0	0	2	-	N	N	Y N	
258.1SG	8448	Empire Dr	Construction	Golden Gate Dr	E	0	0	Y	N	0	40	16	0	0	2	-	N	N	Y N	
258.2	8488	Empire Dr	Golden Gate Dr	Roundabout	W	8	8	Y	L	8	40	16	0	0	2	-	N		Y N	
258.1SG	8448	Empire Dr	Golden Gate Dr	Roundabout	E	8	8	Y	L	8	40	16	0	0	2	-	N		Y N	
SG	8387	Empire Dr	Roundabout	End	NW	0	0	Y	N	0	40	0	0	0	2	-	N	N	Y N	
SG	8388	Empire Dr	Roundabout	End	SE	0	0	Y	N	0	40	0	0	0	2	-	N	N	Y N	
257.5	8488	South Gate Dr	Roundabout	Palisades Creek Dr	W	0	0	Y	N	0	40	16	0	0	2	-	N		Y N	
257.6	8482	South Gate Dr	Roundabout	Palisades Creek Dr	E	0	0	Y	N	0	40	16	0	0	2	-	N		Y N	
257.1	7935	Palisades Blvd	N Central Expy	South Gate Dr	N	5	5	Y	L	3	40	0	0	0	4	-	N		Y N	
257.2	8501	Palisades Blvd	N Central Expy	South Gate Dr	S	5	5	Y	L	3	40	0	0	0	4	-	N		Y N	
257.3	8725	Palisades Blvd	South Gate Dr	N Collins Blvd	N	4	4	Y	L	9	40	9	0	0	2	-	N		Y N	
257.4	8583	Palisades Blvd	South Gate Dr	N Collins Blvd	S	0	0	Y	N	0	40	9	0	0	2	-	N	N	Y N	
260.1	8137	N Collins Blvd	South Boundary	Fall Creek Dr	W	4	4	Y	L	6	40	0	7 x 2	0	4	-	N		Y N	bike lane on each side (W&E)
261.1	7867	N Collins Blvd	South Boundary	Fall Creek Dr	E	4	4	Y	L	8	40	0	7 x 2	0	4	-	N		Y N	
260.2	8201	N Collins Blvd	Fall Creek Dr	Palisades Blvd	W	4.5	4.5	Y	L	6	40	0	7 x 2	0	4	-	N		Y N	
261.2	8204	N Collins Blvd	Fall Creek Dr	Water Tower	E	4.5	4.5	Y	L	4	40	0	7 x 2	0	4	-	N		Y N	
261.3SG	8583	N Collins Blvd	Water Tower	Palisades Blvd	E	0	0	Y	N	0	40	0	7 x 2	0	4	-	N	N	Y N	
260.3	8020	N Collins Blvd	Palisades Blvd	Golden Gate Dr	W	5	5	Y	L	3	40	0	7 x 2	0	4	-	N		Y N	
261.4	8386	N Collins Blvd	Palisades Blvd	Golden Gate Dr	E	9	9	Y	L	6	40	0	7 x 2	0	4	-	N		Y N	
260.4	8070	N Collins Blvd	Golden Gate Dr	Palisades Creek Dr	W	5	5	Y	L	3	40	0	7 x 2	0	4	-	N		Y N	
261.5	8400	N Collins Blvd	Golden Gate Dr	Palisades Creek Dr	E	9	9	Y	L	6	40	0	7 x 2	0	4	-	N		Y N	
260.5	7989	N Collins Blvd	Palisades Creek Dr	W Prarie Creek Dr	W	5	5	Y	L	3	40	0	7 x 2	0	4	-	N		Y N	
261.6	7962	N Collins Blvd	Palisades Creek Dr	W Prarie Creek Dr	E	4	4	Y	L	2	40	0	7 x 2	0	4	-	N		Y N	

For Side of Street, choose:
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S SE
E NW
W SW

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T = Landscaped w/ Trees
V = Vertical (retaining wall)

*All lanes for 2-way street

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LEE ENGINEERING

DART Red & Blue Line Last Mile Connections Project

Field Data Checklist - Sidewalks

Date 08/21/18 Galatyn Park Staff Name J.S & C.H.

Group Link	Link ID	Street Name	From Street	To Street	Side of Street	Sidewalk Width (ft) Actual	Sidewalk Width (ft) Eff.	Curb & Gutter?	Buffer Type	Buffer Width	Prevailing Speed or Speed Limit (mph)	Street Widths On-Street Parking	Street Widths Bike Lane	Street Widths Shoulder	Street Widths No. of Lanes*	If One-Way, Dir. of Travel	Lighting?	Condition Selection	Bicycle and Pedestrian Wayfinding?*	Notes
240.1	7944	N Glenville Dr	N Central Expy	Railroad	N	5	5	Y	L	10	35	0	0	0	4		N	G	Y N	
240.2	8256	N Glenville Dr	Railroad	Routh Creek Pkwy	N	12	12	Y	L	4	35	0	0	0	5		N	E/G	Y N	
241.1	8309	N Glenville Dr	N Central Expy	Crossroad Dwy	S	4	4	Y	L	6	35	0	0	0	4		N	G	Y N	
241.2SG	8541	N Glenville Dr	Crossroad Dwy	Railroad	S	0	0	Y	N	0	35	0	0	0	5		N	N	Y N	
241.3SG	8541	N Glenville Dr	Railroad	crosswalk	S	0	0	Y	N	0	35	0	0	0	5		N	N	Y N	
241.4	8694	N Glenville Dr	crosswalk	Routh Creek Pkwy	S	12	12	Y	L	4	35	0	0	0	5		N	E/G	Y N	
240.3SG	8544	N Glenville Dr	Routh Creek Pkwy	contruction	NE	0	0	Y	N	0	35	0	0	0	4		N	N	Y N	under sonstruction
241.5SG	8251	N Glenville Dr	Routh Creek Pkwy	contruction	SW	5	5	Y	L	12	35	0	0	0	4		N	G	Y N	trail Gravel
240.4SG	8246	N Glenville Dr	contruction	E Lookout Dr	E	0	0	Y	N	0	35	0	0	0	4		N	N	Y N	Hydrant, Telephone
241.6	8251	N Glenville Dr	contruction	E Lookout Dr	W	5	5	Y	L	12	35	0	0	0	4		N	G	Y N	trail
242.1	8198	N Glenville Dr	E Lookout Dr	Galatyn Pkwy	SE	5	5	Y	L	6	35	0	0	0	4		N		Y N	
243.1	8039	N Glenville Dr	E Lookout Dr	Galatyn Pkwy	NW	7	4.5	Y	N	0	35	0	0	0	4		N		Y N	
242.2	8575	N Glenville Dr	Galatyn Pkwy		SE	4	4	Y	N	0	35	0	0	0	4		N	G	Y N	lighting in median
242.3	8572	N Glenville Dr		Waterwood Dr	SE	6	6	Y	L	6	35	0	0	0	4		N	G	Y N	
243.2	8568	N Glenville Dr	Galatyn Pkwy	Waterwood Dr	NW	7	7	Y	L	5	35	0	0	0	4		N	G	(Y) N	lighting named. DART Sign
243.3SG	8608	N Glenville Dr	Waterwood Dr	N Greenville Ave	W	0	0	Y	N	0	35	0	0	0	4		N	N	Y (N)	
242.4	8572	N Glenville Dr	Waterwood Dr	unnamed road Hampton Inn	E	9	9	Y	L	4	35	0	0	0	4		N	E	Y N	wiggly sidewalk under constr.
242.5	8572	N Glenville Dr	unnamed road Hampton Inn	N Greenville Ave	E	9	9	Y	L	4	35	0	0	0	4		N	E	Y N	
243.1	8255	Along Railroad	N Glenville Dr	E Lookout Dr	W	12	12	Y	L		30	0	0	0			N	E	Y N	through park
243.2	8240	Along Railroad	N Glenville Dr	E Lookout Dr	E	12	12	Y	L		30	0	0	0			N	E	Y N	
244.1SG	8690	E Lookout Dr	N Central Expy	Railroad	N	0	0	Y	N	0	30	0	0	0	1	W	N	N	Y N	
244.2SG		E Lookout Dr	N Central Expy	Railroad	S	0	0	Y	N	0	30	0	0	0	1	E	N	N	Y N	
243.1	8234	E Lookout Dr	Railroad	Plaza Blvd	N	6.8	6.8	Y	L	3	30	0	0	0	2	W	N	E	Y N	
244.3	7916	E Lookout Dr	Railroad	Plaza Blvd	S	8	8	Y	N	0	30	0	0	0	2	E	N	E	Y N	
244.4	8219	E Lookout Dr	Plaza Blvd	Performance Dr	N	8	8	Y	L	8	30	0	0	0	4	W	N	E	Y N	
244.5	8085	E Lookout Dr	Plaza Blvd	Performance Dr	S	8	8	Y	N	0	30	0	0	0	4	E	N	E	Y N	
244.6	8221	E Lookout Dr	Performance Dr	North Driveway	N	8	8	Y	L	8	30	0	0	0	4	W	N	E	Y N	
244.7	8227	E Lookout Dr	North Driveway	Driveway	N	8	8	Y	N	0	30	0	0	0	4	W	N	E	Y N	
241.6SG	8547	E Lookout Dr	Driveway	N Glenville Dr	N	0	0	Y	N	0	30	0	0	0	4	W	N	N	Y N	north trail
245.1	8010	E Lookout Dr	Performance Dr	N Glenville Dr	S	8	8	Y	N	0	30	0	0	0	4		N	E	Y N	
240.4SG	8246	E Lookout Dr	N Glenville Dr	East Boundary	NE	0	0	Y	N	0	30	0	0	0	4	W	N	N	Y N	
245.2	7966	E Lookout Dr	N Glenville Dr	East Boundary	SW	5	5	Y	L	5	30	0	0	0	4	E	N	G	Y N	
246.1SG	8584	N Greenville Ave	East Boundary	N Glenville Dr	NW	0	0	Y	N	0	40	0	0	0	8		N	N	Y N	
246.2SG	8585	N Greenville Ave	N Glenville Dr	Driveway	NW	0	0	Y	N	0	40	0	0	0	8		N	N	Y N	
246.3	7793	N Greenville Ave	Driveway	Lawnview Dr	NW	5	5	Y	L	10	40	0	0	0	8		N	G	Y N	
246.4	7873	N Greenville Ave	East Boundary	N Glenville Dr	SE	5	5	Y	L	6	40	0	0	0	8		N		Y N	
246.5	7854	N Greenville Ave	N Glenville Dr	Parking Lot	SE	5	5	Y	L	6	40	0	0	0	8		N	G	Y N	
246.6	7864	N Greenville Ave	Parking Lot	Lawnview Dr	SE	5	5	Y	L	2	40	0	0	0	8		N	G	Y N	
247.1	7819	Lawnview Dr	N Greenville Ave	Roundabout	NE	5	5	Y	L	20	30	0	0	0	4	N	N	D	Y N	Chipseal Cracks
247.2	7861	Lawnview Dr	N Greenville Ave	Roundabout	SW	6	3.75	Y	L	15	30	0	0	0	4	S	N	G	Y N	through parking lot Overgrown
248.1	7881	Lakeside Blvd	South Boundary	Roundabout	SE	6.5	6.5	Y	L	16	30	0	0	0	5	S	N	G	Y N	through parking lot
248.2	8146	Lakeside Blvd	South Boundary	Roundabout	NW	5	5	Y	L	5	30	0	0	0	5	N	N	G	Y N	
248.3	7789	Lakeside Blvd	Roundabout	Roundabout	NW	4.5	4.5	Y	L	10	30	0	0	0	4		N	G	Y N	Need Ramps
248.4	8373	Lakeside Blvd	Roundabout	Roundabout	S	6	6	Y	L	10	30	0	0	0	4		N	G	Y N	
248.5	8376	Lakeside Blvd	Roundabout	Roundabout	E	5	5	Y	L	12	30	0	0	0	4		N	G	Y N	
248.6	7798	Lakeside Blvd	Roundabout	Driveway	NW	5	5	Y	L	22	30	0	0	0	4		N	G	Y N	
248.7	7772	Lakeside Blvd	Roundabout	Driveway	SE	5	5	Y	L	15	30	0	0	0	4		N	G	Y N	
249.1	7761	Lakeside Blvd	Driveway	Waterwood Dr	W	5	5	Y	L	13	30	0	0	0	4		N	G	Y N	
249.2	8147	Lakeside Blvd	Driveway	Waterwood Dr	E	5	5	Y	L	3	30	0	0	0	4		N	G	Y N	
249.3	7777	Lakeside Blvd	Waterwood Dr	Driveway	SW	5	5	Y	L	10	30	0	0	0	4		N	G	Y N	
249.4	8319	Lakeside Blvd	Waterwood Dr	Driveway	NE	5	5	Y	L	20	30	0	0	0	4		N	G	Y N	
249.5	8314	Lakeside Blvd	Driveway	Railroad	SW	5	5	Y	L	3	30	0	0	0	4		N	G	Y (N)	some lighting
249.6	7758	Lakeside Blvd	Driveway	Railroad	NE	5	5	Y	L	6	30	0	0	0	4		N	G	Y N	

For Side of Street, choose:
N NE
S SE
E NW
W SW

Buffer Types:
N = None
S = Solid Surface
L = Landscaped
T = Landscaped w/ Trees
V = Vertical (retaining wall)

*All lanes for 2-way street

Land Use Codes:
1 = Residential, central business districts (CBD), neighborhood commercial,parks and other public facilities, governmental buildings/plazas,offices/office parks
2 = Low density development, rural subdivisions, un-incorporated communities, strip commercial, mixed employment
3 = Light industrial, big-box/auto-oriented commercial
4 = Heavy industrial, intermodal facilities, freeway interchanges See http://www.oregon.gov/ODOT/Planning/Documents/APMv2_Ch14.pdf (Sect. 14.5) for more details.

LEE ENGINEERING

2 min. Greenville @ Lawnview
W E
19 20

DART Red & Blue Line Last Mile Connections Project

Field Data Checklist - Sidewalks

Date 08/21/18. Galatyn Park Staff Name J.S & C.H.

Group Link	Link ID	Street Name	From Street	To Street	Side of Street	Sidewalk Width (ft) Actual	Sidewalk Width (ft) Eff.	Curb & Gutter?	Buffer Type	Buffer Width	Prevailing Speed or Speed Limit (mph)	Street Widths On-Street Parking	Street Widths Bike Lane	Street Widths Shoulder	Street Widths No. of Lanes*	If One-Way, Dir. of Travel	Lighting?	Condition Selection	Bicycle and Pedestrian Wayfinding?*	Notes
		N Central Expy	Ecanglodge	[illegible]	E	6	6	Y	L	10	45	[illegible]	—	—	3	N	N	G	Y N	
		Glenville	N Boundary		E	6	6	Y	L	10	45	—	—	—	3	N	N	G	Y N	
		Waterwood	Glenville	Performance	N	6	9.5	Y	BL	3	30	—	—	—	2	—	N	E	Y (N)	
		"	Performance	Lakeside	N	6	6	Y	L	10+	30	—	—	—	1	—	N	G	Y (N)	buffer varies
		Galatyn	Glenville	Performance	N	6	6	Y	N	0	30	—	—	—	4	—	N	E	Y (N)	
		"	Performance	Plaza	N	6	6	Y	N	0	30	—	—	—	4	—	N	E	Y (N)	
		"	Plaza	Performance	S	0	0	Y	N	0	30	—	—	—	4	—	N	E	Y (N)	
		"	Performance	Glenville	S	10	10	Y	N	0	30	—	—	—	4	—	N	E	Y (N)	

For Side of Street, choose:
N NE
S SE
E NW
W SW

Buffer Types:
N = None
S = Solid Surface
L = Landscaped
T = Landscaped w/ Trees
V = Vertical (retaining wall)

*All lanes for 2-way street

Land Use Codes:
1 = Residential, central business districts (CBD), neighborhood commercial,parks and other public facilities, governmental buildings/plazas,offices/office parks
2 = Low density development, rural subdivisions, un-incorporated communities, strip commercial, mixed employment
3 = Light industrial, big-box/auto-oriented commercial
4 = Heavy industrial, intermodal facilities, freeway interchanges See http://www.oregon.gov/ODOT/Planning/Documents/APMv2_Ch14.pdf (Sect. 14.5) for more details.

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DART Red & Blue Line Last Mile Connections Project
Field Data Checklist - Signalized Crossings

Date 08/21/18 Station Area Galatyn Park Staff Name J.S & C.H.

https://www.cor.net/home/showc

Link ID or "New"	Location Type (circle one)	Street Crossed	At/Between Street(s)	Int. Leg	Lighting Present?	No. Lanes Crossed: Per Direction	No. Lanes Crossed: Total	Med. Refuge Width	Both Ped. Ramps Present?	Permitted: Left Turns?	Permitted: Right Turns?	Countdown Ped. Signals?	If Signalized Pushbuttons: Functional?	If Signalized Pushbuttons: w/ APS Signals?	>1 Refuge Island?	No. of Lanes Crossed at Once	>4 legs or high skew	Closed or limited x-walks	Channelized Right Turns	Photo(s)?	Notes
	I	Galatyn Pkwy	N Central Expy SB	W	Y	2	2	0	N	N	Y	N	N	N	N	2	N	Y			No Sidewalk Present
	I	Galatyn Pkwy	N Central Expy SB	E	Y	2	2	0	N	Y	N	N	N	N	N	2	N	Y			No Sidewalk Present
	I	N Central Expy SB	Galatyn Pkwy	N	Y	2	4	0	N	N	Y	N	N	N	N	4	N	Y			No Sidewalk Present
	I	N Central Expy SB	Galatyn Pkwy	S	Y	2	4	0	N	N	N	N	N	N	N	4	N	Y			No Sidewalk Present
	I	Galatyn Pkwy	N Central Expy NB	W	Y	2	2	0	N	Y	N	N	N	N	N	2	N	Y			No Sidewalk Present
	I	Galatyn Pkwy	N Central Expy NB	E	Y	2	2	0	N	N	Y	N	N	N	N	2	N	Y			No Sidewalk Present
	I	N Central Expy NB	Galatyn Pkwy	N	Y	2	4	0	N	Y	N	N	N	N	N	4	N	Y			No Sidewalk Present
	I	N Central Expy NB	Galatyn Pkwy	S	Y	2	4	0	N	N	N	N	N	N	N	4	N	Y			No Sidewalk Present
	I	Glenville Dr	Routh Creek Pkwy	E	N	2	6	0	Y	Y	Y	Y ~~N~~	Y	N	N	6	N	N	—		↑
	I	Glenville Dr	Routh Creek Pkwy	W	N	2	6	0	Y	Y	Y	Y ~~N~~	Y	N	N	6	N	N	—		Only 1 Button
	I	Routh Creek Pkwy	Glenville Dr	N	N	2	5	0	Y	Y	Y	Y ~~N~~	Y	N	N	5	N	N	—		↓
	I	Routh Creek Pkwy	Glenville Dr	S	N	2	5	0	Y	Y	Y	Y ~~N~~	Y	N	N	5	N	N	—		
	I	Glenville Dr	Greenville Ave	N		2	5	0	Y	Y	Y				N	5	N				
	I	Glenville Dr	Greenville Ave	S		2	5	0	Y	Y	Y				N	5	N				
	I	Greenville Ave	Glenville Dr	E		3	8	0	Y	Y	Y				N	8	N				
	I	Greenville Ave	Glenville Dr	W		3	8	0	Y	Y	Y				N	8	N				
	I M	~~[illegible]~~	~~[illegible]~~																		
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Choose:
I = Intersection
M = Mid-Block

For Int. Leg, choose:
N NE
S SE
E NW
W SW
(N/A for mid-block)

Buffer Types:
N = None
S = Solid Surface
L = Landscaped
T = Landscaped w/ Trees
V = Vertical (retaining wall)

*All lanes for 2-way street

Legend:
Complete in office, confirm in field
Confirm in field

LEE ENGINEERING

See http://www.oregon.gov/ODOT/Planning/Documents/APMv2_Ch14.pdf (Sect. 14.5) for more details.
Consider adding items from I https://www.fhwa.dot.gov/innovation/everydaycounts/edc_4/guide_to_improve_uncontrolled_crossings.pdf

DART Red & Blue Line Last Mile Connections Project
Field Data Checklist - Signalized Crossings

Date 08/21/18 Station Area Galatyn Staff Name J.S & C.H.

https://www.cor.net/home/showc

Link ID or "New"	Location Type (circle one)	Street Crossed	At/Between Street(s)	Int. Leg	Lighting Present?	No. Lanes Crossed: Per Direction	No. Lanes Crossed: Total	Med. Refuge Width	Both Ped. Ramps Present?	Permitted: Left Turns?	Permitted: Right Turns?	Countdown Ped. Signals?	If Signalized Pushbuttons: Functional?	If Signalized Pushbuttons: w/ APS Signals?	>1 Refuge Island?	No. of Lanes Crossed at Once	>4 legs or high skew	Closed or limited x-walks	Channelized Right Turns	Photo(s)?	Notes
	I	Galatyn Pkwy	N Central Expy SB	W	Y	2	2	0	N	N	Y	N	N	N	N	2	N	Y			No Sidewalk Present
	I	Galatyn Pkwy	N Central Expy SB	E	Y	2	2	0	N	Y	N	N	N	N	N	2	N	Y			No Sidewalk Present
	I	N Central Expy SB	Galatyn Pkwy	N	Y	2	4	0	N	N	Y	N	N	N	N	4	N	Y			No Sidewalk Present
	I	N Central Expy SB	Galatyn Pkwy	S	Y	2	4	0	N	N	N	N	N	N	N	4	N	Y			No Sidewalk Present
	I	Galatyn Pkwy	N Central Expy NB	W	Y	2	2	0	N	Y	N	N	N	N	N	2	N	Y			No Sidewalk Present
	I	Galatyn Pkwy	N Central Expy NB	E	Y	2	2	0	N	N	Y	N	N	N	N	2	N	Y			No Sidewalk Present
	I	N Central Expy NB	Galatyn Pkwy	N	Y	2	4	0	N	Y	N	N	N	N	N	4	N	Y			No Sidewalk Present
	I	N Central Expy NB	Galatyn Pkwy	S	Y	2	4	0	N	N	N	N	N	N	N	4	N	Y			No Sidewalk Present
	I	Glenville Dr	Routh Creek Pkwy	E		2	6	0	Y	Y	Y	N			N	6	N				
	I	Glenville Dr	Routh Creek Pkwy	W		2	6	0	Y	Y	Y	N			N	6	N				
	I	Routh Creek Pkwy	Glenville Dr	N		2	5	0	Y	Y	Y	N			N	5	N				
	I	Routh Creek Pkwy	Glenville Dr	S		2	5	0	Y	Y	Y	N			N	5	N				
	I	Glenville Dr	Greenville Ave	N	Y	2	~~5~~ 6	0	Y	Y	Y	Y	Y	Y	N	~~5~~ 6	N	—	—		
	I	Glenville Dr	Greenville Ave	S	Y	2	5	0	Y	Y	Y	Y	Y	Y	N	5	N	—	—		
	I	Greenville Ave	Glenville Dr	E	Y	3	8	0	Y	Y	Y	Y	Y	Y	N	8	N	—	—		
	I	Greenville Ave	Glenville Dr	W	Y	3	8	0	Y	Y	Y	Y	Y	Y	N	8	N	—	—		
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Choose:
I = Intersection
M = Mid-Block

For Int. Leg, choose:
N NE
S SE
E NW
W SW
(N/A for mid-block)

Buffer Types:
N = None
S = Solid Surface
L = Landscaped
T = Landscaped w/ Trees
V = Vertical (retaining wall)

*All lanes for 2-way street

Legend:
Complete in office, confirm in field
Confirm in field

LEE ENGINEERING

See http://www.oregon.gov/ODOT/Planning/Documents/APMv2_Ch14.pdf (Sect. 14.5) for more details.
Consider adding items from I https://www.fhwa.dot.gov/innovation/everydaycounts/edc_4/guide_to_improve_uncontrolled_crossings.pdf

08/21/18. Galatyn Park. H.B & L.L.

Link ID or "New"	Location Type (circle one)	Street Crossed	At/Between Street(s)	Int. Leg	Stop Control?	Lighting Present?	No. Lanes Crossed: Per Direction	No. Lanes Crossed: Total	Med. Refuge Width	Both Ped. Ramps Present?	Speed Limit (mph)	One Way?	2-Min. Traffic Count*: Time	2-Min. Traffic Count*: Volume	Treatment present (circle all)	Photo(s)?	Notes
	I M	Collins	(a) Iron Gate	N	N	N	2	4	0	N	40	Y (N)	9:59	9	Mkg RSg RRFB InSgn Cex RCwk		
	I M	"	"	S	N	N	2	4	0	N	40	Y (N)	9:59	9	Mkg RSg RRFB InSgn Cex RCwk		
	I M											Y N			Mkg RSg RRFB InSgn Cex RCwk		
	I M											Y N			Mkg RSg RRFB InSgn Cex RCwk		
	I M											Y N			Mkg RSg RRFB InSgn Cex RCwk		
	I M											Y N			Mkg RSg RRFB InSgn Cex RCwk		
	I M											Y N			Mkg RSg RRFB InSgn Cex RCwk		
	I M											Y N			Mkg RSg RRFB InSgn Cex RCwk		
	I M											Y N			Mkg RSg RRFB InSgn Cex RCwk		
	I M											Y N			Mkg RSg RRFB InSgn Cex RCwk		
	I M											Y N			Mkg RSg RRFB InSgn Cex RCwk		
	I M											Y N			Mkg RSg RRFB InSgn Cex RCwk		
	I M											Y N			Mkg RSg RRFB InSgn Cex RCwk		
	I M											Y N			Mkg RSg RRFB InSgn Cex RCwk		
	I M											Y N			Mkg RSg RRFB InSgn Cex RCwk		
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	I M											Y N			Mkg RSg RRFB InSgn Cex RCwk		
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	I M											Y N			Mkg RSg RRFB InSgn Cex RCwk		
	I M											Y N			Mkg RSg RRFB InSgn Cex RCwk		

Choose:
I = Intersection
M = Mid-Block

For Int. Leg, choose:
N NE
S SE
E NW
W SW
(N/A for mid-block)

Legend:
Complete in office, confirm in field
Confirm in field

* if ADT is not avail.

Condition Options:
Mkg = Markings
Rsg = Roadside signage
RRFB = Rapid Flash Rect. Beacon
InSgn = In-street signs
Cex = Curb extensions
RCwk = Raised crosswalk

LEE ENGINEERING

See http://www.oregon.gov/ODOT/Planning/Documents/APMv2_Ch14.pdf (Sect. 14.5) for more details.
Consider adding items from Page 9 of https://www.fhwa.dot.gov/innovation/everydaycounts/edc_4/guide_to_improve_uncontrolled_crossings.pdf

DART Red & Blue Line Last Mile Connections Project
Field Data Checklist - Unsignalized Crossings

Date 8/21/18 Station Area Galatyn Staff Name Josh/Curtis

Link ID or "New"	Location Type (circle one)	Street Crossed	At/Between Street(s)	Int. Leg	Stop Control?	Lighting Present?	If No Stop Control (i.e. if Free or Signal): No. Lanes Crossed: Per Direction	If No Stop Control (i.e. if Free or Signal): No. Lanes Crossed: Total	If No Stop Control (i.e. if Free or Signal): Med. Refuge Width	If No Stop Control (i.e. if Free or Signal): Both Ped. Ramps Present?	If Unsignalized with no Stop Control (i.e. Free): Speed Limit (mph)	If Unsignalized with no Stop Control (i.e. Free): One Way?	If Unsignalized with no Stop Control (i.e. Free): 2-Min. Traffic Count*: Time	If Unsignalized with no Stop Control (i.e. Free): 2-Min. Traffic Count*: Volume	Treatment present (circle all)	Photo(s)?	Notes
	I	Galatyn Pkwy	Performance Dr	W	Y	Y					30	N			Mkg RSg RRFB InSgn Cex RCwk		
	I	Galatyn Pkwy	Performance Dr	E	Y	Y					30	N			Mkg RSg RRFB InSgn Cex RCwk		
	I	Performance Dr	Galatyn Pkwy	N	Y	N					30	N			Mkg RSg RRFB InSgn Cex RCwk		
	I	Performance Dr	Galatyn Pkwy	S	Y	N					30	N			Mkg RSg RRFB InSgn Cex RCwk		
	I	E Lookout Dr	Plaza Blvd	NW	N	N	2	4	Y	Y	30	Y N			Mkg RSg RRFB InSgn Cex RCwk		
	I	E Lookout Dr	Plaza Blvd	SE	N	N	2	4	Y	Y	30	Y N			Mkg RSg RRFB InSgn Cex RCwk		
	I	Plaza Blvd	E Lookout Dr	NE	N	N	1	2	N	Y	30	Y N			Mkg RSg RRFB InSgn Cex RCwk		
	I	Plaza Blvd	E Lookout Dr	SW	N	N	2	4	N	Y	30	Y N			Mkg RSg RRFB InSgn Cex RCwk		
	I	Glenville Dr	Galatyn Pkwy	N	N	N	3	6	N	Y	35	N	3:10	13	Mkg RSg RRFB InSgn Cex RCwk	Y	
	I	Glenville Dr	Galatyn Pkwy	S	N	N	3	6	N	Y	35	N	3:10	18	Mkg RSg RRFB InSgn Cex RCwk	Y	
	I	Glenville Dr	Waterwood Dr	N	N	N	3	5	N	N	35	N	2:49p	7	Mkg RSg RRFB InSgn Cex RCwk	Y	
	I	Glenville Dr	Waterwood Dr	S	N	N	3	5	N	Y	35	N	2:40p	7	Mkg RSg RRFB InSgn Cex RCwk	Y	
	I	~~Glenville Dr~~ Greenville	Lanwnview Dr	E	N	N	3	8	N	Y	35	N	12pm	20	Mkg RSg RRFB InSgn Cex RCwk		No signs or mkgs
	I	~~Glenville Dr~~	Lanwnview Dr	W	N	N	3	8	N	Y	35	N	12pm	19	Mkg RSg RRFB InSgn Cex RCwk		No signs or mkgs
	I	Lakeside Blvd	Lawnview Dr	NE	N	N	1	2	N	Y	30	N			Mkg RSg RRFB InSgn Cex RCwk		Roundabout
	I	Lakeside Blvd	Lawnview Dr	SW	N	N	1	2	N	Y	30	N			Mkg RSg RRFB InSgn Cex RCwk		Roundabout
	I	Lawnview Dr	Lakeside Blvd	SE	N	N	1	2	N	Y	30	N			Mkg RSg RRFB InSgn Cex RCwk		Roundabout
	I	Waterwood Dr	Performance Dr	E	N	N	1	2	N	Y		N			Mkg RSg RRFB InSgn Cex RCwk		
	I	Waterwood Dr	Performance Dr	W	N	N	1	2	N	Y		N			Mkg RSg RRFB InSgn Cex RCwk		
	I	E Lookout Dr	Performance Dr	E	N	N	1	2	N	Y		N			Mkg RSg RRFB InSgn Cex RCwk		
	I	E Lookout Dr	Performance Dr	W	N	N	1	2	N	Y		N			Mkg RSg RRFB InSgn Cex RCwk		
	I	Palisades Creek Dr	Northgate Dr	E	N	N			N	Y		N			Mkg RSg RRFB InSgn Cex RCwk		
	I	Palisades Creek Dr	Northgate Dr	W	N	N			N	Y		N			Mkg RSg RRFB InSgn Cex RCwk		
	I	Palisades Dr	Southgate Dr	E	N	N			N	Y		N			Mkg RSg RRFB InSgn Cex RCwk		
	I	Palisades Dr	Southgate Dr	W	N	N			N	Y		N			Mkg RSg RRFB InSgn Cex RCwk		
	I	Collins Blvd	Prairie Creek Dr	N	N	N	2	4	N	Y	40	N			Mkg RSg RRFB InSgn Cex RCwk		
	I	Collins Blvd	Prairie Creek Dr	S	N	N	2	4	N	Y	40	N			Mkg RSg RRFB InSgn Cex RCwk		
	I	Collins Blvd	Palisades Dr	N	N	N	2	4	N	Y	40	N			Mkg RSg RRFB InSgn Cex RCwk		
	I	Collins Blvd	Palisades Dr	S	N	N	2	4	N	Y	40	N			Mkg RSg RRFB InSgn Cex RCwk		
	I	Collins Blvd	Fall Creek Dr	N	N	N	2	5	N	Y	40	N			Mkg RSg RRFB InSgn Cex RCwk		
	I	Collins Blvd	Fall Creek Dr	S	N	N	2	5	N	Y	40	N			Mkg RSg RRFB InSgn Cex RCwk		
	I M	Greenville	Brownyard Morris E/W 22.02 Greenville		N/A	N/A	7-7					Y N			Mkg RSg RRFB InSgn Cex RCwk		

Choose:
I = Intersection
M = Mid-Block

For Int. Leg, choose:
N NE
S SE
E NW
W SW
(N/A for mid-block)

Legend:
Complete in office, confirm in field
Confirm in field

* if ADT is not avail.

Condition Options:
Mkg = Markings
Rsg = Roadside signage
RRFB = Rapid Flash Rect. Beacon
InSgn = In-street signs
Cex = Curb extensions
RCwk = Raised crosswalk

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See http://www.oregon.gov/ODOT/Planning/Documents/APMv2_Ch14.pdf (Sect. 14.5) for more details.
Consider adding items from Page 9 of https://www.fhwa.dot.gov/innovation/everydaycounts/edc_4/guide_to_improve_uncontrolled_crossings.pdf

DART Red & Blue Line Last Mile Connections Project
Field Data Checklist - Unsignalized Crossings

Date 08/21/18 Station Area Galatyn Park Staff Name LLSKHB

Link ID or "New"	Location Type (circle one)	Street Crossed	At/Between Street(s)	Int. Leg	Stop Control?	Lighting Present?	If No Stop Control (i.e. if Free or Signal): No. Lanes Crossed: Per Direction	No. Lanes Crossed: Total	Med. Refuge Width	Both Ped. Ramps Present?	If Unsignalized with no Stop Control (i.e. Free): Speed Limit (mph)	One Way?	2-Min. Traffic Count*: Time	2-Min. Traffic Count*: Volume	Treatment present (circle all)	Photo(s)?	Notes
	I	Galatyn Pkwy	Performance Dr	W	Y	Y					30	N			Mkg RSg RRFB InSgn Cex RCwk		
	I	Galatyn Pkwy	Performance Dr	E	Y	Y					30	N			Mkg RSg RRFB InSgn Cex RCwk		
	I	Performance Dr	Galatyn Pkwy	N	Y	N					30	N			Mkg RSg RRFB InSgn Cex RCwk		
	I	Performance Dr	Galatyn Pkwy	S	Y	N					30	N			Mkg RSg RRFB InSgn Cex RCwk		
	I	E Lookout Dr	Plaza Blvd	NW	N	N	2	4	Y	Y	30	Y N			Mkg RSg RRFB InSgn Cex RCwk		
	I	E Lookout Dr	Plaza Blvd	SE	N	N	2	4	Y	Y	30	Y N			Mkg RSg RRFB InSgn Cex RCwk		
	I	Plaza Blvd	E Lookout Dr	NE	N	N	1	2	N	Y	30	Y N			Mkg RSg RRFB InSgn Cex RCwk		
	I	Plaza Blvd	E Lookout Dr	SW	N	N	2	4	N	Y	30	Y N			Mkg RSg RRFB InSgn Cex RCwk		
	I	Glenville Dr	Galatyn Pkwy	N	N	N	3	8	N	Y	35	N			Mkg RSg RRFB InSgn Cex RCwk		
	I	Glenville Dr	Galatyn Pkwy	S	N	N	3	8	N	Y	35	N			Mkg RSg RRFB InSgn Cex RCwk		
	I	Glenville Dr	Waterwood Dr	N	N	N	3	7	N	Y	35	N			Mkg RSg RRFB InSgn Cex RCwk		
	I	Glenville Dr	Waterwood Dr	S	N	N	3	7	N	Y	35	N			Mkg RSg RRFB InSgn Cex RCwk		
	I	Glenville Dr	Lanwnview Dr	E	N	N	3	8	N	Y	35	N			Mkg RSg RRFB InSgn Cex RCwk		
	I	Glenville Dr	Lanwnview Dr	W	N	N	3	8	N	Y	35	N			Mkg RSg RRFB InSgn Cex RCwk		
	I	Lakeside Blvd	Lawnview Dr	NE	N	N	1	2	N	Y	30	N			Mkg RSg RRFB InSgn Cex RCwk		Roundabout
	I	Lakeside Blvd	Lawnview Dr	SW	N	N	1	2	N	Y	30	N			Mkg RSg RRFB InSgn Cex RCwk		Roundabout
	I	Lawnview Dr	Lakeside Blvd	SE	N	N	1	2	N	Y	30	N			Mkg RSg RRFB InSgn Cex RCwk		Roundabout
	I	Waterwood Dr	Performance Dr	E	N	N	1	2	N	Y		N			Mkg RSg RRFB InSgn Cex RCwk		
	I	Waterwood Dr	Performance Dr	W	N	N	1	2	N	Y		N			Mkg RSg RRFB InSgn Cex RCwk		
	I	E Lookout Dr ✓	Performance Dr ✓	E ✓	N ✓	N ✓	2	4	N ✓	Y ✓	30	N ✓	3:17	19	Mkg RSg RRFB InSgn Cex RCwk	✓	
	I	E Lookout Dr ✓	Performance Dr ✓	W ✓	N ✓	N ✓	2	4	N ✓	Y ✓	30	N ✓	3:12	14	Mkg RSg RRFB InSgn Cex RCwk	✓	
	I	Palisades Creek Dr	Northgate Dr	E	N	N			N	Y		N			Mkg RSg RRFB InSgn Cex RCwk		
	I	Palisades Creek Dr	Northgate Dr	W	N	N			N	Y		N			Mkg RSg RRFB InSgn Cex RCwk		
	I	Palisades Dr ✓	Southgate Dr ✓	E ✓	N ✓	N ✓	1	2	N ✓	Y ✓	30	N ✓	9:43	7	Mkg RSg RRFB InSgn Cex RCwk	✓	No Ramp on SS
	I	Palisades Dr ✓	Southgate Dr ✓	W ✓	N ✓	N ✓	1	2	N ✓	Y ✓	30	N ✓	9:43	7	Mkg RSg RRFB InSgn Cex RCwk	✓	
	I	Collins Blvd ✓	Prairie Creek Dr ✓	N ✓	N ✓	N ✓	2 ✓	4 ✓	N ✓	N Y	40 ✓	N ✓	10:05	9	Mkg RSg RRFB InSgn Cex RCwk		No Ramp on ES
	I	Collins Blvd ✓	Prairie Creek Dr ✓	S ✓	N ✓	N ✓	2 ✓	4 ✓	N ✓	N Y	40 ✓	N ✓	10:05	9	Mkg RSg RRFB InSgn Cex RCwk		
	I	Collins Blvd ✓	Palisades Dr Blvd ✓	N ✓	N ✓	N ✓	2 ✓	4 ✓	N ✓	N Y	40 ✓	N ✓	9:22	11	Mkg RSg RRFB InSgn Cex RCwk	✓	No Ramp on WS
	I	Collins Blvd ✓	Palisades Dr Blvd ✓	S ✓	N ✓	N ✓	2 ✓	4 ✓	N ✓	N Y	40 ✓	N ✓	9:22	11	Mkg RSg RRFB InSgn Cex RCwk	✓	
	I	Collins Blvd ✓	Fall Creek Dr ✓	N ✓	N ✓	N ✓	2 ✓	5 ✓	N ✓	Y ✓	40	N ✓	9:01	13	Mkg RSg RRFB InSgn Cex RCwk	✓	
	I	Collins Blvd ✓	Fall Creek Dr ✓	S ✓	N ✓	N ✓	2 ✓	5 ✓	N ✓	Y ✓	40	N ✓	9:01	13	Mkg RSg RRFB InSgn Cex RCwk	✓	
	I M		Cathedral	E	N ✓	N ✓	1	2	N	N	30	Y (N)	9:43	7	Mkg RSg RRFB InSgn Cex RCwk	✓	
			Palisades Blvd	W	N	N	1	2	N	N	30	N	9:43	7			

Choose:
I = Intersection
M = Mid-Block

For Int. Leg, choose:
N NE
S SE
E NW
W SW
(N/A for mid-block)

* if ADT is not avail.

Condition Options:
Mkg = Markings
Rsg = Roadside signage
RRFB = Rapid Flash Rect. Beacon
InSgn = In-street signs
Cex = Curb extensions
RCwk = Raised crosswalk

Legend:
Complete in office, confirm in field
Confirm in field

LEE ENGINEERING

See http://www.oregon.gov/ODOT/Planning/Documents/APMv2_Ch14.pdf (Sect. 14.5) for more details.
Consider adding items from Page 9 of https://www.fhwa.dot.gov/innovation/everydaycounts/edc_4/guide_to_improve_uncontrolled_crossings.pdf

DART Red & Blue Line Last Mile Connections Project
Field Data Checklist - Sidewalks

Date 08/21/18 Galatyn Park Staff Name H.B & L.L.

Group Link	Link ID	Street Name	From Street	To Street	Side of Street	Sidewalk Width (ft): Actual	Sidewalk Width (ft): Eff.	Curb & Gutter?	Buffer: Type	Buffer: Width	Prevailing Speed or Speed Limit (mph)	Street Widths: On-Street Parking	Street Widths: Bike Lane	Street Widths: Shoulder	Street Widths: No. of Lanes*	If One-Way, Dir. of Travel	Lighting?	Condition Selection	Bicycle and Pedestrian Wayfinding?*	Notes
		Fall Creek	Central	Collins	N	4	0	Y	BL	3	30	N	N	N	2	N	N	P	Y (N)	
		Prairie Creek	Collins	NE boundary	S	4	4	Y	L	6	30	Y	N	N	2	N	N	G/E	Y (N)	
		—	Collins	SW boundary	N	4	4	Y	L	6	30	Y	N	N	2	N	N	G/E	Y (N)	
		—	—	NE boundary	S	4	0	Y	—	0	30	Y	N	N	2	N	N	G/E	Y (N)	
								Y											Y N	
		Empire	South gate	Central Gate	N	0	0	Y	—	—	30	Y	0	0	2	—	—	—	Y (N)	
		Central Gate	Empire	U.S. 75 SB	N	0	0	Y	—	—	30	N	0	0	2	—	—	—	Y (N)	
		Cathedral	Palisades	Golden Gate	E	4	4	Y	LTP	10	30	N	0	8	2	—	—	G/E	Y (N)	wide Median
		—	—	—	W	4	4	Y	LTP	10	30	Y	0	0	2	—	—	G/E	Y (N)	
								Y											Y N	
		Cathedral	Golden Gate	Collins	E	4	4	Y	LTP	10	30 A	Y	0	0	2	—	—	G/E	Y (N)	
		—	—	—	W	4	4	Y	LTP	10	30 A	Y	0	0	2	—	—	G/E	Y (N)	
								Y											Y N	
		Castle Ridge	Moonland	Golden gate	E	4	4	Y	LTP	10	30 A	Y	0	0	2	—	N	G/E	Y (N)	
		Moonland	Cathedral	Cathedral	W	4	4	Y	LTP	10	30 A	Y	0	0	2	—	N	G/E	Y (N)	
		Galatyn Pkwy	Palisades Blvd	Plaza Blvd	N	4	4	Y	LTP	4	30 A	Y	0	0	2	—	N	G/E	Y (N)	
		Fall Creek	Collins	West Boundary	N	4	4	Y	L	4	30	N	N	N	4	—	Y	—	Y (N)	lane width need to be reduced to see sidewalk
		E Prairie Creek	Fall Creek	Creekwood	S	4	4	Y	L	4	30	Y	0	N	2	—	N	F	Y (N)	
								Y											Y N	

For Side of Street, choose:
N NE
S SE
E NW
W SW

Buffer Types:
N = None
S = Solid Surface
L = Landscaped
T = Landscaped w/ Trees
V = Vertical (retaining wall)

*All lanes for 2-way street

Land Use Codes:
1 = Residential, central business districts (CBD), neighborhood commercial,parks and other public facilities, governmental buildings/plazas,offices/office parks
2 = Low density development, rural subdivisions, un-incorporated communities, strip commercial, mixed employment
3 = Light industrial, big-box/auto-oriented commercial
4 = Heavy industrial, intermodal facilities, freeway interchanges See http://www.oregon.gov/ODOT/Planning/Documents/APMv2_Ch14.pdf (Sect. 14.5) for more details.

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DART Red & Blue Line Last Mile Connections Project
Field Data Checklist - Sidewalks

Staff Name H.B & L.L

Date 08/21/18

Galatyn Park

Group Link	Link ID	Street Name	From Street	To Street	Side of Street	Sidewalk Width (ft): Actual	Sidewalk Width (ft): Eff.	Curb & Gutter?	Buffer Type	Buffer Width	Prevailing Speed or Speed Limit (mph)	Street Widths: On-Street Parking	Street Widths: Bike Lane	Street Widths: Shoulder	Street Widths: No. of Lanes*	If One-Way, Dir. of Travel	Lighting?	Condition Selection	Bicycle and Pedestrian Wayfinding?*	Notes:
252.4	7821	Waterwood Dr	Performance Dr	Lakeside Blvd	SE	5	5	Y	L	4	30	0	0	0	4	-	N		Y (N)	
251.1	8270	Performance Dr	Waterwood Dr	Galatyn Pkwy	W	5	10	Y	N	0	30	16	0	0	2	-	N	GIE	Y (N)	
251.2	8562	Performance Dr	Waterwood Dr	Galatyn Pkwy	E	5	10	Y	N	0	30	16	0	0	2	-	N	GIE	Y (N)	
251.3	8630	Performance Dr	Galatyn Pkwy	Performance Court	W	5	10	Y	N	0	30	16	0	0	2	-	N	GIE	Y (N)	
253.4	8686	Performance Dr	Galatyn Pkwy	Performance Court	E	5	10	Y	N	0	30	16	0	0	2	-	N	GIE	Y (N)	
253.5	8356	Performance Dr	Performance Court	E Lookout Dr	W	5	20	Y	N	0	30	16	0	0	2	-	N	GIE	Y (N)	
253.6	8360	Performance Dr	Performance Court	E Lookout Dr	E	5	10	Y	N	0	30	16	0	0	2	-	N	GIE	Y (N)	
254.1SG	8658	Plaza Blvd	Galatyn Pkwy	Performance Court	W	0	0	Y	N	0	30	8	0	0	2	-	N		Y (N)	
254.2	8628	Plaza Blvd	Galatyn Pkwy	Performance Court	E	4	4	Y	N	0	30	8	0	0	2	-	N		Y (N)	small sidewalk gap
254.3	8213	Plaza Blvd	Performance Court	Building	W	4	4	Y	N	0	30	16	0	0	3	-	Y		Y (N)	
254.4	8620	Plaza Blvd	Performance Court	Building	E	4	0	Y	N	0	30	16	0	0	3	-	Y		Y (N)	parking interferes w access
254.5	8213	Plaza Blvd	Building	E Lookout Dr	W	10	10	Y	N	0	30	0	0	0	3	-	N		Y (N)	
254.6	8212	Plaza Blvd	Building	E Lookout Dr	E	6	3	Y	N	0	30	0	0	0	3	-	N		Y (N)	next to railroad
255.1	8732	Railroad SE side	South Boundary	Lakeside Blvd	SE	10	10	Y	L	30									Y N	**poor map view**
255.2	8200	Railroad SE side	Lakeside Blvd	Station	SE	10	10	Y	L	20									Y N	
255.3	8672	Railroad SE side	Station	E Lookout Dr	SE	10	10	Y	L	15									Y N	
255.4SG	8691	N Central Expy	E Lookout Dr	North Boundary	SE	0	0	Y	N	0	45	0	0	0	3	-	N	N	Y (N)	
256.1	8684	N Central Expy	South Boundary	Fall Creek Dr	NW	6	6	Y	N	0	45	0	0	0	4	-	N	P	Y (N)	
256.2	7795	N Central Expy	Fall Creek Dr	Driveway	NW	6	6	Y	N	0	45	0	0	0	4	-	N	F	Y (N)	
256.3	7852	N Central Expy	Driveway	Galatyn Pkwy	NW	4	4	Y	L	12	45	0	0	0	3	-	N	F	Y (N)	wriggly sidewalk
256.4	7785	N Central Expy	Galatyn Pkwy	Palisades Blvd	NW	4	4	Y	L	10	45	0	0	0	3	-	N	F	Y (N)	remove grass from SW
256.5	8033	N Central Expy	Palisades Blvd	Parking Lot	NW	5	5	Y	L	0	45	0	0	0	3	-	N	F	Y (N)	
256.6SG	8691	N Central Expy	Parking Lot	Driveway	NW	0	0	Y	L	0	45	0	0	0	3	-	N	N	Y (N)	
256.7SG	8385	N Central Expy	Driveway	Side Road	NW	0	0	Y	L	0	45	0	0	0	3	-	N	GIE	Y (N)	sidewalk possible ~10
256.8SG	8389	N Central Expy	Side Road	North Boundary	NW	0	0	Y	L	0	45	0	0	0	3	-	N	GIE	Y (N)	
259.1	8035	Palisades Creek Dr	N Central Expy	North Gate Dr	N	5	5	Y	L	4	30	0	0	0	4	-	N	GIE	Y (N)	
259.2SG	8383	Palisades Creek Dr	N Central Expy	North Gate Dr	S	0	0	Y	L	4	30	0	0	0	4	-	N	GIE	Y (N)	
259.3	8166	Palisades Creek Dr	North Gate Dr	N Collins Blvd	NW	5	5	Y	L	14	30	0	0	0	4	-	N	GIE	Y (N)	
259.4	8305	Palisades Creek Dr	Palisades Blvd	Roundabout	W	5	13	Y	L	8	30	0	0	0	3	-	N	GIE	Y (N)	*Not a Gap*
259.3SG	8458	North Gate Dr	Palisades Blvd	Roundabout	W	10	10	Y	L	8	30	0	0	0	3	-	N	GIE	Y (N)	under construction
259.2SG	8448	Empire Dr	Golden Gate Dr	Roundabout	E	8	8	Y	L	10	30	0	0	0	3	-	N	GIE	Y (N)	
259.1SG	8461	North Gate Dr	Palisades Blvd	Roundabout	E	8	8	Y	L	6	30	0	0	0	2	-	N	GIE	Y (N)	
5SG	8387	Empire Dr	Roundabout	Palisades Creek Dr	SE	0	0	Y	L	6	30	0	0	0	2	-	N	GIE	Y (N)	
5SG	8388	Empire Dr	Roundabout	Palisades Creek Dr	W	6	6	Y	L	6	30	0	0	0	2	-	N	GIE	Y (N)	
257.5	8458	South Gate Dr	Roundabout	Palisades Creek Dr	E	0	0	Y	L	6	30	0	0	0	2	-	N	GIE	Y (N)	
257.6	8482	South Gate Dr	Roundabout	Palisades Creek Dr	E	0	0	Y	L	6	30	0	0	0	2	-	N	GIE	Y (N)	
257.1	7935	Palisades Blvd	N Central Expy	South Gate Dr	N	5	5	Y	L	8	30	0	0	0	2	-	N	GIE	Y (N)	
257.2	8501	Palisades Blvd	N Central Expy	South Gate Dr	S	5	5	Y	L	8	30	0	0	0	2	-	N	GIE	Y (N)	
257.3	8725	Palisades Blvd	South Gate Dr	N Collins Blvd	N	4	4	Y	L	8	30	0	0	0	2	-	N	GIE	Y (N)	
257.4	8583	Palisades Blvd	South Gate Dr	N Collins Blvd	S	0	0	Y	L	8	30	0	0	0	2	-	N	GIE	Y (N)	
260.1	8137	N Collins Blvd	South Boundary	Fall Creek Dr	W	4	4	Y	L	8	40	0	7.5	0	4	-	N	F	Y (N)	bike lane on each side (W&E)
261.1	7867	N Collins Blvd	South Boundary	Fall Creek Dr	E	4	4	Y	L	8	40	0	7.5	0	4	-	N	F	Y (N)	
260.2	8201	N Collins Blvd	Fall Creek Dr	Palisades Blvd	W	4.5	4.5	Y	L	4	40	0	7.5	0	4	-	N	F	Y (N)	
261.2	8204	N Collins Blvd	Fall Creek Dr	Water Tower	E	4.5	4.5	Y	L	4	40	0	7.5	0	4	-	N	F	Y (N)	
261.3SG	8583	N Collins Blvd	Water Tower	Palisades Blvd	E	0	0	Y	N	0	40	0	7.5	0	4	-	N		Y (N)	
260.3	8020	N Collins Blvd	Palisades Blvd	Golden Gate Dr	W	5	5	Y	L	3	40	0	7.5	0	4	-	N	GIE	Y (N)	
261.4	8386	N Collins Blvd	Palisades Blvd	Golden Gate Dr	E	9	9	Y	L	6	40	0	7.5	0	4	-	N	GIE	Y (N)	
260.4	8070	N Collins Blvd	Golden Gate Dr	Palisades Creek Dr	W	5	5	Y	L	3	40	0	7.5	0	4	-	N	GIE	Y (N)	
261.5	8400	N Collins Blvd	Golden Gate Dr	Palisades Creek Dr	E	9	9	Y	L	6	40	0	7.5	0	4	-	N	GIE	Y (N)	
260.5	7969	N Collins Blvd	Palisades Creek Dr	W Prairie Creek Dr	W	5	5	Y	L	2	40	0	7.5	0	4	-	N	GIE	Y (N)	
261.6	7962	N Collins Blvd	Palisades Creek Dr	W Prairie Creek Dr	E	4	4	Y	L	2	40	0	7.5	0	4	-	N	GIE	Y (N)	Road is hurricaned (Permanent)

Buffer Types:
N = None
S = Solid Surface
L = Landscaped
T = Landscaped w/ Trees
V = Vertical (retaining wall)

*All lanes for 2-way street

Land Use Codes:
1 = Residential, central business districts (CBD), neighborhood commercial,parks and other public facilities, governmental buildings/plazas,offices/office parks
2 = Low density development, rural subdivisions, un-incorporated communities, strip commercial
3 = Light industrial, big box/auto-oriented commercial
4 = Heavy industrial, intermodal facilities, freeway interchanges See http://www.oregon.gov/ODOT/Planning/Documents/APMv2_Ch14.pdf (Sect. 14.5) for more details.

For Side of Street, choose:
N NE
S SE
E NW
W SW

LEE ENGINEERING

DART Red & Blue Line Last Mile Connections Project
Field Data Checklist - Sidewalk Gaps

Date 8/21/18
Station Galatyn Park
Staff Name Josl
Location N Central - Lookout Dr to Econo Lodge

Instructions : When coding/confirming sidewalk condition of "Nonexistant" on sidewalk checklist, review the following and make notes here and/or on the sidewalk checklist.

What challenges are there to the feasibility/practicability of sidewalk?
Circle items below and add notes/sketches as applicable.

Utility poles? N

Underground utilities? Time Warner Telecom UG

Trees? N

Slopes? N

Other structures? N

Rail crossings? On short segment of Lookout Dr.

Business parking/access management issues? one dwy to cross (southern Econo Lodge)

Insufficient bridge width? N

Take photos and notes to document. Y

Other Notes:

LEE ENGINEERING

DART Red & Blue Line Last Mile Connections Project
Field Data Checklist - Sidewalk Gaps

Date 8/21/18
Station Galatyn Park
Staff Name Josh
Location DART tracks S side of Glenville

Instructions : When coding/confirming sidewalk condition of "Nonexistant" on sidewalk checklist, review the following and make notes here and/or on the sidewalk checklist.

What challenges are there to the feasibility/practicability of sidewalk?
Circle items below and add notes/sketches as applicable.

Utility poles? Y

Underground utilities? Y

Trees? Landscaping bushes for trail

Slopes? Y ... steep near trail

Other structures? N

Rail crossings? Y - DART

Business parking/access management issues? New office/comm. bldg. ~~east~~ west of tracks lacks access to station

Insufficient bridge width? N

Take photos and notes to document. Y

Other Notes:

LEE ENGINEERING

DART Red & Blue Line Last Mile Connections Project
Field Data Checklist - Sidewalk Gaps

Date 8/21/18
Station Galatyn
Staff Name Josh / Curtis
Location Glenville Dr fr. South Creek to Lookout Dr. (both sides)

Instructions : When coding/confirming sidewalk condition of "Nonexistant" on sidewalk checklist, review the following and make notes here and/or on the sidewalk checklist.

What challenges are there to the feasibility/practicability of sidewalk?
Circle items below and add notes/sketches as applicable.

Utility poles? N

Underground utilities? Y - Telecomm. (WorldCom, Level 3), water, fire hydrants

Trees? N - minor brush clearing on NE side

Slopes? Mild slopes on SW side - meandering unpaved trail higher up

Other structures? N

Rail crossings? N

Business parking/access management issues? SW side has ex. x-walk across BCBS dwy. Unpaved trail also. Dwy has rev. center line w/ white lines (not MUTCD appr.)

Insufficient bridge width? N

Take photos and notes to document. Y

Other Notes:

LEE ENGINEERING

DART Red & Blue Line Last Mile Connections Project
Field Data Checklist - Sidewalk Gaps

Date 8/21/18
Station Galatyn
Staff Name Josh
Location Greenville N side from Glenville to Courtyard hotel

Instructions : When coding/confirming sidewalk condition of "Nonexistant" on sidewalk checklist, review the following and make notes here and/or on the sidewalk checklist.

What challenges are there to the feasibility/practicability of sidewalk?
Circle items below and add notes/sketches as applicable.

Utility poles? N

Underground utilities? Y telecom

Trees? N

Slopes? N, ~~mild~~ shapes near Courtyard sign

Other structures? N

Rail crossings? N

Business parking/access management issues? N

Insufficient bridge width? N

Take photos and notes to document. Y

Other Notes:

DART Red & Blue Line Last Mile Connections Project
Field Data Checklist - Sidewalk Gaps

Date 8/21/18
Station Galatyn
Staff Name Josh
Location Glenville W side Waterwood to Greenville

Instructions : When coding/confirming sidewalk condition of "Nonexistant" on sidewalk checklist, review the following and make notes here and/or on the sidewalk checklist.

What challenges are there to the feasibility/practicability of sidewalk?
Circle items below and add notes/sketches as applicable.

Utility poles? N

Underground utilities? Y, water, telecom

Trees? N

Slopes? N, except near Residence Inn sign

Other structures? N

Rail crossings? N

Business parking/access management issues? N

Insufficient bridge width? N

Take photos and notes to document. Y

Other Notes:

DART Red & Blue Line Last Mile Connections Project
Field Data Checklist - Sidewalk Gaps

Date 8/21/18
Station Galatyn Park
Staff Name HB/LL
Location Collins bet^n water tower and Palisades

Instructions : When coding/confirming sidewalk condition of "Nonexistant" on sidewalk checklist, review the following and make notes here and/or on the sidewalk checklist.

What challenges are there to the feasibility/practicability of sidewalk?
Circle items below and add notes/sketches as applicable.

Utility poles? No
Underground utilities? may be
Trees? No
Slopes? No
Other structures? No
Rail crossings? No
Business parking/access management issues? No
Insufficient bridge width? No
Take photos and notes to document. /

Other Notes:

DART Red & Blue Line Last Mile Connections Project
Field Data Checklist - Sidewalk Gaps

Date 08/21/2018
Station Galatyn Park
Staff Name LL & HB
Location General between N Bowser & Palisades Creek Dr.

Instructions : When coding/confirming sidewalk condition of "Nonexistant" on sidewalk checklist, review the following and make notes here and/or on the sidewalk checklist.

What challenges are there to the feasibility/practicability of sidewalk?
Circle items below and add notes/sketches as applicable.

Utility poles? Yes.
Underground utilities? Maybe.
Trees? No.
Slopes? No.
Other structures? ~~No~~ Yes (Signs)
Rail crossings? No.
Business parking/access management issues? No.
Insufficient bridge width? No.
Take photos and notes to document. ✓

Other Notes: Sidewalk with mix-use development?

DART Red & Blue Line Last Mile Connections Project
Field Data Checklist - Sidewalk Gaps

Date 08/21/18
Station Galatyn Park
Staff Name L.L. & H.B
Location Central between Palisades & ~~Gate~~ Central Gate

Instructions : When coding/confirming sidewalk condition of "Nonexistant" on sidewalk checklist, review the following and make notes here and/or on the sidewalk checklist.

What challenges are there to the feasibility/practicability of sidewalk?
Circle items below and add notes/sketches as applicable.

Utility poles? Yes (10' from curb)

Underground utilities? ~~Maybe~~ Yes (S.B.C.)

Trees? No

Slopes? NO

Other structures? Yes (Signs)

Rail crossings? No

Business parking/access management issues? No

Insufficient bridge width? No

Take photos and notes to document. ✓

Other Notes:

sidewalk with proposed mix-use development?

DART Red & Blue Line Last Mile Connections Project
Field Data Checklist - Sidewalk Gaps

Date 08/21/18
Station Galatyn Park
Staff Name L.L. & H.B
Location ~~Fall Creek between~~ Central & Collins (South side

Instructions : When coding/confirming sidewalk condition of "Nonexistant" on sidewalk checklist, review the following and make notes here and/or on the sidewalk checklist.

What challenges are there to the feasibility/practicability of sidewalk?
Circle items below and add notes/sketches as applicable.

Utility poles? No

Underground utilities? Maybe

Trees? Some close to Central (screening bushes)

Slopes? No

Other structures? No

Rail crossings? No

Business parking/access management issues? No

Insufficient bridge width? No

Take photos and notes to document. ✓

Other Notes:

DART Red & Blue Line Last Mile Connections Project
Field Data Checklist - Sidewalk Gaps

Date 08/21/18
Station Galatyn Park
Staff Name L.L. & H.B.
Location Prairie Creek between Collins & SW boundary

Instructions : When coding/confirming sidewalk condition of "Nonexistant" on sidewalk checklist, review the following and make notes here and/or on the sidewalk checklist.

What challenges are there to the feasibility/practicability of sidewalk?
Circle items below and add notes/sketches as applicable.

Utility poles? No
Underground utilities? Maybe
Trees? Yes
Slopes? No
Other structures? No
Rail crossings? No
Business parking/access management issues? No
Insufficient bridge width? No
Take photos and notes to document. ✓

Other Notes:

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DART Red & Blue Line Last Mile Connections Project
Field Data Checklist - Sidewalk Gaps

Date 08/21/18
Station Galatyn Park
Staff Name L.L. & H.B.
Location Palisades Creek between north Gate & Central

Instructions : When coding/confirming sidewalk condition of "Nonexistant" on sidewalk checklist, review the following and make notes here and/or on the sidewalk checklist.

What challenges are there to the feasibility/practicability of sidewalk?
Circle items below and add notes/sketches as applicable.

Utility poles? Yes
Underground utilities? Maybe
Trees? No
Slopes? No
Other structures? No.
Rail crossings? No
Business parking/access management issues? No
Insufficient bridge width? No
Take photos and notes to document. ✓.

Other Notes: Sidewalk with new development?

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DART Red & Blue Line Last Mile Connections Project
Field Data Checklist - Sidewalk Gaps

Date 08/21/18
Station Galatyn Park
Staff Name L.L. & H.B
Location Palisades between Collins & Empire Dr

Instructions : When coding/confirming sidewalk condition of "Nonexistant" on sidewalk checklist, review the following and make notes here and/or on the sidewalk checklist.

What challenges are there to the feasibility/practicability of sidewalk?
Circle items below and add notes/sketches as applicable.

Utility poles? No

Underground utilities? Maybe.

Trees? No

Slopes? No

Other structures? No

Rail crossings? No

Business parking/access management issues? No

Insufficient bridge width? No.

Take photos and notes to document. ✓

Other Notes:

DART Red & Blue Line Last Mile Connections Project
Field Data Checklist - Sidewalk Gaps

Date 08/21/18
Station Galatyn Park
Staff Name L.L. & H.B
Location Empire between South Gate & ~~Central Gate~~ Driveway of Palisade Central I

Instructions : When coding/confirming sidewalk condition of "Nonexistant" on sidewalk checklist, review the following and make notes here and/or on the sidewalk checklist.

What challenges are there to the feasibility/practicability of sidewalk?
Circle items below and add notes/sketches as applicable.

	N	S
Utility poles?	N	~~Maybe~~ N
Underground utilities?	Maybe	Maybe
Trees?	N	Some
Slopes?	N	N
Other structures?	N	N
Rail crossings?	N	N
Business parking/access management issues?	N	N
Insufficient bridge width?	N	N
Take photos and notes to document.	✓	✓

Other Notes:

LEE ENGINEERING

DART Red & Blue Line Last Mile Connections Project
Field Data Checklist - Sidewalk Gaps

Date 08/21/18
Station Galatyn Park
Staff Name L.L. & H.B
Location Empire between Driveway of Palisade Central I & Central Gate

Instructions : When coding/confirming sidewalk condition of "Nonexistant" on sidewalk checklist, review the following and make notes here and/or on the sidewalk checklist.

What challenges are there to the feasibility/practicability of sidewalk?
Circle items below and add notes/sketches as applicable.

	N	S
Utility poles?	N	N
Underground utilities?	Maybe	Maybe
Trees?	Y	N
Slopes?	Y	N
Other structures?	N	N
Rail crossings?	N	N
Business parking/access management issues?	N	N
Insufficient bridge width?	N	N
Take photos and notes to document.	✓	✓

Other Notes:

DART Red & Blue Line Last Mile Connections Project
Field Data Checklist - Sidewalk Gaps

Date 08/21/18
Station Galatyn Park
Staff Name L.L. & H.B
Location Galatyn parkway between Palisade & plaza BLVD

Instructions : When coding/confirming sidewalk condition of "Nonexistant" on sidewalk checklist, review the following and make notes here and/or on the sidewalk checklist.

What challenges are there to the feasibility/practicability of sidewalk?
Circle items below and add notes/sketches as applicable.

Utility poles? No
Underground utilities? No
Trees? No
Slopes? No
Other structures? No
Rail crossings? No
Business parking/access management issues? No
Insufficient bridge width? Yes
Take photos and notes to document. ✓

Other Notes: Lane width needs to be reduced to have sidewalk.

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DART Red & Blue Line Last Mile Connections Project
Field Data Checklist - Stations

Date 8/16/18
Station Arapaho
Staff Name Josh

Sketch bike & pedestrian observed travel & desire lines on aerial photo inserted below: ☑
(Zoom out 1/2 block beyond station perimeter)

Are any desire lines missing a marked crossing location on a perimeter street, especially if mid-block? *(If Yes, note on sketch and add line with "New" link ID on Crossings Checklist)* (Y) N Woodsill ?

- ☑ Note bike parking locations (covered vs. rack vs. bikeshare)
- Do any travel routes differ significantly from linear desire lines? mostly not exc. crossing Greenville or U.S. 75 — Y ☑ N
- ☑ Note car & bus circulation patterns & conflict points
- Bike and ped desire lines continuously lit? (Note where if not). — Y ☑ N
- Trip hazards? N
- Landscaping barriers? Mostly appropriate
- Fences? Taller to discourage crossing Greenville
- Absent ramps? Only mid-platform, but of little conseq.
- Bike/Pedestrian sight distance problems? (Mirror at bottom of platf. ADA ramp)
- ☐ Review questions (Post Construction Column) from p. 6-7 of Ped RSA Checklist
- ☐ Other Notes:

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FTA DART Stations
Last Mile Connections
Arapaho Station
February, 2018

DRAFT

Josh.

Existing Residential and Employment Population (Number of People)
- 0 - 10
- 11 - 50
- 51 - 100
- 101 - 250
- 251 - 578
- 579 - 1000
- 1001 - 1500
- 1501 - 2500
- 2501 - 5000
- 5001 - 24170

Legend
- Primary Routes

Segment Category
- Existing Sidewalk
- Sidewalk Gap
- Not Acceptable Sidewalk Condition
- DART Rail Station
- 0.25 Mile Buffer
- 0.5 Mile Buffer

N

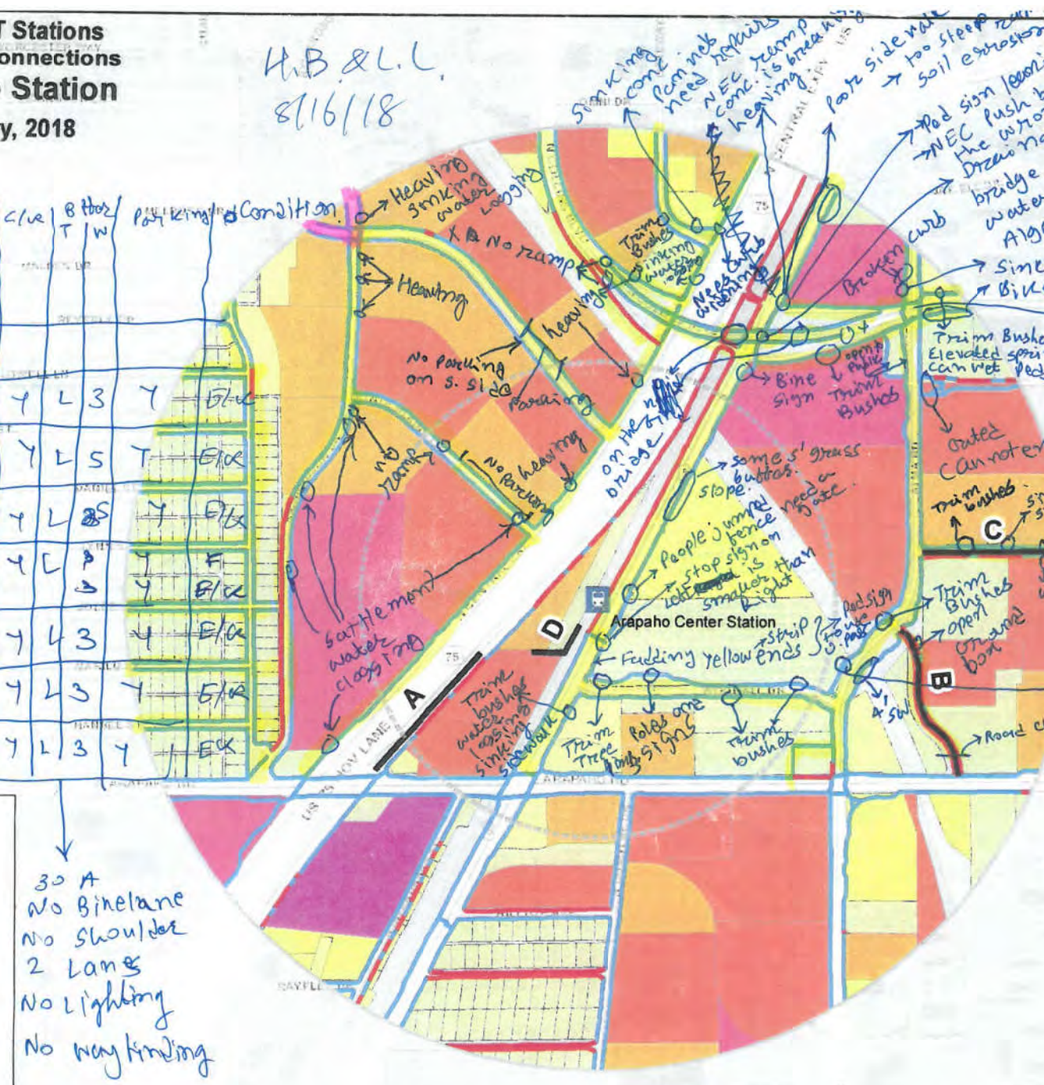
North Central Texas Council of Governments

FTA DART Stations
Last Mile Connections
Arapaho Station
February, 2018

H.B & L.L.
8/16/18

DRAFT

side	width Act	width left	C/W	B T	B W	Parking	Condition
N S	4	4	Y	L	3	Y	Ex
N S	4	4	Y	L	5	Y	Ex
N S	4	4	Y	L	25	Y	Ex
N S	4	4	Y	L	3	Y	Ex
N S	4	4	Y	L	3	Y	Ex
N S	4	4	Y	L	3	Y	Ex
N S	4	4	Y	L	3	Y	Ex



Existing Residential and Employment Population (Number of People)
- 0 - 10
- 11 - 50
- 51 - 100
- 101 - 250
- 251 - 578
- 579 - 1000
- 1001 - 1500
- 1501 - 2500
- 2501 - 5000
- 5001 - 24170

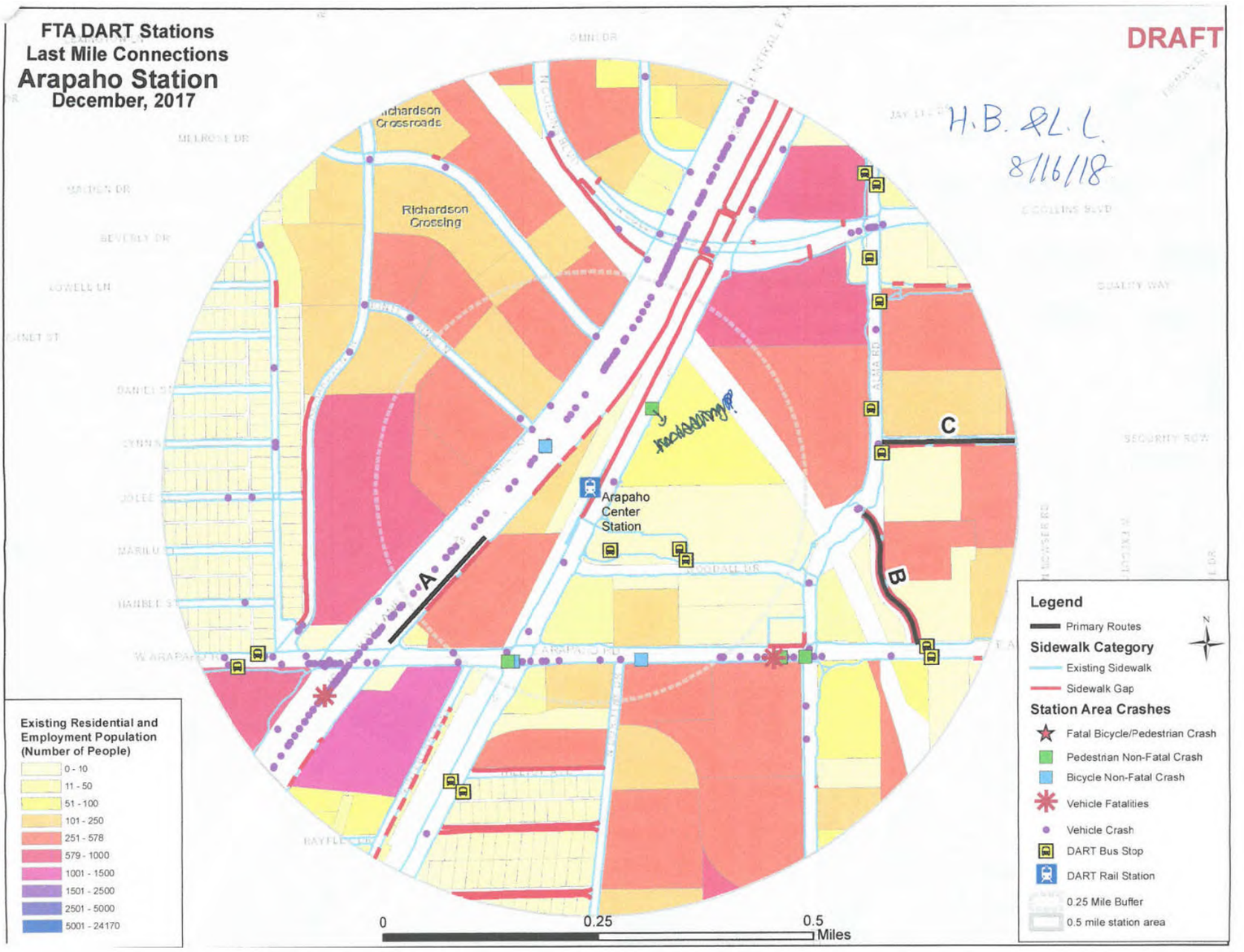
30 A
No Bikelane
No shoulder
2 Lanes
No Lighting
No wayfinding

Legend
- Primary Routes

Segment Category
- Existing Sidewalk
- Sidewalk Gap
- Not Acceptable Sidewalk Condition
- DART Rail Station
- 0.25 Mile Buffer
- 0.5 Mile Buffer

N

North Central Texas Council of Governments



DART Red & Blue Line Last Mile Connections Project — Date 08/16/18 — Station Area **Arapaho Center Station** — Staff Name H.B. & L.L.

Field Data Checklist - Sidewalks

Group Link	Link ID	Street Name	From Street	To Street	Side of Street	Sidewalk Width (ft) Actual	Sidewalk Width (ft) Eff.	Curb & Gutter ?	Buffer Type	Buffer Width	Prevailing Speed or Speed Limit (mph)	Street Widths: On-Street Parking	Bike Lane	Shoulder	No. of Lanes*	If One-Way, Dir. of Travel	Lighting?	Bicycle and Pedestrian Wayfinding?	Notes	Photos?	Grouping
200.15G	28008	E Arapaho Rd	East boundary	railroad	N	0	0	Y	N	0	40	0	0	0	6	-	N	Y N	goat trail		
200.2	27595	E Arapaho Rd	railroad	Grove Road	N	5	5	Y	L	4	40	0	0	0	6	-	N	Y N			
200.35G	28002	E Arapaho Rd	Grove Road	1 Block	N	0	0	Y	N	0	40	0	0	0	6	-	N	Y N			
200.3	27619	E Arapaho Rd		Parking Lot	N	6	6	Y	L	3	40	0	0	0	6	-	N	Y N			
200.4	27624	E Arapaho Rd	Parking Lot	N Greenville Ave	N	5	5	Y	L	4	40	0	0	0	6	-	N	Y N	wiggly sidewalk		
200.5	27650	E Arapaho Rd	N Greenville Ave	U.S. Route 75	N	5	5	Y	L	3	40	0	0	0	6	-	N	Y N			
200.6	27303	E Arapaho Rd	U.S. Route 75	West Bounday	N	4	4	Y	L	3	40	0	0	0	7	-	N	Y N			
201.1	27372	E Arapaho Rd	West Bounday	U.S. Route 75	S	4	4	Y	L	20	40	0	0	0	7	-	N	Y N			
201.2	27633	E Arapaho Rd	U.S. Route 75	N Greenville Ave	S	5	5	Y	N	0	40	0	0	0	6	-	N	Y N			
201.3	28034	E Arapaho Rd	N Greenville Ave	Driveway	S	5	5	Y	L	2	40	0	0	0	6	-	N	Y N			
201.4	27632	E Arapaho Rd	Driveway	Grove Road	S	4	4	Y	L	4	40	0	0	0	6	-	N	Y N			
201.5	28012	E Arapaho Rd	Grove Road	railroad	S	5	5	Y	L	25	40	0	0	0	6	-	N	Y N			
201.65G	28011	E Arapaho Rd	railroad	East Boundary	S	0	0	Y	N	0	40	0	0	0	6	-	N	Y N			
202.1	27584	Grove Road	South Boundary	E Arapaho Rd	W	5	5	Y	L	5	30	0	0	0	4	-	N	Y N			
202.2	28025	Grove Road	South Boundary	E Arapaho Rd	E	5	5	Y	L	5	30	0	0	0	4	-	N	Y N			
203.15G	28001	Alma Rd	E Arapaho Rd	Vacant Lot	W	0	0	Y	N	0	30	0	0	0	4	-	N	Y N			
203.2	27616	Alma Rd	Vacant Lot	Vacant Lot	W	4	4	Y	L	2	30	0	0	0	4	-	N	Y (N)			
203.3	27569	Alma Rd	Parking Lot	Woodall Dr	W	4	4	Y	L	8	30	0	0	0	4	-	N	Y (N)			
204.1	27541	Alma Rd	E Arapaho Rd	Woodall Dr	E	4	4	Y	L	4	30	0	0	0	4	-	Y	Y (N)	Bike lane Ends E/C		
203.4	27561	Alma Rd	Woodall Dr	Alma Rd	W	6	6	Y	L	10	30	0	0	0	4	-	Y	Y (N)	wiggly sidewalk E/C		
204.2	27581	Alma Rd	Woodall Dr	Alma Rd	E	4	4	Y	L	10	30	0	0	0	4	-	N	Y (N)	E/C		
203.5	27991	Alma Rd	Security Row	Alma Rd	W	6	6	Y	L	4	30	0	0	0	4	-	N	Y (N)	E/C		
204.3	27978	Alma Rd	Alma Rd	Security Row	E	5	5	Y	L	6	30	0	0	0	4	-	N	Y (N)	E/C		
203.6	27986	Alma Rd	Security Row	E Collins Blvd	W	6	6	Y	L	3 X	30	0	0	0	4	-	N	Y (N)	E/C		
204.4	27976	Alma Rd	Security Row	E Collins Blvd	E	6	6	Y	N	0	30	0	0	0	4	-	N	Y (N)	E/C		
203.7	27441	Alma Rd	E Collins BLVD	North Boundary	W	5	5	Y	L	3	30	0	0	0	6	-	N	Y (N)	E/C		
204.5	27502	Alma Rd	E Collins BLVD	North Boundary	E	7	7	Y	N	0	30	0	0	0	6	-	N	Y (N)	E/C		
205.15G	27994	Grove Road	E Arapaho Rd	W	0	0	Y	N	0		0	0	0	2	-	N	Y N	dead end			P.R. B
205.25G	27997	Alma Rd	Grove Road	E Arapaho Rd	E	0	0	Y	N	0		0	0	0	2	-	N	Y N			
206.1	27979	Security Row	Alma Rd	N Bowser Rd	N	4	4	Y	L	12	30	0	0	0	2	-	N	Y (N)	Fair F		
206.2	27571	Security Row	N Bowser Rd	Hall+ Dr	S	4	4	Y	N	0	30	0	0	0	2	-	N	Y (N)			P.R. C
206.35G	27985	Security Row	Alma Rd		S	0	0	Y	N	0		0	0	0	2	-	N	Y N			
207.1	28138	N Greenville Ave	South Boundary	E Arapaho Rd	W	10	10	Y	L	6	35	0	0	0	6	-	N	Y N			
207.2	27630	N Greenville Ave	E Arapaho Rd	Arapaho Station	W	10	10	Y	L	3	40	0	0	0	6	-	N	Y N			
207.35G	28099	N Greenville Ave	Arapaho Station	N Collins Blvd	W	0	0	Y	N	0	40	0	0	0	6	-	N	Y N			P.R. D
207.45G	28107	N Greenville Ave	N Collins Blvd	North Boundary	W	0	0	Y	N	0	40	0	0	0	6	-	N	Y N			
208.1	28048	N Greenville Ave	South Boundary	Hilltop Ave	E	5	5	Y	L	3	35	0	0	0	6	-	N	Y N			
208.2	27639	N Greenville Ave	Hilltop Ave	Driveway	E	6	6	Y	L	1	35	0	0	0	6	-	N	Y N			
208.3	27652	N Greenville Ave	Driveway	E Arapaho Rd	E	8	8	Y	L	2	35	0	0	0	6	-	N	Y N			
208.4	27589	N Greenville Ave	E Arapaho Rd	Woodall Dr	E	5	5	Y	L	1	40	0	0	0	6	-	N	Y (N)			
208.5	27714	N Greenville Ave	Woodall Dr	Parking Lot	E	8	8	Y	L	8	40	0	0	0	6	-	N	(Y) N	Fading Yellow stripe		E/C
208.6	27483	N Greenville Ave	Parking Lot	N Collins Blvd	E	8	8	Y	N	0	40	0	0	0	6	-	N	(N) N	"		E/C
208.7	27526	N Greenville Ave	N Collins Blvd	Parking Lot	E	8	8	Y	N	0	40	0	0	0	7	-	N	(N) N			E/C
208.8	27739	N Greenville Ave	Parking Lot	North Boundary	E	5	5	Y	N	0	40	0	0	0	6	-	N	Y (N)			

See http://www.mutcd.com/2011/Samples/Documents/APMv2_ch14.pdf (Sect. 14.5) for more details.

For Side of Street, choose: N NE / S SE / E NW / W SW

Buffer Types: N = None; S = Solid Surface; L = Landscaped; T = Landscaped w/ Trees; V = Vertical (retaining wall)

*All lanes for 2-way street

*Add photos of each sign; sketch signing and marking on separate map

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xt some (L 10') to N of Arapaho

1 = Monte Blaine 2 = Parking is allowed in small section.

DART Red & Blue Line Last Mile Connections Project Date 08/16/18 Station Area **Arapaho Center Station** Staff Name H.B&L.L.

Field Data Checklist - Sidewalks

Group Link	Link ID	Street Name	From Street	To Street	Side of Street	Sidewalk Width (ft) Actual	Sidewalk Width (ft) Eff.	Curb & Gutter ?	Buffer Type	Buffer Width	Prevailing Speed or Speed Limit (mph)	Street Widths On-Street Parking	Bike Lane	Shoulder	No. of Lanes*	If One-Way, Dir. of Travel	Lighting?	Bicycle and Pedestrian Wayfinding?	Notes	Photos?	Grouping
209.1SG	28078	N Central Expy	South Boundary	Parking Lot	SE	0	0	Y	N	0		0	0	0	3	N	N	Y N			P.R. A
209.2	27366	N Central Expy	Parking Lot	E Arapaho Rd	SE	5	5	Y	L	1		0	0	0	3	N	N	Y N			
209.3SG	28083	N Central Expy	E Arapaho Rd	Driveway	SE	0	0	Y	N	0		0	0	0	3	N	N	Y N			P.R. A
209.4	27574	N Central Expy	Driveway	TEN 50	SE	4	4	Y	L	4		0	0	0	3	N	N	Y N			
209.5SG	28087	N Central Expy	TEN 50	Driveway	SE	0	0	Y	N	0	45	0	0	0	3	N	N	Y N			
209.6SG	28093	N Central Expy	Driveway	N Collins Blvd	SE	0	0	Y	N	0	45	0	0	0	3	N	N	Y N			
209.7SG	28097	N Central Expy	N Collins Blvd	North Boundary	SE	0	0	Y	N	0	45	0	0	0	4	N	N	Y N			
210.1	28118	N Central Expy	South Boundary	W Arapaho Rd	NW	4	4	Y	L	20		0	0	0	3	S	N	Y N			
210.2	27360	N Central Expy	W Arapaho Rd	Parking Lot	NW	4	4	Y	L	8		0	0	0	3	S	N	Y N			
210.3	27696	N Central Expy	Parking Lot	North Boundary	NW	6	6	Y	N	0		0	0	0	3	S	N	Y N	EB / P (N of Arapaho)		
211.1	27443	Monte Blaine Ln	N Central Expy	Richardson Dr	SW	5	5	Y	L	4.5		8	0	0	2	-	N	Y N			
211.2	27513	Monte Blaine Ln	N Central Expy	Richardson Dr	NE	5	5	Y	L	4		8	0	0	2	-	N	Y N			
212.1	27506	Melrose Dr	N Central Expy	Richardson Dr	SW	5	5	Y	L	4	30	0	0	0	4	-	N	Y N			
212.2	27955	Melrose Dr	N Central Expy	random	NE	5	5	Y	L	4	30	16	0	0	4	-	N	Y N			
212.3SG	27959	Melrose Dr	random	random	NE	0	0	Y	N	0	30	16	0	0	4	-	N	Y N			
212.4	27743	Melrose Dr	random	Richardson Dr	NE	5	5	Y	L	4		16	0	0	4	-	N	Y N			
212.5	27277	Melrose Dr	Richardson Dr	West Boundary	SW	4	4	Y	L	4	30	0	0	2	-	-	N	Y N	F		
212.6	27272	Melrose Dr	Richardson Dr	West Boundary	NE	4	4	Y	L	4	30	0	0	2	-	-	N	Y N	Pool		
213.1	27301	Richardson Dr	W Arapaho Rd	Lorrie Dr	W	4	4	Y	L	2		0	0	0	4	-	N	Y N			
213.2SG	27962	Richardson Dr	~~Lorrie Dr~~	~~Parking Lot~~	W	0	0	Y	N	0		0	0	0	4	-	N	Y N	some street lighting		
213.3	27276	Richardson Dr	~~Parking Lot~~	Melrose Dr	W	6	6	Y	L	4	35	0	0	0	4	-	N	Y N	rec lighting doucle check		
213.4	27415	Richardson Dr	Melrose Dr	Monte Blaine Ln	E	5	5	Y	L	4	35	0	0	0	4	-	N	Y N			
213.5	27370	Richardson Dr	Monte Blaine Ln	W Arapaho Rd	E	5	5	Y	L	4	35	0	0	0	4	-	N	Y N	Pool		
214.1	27663	N Dorothy Dr	E Arapaho Rd	Hilltop Ave	W	4	4	Y	L	4	30	0	0	0	4	-	N	Y N	no ramps on driveways		
215.1	27804	N Dorothy Dr	E Arapaho Rd	Hilltop Ave	E	4	4	Y	L	5	30	0	0	0	4	-	N	Y N			
214.2	27597	N Dorothy Dr	Hilltop Ave	Hillcrest Ave	W	4	4	Y	N	0	30	0	0	0	4	-	N	Y N			
215.2	27497	N Dorothy Dr	Hilltop Ave	Hillcrest Ave	E	4	4	Y	L	5	30	0	0	0	4	-	N	Y N			
214.3	27462	N Dorothy Dr	Hillcrest Ave	Hillside Ave	W	4	4	Y	N	0	30	0	0	0	4	-	N	Y N			
215.3	27637	N Dorthy Dr	Hillcrest Ave	Hillside Ave	E	4	4	Y	L	5	30	0	0	0	4	-	N	Y N			
216.1SG	28045	Hilltop Ave	N Dorothy Dr	N Greenville Ave	N	0	0	N	N	0	30	16	0	0	2	-	N	Y N	on grass parking		
216.2	27579	Hilltop Ave	N Dorothy Dr	N Greenville Ave	S	4	4	N	L	5	30	16	0	0	2	-	N	Y N	on grass parking		
216.3SG	28044	Hillcrest Ave	N Dorothy Dr	N Greenville Ave	N	0	0	N	N	0	30	0	0	0	2	-	N	Y N	on grass parking		
216.4SG	28043	Hillcrest Ave	N Dorothy Dr	N Greenville Ave	S	0	0	N	N	0	30	0	0	0	2	-	N	Y N	on grass parking		
216.5SG	28042	Hillside Ave	N Dorothy Dr	N Greenville Ave	N	0	0	N	N	0	30	0	0	0	2	-	N	Y N	on grass parking		
216.6SG	28041	Hillside Ave	N Dorothy Dr	N Greenville Ave	S	0	0	N	N	0	30	0	0	0	2	-	N	Y N	on grass parking		
217.1	27583	Woodall Dr	N Greenville Ave	N Grove Rd	N	4	4	Y	L	12	30	0	0	0	2	-	Y	Y N			
217.2	27721	Woodall Dr	N Greenville Ave	N Grove Rd	S	4	4	Y	L	6	30	0	0	0	2	-	N	Y N			
217.3	27777	Woodall Dr	DART Station	DART Station	N	8	8	Y	N	0	-	0	0	0	0	-	Y	Y N			
218.1	27364	Hanbee St	Lorrie Dr	West Boundy	S	4	4	Y	L	6	30	16	0	0	2	-	N	Y N			
218.2	27362	Hanbee St	Lorrie Dr	West Boundy	N	4	4	Y	L	4	30	16	0	0	2	-	N	Y N			
218.3	27341	Marilu St	Lorrie Dr	West Boundy	S	4	4	Y	L	4	30	16	0	0	2	-	N	Y N			
218.4	27344	Marilu St	Lorrie Dr	West Boundy	N	4	4	Y	L	4	30	16	0	0	2	-	N	Y N			
218.5	27392	Jolee St	Lorrie Dr	West Boundy	S	4	4	Y	L	4	30	16	0	0	2	-	N	Y N			
218.6	27298	Jolee St	Lorrie Dr	West Boundy	N	4	4	Y	L	4	30	16	0	0	2	-	N	Y N			
218.7	27331	Daniel St	Lorrie Dr	West Boundy	S	4	4	Y	L	4	30	16	0	0	2	-	N	Y N			

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*All lanes for 2-way street

*Add photos of each sign; sketch signing and marking on separate map

LEE ENGINEERING

DART Red & Blue Line Last Mile Connections Project Date 08/16/18 Station Area **Arapaho Center Station** Staff Name H.B&L.L.

Field Data Checklist - Sidewalks

Group Link	Link ID	Street Name	From Street	To Street	Side of Street	Sidewalk Width (ft) Actual	Sidewalk Width (ft) Eff.	Curb & Gutter ?	Buffer Type	Buffer Width	Prevailing Speed or Speed Limit (mph)	Street Widths On-Street Parking	Bike Lane	Shoulder	No. of Lanes*	If One-Way, Dir. of Travel	Lighting?	Bicycle and Pedestrian Wayfinding?	Notes	Photos?	Grouping
218.8	27321	Daniel St	Lorrie Dr	West Boundy	N	4	4	Y	L	4	30	16	0	0	2	-	N	Y N			
219.1	27263	Vernet St	Lorrie Dr	West Boundy	S	4	4	Y	L	4	30	16	0	0	2	-	N	Y N			
219.2	27262	Vernet St	Lorrie Dr	West Boundy	N	4	4	Y	L	4	30	16	0	0	2	-	N	Y N			
219.3	27318	Lowell Ln	Lorrie Dr	West Boundy	S	4	4	Y	L	4	30	16	0	0	2	-	N	Y N			
219.4	27280	Lowell Ln	Lorrie Dr	West Boundy	N	4	4	Y	L	4	30	16	0	0	2	-	N	Y N			
220.1	27316	Lorrie Dr	W Arapaho Rd	Jolee St	W	4	4	Y	L	4	30	8	0	0	2	-	N	Y N			
220.2	27382	Lorrie Dr	Jolee St	North Boundary	W	4	4	Y	L	4	30	8	0	0	2	-	N	Y N			
220.3	27348	Lorrie Dr	W Arapaho Rd	Jolee St	E	4	4	Y	L	4	30	8	0	0	2	-	N	Y N			
220.4	27342	Lorrie Dr	Jolee St	Lowell Ln	E	4	4	Y	L	4	30	8	0	0	2	-	N	Y N			
220.5SG	27969	Lorrie Dr	Lowell Ln	Lowell Ln	E	0	0	Y	N	0	30	0	0	0	2	-	N	Y N			
220.6	27379	Lorrie Dr	Lowell Ln	North Boundary	E	4	4	Y	L	4	30	0	0	0	2	-	N	Y N			
		Collins	Alma	East B.	N	5	5	Y	N	0	40	0	0	0	4	—	N	Y N	Trim bushes, sprinklers		
		"	"	"	S	5	5	Y	L	3	40	0	0	0	4	—	N	Y N	Bike lane		
		"	Greenville	Alma	S	5	5	Y	S	12	40	0	0	0	1	E	N	Y N			
		"	"	"	N	4	4	Y	L	3	40	0	0	0	1	W	N	Y N			
																		Y N			
		Gateway	W Lim	US 75	S	4	4	Y	L	3	30	0	0	0	2	—	N	Y N	F		
		"	"	"	N	4	4		L	3	30	0	0	0	2	—	N	Y N	F		
																		Y N			
		Central	N Lim	Gateway	W	4	4	Y	0	0	45	0	0	0	3	S	N	Y N	F		
																		Y N			
		"	Gateway	Collins	W	4	4	Y	0	0	45	0	0	0	3	S	N	Y N	F		
																		Y N			
		Collins	W Lim	Central	N	4	4	Y	0	3	40	0	0	0	6	—	N	Y N	F		
		"	W of Bridge		S	4	4	Y	0	3	40	0	0	0	6	—	N	Y N	F		
																		Y N			
																		Y N			
		collins	Bridge		N	4	4	Y	0	0	40	0	0	0	4	—	N	Y N	P } No ped connection on W side		
					S	4	4	Y	0	0	40	0	0	0	4	—	N	Y N	P } Heaving and breaking.		
																		Y N			
		Richardson	N Lim	Melrose	E	4	4	Y	L	4	35	0	0	0	4	—	N	Y N	F		
					W	4	4	Y	L	4	35	0	0	0	4	—	N	Y N	E/C		
																		Y N			
		Richardson	Start point of SW	Monte Blaine	W	5	5	Y	L	3	35	0	0	0	4	—	N	Y N	Pool		
																		Y N			
																		Y N			
																		Y N			
																		Y N			
																		Y N			
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LEE ENGINEERING

DART Red & Blue Line Last Mile Connections Project

Field Data Checklist - Sidewalks

Date 8/16 Station Area **Arapaho Center Station** Staff Name Josh / Selena

Group Link	Link ID	Street Name	From Street	To Street	Side of Street	Sidewalk Width (ft) Actual	Sidewalk Width (ft) Eff.	Curb & Gutter ?	Buffer Type	Buffer Width	Prevailing Speed or Speed Limit (mph)	Street Widths: On-Street Parking	Street Widths: Bike Lane	Street Widths: Shoulder	Street Widths: No. of Lanes*	If One-Way, Dir. of Travel	Lighting?	Bicycle and Pedestrian Wayfinding?	Notes	Photos?	Grouping
200.1SG	28008	E Arapaho Rd	East boundary	railroad	N	6	6	Y	NL	30	40	0	0	0	6	-	N	Y(N)	goat trail	✓	
200.2	27595	E Arapaho Rd	railroad	Grove Road	N	5	5	Y	L	45	40	0	0	0	6	-	N	Y(N)		✓	
200.3SG	28002	E Arapaho Rd	Grove Road	I-Block Cemetery	N	0	0	Y	N	0	40	0	0	0	6	-	N	Y N	4' betw. cem fence	✓	and b/c w/ U.P's.
200.3	27619	E Arapaho Rd	Cemetery	Parking Lot	N	6	6	Y	L	3	40	0	0	0	6	-	N	Y N		✓	
200.4	27624	E Arapaho Rd	Parking Lot	N Greenville Ave	N	5	5	Y	L	4	40	0	0	0	6	-	N	(Y)N	wiggly sidewalk, DART sign	✓	
200.5	27650	E Arapaho Rd	N Greenville Ave	U.S. Route 75	N	5	5	Y	L	30	40	0	0	0	6	-	N	Y(N)			
200.6	27303	E Arapaho Rd	U.S. Route 75	West Boundary	N	4	3	Y	L	22	40	0	0	0	7	-	N	Y(N)			
201.1	27372	E Arapaho Rd	West Boundary	U.S. Route 75	S	5	5	Y	L	20	40	0	0	0	7	-	N	Y(N)	bif. vary 4-20		
201.2	27633	E Arapaho Rd	U.S. Route 75	N Greenville Ave	S	6	4	Y	N	0	40	0	0	0	6	-	N	Y(N)			
201.3	28034	E Arapaho Rd	N Greenville Ave	~~Driveway~~ Dorothy Dr	S	7	5	Y	L	25	40	0	0	0	6	-	N	Y(N)			
201.4	27632	E Arapaho Rd	~~Driveway~~ Dorothy Dr	Grove Road	S	5	5	Y	L	4	40	0	0	0	6	-	N	(Y)N	Bike Lane / Park signs	✓	One very poor seg w/ 4" gap
201.5	28012	E Arapaho Rd	Grove Road	railroad	S	5	5	Y	L	25	40	0	0	0	6	-	N	Y(N)	SW members	✓	4' grass buffer
201.6SG	28011	E Arapaho Rd	railroad	East Boundary	S	7	7	Y	N	0	40	0	0	0	6	-	N	Y(N)	In places 5' SW w/		(but signed)
202.1	27584	Grove Road	South Boundary	E Arapaho Rd	W	5	5	Y	L	5	30	0	0	12	0	-	N	Y(N)	Bike lane faded	✓	(but signed)
202.2	28025	Grove Road	South Boundary	E Arapaho Rd	E	5	5	Y	L	5	30	0	0	12	0	-	N	Y(N)	Bike lane faded	✓	
203.1SG	28001	Alma Rd	E Arapaho Rd	Vacant Lot	W	0	0	Y	N	0	30	0	0	0	4	-	N	Y N			
203.2	27616	Alma Rd	Vacant Lot	Vacant Lot	W	6	6	Y	L	2	30	0	0	0	4	-	N	Y N			
203.3	27569	Alma Rd	Parking Lot	Woodall Dr	W	4	4	Y	L	8	30	0	0	0	4	-	N	Y N			
204.1	27541	Alma Rd	E Arapaho Rd	Woodall Dr	E	4	4	Y	L	4	30	0	0	0	4	-	Y	Y N			
203.4	27561	Alma Rd	Woodall Dr	Alma Rd	W	6	6	Y	L	10	30	0	0	0	4	-	Y	Y N	wiggly sidewalk		
204.2	27581	Alma Rd	Woodall Dr	Alma Rd	E	4	4	Y	L	10	30	0	0	0	4	-	N	Y N			
203.5	27991	Alma Rd	Alma Rd	Security Row	W	6	6	Y	L	4	30	0	0	0	4	-	N	Y N			
204.3	27978	Alma Rd	Alma Rd	Security Row	E	5	5	Y	L	6	30	0	0	0	4	-	N	Y N			
203.6	27986	Alma Rd	Security Row	E Collins Blvd	W	6	6	Y	L	1	30	0	0	0	4	-	N	Y N			
204.4	27976	Alma Rd	Security Row	E Collins Blvd	E	7	7	Y	N	0	30	0	0	0	4	-	N	Y N			
203.7	27441	Alma Rd	E Collins BLVD	North Boundary	W	5	5	Y	L	1	30	0	0	0	6	-	N	Y N			
204.5	27502	Alma Rd	E Collins BLVD	North Boundary	E	7	7	Y	N	0	30	0	0	0	6	-	N	Y N			
205.1SG	27994	Alma Rd	Grove Road	E Arapaho Rd	W	0	0	Y	N	0		0	0	0	2	-	N	Y N	dead end		P.R. B
205.2SG	27997	Alma Rd	Grove Road	E Arapaho Rd	E	0	0	Y	N	0		0	0	0	2	-	N	Y N			
206.1	27979	Security Row	Alma Rd	N Bowser Rd	N	4	4	Y	L	12		0	0	0	2	-	N	Y N			
206.2	27571	Security Row	N Bowser Rd		S	4	4	Y	N	0		0	0	0	2	-	N	Y N			P.R. C
206.3SG	27985	Security Row		Alma Rd	S	0	0	Y	N	0		0	0	0	2	-	N	Y N			
207.1	28138	N Greenville Ave	South Boundary	E Arapaho Rd	W	10	10	Y	L	6	35	0	0	0	6	-	N	(Y)N*			
207.2	27630	N Greenville Ave	E Arapaho Rd	Arapaho Station	W	10	10	Y	L	3	40	0	0	0	6	-	N	(Y)N	median light		
207.3SG	28099	N Greenville Ave	Arapaho Station	N Collins Blvd	W	0	0	Y	N	0	40	0	0	0	6	-	N	Y N			P.R. D
207.4SG	28107	N Greenville Ave	N Collins Blvd	North Boundary	W	0	0	Y	N	0	40	0	0	0	6	-	N	Y N			
208.1	28048	N Greenville Ave	South Boundary	Hilltop Ave	E	5	3	Y	L	3	35	0	0	0	6	-	N	(Y)N	lawn maint		
208.2	27639	N Greenville Ave	Hilltop Ave	Driveway	E	6	6	Y	L	1	35	0	0	0	6	-	N	(Y)N	lawn maint		
208.3	27652	N Greenville Ave	Driveway	E Arapaho Rd	E	8	4	Y	L	2	35	0	0	0	6	-	N	(Y)N			
208.4	27589	N Greenville Ave	E Arapaho Rd	Woodall Dr	E	5	5	Y	L	1	40	0	0	0	6	-	N	Y N			
208.5	27714	N Greenville Ave	Woodall Dr	Parking Lot	E	8	8	Y	L	8	40	0	0	0	6	-	N	Y N			
208.6	27483	N Greenville Ave	Parking Lot	N Collins Blvd	E	8	8	Y	N	0	40	0	0	0	6	-	N	Y N			
208.7	27526	N Greenville Ave	N Collins Blvd	Parking Lot	E	8	8	Y	N	0	40	0	0	0	7	-	N	Y N			
208.8	27739	N Greenville Ave	Parking Lot	North Boundary	E	5	5	Y	L	2	40	0	0	0	6	-	N	Y N			

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LEE ENGINEERING

DART Red & Blue Line Last Mile Connections Project

Field Data Checklist - Sidewalks

Date 8/16 Station Area **Arapaho Center Station** Staff Name Josh / Selena

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209.1SG	28078	N Central Expy	South Boundary	Parking Lot	SE	6	4	Y	N	0	45	0	0	0	5	-	N	Y N			P.R. A
209.2	27366	N Central Expy	Parking Lot	E Arapaho Rd	SE	5	5	Y	NL	0	45	0	0	0	3	-	N	Y N			
209.3SG	28083	N Central Expy	E Arapaho Rd	Driveway	SE	5	3	Y	N	0	45	0	0	0	5	-	N	Y N			P.R. A
209.4	27574	N Central Expy	Driveway	TEN 50	SE	4	4	Y	L	4	45	0	0	0	3	-	N	Y N	gas line		
209.5SG	28087	N Central Expy	TEN 50	Driveway	SE	5	5	Y	N	0	45	0	0	0	3	-	N	Y N			
209.6SG	28093	N Central Expy	Driveway	N Collins Blvd	E	0	0	Y	N	0	45	0	0	0	3	-	N	Y N			
209.7SG	28097	N Central Expy	N Collins Blvd	North Boundary	SE	0	0	Y	N	0	45	0	0	0	4	-	N	Y N			
210.1	28118	N Central Expy	South Boundary	W Arapaho Rd	NW	5	4	Y	NL	20		0	0	0	3	-	N	Y N	bif. vary		
210.2	27360	N Central Expy	W Arapaho Rd	Parking Lot	NW	4	4	Y	L	8		0	0	0	3	S	N	Y N			
210.3	27696	N Central Expy	Parking Lot	North Boundary	NW	6	6	Y	N	0		0	0	0	3	S	N	Y N			
211.1	27443	Monte Blaine Ln	N Central Expy	Richardson Dr	SW	5	5	Y	L	4.5		8	0	0	2	-	N	Y N			
211.2	27513	Monte Blaine Ln	N Central Expy	Richardson Dr	NE	5	5	Y	L	4		8	0	0	2	-	N	Y N			
212.1	27506	Melrose Dr	N Central Expy	Richardson Dr	SW	5	5	Y	L	4		16	0	0	4	-	N	Y N			
212.2	27955	Melrose Dr	N Central Expy	random	NE	5	5	Y	L	4		16	0	0	4	-	N	Y N			
212.3SG	27959	Melrose Dr	random	random	NE	0	0	Y	N	0		16	0	0	4	-	N	Y N			
212.4	27743	Melrose Dr	random	Richardson Dr	NE	5	5	Y	L	4		16	0	0	4	-	N	Y N			
212.5	27277	Melrose Dr	Richardson Dr	West Boundary	SW	4	4	Y	L	10		16	0	0	4	-	N	Y N			
212.6	27272	Melrose Dr	Richardson Dr	West Boundary	NE	4	4	Y	L	10		16	0	0	4	-	N	Y N			
213.1	27301	Richardson Dr	W Arapaho Rd	Lorrie Dr	W	4	4	Y	L	2		0	0	0	4	-	N	Y N			
213.2SG	27962	Richardson Dr	Lorrie Dr	Parking Lot	W	0	0	Y	N	0		0	0	0	4	-	N	Y N	some street lighting		
213.3	27276	Richardson Dr	Parking Lot	Melrose Dr	W	5	5	Y	L	4		0	0	0	4	-	N	Y N	rec lighting doucle check		
213.4	27415	Richardson Dr	Melrose Dr	Monte Blaine Ln	E	5	5	Y	L	4		0	0	0	4	-	N	Y N			
213.5	27370	Richardson Dr	Monte Blaine Ln	W Arapaho Rd	E	5	5	Y	L	4		0	0	0	4	-	N	Y N			
214.1	27663	N Dorothy Dr	E Arapaho Rd	Hilltop Ave	W	4	4	Y	L	30		0	0	0	2	-	N	Y(N)	no ramps on driveways		
215.1	27804	N Dorothy Dr	E Arapaho Rd	Hilltop Ave	E	4	4	Y	L	5	30	0	0	0	4	-	N	Y N			
214.2	27597	N Dorothy Dr	Hilltop Ave	Hillcrest Ave	W	4	4	Y	N	0	30	0	0	0	4	-	N	Y N			
215.2	27497	N Dorothy Dr	Hilltop Ave	Hillcrest Ave	E	4	4	Y	L	5	30	0	0	0	4	-	N	Y N			
214.3	27462	N Dorothy Dr	Hillcrest Ave	Hillside Ave	W	4	4	Y	N	0	30	0	0	0	2	-	N	Y(N)			
215.3	27637	N Dorthy Dr	Hillcrest Ave	Hillside Ave	E	4	4	Y	L	5	30	0	0	0	2	-	N	Y(N)			
216.1SG	28045	Hilltop Ave	N Dorothy Dr	N Greenville Ave	N	0	0	N	N	0	30	16	0	0	2	-	N	Y(N)	no grass parking		
216.2	27579	Hilltop Ave	N Dorothy Dr	N Greenville Ave	S	4	4	N	L	5	30	16	0	0	2	-	N	Y(N)	no grass parking		
216.3SG	28044	Hillcrest Ave	N Dorothy Dr	N Greenville Ave	N	0	0	N	N	0	30	0	0	0	2	-	N	Y(N)	on grass parking		
216.4SG	28043	Hillcrest Ave	N Dorothy Dr	N Greenville Ave	S	0	0	N	N	0	30	0	0	0	2	-	N	Y(N)	on grass parking		
216.5SG	28042	Hillside Ave	N Dorothy Dr	N Greenville Ave	N	0	0	N	N	0	30	0	0	0	2	-	N	Y(N)	on grass parking		
216.6SG	28041	Hillside Ave	N Dorothy Dr	N Greenville Ave	S	0	0	N	N	0	30	0	0	0	2	-	N	Y(N)	on grass parking		
217.1	27583	Woodall Dr	N Greenville Ave	N Grove Rd	N	4	4	Y	L	12		0	0	0	2	-	Y	Y N			
217.2	27721	Woodall Dr	N Greenville Ave	N Grove Rd	S	5	5	Y	L	6		0	0	0	2	-	N	Y N			
217.3	27777	Woodall Dr	DART Station	DART Station	N	6	6	Y	N	0						-	Y	Y N			
218.1	27364	Hanbee St	Lorrie Dr	West Boundary	S	4	4	Y	L	6	30	16	0	0	2	-	N	Y N			
218.2	27362	Hanbee St	Lorrie Dr	West Boundary	N	4	4	Y	L	4	30	16	0	0	2	-	N	Y N			
218.3	27341	Marilu St	Lorrie Dr	West Boundary	S	4	4	Y	L	4	30	16	0	0	2	-	N	Y N			
218.4	27344	Marilu St	Lorrie Dr	West Boundary	N	4	4	Y	L	4	30	16	0	0	2	-	N	Y N			
218.5	27392	Jolee St	Lorrie Dr	West Boundary	S	4	4	Y	L	4	30	16	0	0	2	-	N	Y N			
218.6	27298	Jolee St	Lorrie Dr	West Boundary	N	4	4	Y	L	4	30	16	0	0	2	-	N	Y N			
218.7	27331	Daniel St	Lorrie Dr	West Boundary	S	4	4	Y	L	4	30	16	0	0	2	-	N	Y N			

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Field Data Checklist - Sidewalks

Date 8/16 Station Area **Arapaho Center Station** Staff Name Josh / Selena

Group Link	Link ID	Street Name	From Street	To Street	Side of Street	Sidewalk Width (ft) Actual	Sidewalk Width (ft) Eff.	Curb & Gutter ?	Buffer Type	Buffer Width	Prevailing Speed or Speed Limit (mph)	Street Widths: On-Street Parking	Street Widths: Bike Lane	Street Widths: Shoulder	Street Widths: No. of Lanes*	If One-Way, Dir. of Travel	Lighting?	Bicycle and Pedestrian Wayfinding?	Notes	Photos?	Grouping
218.8	27321	Daniel St	Lorrie Dr	West Boundary	N	4	4	Y	L	4	30	16	0	0	2	-	N	Y N			
219.1	27263	Vernet St	Lorrie Dr	West Boundary	S	4	4	Y	L	4	30	16	0	0	2	-	N	Y N			
219.2	27262	Vernet St	Lorrie Dr	West Boundary	N	4	4	Y	L	4	30	16	0	0	2	-	N	Y N			
219.3	27318	Lowell Ln	Lorrie Dr	West Boundary	S	4	4	Y	L	4	30	16	0	0	2	-	N	Y N			
219.4	27280	Lowell Ln	Lorrie Dr	West Boundary	N	4	4	Y	L	4	30	16	0	0	2	-	N	Y N			
220.1	27316	Lorrie Dr	W Arapaho Rd	Jolee St	W	4	4	Y	L	4	30	8	0	0	2	-	N	Y N			
220.2	27382	Lorrie Dr	Jolee St	North Boundary	W	4	4	Y	L	4	30	8	0	0	2	-	N	Y N			
220.3	27348	Lorrie Dr	W Arapaho Rd	Jolee St	E	4	4	Y	L	4	30	8	0	0	2	-	N	Y N			
220.4	27342	Lorrie Dr	Jolee St	Lowell Ln	E	4	4	Y	L	4	30	8	0	0	2	-	N	Y N			
220.55G	27969	Lorrie Dr	Lowell Ln	Lowell Ln	E	0	0	Y	N	0	30	0	0	0	2	-	N	Y N			
220.6	27379	Lorrie Dr	Lowell Ln	North Boundary	E	4	4	Y	L	4	30	0	0	0	2	-	N	Y N			
		Arapaho	NBFR	SBFR	N	6	6	Y	N	0	20	6	0	0	1	SBM	Y	Y N			
		Interurban	Arapaho	Reed	S	6	6	Y	N	0	20	6	0	0	1	NBM	N	Y N			
					W	6	5.5	Y	N	0	30	4	0	0	4	-	N	Y N			
					E	6	6	Y	N	0	30	4	0	0	4	-	N	Y N			

See http://www.oregon.gov/ODOT/Planning/Documents/APMv2_Ch14.pdf (Sect. 14.5) for more details.

For Side of Street, choose:
N NE
S SE
E NW
W SW

Buffer Types:
N = None
S = Solid Surface
L = Landscaped
T = Landscaped w/ Trees
V = Vertical (retaining wall)

*All lanes for 2-way street

*Add photos of each sign; sketch signing and marking on separate map

LEE ENGINEERING

DART Red & Blue Line Last Mile Connections Project
Field Data Checklist - Signalized Crossings

Date 8/16 Station Area Arapaho Center Staff Name Josh / Selena

"Wait" is only APS messg. loud enough to be audible. "Walk sign" on to cross... not loud enough.

Not straight

Location Type (circle one)	Street Crossed	At/Between Street(s)	Int. Leg	Stop Control?	Lighting Present?	If Signalized: No. Lanes Crossed: Per Direction	No. Lanes Crossed: Total	Med. Refuge Width	Both Ped. Ramps Present?	Permitted: Left Turns?	Permitted: Right Turns?	Countdown Ped. Signals?	Pushbuttons: Functional?	Pushbuttons: w/ APS Signals?	>1 Refuge Island?	No. of Lanes Crossed at Once	>4 legs or high skew	Closed or limited x-walks	Channelized Right Turns	Photo(s)?	Notes
I	~~Alma Rd~~ Grant Rd	N Collins Blvd	N	Y	N											7	N				58
I	~~Alma Rd~~ Grant Rd	N Collins Blvd	S	Y	N											7	N				58
I	N Collins Blvd	Alma Rd	W	Y	N											6	N				60
I	N Collins Blvd	Alma Rd	E	Y	N											6	N				60
I	N Grove Rd	E Arapaho Rd	N	Y	Y	3	4	2	Y	Y	Y	Y	Y	Y	N	4	N	N	N	✓	y-walk wrong ramps
I	N Grove Rd	E Arapaho Rd	S	Y	Y	3	5	2	Y	Y	Y	Y	Y	Y	N	4	N	N	N	✓	X-walk striped wrong
I	E Arapaho Rd	N Grove Rd	W	Y	Y	5	8	2	Y	Y	Y	Y	Y	Y	N	8	N	N	N	✓	57
I	E Arapaho Rd	N Grove Rd	E	Y	N	4	7	2	Y	Y	Y	Y	Y	Y	N	7	N	N	N	✓	X-walk not straight
I	E Arapaho Rd	N Greenville Ave	W	Y	N	6	9	0	Y	Y	Y	Y	Y	N	N	8	N	N	Y	✓	
I	E Arapaho Rd	N Greenville Ave	E	Y	Y	6	9	0	Y	Y	Y	Y	Y	N	N	8	N	N	Y	✓	
I	N Greenville Ave	E Arapaho Rd	N	Y	Y	6	10	2	Y	Y	Y	Y	Y	N	N	9	N	N	Y	✓	
I	N Greenville Ave	E Arapaho Rd	S	Y	Y	6	10	2	Y	Y	Y	N	Y	N	N	9	N	N	Y	✓	
I	N Central EXPY ⟷	E Arapaho Rd	W	Y	Y											10	Y				36
I	N Central EXPY ⟷	E Arapaho Rd	E	Y	Y	5		2	Y	N	Y	Y	Y	N	N	10	Y	N	Y	✓	36
I	E Arapaho Rd ⟷	N Central EXPY NBFR	N	Y	N	3	3	2	Y	Y	Y	Y	Y	N	N	3	Y	N	N	✓	
I	E Arapaho Rd ⟷	N Central EXPY SBFR	S	Y	N	4	4	0	Y	Y	Y	Y	Y	N	N	4	Y	N	N	✓	
I M	~~Arapaho~~	NBFR-SBFR	N		N																
I M	SBFR	Arapaho	N		N	4	4	0	Y	Y	Y	Y	Y	N	N	4	N	N	N	✓	
I M	SBFR	Arapaho	S		N	2	2	0	Y	N	N	Y	Y	N	N	2	N	N	Y	✓	
I M																					
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Choose:
I = Intersection
M = Mid-Block

Complete in office, confirm in field
Confirm in field

For Int. Leg, choose:
N NE
S SE
E NW
W SW
(N/A for mid-block)

Buffer Types:
N = None
S = Solid Surface
L = Landscaped
T = Landscaped w/ Trees
V = Vertical (retaining wall)

*All lanes for 2-way street

LEE ENGINEERING

See http://www.oregon.gov/ODOT/Planning/Documents/APMv2_Ch14.pdf (Sect. 14.5) for more details.
Consider adding items from Page 9 of https://www.fhwa.dot.gov/innovation/everydaycounts/edc_4/guide_to_improve_uncontrolled_crossings.pdf

DART Red & Blue Line Last Mile Connections Project
Field Data Checklist - Signalized Crossings

Date 08/16/18. Station Area Arapaho. Station Staff Name H.B & L.L

Location Type (circle one)	Street Crossed	At/Between Street(s)	Int. Leg	Stop Control?	Lighting Present?	No. Lanes Crossed: Per Direction	No. Lanes Crossed: Total	Med. Refuge Width	Both Ped. Ramps Present?	Permitted: Left Turns?	Permitted: Right Turns?	If Signalized: Countdown Ped. Signals?	If Signalized: Pushbuttons Functional?	If Signalized: Pushbuttons w/ APS Signals?	>1 Refuge Island?	No. of Lanes Crossed at Once	>4 legs or high skew	Closed or limited x-walks	Channelized Right Turns	Photo(s)?	Notes
I	Alma Rd	N Collins Blvd	N	Y	N	2	6	N	Y	Y	Y	Y	Y	N	N	7	N	N	N	✓	E Leg has 2nd Ped Push button in the middle 58
I	Alma Rd	N Collins Blvd	S	Y	N	2	5	N	Y	Y	Y	Y	Y*	N	N	7	N	N	N	✓	* Ped B. No beeping 58
I	N Collins Blvd	Alma Rd	W	Y	N	2	6	N	Y	Y	Y	Y	Y	N	N	6	N	N	N	✓	NWC only 1 Push B. 58
I	N Collins Blvd	Alma Rd	E	Y	N	2	7	N	Y	Y	Y	Y	Y	N	N	6	N	N	Y	✓	Bike lane on Collins 59
I	N Grove Rd	E Arapaho Rd	N	Y	N											6	N				59
I	N Grove Rd	E Arapaho Rd	S	Y	N											6	N				59
I	E Arapaho Rd	N Grove Rd	W	Y	N											7	N				57
I	E Arapaho Rd	N Grove Rd	E	Y	N											7	N				57
I	E Arapaho Rd	N Greenville Ave	W	Y	Y											8	N				
I	E Arapaho Rd	N Greenville Ave	E	Y	Y											8	N				
I	N Greenville Ave	E Arapaho Rd	N	Y	Y											8	N				
I	N Greenville Ave	E Arapaho Rd	S	Y	Y											8	N				
I	N Central EXPY	E Arapaho Rd	W	Y	Y											10	Y				36
I	N Central EXPY	E Arapaho Rd	E	Y	Y											10	Y				36
I	E Arapaho Rd	N Central EXPY	N	Y	N											8	Y				
I	E Arapaho Rd	N Central EXPY	S	Y	N											8	Y				
I M	Collins (S)	Greenville	E	N	N	1	1	N	Y	N	N	Y	Y	N	N	1	N	N	N		one-way, No Ped crosswalk marks & push button on the wrong side
I M	~~Collins~~																				
I M	Collins (N)	Greenville	E	N	N	1	1	N	Y	Y	Y	Y	Y	N	N	1	N	N	Y		
I M	~~Collins Blvd~~	~~Alma Rd~~	~~N~~																		
I M	~~Security Rd~~	~~Bowser~~	~~W~~	~~N~~																	
I M	~~Alma / Grove~~	~~Alma~~	~~E~~																		
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Choose:
I = Intersection
M = Mid-Block

For Int. Leg, choose:
N NE
S SE
E NW
W SW
(N/A for mid-block)

Buffer Types:
N = None
S = Solid Surface
L = Landscaped
T = Landscaped w/ Trees
V = Vertical (retaining wall)

*All lanes for 2-way street

Complete in office, confirm in field
Confirm in field

LEE ENGINEERING

See http://www.oregon.gov/ODOT/Planning/Documents/APMv2_Ch14.pdf (Sect. 14.5) for more details.
Consider adding items from Page 9 of https://www.fhwa.dot.gov/innovation/everydaycounts/edc_4/guide_to_improve_uncontrolled_crossings.pdf

DART Red & Blue Line Last Mile Connections Project
Field Data Checklist - Unsignalized Crossings

Date 8/16 Station Area Arapaho Center Staff Name Josh / Selena

Link ID or "New"	Location Type (circle one)	Street Crossed	At/Between Street(s)	Int. Leg	Stop Control?	Lighting Present?	If No Stop Control (i.e. if Free or Signal): No. Lanes Crossed: Per Direction	No. Lanes Crossed: Total	Med. Refuge Width	Both Ped. Ramps Present?	If Unsignalized with no Stop Control (i.e. Free): Speed Limit (mph)	One Way?	2-Min. Traffic Count*: Time	2-Min. Traffic Count*: Volume	Treatment present (circle all)	Photo(s)?	Notes
	I	Quality Way	Alma Rd	E	Y	N	1	1	0			Y N			Mkg RSg RRFB InSgn Cex RCwk		
	I	Security Row	Alma Rd	E	Y	N	1	3	0			Y N			Mkg RSg RRFB InSgn Cex RCwk		
	I	Alma Rd	Alma Rd	SE	N	N	1	2	0			Y N	N/A	N/A	Mkg RSg RRFB InSgn Cex RCwk		58
	I	N Grove Rd	Woodall Dr	N	N	N	2	4	0			Y N	N/A	N/A	Mkg RSg RRFB InSgn Cex RCwk		57
	I	N Grove Rd	Woodall Dr	SE	N	N	2	4	0			Y N	N/A	N/A	Mkg RSg RRFB InSgn Cex RCwk		57
	I	Woodall Dr	N Grove Rd	W	N	N	2	4	0			Y N			Mkg RSg RRFB InSgn Cex RCwk		
	I	N Dorthy Dr	E Arapaho Rd	S	N	N	1	2	0			Y N	N/A	N/A	Mkg RSg RRFB InSgn Cex RCwk		46
	M	E Arapaho Rd	N Dorthy Dr		N	N	3	8	0			Y N	N/A	N/A	Mkg RSg RRFB InSgn Cex RCwk		59
	I M	Arapaho	Richardson	N	N	N	2	3	2	Y		Y (N circled)			Mkg RSg RRFB InSgn Cex RCwk		
	I M											Y N			Mkg RSg RRFB InSgn Cex RCwk		
	I M											Y N			Mkg RSg RRFB InSgn Cex RCwk		
	I M											Y N			Mkg RSg RRFB InSgn Cex RCwk		
	I M											Y N			Mkg RSg RRFB InSgn Cex RCwk		
	I M											Y N			Mkg RSg RRFB InSgn Cex RCwk		
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	I M											Y N			Mkg RSg RRFB InSgn Cex RCwk		
	I M											Y N			Mkg RSg RRFB InSgn Cex RCwk		
	I M											Y N			Mkg RSg RRFB InSgn Cex RCwk		

DART Red & Blue Line Last Mile Connections Project
Field Data Checklist - Unsignalized Crossings

Date 08/16/18 Station Area Arapaho Staff Name H.B. & L.L.

Link ID or "New"	Location Type (circle one)	Street Crossed	At/Between Street(s)	Int. Leg	Stop Control?	Lighting Present?	If No Stop Control (i.e. if Free or Signal): No. Lanes Crossed – Per Direction	No. Lanes Crossed – Total	Med. Refuge Width	Both Ped. Ramps Present?	If Unsignalized with no Stop Control (i.e. Free): Speed Limit (mph)	One Way?	2-Min. Traffic Count* – Time	2-Min. Traffic Count* – Volume	Treatment present (circle all)	Photo(s)?	Notes
	I	Quality Way	Alma Rd	E	Y	N	1	1	0			Y N			Mkg RSg RRFB InSgn Cex RCwk		
→	I	Security Row	Alma Rd	E	Y	N	1	3	0	Y	30	Y N	[illegible]		Mkg RSg RRFB InSgn Cex RCwk	✓	No Ped markings
	I	Alma Rd / Grove	Alma Rd	E SE	N Y	N	1	2	0	Y	30	Y N	N/A	N/A	Mkg RSg RRFB InSgn Cex RCwk	✓	No Ped markings 58
	I	N Grove Rd	Woodall Dr	N	N	Y	2	5	0	Y	30	Y N	N/A	N/A	Mkg RSg RRFB InSgn Cex RCwk		light on SEC. 57
	I	N Grove Rd	Woodall Dr	S	N	Y	2	5	0	Y	30	Y N	N/A	N/A	Mkg RSg RRFB InSgn Cex RCwk		57
	I	Woodall Dr	N Grove Rd	W	Y	Y	1	2	0	Y	30	Y N	—	—	Mkg RSg RRFB InSgn Cex RCwk		
	I	N Dorthy Dr	E Arapaho Rd	S	N	N	1	2	0			Y N	N/A	N/A	Mkg RSg RRFB InSgn Cex RCwk		46
	M	E Arapaho Rd	N Dorthy Dr		N	N	3	8	0			Y N	N/A	N/A	Mkg RSg RRFB InSgn Cex RCwk		59
	I M	Greenville	Woodall Dr.	E	N	Y	3	8	0	N	40	Y N	7:40	14	Mkg RSg RRFB InSgn Cex RCwk	✓	No Ramp on WS, No Crosswalk markings
	I M	Woodall Dr	Greenville	N	Y	Y	1	3	0	Y	30	Y N			Mkg RSg RRFB InSgn Cex RCwk		
	I M	Woodall Dr	Greenville	S	Y	Y	1	3	0	Y	30	Y N			Mkg RSg RRFB InSgn Cex RCwk		
	I M	Alma	Security Row	S	N	N	2	5	0	Y	30	Y N	9:42	11	Mkg RSg RRFB InSgn Cex RCwk	✓	No Ped markings
	I M	Alma	Security Row	N	N	N	2	5	0	Y	30	Y N	9:42	11	Mkg RSg RRFB InSgn Cex RCwk	✓	
	I M	Alma	Grove/Alma	S	N	N	2	5	0	Y	30	Y N			Mkg RSg RRFB InSgn Cex RCwk		
	I M	Alma	Grove/Alma	N	N	N	2	5	0	Y	30	Y N			Mkg RSg RRFB InSgn Cex RCwk	✓	
	I M	Richardson	Monte Blaine	[illegible]	N	N	1	2	0	Y	30	Y N			Mkg RSg RRFB InSgn Cex RCwk	✓	No Ped markings
	I M	Richardson	Monte Blaine	N	Y	N	2	4	0	Y	30	Y N	3:30	16	Mkg RSg RRFB InSgn Cex RCwk	✓	No lights
	I M	—	—	S	Y	N	2	4	0	Y	30	Y N	3:30	16	Mkg RSg RRFB InSgn Cex RCwk	✓	
	I M											Y N			Mkg RSg RRFB InSgn Cex RCwk		
	I M											Y N			Mkg RSg RRFB InSgn Cex RCwk		
	I M											Y N			Mkg RSg RRFB InSgn Cex RCwk		
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DART Red & Blue Line Last Mile Connections Project
Field Data Checklist - Sidewalk Gaps

Date 8/16/18
Station Arapaho
Staff Name Josh / Selena
Location Arapaho

Instructions : When coding/confirming sidewalk condition of "Nonexistant" on sidewalk checklist, review the following and make notes here and/or on the sidewalk checklist.

What challenges are there to the feasibility/practicability of sidewalk?
Circle items below and add notes/sketches as applicable.

Utility poles? No

Underground utilities? maybe - san. sewer manhole, fh

Trees? No

Slopes? No

Other structures? No

Rail crossings? No

Business parking/access management issues? No - 2 dwy to cross

Insufficient bridge width? No

Take photos and notes to document. ✓

Other Notes:

DART sign

LEE ENGINEERING

DART Red & Blue Line Last Mile Connections Project
Field Data Checklist - Sidewalk Gaps

Date 08/16/18
Station Arapaho
Staff Name Josh / Selena
Location NBFR
Collins to Arapaho last side

Instructions : When coding/confirming sidewalk condition of "Nonexistant" on sidewalk checklist, review the following and make notes here and/or on the sidewalk checklist.

What challenges are there to the feasibility/practicability of sidewalk?
Circle items below and add notes/sketches as applicable.

Utility poles? No

Underground utilities? maybe - sprinkler, solo power irrigation, water meter

Trees? Yes

Slopes? No

Other structures? No

Rail crossings? No

Business parking/access management issues? No

Insufficient bridge width? No

Take photos and notes to document. ✓

Other Notes:

45 mph

DART Red & Blue Line Last Mile Connections Project
Field Data Checklist - Sidewalk Gaps

Date 08/16/18
Station Arapaho
Staff Name Josh / selena
Location NBFR
Arapaho to 10 30 BBQ last side

Instructions : When coding/confirming sidewalk condition of "Nonexistant" on sidewalk checklist, review the following and make notes here and/or on the sidewalk checklist.

What challenges are there to the feasibility/practicability of sidewalk?
Circle items below and add notes/sketches as applicable.

Utility poles? No

Underground utilities? maybe - fibre optic

Trees? Yes - roots

Slopes? No

Other structures? No

Rail crossings? No

Business parking/access management issues? No

Insufficient bridge width? No

Take photos and notes to document. ✓

Other Notes:

45 mph

DART Red & Blue Line Last Mile Connections Project
Field Data Checklist - Sidewalk Gaps

Date 08/16/18
Station Arapaho
Staff Name Josh / Selena
Location ~~Hillside~~ Greenmill to Dorothy

Instructions : When coding/confirming sidewalk condition of "Nonexistant" on sidewalk checklist, review the following and make notes here and/or on the sidewalk checklist.

north : south side

What challenges are there to the feasibility/practicability of sidewalk?
Circle items below and add notes/sketches as applicable.

Utility poles? No

Underground utilities? No

Trees? Yes

Slopes? 2/.

Other structures? No

Rail crossings? No

Business parking/access management issues? No

Insufficient bridge width? No

Take photos and notes to document. ✓

Other Notes:
parking problem

DART Red & Blue Line Last Mile Connections Project
Field Data Checklist - Sidewalk Gaps

Date 8/16/18
Station Arapaho
Staff Name Josh / Selena
Location ~~Hillcrest~~ Dorothy to Greenmill

Instructions : When coding/confirming sidewalk condition of "Nonexistant" on sidewalk checklist, review the following and make notes here and/or on the sidewalk checklist.

north : south

What challenges are there to the feasibility/practicability of sidewalk?
Circle items below and add notes/sketches as applicable.

Utility poles? No

Underground utilities? ~~No~~ maybe - drainage problem

Trees? No

Slopes? need filter

Other structures? No

Rail crossings? No

Business parking/access management issues? No

Insufficient bridge width? No

Take photos and notes to document. ✓

Other Notes:

DART Red & Blue Line Last Mile Connections Project
Field Data Checklist - Sidewalk Gaps

Date 08/16/18
Station Arapaho
Staff Name Josh/Selena
Location ~~Hilltop~~ Dorothy to Greenville south side

Instructions : When coding/confirming sidewalk condition of "Nonexistant" on sidewalk checklist, review the following and make notes here and/or on the sidewalk checklist.

What challenges are there to the feasibility/practicability of sidewalk?
Circle items below and add notes/sketches as applicable.

Utility poles? NO

Underground utilities? maybe

Trees? yes

Slopes? NO

Other structures? No

Rail crossings? No

Business parking/access management issues? No

Insufficient bridge width? No

Take photos and notes to document. ✓

Other Notes:
Wall in way - no need for sidewalk

DART Red & Blue Line Last Mile Connections Project
Field Data Checklist - Sidewalk Gaps

Date 8/16/18
Station Arapaho Rd
Staff Name ~~Kristen~~ HB/LL
Location Greenwill Ave N side bet^n parking lot & collins

Instructions : When coding/confirming sidewalk condition of "Nonexistant" on sidewalk checklist, review the following and make notes here and/or on the sidewalk checklist.

What challenges are there to the feasibility/practicability of sidewalk?
Circle items below and add notes/sketches as applicable.

Utility poles? No

Underground utilities? may be.

Trees? some.

Slopes? some

Other structures? signs.

Rail crossings? no

Business parking/access management issues? no

Insufficient bridge width? N/A

Take photos and notes to document.

Other Notes:
next to the rail line. No trip Gen/Attract^n to serve. Low priority.

DART Red & Blue Line Last Mile Connections Project
Field Data Checklist - Sidewalk Gaps

Date 8/16/18
Station Arapahoe
Staff Name HB / LL
Location Security Row ~~between~~ S side bet ~~Holly~~ Dr to Browser Rd

Instructions : When coding/confirming sidewalk condition of "Nonexistant" on sidewalk checklist, review the following and make notes here and/or on the sidewalk checklist.

What challenges are there to the feasibility/practicability of sidewalk?
Circle items below and add notes/sketches as applicable.

Utility poles? No
Underground utilities? may be
Trees? No
Slopes? no
Other structures? No
Rail crossings? no
Business parking/access management issues? no
Insufficient bridge width? N/A

Take photos and notes to document.

Other Notes:

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DART Red & Blue Line Last Mile Connections Project
Field Data Checklist - Sidewalk Gaps

Date 8/16/18
Station ~~HB / LL~~ Arapaho
Staff Name HB / LL
Location Primary Route B Alma to Arapahoe

Instructions : When coding/confirming sidewalk condition of "Nonexistant" on sidewalk checklist, review the following and make notes here and/or on the sidewalk checklist.

What challenges are there to the feasibility/practicability of sidewalk?
Circle items below and add notes/sketches as applicable.

	East side	west side
Utility poles?	Yes	No
Underground utilities?	Yes	No
Trees?	Yes	No
Slopes?	No	Yes
Other structures?	Fire Hydrant	open drainage
Rail crossings?	No	No
Business parking/access management issues?	~~No~~	~~N/A~~ N/A
Insufficient bridge width?	N/A	N/A

Take photos and notes to document.

Other Notes:
sidewalk ~~A~~ Evensible. Difficult

Road closed just N of Arapaho

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DART Red & Blue Line Last Mile Connections Project
Field Data Checklist - Sidewalk Gaps

Date 08/16/18
Station Arapaho
Staff Name H.B & L.L.
Location ~~Calling Ramp to~~ US 75 SBFR

Instructions : When coding/confirming sidewalk condition of "Nonexistant" on sidewalk checklist, review the following and make notes here and/or on the sidewalk checklist.

What challenges are there to the feasibility/practicability of sidewalk?
Circle items below and add notes/sketches as applicable.

Utility poles? 6 ft db the curb.

Underground utilities? may be

Trees? NO

Slopes? NO

Other structures? NO

Rail crossings? NO

Business parking/access management issues? NO

Insufficient bridge width? N/A

Take photos and notes to document.

Other Notes:

DART Red & Blue Line Last Mile Connections Project
Field Data Checklist - Sidewalk Gaps

Date 08/16/18
Station Arapaho
Staff Name H.B & L.L.
Location Richardson Sidewalk gap on W side N of Arapaho

Instructions : When coding/confirming sidewalk condition of "Nonexistant" on sidewalk checklist, review the following and make notes here and/or on the sidewalk checklist.

What challenges are there to the feasibility/practicability of sidewalk?
Circle items below and add notes/sketches as applicable.

Utility poles? NO

Underground utilities? ~~NO~~ NO

Trees? YES

Slopes? NO

Other structures? Signs

Rail crossings? NO

Business parking/access management issues? NO

Insufficient bridge width? N/A

Take photos and notes to document.

Other Notes:

ROW issues

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DART Red & Blue Line Last Mile Connections Project
Field Data Checklist - Sidewalk Gaps

Date 08/16/18.
Station Arapaho.
Staff Name A.B. & L.L.
Location Lo Horie s.w. corner bet'n Lowell and Alley to S.

Instructions : When coding/confirming sidewalk condition of "Nonexistant" on sidewalk checklist, review the following and make notes here and/or on the sidewalk checklist.

What challenges are there to the feasibility/practicability of sidewalk?
Circle items below and add notes/sketches as applicable.

Utility poles? No

Underground utilities? No

Trees? No

Slopes? No

Other structures? No

Rail crossings? No

Business parking/access management issues? No

Insufficient bridge width? N/A

Take photos and notes to document.

Other Notes:

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DART Red & Blue Line Last Mile Connections Project
Field Data Checklist - Sidewalk Gaps

Date 8/16
Station Arapaho
Staff Name Jennifer
Location SW of station, SE of Storage Facility

Instructions : When coding/confirming sidewalk condition of "Nonexistant" on sidewalk checklist, review the following and make notes here and/or on the sidewalk checklist.

What challenges are there to the feasibility/practicability of sidewalk?
Circle items below and add notes/sketches as applicable.

Utility poles? Yes, inside storage facility fence

Underground utilities?
Yes, water, fiberoptic

Trees?
Yes, a few

Slopes?
Yes, slope down to driveway is pretty steep (up to 23.7% running slope

Other structures?
only fences

Rail crossings?
NO

Business parking/access management issues?
Yes, if sidewalk is recommended find solution to avoid DART riders parking in Calypso or BBQ parking lots

Insufficient bridge width?
N/A

Take photos and notes to document.

Other Notes:

"Caution Children at Play" sign b/w Cigar parking lot & TEN SO BBQ parking lot
Sidewalk recommended only if sidewalk gaps found along 75 frontage Rd NB

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DART Red & Blue Line Last Mile Connections Project
Field Data Checklist - Stations

Date 8/21/18
Station Spring Valley
Staff Name Josh / Selena

Sketch bike & pedestrian observed travel & desire lines on aerial photo inserted below: ☐
(Zoom out 1/2 block beyond station perimeter)

	Y	N
Are any desire lines missing a marked crossing location on a perimeter street, especially if mid-block? *(If Yes, note on sketch and add line with "New" link ID on Crossings Checklist)*	☐	
Note bike parking locations (covered vs. rack vs. bikeshare)		
Do any travel routes differ significantly from linear desire lines?	☐	
Note car & bus circulation patterns & conflict points		
Bike and ped desire lines continuously lit? (Note where if not).	☐	
Trip hazards?		
Landscaping barriers?		
Fences?		
Absent ramps?		
Bike/Pedestrian sight distance problems?		
Review questions (Post Construction Column) from p. 6-7 of Ped RSA Checklist		
Other Notes:		

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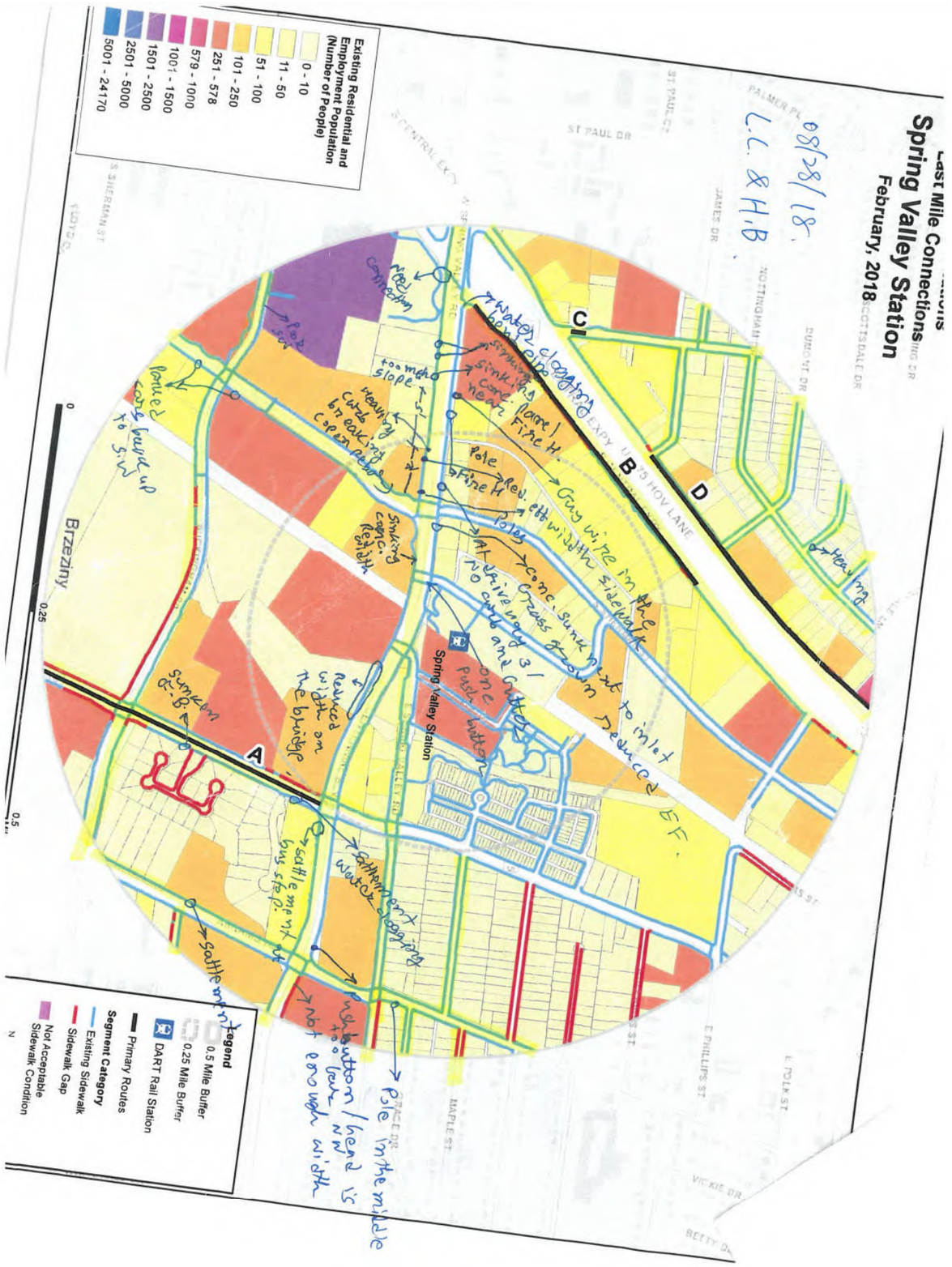

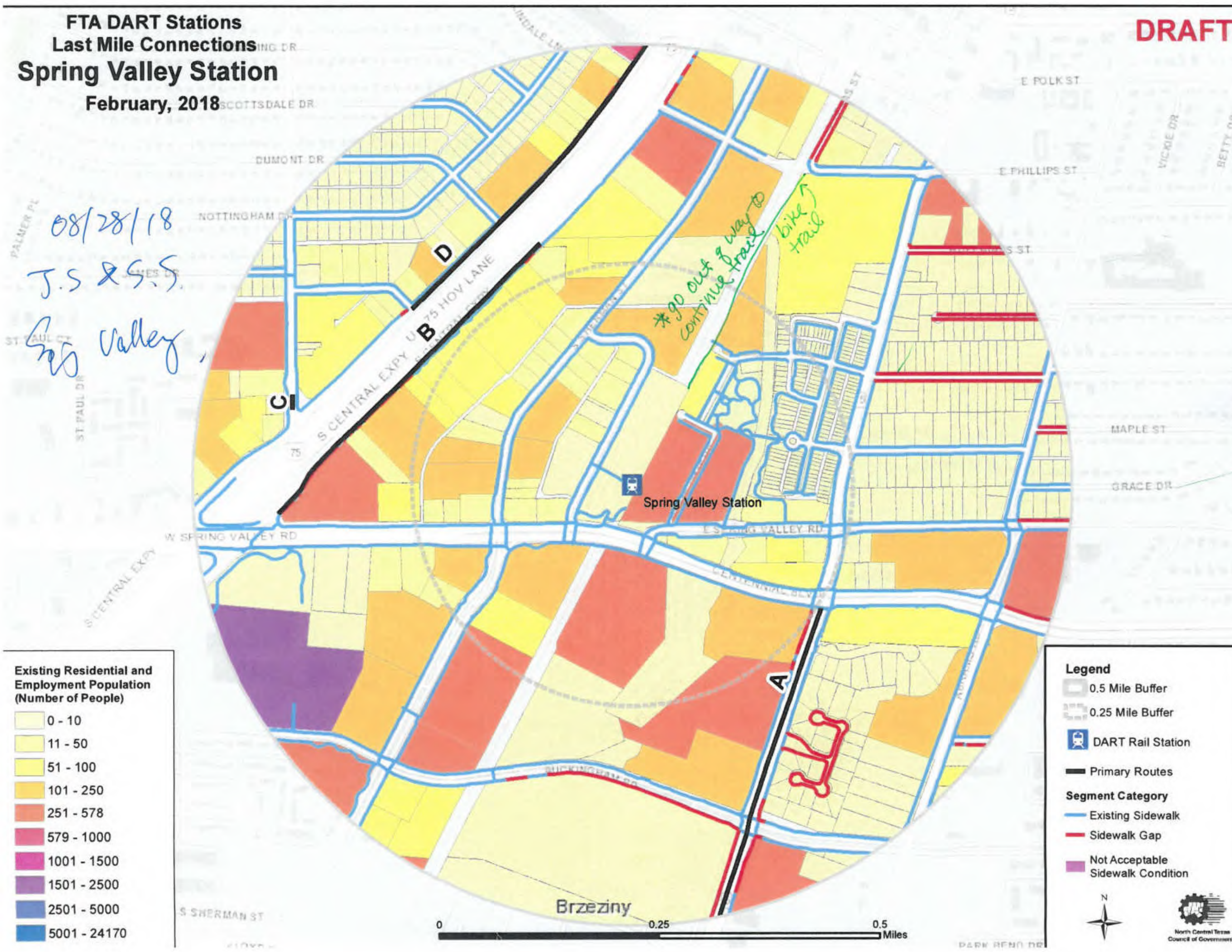
FTA DART Stations
Last Mile Connections
Spring Valley Station
February, 2018
DRAFT
08/28/18
J.S & S.S
Spg Valley
* go out of way to continue trail
bike trail
S CENTRAL EXPY
75 HOV LANE
Spring Valley Station
W SPRING VALLEY RD
E POLK ST
E PHILLIPS ST
MAPLE ST
GRACE DR
NOTTINGHAM DR
DUMONT DR
SCOTTSDALE DR
ST PAUL DR
Brzeziny
Existing Residential and Employment Population (Number of People)
0 - 10
11 - 50
51 - 100
101 - 250
251 - 578
579 - 1000
1001 - 1500
1501 - 2500
2501 - 5000
5001 - 24170
Legend
0.5 Mile Buffer
0.25 Mile Buffer
DART Rail Station
Primary Routes
Segment Category
Existing Sidewalk
Sidewalk Gap
Not Acceptable Sidewalk Condition
0
0.25
0.5 Miles
North Central Texas Council of Governments


Last Mile Connections
Spring Valley Station
February, 2018
08/28/18
J.S. & S.S
Spg Valley
Trip Haz. (near Pappadeaux Seafood)
One bad SW segment near Wizards Sports Cafe (low spot where water appears to pond)
* Poor SW, 1 seg., could be combined w/ adj. project
Small SW gap (code red) S of DW between Avis & Lamborghini
2 trip haz.
Driveways
Multiple trip hazards
Ped signs face traffic on right hand side only
X-walk hidden behind horiz. curve (Limited Sight Distance/30 mph sign here)
Median impedes xings
Single house (320 Huffines has SW)
Curb ramps missing (brand new alley)
Stop
Central Trail (Add links)
Sara's Market & Bakery
Food bank market
Dumpster blocks SW
Add SW links
Large tree 3' EW from b/c to roots
Trip Haz. & Drainage Problem
Goal trail connects to alley
SW here (small gap adj. to sta.) Provide ramp or short SW segment
3.5' EW catering trucks backed over SW
DART Parking
Maple
5' EW (ret. wall)
Spring Valley Station
Brzeziny
Existing Residential and Employment Population (Number of People)
0 - 10
11 - 50
51 - 100
101 - 250
251 - 578
579 - 1000
1001 - 1500
1501 - 2500
2501 - 5000
5001 - 24170
Legend
0.5 Mile Buffer
0.25 Mile Buffer
DART Rail Station
Primary Routes
Segment Category
Existing Sidewalk
Sidewalk Gap
Not Acceptable Sidewalk Condition

DART Red & Blue Line Last Mile Connections Project
Field Data Checklist - Sidewalks

Station Area: Spring Valley Staff Name: SJ, XJ, J Date: 8/28/18

Group Link	Link ID	Street Name	From Street	To Street	Side of Street	Sidewalk Width (ft) Actual	Sidewalk Width (ft) Eff.	Curb & Gutter?	Buffer Type	Buffer Width	Prevailing Speed or Speed Limit (mph)	On-Street Parking	Street Widths Bike Lane	Street Widths Shoulder	No. of Lanes*	If One-Way, Dir. of Travel	Lighting?	Select.
309.1	3017	S Sherman St	South Boundary	W Buckingham Rd	NW	4	4	Y	L	6	30	0	0	0	4	-	N	
					SE	5	3	Y	L	10	30	0	0	0	4	-	N	
310.1	3018	S Sherman St	South Boundary	W Spring Valley Rd	NW	5	5	Y	L	4	30	0	0	0	6	-	N	
					SE	5	3	Y	L	12	30	0	0	0	6	-	N	
309.2	2943	S Sherman St	W Buckingham Rd	W Spring Valley Rd	W	5	5	Y	L	9	30	8	0	0	2	-	N	
310.2	3385	S Sherman St	W Buckingham Rd	W Spring Valley Rd	E	5	5	Y	L	3	30	8	0	0	2	-	N	
309.3	2644	S Sherman St	Parking Lot	W Spring Valley Rd	W	5	5	Y	L	0	30	8	0	0	2	-	N	
					E	5	5	Y	L	3	30	8	0	0	2	-	N	
310.3	2646	S Sherman St	Parking Lot	Red Sidewalk	W	11	6	Y	L	0	30	8	0	0	2	-	N	
309.4	2845	S Sherman St	Parking Lot	Lingco Dr	E	12	7	Y	L	4	30	0	0	0	2	-	N	
310.4	2793	S Sherman St	Red Sidewalk	Lingco Dr	NW	4	4	Y	L	5	30	0	0	0	2	-	N	
309.5	3366	S Sherman St	Parking Lot	Lingco Dr	SE	10	8	Y	L	4	30	0	0	0	2	-	N	
310.5	2759	S Sherman St	Lingco Dr	Phillips St	NW	4	4	Y	L	5	30	0	0	0	2	-	N	
309.6	2778	S Sherman St	Lingco Dr	Phillips St	SE	4	4	Y	L	3	30	8	0	0	2	-	N	
310.6	2585	S Sherman St	North Boundary	Phillips St	NW	4	4	Y	L	4	30	8	0	0	2	-	N	
309.7	2592	S Sherman St	Phillips St	North Boundary	SE	4	4	Y	L	4	30	8	0	0	2	-	N	
310.7	2848	S Central Expy	W Spring Valley Rd	Steak House	NW	4	4	Y	N	0	45	0	0	0	4	SE	N	
311.1	2848	S Central Expy	Steak House	S Floyd Rd	NW	5	5	Y	N	0	45	0	0	0	3	SE	N	
311.2	2788	S Central Expy	S Floyd Rd	Driveway	NW	6	6	Y	L	18	45	0	0	0	3	SE	N	
311.3	3414	S Central Expy	Driveway	Payday & Loan	NW	6	6	Y	L	6	45	0	0	0	3	SE	N	
311.4	3418	S Central Expy	Payday & Loan	James Dr	NW	0	0	Y	N	0	45	0	0	0	3	SE	N	
312.15G	2737	S Central Expy	James Dr	Driveway	NW	5	5	Y	L	4	45	0	0	0	3	SE	VP	
312.2	2710	S Central Expy	Driveway	Parking Lot	NW	9	9	Y	N	0	45	0	0	0	3	SE	N	
312.3	3350	S Central Expy	Parking Lot	Parking Lot	NW	0	0	Y	N	0	45	0	0	0	3	SE	N	
312.45G	2729	S Central Expy	Parking Lot	Dumont Dr	NW	5	5	Y	N	0	45	0	0	0	3	SE	N	
312.5	2688	S Central Expy	Dumont Dr	Driveway	NW	7	7	Y	N	0	45	0	0	0	3	SE	N	
312.6	3424	S Central Expy	Driveway	North Boundary	NW	0	0	Y	N	0	45	0	0	0	3	SE	N	
312.75G	3442	S Central Expy	North Boundary	W Phillips St	SE	5	5	Y	L	8	45	0	0	0	3	NW	N	
313.15G	2602	S Central Expy	W Phillips St	Parking Lot	SE	4	4	Y	L	0	45	0	0	0	3	NW	N	
313.2	2707	S Central Expy	Parking Lot	Driveway	SE	0	0	Y	N	0	45	0	0	0	3	NW	N	
313.3	3447	S Central Expy	Driveway	Parking Lot	SE	4	4	Y	L	6	45	0	0	0	3	NW	N	
314.15G	2762	S Central Expy	Parking Lot	Parking Lot	SE	4	4	Y	L	6	45	0	0	0	3	NW	N	
314.2	2765	S Central Expy	Parking Lot	Driveway	SE	0	0	Y	N	0	45	0	0	0	3	NW	N	
314.3	3449	S Central Expy	Driveway	Spring Valley Rd	SE	6	6	Y	N	0	45	0	0	0	3	NW	N	
314.45G	3396	S Central Expy	Spring Valley Rd	Crosswalk	SE	6	6	Y	N	0	45	0	0	0	3	NW	N	
314.5	2635	S Central Expy	Spring Valley Rd	S Central Expy	SE	0	0	Y	N	0	45	0	0	0	3	NW	N	
314.65G	2889	S Central Expy	Spring Valley Rd	South Boundary	SE	5	5	Y	L	25	45	0	0	0	4	NW	N	
314.7	3410	S Floyd Rd	S Central Expy	Driveway	W	0	0	Y	N	0	30	8	0	0	3	-	N	
SG	2785	S Floyd Rd	Driveway	Driveway	W	5	5	Y	L	5	30	8	0	0	3	-	N	
	2777	S Floyd Rd	Driveway	James Dr	W	4	4	Y	L	5	30	0	0	0	2	-	N	
	2708	S Floyd Rd	James Dr	Nottingham Dr	W	4	4	Y	L	6	30	0	0	0	2	-	N	
	2772	S Floyd Rd	Nottingham Dr	James Dr	E	6	6	Y	N	0	30	0	0	0	3	-	N	
	2719	S Floyd Rd	James Dr	Side Road	E	4	4	Y	L	4	30	0	0	0	2	-	N	
	2716	S Floyd Rd	Side Road	Nottingham Dr	E	4	4	Y	L	4	30	0	0	0	2	-	N	
	2723	James Dr	S Central Expy	S Floyd Rd	N	4	4	Y	L	6	30	16	0	0	2	-	N	
	2736	James Dr	S Central Expy	S Floyd Rd	S	5	5	Y	N	0	30	16	0	0	2	-	N	
	2704	Nottingham Dr	S Floyd Rd	Dumont Dr	N	4	4	Y	L	5	30	16	0	0	2	-	N	
	2692	Nottingham Dr	S Floyd Rd	Dumont Dr	S	4	4	Y	L	5	30	16	0	0	2	-	N	
	2731	Nottingham Dr	Dumont Dr	North Boundary	NW	4	4	Y	L	5	30	16	0	0	2	-	N	
	3020	Nottingham Dr	Dumont Dr	North Boundary	SE	4	4	Y	L	5	30	16	0	0	2	-	N	
	2730	Dumont Dr	Nottingham Dr	West Boundary	N	4	4	Y	L	5	30	16	0	0	2	-	N	
	2702	Dumont Dr	Nottingham Dr	West Boundary	S	4	4	Y	L	5	30	16	0	0	2	-	N	
	2573	Scottsdale Dr	Nottingham Dr	West Boundary	N	4	4	Y	L	5	30	16	0	0	2	-	N	
	2574	Scottsdale Dr	Nottingham Dr	West Boundary	S	4	4	Y	L	5	30	16	0	0	2	-	N	
	3031	Downing Dr	Nottingham Dr	West Boundary	N	4	4	Y	L	5	30	16	0	0	2	-	N	
	2580	Downing Dr	Nottingham Dr	West Boundary	S	4	4	Y	L	5	30	16	0	0	2	-	N	

Buffer Types:
N = None
S = Solid Surface
L = Landscaped
T = Landscaped w/ Trees

*All lanes for 2-way street

For Side of Street, choose:
N NE
S SE
E NW
W SW

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No sidewalks

DART Red & Blue Line Last Mile Connections Project

Field Data Checklist - Sidewalks

Date 08/28/18 Station Area Spring Valley Staff Name SS & JS

Group Link	Link ID	Street Name	From Street	To Street	Side of Street	Sidewalk Width (ft) Actual	Sidewalk Width (ft) Eff.	Curb & Gutter?	Buffer Type	Buffer Width	Prevailing Speed or Speed Limit (mph)	Street Widths On-Street Parking	Street Widths Bike Lane	Street Widths Shoulder	Street Widths No. of Lanes*	If One-Way, Dir. of Travel	Lighting?	Condition Selection
300.1SG	3530	Centennial Blvd	East Boundary	Abrams Rd	N	0	0	Y	N	0	35	0	0	0	6	-	N	N
300.2	2930	Centennial Blvd	East Boundary	Abrams Rd	S	5	5	Y	N	0	35	0	0	0	6	-	N	
300.3	2901	Centennial Blvd	Abrams Rd	S Greenville Ave	N	5	5	Y	N	0	35	0	0	0	6	-	N	
300.4	2941	Centennial Blvd	Abrams Rd	S Greenville Ave	S	7	5	Y	N	0	35	0	0	0	6	-	N	
300.5	2892	Centennial Blvd	S Greenville Ave	E Spring Valley Rd	N	7	5	Y	N	0	35	0	0	0	6	-	N	
300.6	2917	Centennial Blvd	S Greenville Ave	E Spring Valley Rd	S	7	7	Y	N	0	35	0	0	0	6	-	N	
300.7	3051	Centennial Blvd	E Spring Valley Rd	Railroad	N	9	9	Y	L	10	35	0	0	0	8	-	N	
300.8	3534	Centennial Blvd	E Spring Valley Rd	Railroad	S	6	6	Y	S	2	35	0	0	0	8	-	N	
301.1	3050	W Spring Valley Rd	Railroad	S Sherman St	N	7	5	Y	N	0	35	0	0	0	8	-	N	
301.2	2658	W Spring Valley Rd	Railroad	S Sherman St	S	7	5	Y	N	0	35	0	0	0	8	-	N	
301.3	2865	W Spring Valley Rd	S Sherman St	S Central Expy	N	4	4	Y	N	0	35	0	0	0	8	-	N	F
301.4	2627	W Spring Valley Rd	S Sherman St	S Central Expy	S	7	3	Y	S	3	35	0	0	0	8	-	N	
302.1	3548	Buckingham Rd	Abrams Rd	S Greenville Ave	N	6	6	Y	4	4	35	0	0	0	4	-	N	P
303.1	3547	Buckingham Rd	Abrams Rd	S Greenville Ave	S	7	7	Y	4	4	35	0	0	0	4	-	N	
302.2	3013	Buckingham Rd	S Greenville Ave	North Side Street	N	4	4	Y	L	3	35	0	0	0	4	-	N	
303.2SG	3542	Buckingham Rd	S Greenville Ave	Sidewalk	S	0	0	Y	N	0	35	0	0	0	4	-	N	N
302.3	3124	Buckingham Rd	North Side Street	Railroad	N	8	8	Y	N	0	35	0	0	0	4	-	N	
303.3	3541	Buckingham Rd	Sidewalk	Railroad	S	7	7	Y	N	0	35	0	0	0	4	-	N	
302.4	2974	Buckingham Rd	Railroad	S Sherman St	N	5	5	Y	L	4	35	0	0	0	4	-	N	
303.4	2997	Buckingham Rd	Railroad	S Sherman St	S	4	4	Y	L	4	35	0	0	0	4	-	N	
302.5	2944	Prestonwood Dr	S Sherman St	West Boundary	N	6	6	Y	L	2	35	0	0	0	4	-	N	
303.5	2942	Prestonwood Dr	S Sherman St	West Boundary	S	5	5	Y	L	10	35	0	0	0	4	-	N	
304.1	3559	Abrams Rd	Buckingham Rd	Driveway	NW	5	5	Y	L	2		0	0	0	4	-	N	
305.1	3561	Abrams Rd	Buckingham Rd	Willingham Dr	SE	5	5	Y	L	3		0	0	0	4	-	N	
304.2	2941	Abrams Rd	Willingham Dr	Centennial Blvd	NW	5	5	Y	N	0		0	0	0	4	-	N	
305.2	2930	Abrams Rd	Driveway	Centennial Blvd	SE	5	5	Y	N	0		0	0	0	4	-	N	
304.3	2904	Abrams Rd	Centennial Blvd	E Spring Valley Rd	W	6	6	Y	N	0		0	0	0	4	-	N	
305.3	2877	Abrams Rd	Centennial Blvd	E Spring Valley Rd	E	5	5	Y	L	3		0	0	0	4	-	N	
304.4	2649	Abrams Rd	E Spring Valley Rd	Maple St	NW	4	4	Y	L	4	30	0	0	0	4	-	N	
305.4	2841	Abrams Rd	E Spring Valley Rd	Maple St	SE	4	4	Y	L	4	30	0	0	0	4	-	N	
304.5	2814	Abrams Rd	Maple St	Pittman St	NW	4	4	Y	L	4	30	0	0	0	4	-	N	
305.5	2794	Abrams Rd	Maple St	Pittman St	SE	4	4	Y	L	4	30	0	0	0	4	-	N	
306.1SG	3543	S Greenville Ave	South Boundary	Buckingham Rd	NW	0	0	Y	N	0	40	0	0	0	6	-	N	N
306.2SG	3546	S Greenville Ave	South Boundary	Buckingham Rd	SE	0	0	Y	N	0	40	0	0	0	6	-	N	N
306.3	2956	S Greenville Ave	Buckingham Rd	Fountain	NW	5	5	Y	L	4	40	0	0	0	6	-	N	
306.4SG	3549	S Greenville Ave	Buckingham Rd	Brick Fence	SE	2	0	Y	N	0	40	0	0	0	6	-	N	VP
306.5	3006	S Greenville Ave	Brick Fence	Fountain	SE	6	6	Y	L	6	40	0	0	0	6	-	N	
306.6	2682	S Greenville Ave	Fountain	Driveway	NW	4	4	Y	L	4	40	0	0	0	6	-	N	
306.7SG	3552	S Greenville Ave	Driveway	Centennial Blvd	NW	0	0	Y	N	0	40	0	0	0	6	-	N	N
306.8	2684	S Greenville Ave	Fountain	Centennial Blvd	SE	5	5	Y	L	5	40	0	0	0	6	-	N	
307.1	2891	S Greenville Ave	Centennial Blvd	E Spring Valley Rd	W	5	5	Y	L	7	35	0	0	0	6	-	N	
308.1	3577	S Greenville Ave	Centennial Blvd		E	4	2	Y	L	8	35	0	0	0	6	-	N	P
308.1	3577	S Greenville Ave			E	5	5	Y	N	0	35	0	0	0	6	-	N	
308.1	3577	S Greenville Ave		E Spring Valley Rd	E	5	5	Y	L	8	35	0	0	0	6	-	N	
307.2	3403	S Greenville Ave	E Spring Valley Rd	Emily Ln	W	6	6	Y	L	4	35	0	0	0	4.5	-	N	E/Cr
308.2SG	3488	S Greenville Ave	E Spring Valley Rd	Maple St	E	6.0	5.0	Y	N	0	35	0	0	0	4.5	-	N	N E/Cr
307.3	3304	S Greenville Ave	Emily Ln	Brick Row	W	6	6	Y	L	5	35	0	0	0	4.5	-	N	
308.3	3285	S Greenville Ave	Maple St	Pittman St	E	4	4	Y	N	0	35	0	0	0	4.5	-	N	E/Cr
307.4	3295	S Greenville Ave	Brick Row	Bruton Bends Dr	W	6	6	Y	L	5	35	0	0	0	6	-	N	E/Cr
308.4	2769	S Greenville Ave	Pittman St	Bruton Bends Dr	E	4	4	Y	L	3	35	0	0	0	6	-	N	E/Cr
307.5	2757	S Greenville Ave	Bruton Bends Dr	Huffhines St	NW	4	4	Y	L	3	35	0	0	0	4.5	-	N	E/Cr
308.5	3282	S Greenville Ave	Bruton Bends Dr	Huffhines St	SE	5	5	Y	L	2	35	0	0	0	4.5	-	N	E/Cr
307.6	2620	S Greenville Ave	Huffhines St	E Phillips St	NW	4	4	Y	L	2	35	0	0	0	6	-	N	E/Cr
308.6	3024	S Greenville Ave	Huffhines St	E Phillips St	SE	6.4	4.2	Y	N	0	35	0	0	0	6	-	N	E/Cr

LEE ENGINEERING

For Side of Street, choose:

N	NE
S	SE
E	NW
W	SW

Buffer Types:

N = None
S = Solid Surface
L = Landscaped
T = Landscaped w/ Trees

DART Red & Blue Line Last Mile Connections Project

Field Data Checklist - Sidewalks

Date 08/28/18 Station Area Spring Valley Staff Name J. J.

Group Link	Link ID	Street Name	From Street	To Street	Side of Street	Sidewalk Width (ft) Actual	Sidewalk Width (ft) Eff.	Curb & Gutter?	Buffer Type	Buffer Width	Prevailing Speed or Speed Limit (mph)	Street Widths On-Street Parking	Street Widths Bike Lane	Street Widths Shoulder	Street Widths No. of Lanes*	If One-Way, Dir. of Travel	Lighting?	Condition Selection
	2778	Lingco Dr	S Sherman St	Curve	N	5	5	Y	L	4	20 ADV	0	0	0	2	-	N	
	2797	Lingco Dr	S Sherman St	Curve	S	5	5	Y	L	4	20 ADV	0	0	0	2	-	N	
	2802	Lingco Dr	Curve	W Spring Valley Rd	NW	5	5	Y	L	4	30	0	0	0	3	-	Y N	E/Cr
	2853	Lingco Dr	Curve	W Spring Valley Rd	SE	5	5	Y	L	4	30	0	0	0	3	-	Y N	E/Cr
SG	3487	E Spring Valley Rd	East Boundary	Abrams Rd	N	0	0	Y	N	0	30	0	0	0	4	-	N	N
	2867	E Spring Valley Rd	East Boundary	Abrams Rd	S	4	4	Y	L	5	30	0	0	0	4	-	N	
	2650	E Spring Valley Rd	Abrams Rd	S Greenville Ave	N	4	4	Y	L	1.5	30	0	0	0	2	-	N	P
	2873	E Spring Valley Rd	Abrams Rd	S Greenville Ave	S	4	4	Y	L	5	30	0	0	0	2	-	N	P
SG	3152	E Spring Valley Rd	S Greenville Ave	Centennial Blvd	N	0	0	Y	N	0	30	19 * 2	0	0	2	-	N	N
	3402	E Spring Valley Rd	S Greenville Ave	Centennial Blvd	S	4	4	Y	N	0	30	19 * 2	0	0	2	-	N	
	2843	Grace Dr	East Boundary	Abrams Rd	N	4	4	Y	L	6	30	0	0	0	2	-	N	
	3483	Grace Dr	East Boundary	Abrams Rd	S	4	4	Y	L	6	30	0	0	0	2	-	N	
SG	3476	Maple St	East Boundary	Abrams Rd	N	0	0	Y	N	0	30	16	0	0	2	-	N	N
SG	3477	Maple St	East Boundary	Abrams Rd	S	0	0	Y	N	0	30	16	0	0	2	-	N	N
	2820	Maple St	Abrams Rd	S Greenville Ave	N	4	4	Y	L	6	30	16	0	0	2	-	N	
	2828	Maple St	Abrams Rd	S Greenville Ave	S	4	4	Y	L	6	30	16	0	0	2	-	N	
	3326	Maple St	S Greenville Ave	Culdisac	N/S	11	4	Y	N	0	30	0	0	0	2	-	N	N
SG	3484	Pittman St	Abrams Rd	S Greenville Ave	N	0	0	N	N	0	30	0	0	0	2	-	N	N
SG	3486	Pittman St	Abrams Rd	S Greenville Ave	S	0	0	N	N	0	30	0	0	0	2	-	N	N
SG	3479	Wista Vista Dr	Abrams Rd	end	N	0	0	N	N	0	30	0	0	0	2	-	N	N
SG	3478	Wista Vista Dr	Abrams Rd	end	S	0	0	N	N	0	30	0	0	0	2	-	N	N
SG	3481	E Phillips St	East Boundary	S Greenville Ave	N	0	0	N	N	0	30	0	0	0	2	-	N	N
SG	3482	E Phillips St	East Boundary	S Greenville Ave	S	0	0	N	N	0	30	0	0	0	2	-	N	N
	3521	Central Trail Link	Dart Station	Along Railroad	E	6	6	Y	L	4	30	0	0	0	2	-	N	E/Cr

Phillips → Brick Row → Phillips

Texas St → Alexandra → McKamy → Sherman

Greenville → McKamy Spur → Spring Valley → DART Trail → US 75

					N	4	4	Y	L	4	30	0	0	0	2	-	N	
					S	4	4	Y	L	4	30	0	0	0	2	-	N	
					N	4	4	Y	L	4	30	0	0	0	2	-	N	
					S	4	4	Y	L	4	30	0	0	0	2	-	N	
					W	6	6	Y	N	0	30	0	0	0	2	-	N	
					N	6	6	Y	N	0	30	0	0	0	2	-	N	
					N	6	6	Y	L	4	30	0	0	0	2	-	N	
					S	6	6	Y	L	4	30	0	0	0	2	-	N	
					N	6	6	Y	L	4	30	0	0	0	2	-	N	
					S	6	6	Y	L	4	30	0	0	0	2	-	N	

*Bike Lanes = 3.5 ea width

For Side of Street, choose:

Buffer Types:

DART Red & Blue Line Last Mile Connections Project

Field Data Checklist - Sidewalks

Date 08/28/18 — X_1 = 4 Ln ⇄ 2 Ln?

Station Area Spring Valley

Staff Name LL. & H. B.

Group Link	Link ID	Street Name	From Street	To Street	Side of Street	Sidewalk Width (ft) Actual	Sidewalk Width (ft) Eff.	Curb & Gutter?	Buffer Type	Buffer Width	Prevailing Speed or Speed Limit (mph)	Street Widths On-Street Parking	Street Widths Bike Lane	Street Widths Shoulder	Street Widths No. of Lanes*	If One-Way, Dir. of Travel	Lighting?	Condition Selection
300.1SG	3530	Centennial Blvd	East Boundary	Abrams Rd	N	0	0	Y	N	0	35 40	0	0	0	6	-	N	N
300.2	2930	Centennial Blvd	East Boundary	Abrams Rd	S	5	5	Y	N	0	35 40	0	0	0	6	-	N	E/C
300.3	2901	Centennial Blvd	Abrams Rd	S Greenville Ave	N	5	5	Y	N	0	35	0	0	0	6	-	N	
300.4	2941	Centennial Blvd	Abrams Rd	S Greenville Ave	S	5	5	Y	N	0	35 40	0	0	0	6	-	N	E/C
300.5	2892	Centennial Blvd	S Greenville Ave	E Spring Valley Rd	N	7	5	Y	N	0	35	0	0	0	6	-	N	
300.6	2917	Centennial Blvd	S Greenville Ave	E Spring Valley Rd	S	5	5	Y	N	0	35 40	0	0	0	6	-	N	E/C
300.7	3051	Centennial Blvd	E Spring Valley Rd	Railroad	N	9	9	Y	L	10	35	0	0	0	8	-	N	E/C
300.8	3534	Centennial Blvd	E Spring Valley Rd	Railroad	S	6	6	Y	50	20	35	0	0	0	8	-	N	E/C
301.1	3050	W Spring Valley Rd	Railroad	S Sherman St	N	5	5	Y	N	0	35	0	0	0	8	-	N	F
301.2	2658	W Spring Valley Rd	Railroad	S Sherman St	S	7	5	Y	N	0	35	0	0	0	8	-	N	F
301.3	2865	W Spring Valley Rd	S Sherman St	S Central Expy	N	4	4	Y	N	0	35	0	0	0	8	-	N	F
301.4	2627	W Spring Valley Rd	S Sherman St	S Central Expy	S	3	3	Y	S	3	35	0	0	0	8	-	N	F
302.1	3548	Buckingham Rd	Abrams Rd	S Greenville Ave	N	6	6	Y	L	4	35	0	0	0	4	-	N	F/C
303.1	3547	Buckingham Rd	Abrams Rd	S Greenville Ave	S	7	7	Y	4	4	35	0	0	0	4	-	N	
302.2	3013	Buckingham Rd	S Greenville Ave	North Side Street	N	4	4	Y	L	3	35	0	0	0	4	-	N	
303.2SG	3542	Buckingham Rd	S Greenville Ave	Sidewalk	S	0	0	Y	N	0	35	0	0	0	4	-	N	N
302.3	3124	Buckingham Rd	North Side Street	Railroad	N	8	8	Y	N	0	35	0	0	0	4	-	N	E/C
303.3	3541	Buckingham Rd	Sidewalk	Railroad	S	7	7	Y	N	0	35	0	0	0	4	-	N	
302.4	2974	Buckingham Rd	Railroad	S Sherman St	N	5	5	Y	L	4	35	0	0	0	4	-	N	F
303.4	2997	Buckingham Rd	Railroad	S Sherman St	S	4	4	Y	L	4	35	0	0	0	4	-	N	
302.5	2944	Prestonwood Dr	S Sherman St	West Boundary	N	6	6	Y	L	2	35 30	0	0	0	4	-	N	P
303.5	2942	Prestonwood Dr	S Sherman St	West Boundary	S	5	5	Y	L	10	35 30	0	0	0	4	-	N	E/C
304.1	3559	Abrams Rd	Buckingham Rd	Driveway	NW	5	5	Y	L	2		0	0	0	4	-	N	E/C
305.1	3561	Abrams Rd	Buckingham Rd	Willingham Dr	SE	5	5	Y	L	3		0	0	0	4	-	N	
304.2	2941	Abrams Rd	Willingham Dr	Centennial Blvd	NW	5	5	Y	N	0		0	0	0	4	-	N	E/C
305.2	2930	Abrams Rd	Driveway	Centennial Blvd	SE	5	5	Y	N	0		0	0	0	4	-	N	
304.3	2904	Abrams Rd	Centennial Blvd	E Spring Valley Rd	W	6	6	Y	N	0		0	0	0	4	-	N	
305.3	2877	Abrams Rd	Centennial Blvd	E Spring Valley Rd	E	5	5	Y	L	3		0	0	0	4	-	N	
304.4	2649	Abrams Rd	E Spring Valley Rd	Maple St	NW	4	4	Y	L	4	30	0	0	0	4	-	N	F
305.4	2841	Abrams Rd	E Spring Valley Rd	Maple St	SE	4	4	Y	L	4	30	0	0	0	4	-	N	F
304.5	2814	Abrams Rd	Maple St	Pittman St	NW	4	4	Y	L	4	30	0	0	0	4	-	N	F
305.5	2794	Abrams Rd	Maple St	Pittman St	SE	4	4	Y	L	4	30	0	0	0	4	-	N	F
306.1SG	3543	S Greenville Ave	South Boundary	Buckingham Rd	NW	0	0	Y	N	0	40	0	0	0	6	-	N	N
306.2SG	3546	S Greenville Ave	South Boundary	Buckingham Rd	SE	0	0	Y	N	0	40	0	0	0	6	-	N	N
306.3	2956	S Greenville Ave	Buckingham Rd	Fountain	NW	5	5	Y	L	4	40	0	0	0	6	-	N	F
306.4SG	3549	S Greenville Ave	Buckingham Rd	Brick Fence	SE	40	40	Y	VL	93	40	0	0	0	6	-	N	VP C
306.5	3006	S Greenville Ave	Brick Fence	Fountain	SE	6	6	Y	L	6	40	0	0	0	6	-	N	F/C
306.6	2682	S Greenville Ave	Fountain	Driveway	NW	4	4	Y	L	4	40	0	0	0	6	-	N	E/C
306.7SG	3552	S Greenville Ave	Driveway	Centennial Blvd	NW	0	0	N	N	0	40	0	0	0	6	-	N	N
306.8	2684	S Greenville Ave	Fountain	Centennial Blvd	SE	5	5	Y	L	5	40	0	0	0	6	-	N	F
307.1	2891	S Greenville Ave	Centennial Blvd	E Spring Valley Rd	W	5	5	Y	L	7	35	0	0	0	6	-	N	
308.1	3577	S Greenville Ave	Centennial Blvd		E	4	2	Y	L	8	35	0	0	0	6	-	N	P
308.1	3577	S Greenville Ave			E	5	5	Y	N	0	35	0	0	0	6	-	N	
308.1	3577	S Greenville Ave		E Spring Valley Rd	E	5	5	Y	L	8	35	0	0	0	6	-	N	
307.2	3403	S Greenville Ave	E Spring Valley Rd	Emily Ln	W	6	6	Y	L	4	35	0	0	0	6	-	N	
308.2SG	3488	S Greenville Ave	E Spring Valley Rd	Maple St	E	0	0	Y	N	0	35	0	0	0	6	-	N	N
307.3	3304	S Greenville Ave	Emily Ln	Brick Row	W	6	6	Y	L	5	35	0	0	0	6	-	Y	
308.3	3285	S Greenville Ave	Maple St	Pittman St	E	4	4	Y	L	3	35	0	0	0	6	-	N	
307.4	3295	S Greenville Ave	Brick Row	Bruton Bends Dr	W	6	6	Y	L	5	35	0	0	0	6	-	N	
308.4	2769	S Greenville Ave	Pittman St	Bruton Bends Dr	E	4	4	Y	L	3	35	0	0	0	6	-	N	
307.5	2757	S Greenville Ave	Bruton Bends Dr	Huffhines St	NW	4	4	Y	L	3	35	0	0	0	6	-	N	
308.5	3282	S Greenville Ave	Bruton Bends Dr	Huffhines St	SE	5	5	Y	L	2	35	0	0	0	6	-	N	
307.6	2620	S Greenville Ave	Huffhines St	E Phillips St	NW	4	4	Y	L	2	35	0	0	0	6	-	N	
308.6	3024	S Greenville Ave	Huffhines St	E Phillips St	SE	4	2	Y	L	2	35	0	0	0	6	-	N	P

LEE ENGINEERING

For Side of Street, choose:
N NE
S SE
E NW
W SW

Buffer Types:
N = None
S = Solid Surface
L = Landscaped
T = Landscaped w/ Trees

DART Red & Blue Line Last Mile Connections Project

Field Data Checklist - Sidewalks

Date 08/28/18

Station Area Spring Valley

Staff Name LL. & H. B

Group Link	Link ID	Street Name	From Street	To Street	Side of Street	Sidewalk Width (ft) Actual	Sidewalk Width (ft) Eff.	Curb & Gutter?	Buffer Type	Buffer Width	Prevailing Speed or Speed Limit (mph)	Street Widths On-Street Parking	Street Widths Bike Lane	Street Widths Shoulder	Street Widths No. of Lanes*	If One-Way, Dir. of Travel	Lighting?	Condition Selection
309.1	3017	S Sherman St	South Boundary	W Buckingham Rd	NW	4	4	Y	L	6	30	0	0	0	4	-	N	E/C
310.1	3018	S Sherman St	South Boundary	W Buckingham Rd	SE	5	3	Y	L	10	30	0	0	0	4	-	N	E/C
309.2	2943	S Sherman St	W Buckingham Rd	W Spring Valley Rd	NW	5	5	Y	L	4	30	0	0	0	6	-	N	
310.2	3385	S Sherman St	W Buckingham Rd	W Spring Valley Rd	SE	5	3	Y	L	12	30	0	0	0	6	-	N	F
309.3	2644	S Sherman St	W Spring Valley Rd	Parking Lot	W	5	5	Y	L	9	30	8	0	0	2	-	N	
310.3	2648	S Sherman St	W Spring Valley Rd	Parking Lot	E	5	5	Y	L	3	30	8	0	0	2	-	N	
309.4	2846	S Sherman St	Parking Lot	Red Sidewalk	W	11	6	Y	N	0	30	8	0	0	2	-	N	
310.4	2845	S Sherman St	Parking Lot	Lingco Dr	E	12	7	Y	N	0	30	8	0	0	2	-	N	
309.5	2793	S Sherman St	Red Sidewalk	Lingco Dr	NW	4	4	Y	L	4	30	0	0	0	2	-	N	
310.5	3366	S Sherman St	Parking Lot	Lingco Dr	SE	10	8	Y	N	0	30	0	0	0	2	-	N	
309.6	2759	S Sherman St	Lingco Dr	Phillips St	NW	4	4	Y	L	3	30	0	0	0	2	-	N	
310.6	2778	S Sherman St	Lingco Dr	Phillips St	SE	4	4	Y	L	4	30	0	0	0	2	-	N	
309.7	2585	S Sherman St	Phillips St	North Boundary	NW	4	4	Y	L	3	30	8	0	0	2	-	N	
310.7	2592	S Sherman St	Phillips St	North Boundary	SE	4	4	Y	L	4	30	8	0	0	2	-	N	
311.1	2848	S Central Expy	W Spring Valley Rd	Steak House	NW	4	4	Y	N	0	45	0	0	0	4	SE	N	
311.2	2848	S Central Expy	Steak House	S Floyd Rd	NW	5	5	Y	N	0	45	0	0	0	3	SE	N	
311.3	2788	S Central Expy	S Floyd Rd	Driveway	NW	6	6	Y	L	18	45	0	0	0	3	SE	N	
311.4	3414	S Central Expy	Driveway	Payday & Loan	NW	6	6	Y	L	6	45	0	0	0	3	SE	N	
312.1SG	3418	S Central Expy	Payday & Loan	James Dr	NW	0	0	Y	N	0	45	0	0	0	3	SE	N	N
312.2	2737	S Central Expy	James Dr	~~Driveway~~	NW	5	5	Y	L	4	45	0	0	0	3	SE	N	
312.3	2710	S Central Expy	~~Driveway~~	~~Parking Lot~~	NW	9	9	Y	N	0	45	0	0	0	3	SE	N	VP
312.4SG	3350	S Central Expy	~~Parking Lot~~	Parking Lot	NW	0	0	Y	N	0	45	0	0	0	3	SE	N	N
312.5	2729	S Central Expy	Parking Lot	Dumont Dr	NW	5	5	Y	N	0	45	0	0	0	3	SE	N	E/C
312.6	2688	S Central Expy	Dumont Dr	Driveway	NW	7	7	Y	N	0	45	0	0	0	3	SE	N	
312.7SG	3424	S Central Expy	Driveway	North Boundary	NW	0	0	Y	N	0	45	0	0	0	3	SE	N	N
313.1SG	3442	S Central Expy	North Boundary	W Phillips St	SE	0	0	Y	N	0	45	0	0	0	3	NW	N	N
313.2	2602	S Central Expy	W Phillips St	Parking Lot	SE	5	5	Y	L	8	45	0	0	0	3	NW	N	
313.3	2707	S Central Expy	Parking Lot	Driveway	SE	4	4	Y	N	0	45	0	0	0	3	NW	N	
314.1SG	3447	S Central Expy	Driveway	Parking Lot	SE	0	0	Y	N	0	45	0	0	0	3	NW	N	N
314.2	2762	S Central Expy	Parking Lot	Parking Lot	SE	4	4	Y	N	0	45	0	0	0	3	NW	N	
314.3	2765	S Central Expy	Parking Lot	Driveway	SE	4	4	Y	L	6	45	0	0	0	3	NW	N	
314.4SG	3449	S Central Expy	Driveway	Spring Valley Rd	SE	0	0	Y	N	0	45	0	0	0	3	NW	N	N
314.5	3396	S Central Expy	Spring Valley Rd	Crosswalk	SE	6	6	Y	N	0	45	0	0	0	3	NW	N	
314.6SG	2635	S Central Expy	Spring Valley Rd	S Central Expy	SE	0	0	Y	N	0	45	0	0	0	3	NW	N	N
314.7	2889	S Central Expy	Spring Valley Rd	South Boundary	SE	5	5	Y	L	25	45	0	0	0	4	NW	N	
SG	3410	S Floyd Rd	S Central Expy	Driveway	W	0	0	Y	N	0	30	8	0	0	3	-	N	N
	2785	S Floyd Rd	Driveway	Driveway	W	5	5	Y	L	5	30	8	0	0	3	-	N	
	2777	S Floyd Rd	Driveway	James Dr	W	4	4	Y	L	6	30	0	0	0	2	-	N	
	2708	S Floyd Rd	James Dr	Nottingham Dr	W	4	4	Y	L	6	30	0	0	0	2	-	N	
	2772	S Floyd Rd	S Central Expy	James Dr	E	6	6	Y	N	0	30	8	0	0	3	-	N	
	2719	S Floyd Rd	James Dr	Side Road	E	4	4	Y	L	4	30	0	0	0	2	-	N	P
	2716	S Floyd Rd	Side Road	Nottingham Dr	E	4	4	Y	L	5	30	0	0	0	2	-	N	
	2723	James Dr	S Central Expy	S Floyd Rd	N	4	4	Y	L	6	30	16	0	0	2	-	N	
	2736	James Dr	S Central Expy	S Floyd Rd	S	5	5	Y	N	0	30	16	0	0	2	-	N	
	2704	Nottingham Dr	S Floyd Rd	Dumont Dr	N	4	4	Y	L	5	30	16	0	0	2	-	N	
	2692	Nottingham Dr	S Floyd Rd	Dumont Dr	S	4	4	Y	L	5	30	16	0	0	2	-	N	
	2731	Nottingham Dr	Dumont Dr	North Boundary	NW	4	4	Y	L	5	30	16	0	0	2	-	N	
	3020	Nottingham Dr	Dumont Dr	North Boundary	SE	4	4	Y	L	5	30	16	0	0	2	-	N	
	2730	Dumont Dr	Nottingham Dr	West Boundary	N	4	4	Y	L	5	30	16	0	0	2	-	N	E
	2702	Dumont Dr	Nottingham Dr	West Boundary	S	4	4	Y	L	5	30	16	0	0	2	-	N	E/C
	2573	Scottsdale Dr	Nottingham Dr	West Boundary	N	4	4	Y	L	5	30	16	0	0	2	-	N	E
	2574	Scottsdale Dr	Nottingham Dr	West Boundary	S	4	4	Y	L	5	30	16	0	0	2	-	N	E/C
	3031	Downing Dr	Nottingham Dr	West Boundary	N	4	4	Y	L	5	30	16	0	0	2	-	N	E/C
	2580	Downing Dr	Nottingham Dr	West Boundary	S	4	4	Y	L	5	30	16	0	0	2	-	N	E/C

LEE ENGINEERING

For Side of Street, choose:
N NE
S SE
E NW
W SW

Buffer Types:
N = None
S = Solid Surface
L = Landscaped
T = Landscaped w/ Trees

*All lanes for 2-way street

DART Red & Blue Line Last Mile Connections Project
Field Data Checklist - Sidewalks

Date 08/28/18 Station Area Spring Valley Staff Name L.L. & H.B

Group Link	Link ID	Street Name	From Street	To Street	Side of Street	Sidewalk Width (ft) Actual	Sidewalk Width (ft) Eff.	Curb & Gutter?	Buffer Type	Buffer Width	Prevailing Speed or Speed Limit (mph)	Street Widths On-Street Parking	Street Widths Bike Lane	Street Widths Shoulder	Street Widths No. of Lanes*	If One-Way, Dir. of Travel	Lighting?	Condition Selection
	2778	Lingco Dr	S Sherman St	Curve	N	5	5	Y	L	4	20 ADV	0	0	0	2	-	N	
	2797	Lingco Dr	S Sherman St	Curve	S	5	5	Y	L	4	20 ADV	0	0	0	2	-	N	
	2802	Lingco Dr	Curve	W Spring Valley Rd	NW	5	5	Y	L	4	30	0	0	0	3	-	N	
	2853	Lingco Dr	Curve	W Spring Valley Rd	SE	5	5	Y	L	4	30	0	0	0	3	-	N	
SG	3487	E Spring Valley Rd	East Boundary	Abrams Rd	N	0	0	Y	N	0	30	0	0	0	2	-	N	N
	2867	E Spring Valley Rd	East Boundary	Abrams Rd	S	4	4	Y	L	5	30	0	0	0	2	-	N	
	2650	E Spring Valley Rd	Abrams Rd	S Greenville Ave	N	4	4	Y	L	1.5	30	0	0	0	2	-	N	
	2873	E Spring Valley Rd	Abrams Rd	S Greenville Ave	S	4	4	Y	L	5	30	0	0	0	2	-	N	
SG	3152	E Spring Valley Rd	S Greenville Ave	Centennial Blvd	N	15	5	Y	P	140	30	19 * 2	10	0	2	-	N	
	3402	E Spring Valley Rd	S Greenville Ave	Centennial Blvd	S	15	5	Y	P	140	30	19 * 2	10	0	2	-	N	
	2843	Grace Dr	East Boundary	Abrams Rd	N	4	4	Y	L	6	30	0	0	0	2	-	N	
	3483	Grace Dr	East Boundary	Abrams Rd	S	4	4	Y	L	6	30	16	0	0	2	-	N	N
SG	3476	Maple St	East Boundary	Abrams Rd	N	0	0	Y	N	0	30	16	0	0	2	-	N	N
SG	3477	Maple St	East Boundary	Abrams Rd	S	0	0	Y	N	0	30	16	0	0	2	-	N	
	2820	Maple St	Abrams Rd	S Greenville Ave	N	4	4	Y	L	6	30	16	0	0	2	-	N	
	2828	Maple St	Abrams Rd	S Greenville Ave	S	4	4	Y	L	6	30	16	0	0	2	-	N	
	3326	Maple St	S Greenville Ave	Culdisac	N/S	11	4	Y	N	0	30	0	0	0	2	-	N	
SG	3484	Pittman St	Abrams Rd	S Greenville Ave	N	0	0	N	N	0	30	0	0	0	2	-	N	N
SG	3486	Pittman St	Abrams Rd	S Greenville Ave	S	0	0	N	N	0	30	0	0	0	2	-	N	N
SG	3479	Wista Vista Dr	Abrams Rd	end	N	0	0	N	N	0	30	0	0	0	2	-	N	N
SG	3478	Wista Vista Dr	Abrams Rd	end	S	0	0	N	N	0	30	0	0	0	2	-	N	N
SG	3481	E Phillips St	East Boundary	S Greenville Ave	N	0	0	N	N	0	30	0	0	0	2	-	N	N
SG	3482	E Phillips St	East Boundary	S Greenville Ave	S	0	0	N	N	0	30	0	0	0	2	-	N	N
	3521	Central Trail Link	Dart Station	Along Railroad	E	6	6	Y										

For Side of Street, choose:

Buffer Types:

DART Red & Blue Line Last Mile Connections Project
Field Data Checklist - Sidewalks

Date 08/28/18 Station Area Spring Valley Staff Name L.L. & H.L

Group Link	Link ID	Street Name	From Street	To Street	Side of Street	Sidewalk Width (ft) Actual	Sidewalk Width (ft) Eff.	Curb & Gutter?	Buffer Type	Buffer Width	Prevailing Speed or Speed Limit (mph)	Street Widths On-Street Parking	Street Widths Bike Lane	Street Widths Shoulder	Street Widths No. of Lanes*	If One-Way, Dir. of Travel	Lighting?	Condition Selection
300.15G	3530	Centennial Blvd	East Boundary	Abrams Rd	N	0	0	Y	N	0	35	0	0	0	6	-	N	
300.2	2930	Centennial Blvd	East Boundary	Abrams Rd	S	5	5	Y	N	0	35	0	0	0	6	-	N	
300.3	2901	Centennial Blvd	Abrams Rd	S Greenville Ave	N	5	5	Y	N	0	~~35~~ 40	0	0	0	6	-	N	E/F
300.4	2941	Centennial Blvd	Abrams Rd	S Greenville Ave	S	7	5	Y	N	0	35	0	0	0	6	-	N	
300.5	2892	Centennial Blvd	S Greenville Ave	E Spring Valley Rd	N	7	7	Y	N	0	~~35~~ 40	0	0	0	6	-	N	G/E
300.6	2917	Centennial Blvd	S Greenville Ave	E Spring Valley Rd	S	7	7	Y	N	0	35	0	0	0	6	-	N	
300.7	3051	Centennial Blvd	E Spring Valley Rd	Railroad	N	9	9	Y	L	10	35	0	0	0	8	-	N	
300.8	3534	Centennial Blvd	E Spring Valley Rd	Railroad	S	6	6	Y	S	2	35	0	0	0	8	-	N	
301.1	3050	W Spring Valley Rd	Railroad	S Sherman St	N	7	5	Y	N	0	35	0	0	0	8	-	N	
301.2	2658	W Spring Valley Rd	Railroad	S Sherman St	S	7	5	Y	N	0	35	0	0	0	8	-	N	
301.3	2865	W Spring Valley Rd	S Sherman St	S Central Expy	N	4	4	Y	N	0	35	0	0	0	8	-	N	
301.4	2627	W Spring Valley Rd	S Sherman St	S Central Expy	S	7	3	Y	S	3	35	0	0	0	8	-	N	F
302.1	3548	Buckingham Rd	Abrams Rd	S Greenville Ave	N	6	6	Y	4	4	35	0	0	0	4	-	N	
303.1	3547	Buckingham Rd	Abrams Rd	S Greenville Ave	S	7	7	Y	~~3~~	~~3~~	35	0	0	0	4	-	N	P
302.2	3013	Buckingham Rd	S Greenville Ave	North Side Street	N	4	4	Y	L	3	35	0	0	0	4	-	N	G/E
303.2SG	3542	Buckingham Rd	S Greenville Ave	Sidewalk	S	0	0	Y	N	0	35	0	0	0	4	-	N	
302.3	3124	Buckingham Rd	North Side Street	Railroad	N	8	8	Y	N	0	35	0	0	0	4	-	N	N
303.3	3541	Buckingham Rd	Sidewalk	Railroad	S	7	7	Y	N	0	35	0	0	0	4	-	N	
302.4	2974	Buckingham Rd	Railroad	S Sherman St	N	5	5	Y	L	4	35	0	0	0	4	-	N	G/E
303.4	2997	Buckingham Rd	Railroad	S Sherman St	S	~~5~~	~~5~~	Y	L	4	35	0	0	0	4	-	N	
302.5	2944	Prestonwood Dr	S Sherman St	West Boundary	N	6	6	Y	L	2	35	0	0	0	4	-	N	G/E
303.5	2942	Prestonwood Dr	S Sherman St	West Boundary	S	5	5	Y	L	10	35	0	0	0	4	-	N	
304.1	3559	Abrams Rd	Buckingham Rd	Driveway	NW	5	5	Y	L	2		0	0	0	4	-	N	
305.1	3561	Abrams Rd	Buckingham Rd	Willingham Dr	E	6	6	Y	L	12	35	0	0	0	4	-	N	G/E
304.2	2941	Abrams Rd	Willingham Dr	Centennial Blvd	E	5	5	Y	N	0	35	0	0	0	4	-	N	buffer missing @ some sections
305.2	2930	Abrams Rd	Driveway	Centennial Blvd	SE	5	5	Y	N	0		0	0	0	4	-	N	
304.3	2904	Abrams Rd	Centennial Blvd	E Spring Valley Rd	W	4	4	Y	N	0	~~30~~	~~0~~	~~0~~	~~0~~	~~4~~	~~-~~	~~N~~	F
305.3	2877	Abrams Rd	Centennial Blvd	E Spring Valley Rd	E	5	5	Y	~~N~~	~~0~~	~~30~~	0	0	0	4	-	N	G/E
304.4	2649	Abrams Rd	E Spring Valley Rd	Maple St	NW	4	4	Y	L	4	30	0	0	0	4	-	N	
305.4	2841	Abrams Rd	E Spring Valley Rd	Maple St	SE	4	4	Y	L	4	30	0	0	0	4	-	N	
304.5	2814	Abrams Rd	Maple St	Pittman St	NW	4	4	Y	L	4	30	0	0	0	4	-	N	
305.5	2794	Abrams Rd	Maple St	Pittman St	SE	4	4	Y	L	4	30	0	0	0	4	-	N	
306.15G	3543	S Greenville Ave	South Boundary	Buckingham Rd	NW	0	0	Y	N	0	40	0	0	0	6	-	N	N
306.25G	3546	S Greenville Ave	South Boundary	Buckingham Rd	SE	0	0	Y	N	0	40	0	0	0	6	-	N	N
306.3	2956	S Greenville Ave	Buckingham Rd	Fountain	NW	5	5	Y	L	4	40	0	0	0	6	-	N	
306.45G	3549	S Greenville Ave	Buckingham Rd	Brick Fence	SE	2	0	Y	N	0	40	0	0	0	6	-	N	VP
306.5	3006	S Greenville Ave	Brick Fence	Fountain	SE	6	6	Y	L	6	40	0	0	0	6	-	N	
306.6	2682	S Greenville Ave	Fountain	Driveway	NW	4	4	Y	L	4	40	0	0	0	6	-	N	
306.75G	3552	S Greenville Ave	Driveway	Centennial Blvd	NW	0	0	Y	N	0	40	0	0	0	6	-	N	
306.8	2684	S Greenville Ave	Fountain	Centennial Blvd	SE	5	5	Y	L	5	40	0	0	0	6	-	N	N
307.1	2891	S Greenville Ave	Centennial Blvd	E Spring Valley Rd	W	5	5	Y	L	7	35	0	0	0	~~4~~	~~-~~	~~N~~	F
308.1	3577	S Greenville Ave	Centennial Blvd		E	4	2	Y	L	~~4~~	35	0	0	0	~~4~~	-	N	F/P
308.1	3577	S Greenville Ave			E	5	5	Y	N	0	35	0	0	0	6	-	N	
308.1	3577	S Greenville Ave		E Spring Valley Rd	E	5	5	Y	L	8	35	0	0	0	6	-	N	
307.2	3403	S Greenville Ave	E Spring Valley Rd	Emily Ln	W	6	6	Y	L	4	35	0	0	0	6	-	N	
308.25G	3488	S Greenville Ave	E Spring Valley Rd	Maple St	E	0	0	Y	N	0	35	0	0	0	6	-	N	
307.3	3304	S Greenville Ave	Emily Ln	Brick Row	W	6	6	Y	L	5	35	0	0	0	6	-	N	N
308.3	3285	S Greenville Ave	Maple St	Pittman St	E	4	4	Y	L	3	35	0	0	0	6	-	Y	
307.4	3295	S Greenville Ave	Brick Row	Bruton Bends Dr	W	6	6	Y	L	5	35	0	0	0	6	-	N	
308.4	2769	S Greenville Ave	Pittman St	Bruton Bends Dr	E	4	4	Y	L	3	35	0	0	0	6	-	N	
307.5	2757	S Greenville Ave	Bruton Bends Dr	Huffhines St	NW	4	4	Y	L	3	35	0	0	0	6	-	N	
308.5	3282	S Greenville Ave	Bruton Bends Dr	Huffhines St	SE	5	5	Y	L	2	35	0	0	0	6	-	N	
307.6	2620	S Greenville Ave	Huffhines St	E Phillips St	NW	4	4	Y	L	2	35	0	0	0	6	-	N	
308.6	3024	S Greenville Ave	Huffhines St	E Phillips St	SE	4	2	Y	L	2	35	0	0	0	6	-	N	P
		Willingham	Abrams	E boundary	S	0	0	Y	-	-	30	0	0	0	2	-	N	N
					3			Y	8		30	0	0	0	2	-	N	F

For Side of Street, choose:
N N NE
S SE
E NW
W SW

Buffer Types:
N = None
S = Solid Surface
L = Landscaped
T = Landscaped w/ Trees

LEE ENGINEERING

DART Red & Blue Line Last Mile Connections Project

Field Data Checklist - Sidewalks

Date 08/28/18 Station Area Spring Valley Staff Name LL. & H.B

Group Link	Link ID	Street Name	From Street	To Street	Side of Street	Sidewalk Width (ft) Actual	Sidewalk Width (ft) Eff.	Curb & Gutter?	Buffer Type	Buffer Width	Prevailing Speed or Speed Limit (mph)	Street Widths: On-Street Parking	Street Widths: Bike Lane	Street Widths: Shoulder	Street Widths: No. of Lanes*	If One-Way, Dir. of Travel	Lighting?	Condition Selection
309.1	3017	S Sherman St	South Boundary	W Buckingham Rd	NW	4	4	Y	L	6	30	0	0	0	4	-	N	
310.1	3018	S Sherman St	South Boundary	W Buckingham Rd	SE	5	3	Y	L	10	30	0	0	0	4	-	N	
309.2	2943	S Sherman St	W Buckingham Rd	W Spring Valley Rd	NW	5	5	Y	L	4	30	0	0	0	6	-	N	
310.2	3365	S Sherman St	W Buckingham Rd	W Spring Valley Rd	SE	5	3	Y	L	12	30	0	0	0	6	-	N	
309.3	2644	S Sherman St	W Spring Valley Rd	Parking Lot	W	5	5	Y	L	9	30	8	0	0	2	-	N	
310.3	2648	S Sherman St	W Spring Valley Rd	Parking Lot	E	5	5	Y	L	3	30	8	0	0	2	-	N	
309.4	2846	S Sherman St	Parking Lot	Red Sidewalk	W	11	6	Y	N	0	30	8	0	0	2	-	N	
310.4	2845	S Sherman St	Parking Lot	Lingco Dr	E	12	7	Y	N	0	30	8	0	0	2	-	N	
309.5	2793	S Sherman St	Red Sidewalk	Lingco Dr	NW	4	4	Y	L	4	30	0	0	0	2	-	N	
310.5	3366	S Sherman St	Parking Lot	Lingco Dr	SE	10	8	Y	N	0	30	0	0	0	2	-	N	
309.6	2759	S Sherman St	Lingco Dr	Phillips St	NW	4	4	Y	L	3	30	0	0	0	2	-	N	
310.6	2778	S Sherman St	Lingco Dr	Phillips St	SE	4	4	Y	L	4	30	0	0	0	2	-	N	
309.7	2585	S Sherman St	Phillips St	North Boundary	NW	4	4	Y	L	3	30	8	0	0	2	-	N	
310.7	2592	S Sherman St	Phillips St	North Boundary	SE	4	4	Y	L	4	30	8	0	0	2	-	N	
311.1	2848	S Central Expy	W Spring Valley Rd	Steak House	NW	4	4	Y	N	0	45	0	0	0	4	SE	N	
311.2	2848	S Central Expy	Steak House	S Floyd Rd	NW	5	5	Y	N	0	45	0	0	0	3	SE	N	
311.3	2788	S Central Expy	S Floyd Rd	Driveway	NW	6	6	Y	L	18	45	0	0	0	3	SE	N	
311.4	3414	S Central Expy	Driveway	Payday & Loan	NW	6	6	Y	L	6	45	0	0	0	3	SE	N	
312.15G	3418	S Central Expy	Payday & Loan	James Dr	NW	0	0	Y	N	0	45	0	0	0	3	SE	N	N
312.2	2737	S Central Expy	James Dr	Driveway	NW	5	5	Y	L	4	45	0	0	0	3	SE	N	
312.3	2710	S Central Expy	Driveway	Parking Lot	NW	9	9	Y	N	0	45	0	0	0	3	SE	N	VP
312.45G	3350	S Central Expy	Parking Lot	Parking Lot	NW	0	0	Y	N	0	45	0	0	0	3	SE	N	N
312.5	2729	S Central Expy	Parking Lot	Dumont Dr	NW	5	5	Y	N	0	45	0	0	0	3	SE	N	
312.6	2688	S Central Expy	Dumont Dr	Driveway	NW	7	7	N	N	0	45	0	0	0	3	SE	N	F
312.75G	3424	S Central Expy	Driveway	North Boundary	NW	0	0	Y	N	0	45	0	0	0	3	SE	N	N
313.15G	3442	S Central Expy	North Boundary	W Phillips St	SE	0	0	Y	N	0	45	0	0	0	3	NW	N	N
313.2	2602	S Central Expy	W Phillips St	Parking Lot	SE	5	5	Y	L	8	45	0	0	0	3	NW	N	
313.3	2707	S Central Expy	Parking Lot	Driveway	SE	4	4	Y	N	0	45	0	0	0	3	NW	N	
314.15G	3447	S Central Expy	Driveway	Parking Lot	SE	0	0	Y	N	0	45	0	0	0	3	NW	N	N
314.2	2762	S Central Expy	Parking Lot	Parking Lot	SE	4	4	Y	N	0	45	0	0	0	3	NW	N	
314.3	2765	S Central Expy	Parking Lot	Driveway	SE	4	4	Y	L	6	45	0	0	0	3	NW	N	
314.45G	3449	S Central Expy	Driveway	Spring Valley Rd	SE	0	0	Y	N	0	45	0	0	0	3	NW	N	N
314.5	3396	S Central Expy	Spring Valley Rd	Crosswalk	SE	6	6	Y	N	0	45	0	0	0	3	NW	N	
314.65G	2635	S Central Expy	Spring Valley Rd	S Central Expy	SE	0	0	Y	N	0	45	0	0	0	3	NW	N	N
314.7	2889	S Central Expy	Spring Valley Rd	South Boundary	SE	5	5	Y	L	25	45	0	0	0	4	NW	N	
SG	3410	S Floyd Rd	S Central Expy	Driveway	W	0	0	Y	N	0	30	8	0	0	3	-	N	N
	2785	S Floyd Rd	Driveway	Driveway	W	5	5	Y	L	5	30	8	0	0	3	-	N	
	2777	S Floyd Rd	Driveway	James Dr	W	4	4	Y	L	6	30	0	0	0	2	-	N	
	2708	S Floyd Rd	James Dr	Nottingham Dr	W	4	4	Y	L	6	30	0	0	0	2	-	N	
	2772	S Floyd Rd	S Central Expy	James Dr	E	6	6	Y	N	0	30	8	0	0	3	-	N	
	2719	S Floyd Rd	James Dr	Side Road	E	4	4	Y	L	4	30	0	0	0	2	-	N	P
	2716	S Floyd Rd	Side Road	Nottingham Dr	E	4	4	Y	L	5	30	0	0	0	2	-	N	
	2723	James Dr	S Central Expy	S Floyd Rd	N	4	4	Y	L	6	30	16	0	0	2	-	N	
	2736	James Dr	S Central Expy	S Floyd Rd	S	5	5	Y	N	0	30	16	0	0	2	-	N	
	2704	Nottingham Dr	S Floyd Rd	Dumont Dr	N	4	4	Y	L	5	30	16	0	0	2	-	N	
	2692	Nottingham Dr	S Floyd Rd	Dumont Dr	S	4	4	Y	L	5	30	16	0	0	2	-	N	
	2731	Nottingham Dr	Dumont Dr	North Boundary	NW	4	4	Y	L	5	30	16	0	0	2	-	N	
	3020	Nottingham Dr	Dumont Dr	North Boundary	SE	4	4	Y	L	5	30	16	0	0	2	-	N	
	2730	Dumont Dr	Nottingham Dr	West Boundary	N	4	4	Y	L	5	30	16	0	0	2	-	N	
	2702	Dumont Dr	Nottingham Dr	West Boundary	S	4	4	Y	L	5	30	16	0	0	2	-	N	
	2573	Scottsdale Dr	Nottingham Dr	West Boundary	N	4	4	Y	L	5	30	16	0	0	2	-	N	
	2574	Scottsdale Dr	Nottingham Dr	West Boundary	S	4	4	Y	L	5	30	16	0	0	2	-	N	
	3031	Downing Dr	Nottingham Dr	West Boundary	N	4	4	Y	L	5	30	16	0	0	2	-	N	
	2580	Downing Dr	Nottingham Dr	West Boundary	S	4	4	Y	L	5	30	16	0	0	2	-	N	

LEE ENGINEERING

For Side of Street, choose:
N NE
S SE
E NW
W SW

Buffer Types:
N = None
S = Solid Surface
L = Landscaped
T = Landscaped w/ Trees

*All lanes for 2-way street

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	2778	Lingco Dr	S Sherman St	Curve	N	5	5	Y	L	4	20 ADV	0	0	0	2	-	N	
	2797	Lingco Dr	S Sherman St	Curve	S	5	5	Y	L	4	20 ADV	0	0	0	2	-	N	
	2802	Lingco Dr	Curve	W Spring Valley Rd	NW	5	5	Y	L	4	30	0	0	0	3	-	N	
	2853	Lingco Dr	Curve	W Spring Valley Rd	SE	5	5	Y	L	4	30	0	0	0	3	-	N	
SG	3487	E Spring Valley Rd	East Boundary	Abrams Rd	N	0	0	Y	N	0	30	0	0	0	4	-	N	N
	2867	E Spring Valley Rd	East Boundary	Abrams Rd	S	4	4	Y	L	5	30	0	0	0	4	-	N	
	2650	E Spring Valley Rd	Abrams Rd	S Greenville Ave	N	4	4	Y	L	1.5	30	0	0	0	2	-	N	P
	2873	E Spring Valley Rd	Abrams Rd	S Greenville Ave	S	4	4	Y	L	5	30	0	0	0	2	-	N	P
SG	3152	E Spring Valley Rd	S Greenville Ave	Centennial Blvd	N	0	0	Y	N	0	30	19 * 2	0	0	2	-	N	N
	3402	E Spring Valley Rd	S Greenville Ave	Centennial Blvd	S	4	4	Y	N	0	30	19 * 2	0	0	2	-	N	
	2843	Grace Dr	East Boundary	Abrams Rd	N	4	4	Y	L	6	30	0	0	0	2	-	N	
	3483	Grace Dr	East Boundary	Abrams Rd	S	4	4	Y	L	6	30	0	0	0	2	-	N	
SG	3476	Maple St	East Boundary	Abrams Rd	N	0	0	Y	N	0	30	16	0	0	2	-	N	N
SG	3477	Maple St	East Boundary	Abrams Rd	S	0	0	Y	N	0	30	16	0	0	2	-	N	N
	2820	Maple St	Abrams Rd	S Greenville Ave	N	4	4	Y	L	6	30	17	0	0	2	-	N	F
	2828	Maple St	Abrams Rd	S Greenville Ave	S	4	4	Y	L	6	30	17	0	0	2	-	N	F
	3326	Maple St	S Greenville Ave	Culdsac	N/S	11	4	Y	N	0	30	0	0	0	2	-	N	
SG	3484	Pittman St	Abrams Rd	S Greenville Ave	N	0	0	N	N	0	30	0	0	0	2	-	N	N
SG	3486	Pittman St	Abrams Rd	S Greenville Ave	S	0	0	N	N	0	30	0	0	0	2	-	N	N
SG	3479	Wista Vista Dr	Abrams Rd	end	N	0	0	N	N	0	30	0	0	0	2	-	N	N
SG	3478	Wista Vista Dr	Abrams Rd	end	S	0	0	N	N	0	30	0	0	0	2	-	N	N
SG	3481	E Phillips St	East Boundary	S Greenville Ave	N	0	0	N	N	0	30	0	0	0	2	-	N	N
SG	3482	E Phillips St	East Boundary	S Greenville Ave	S	0	0	N	N	0	30	0	0	0	2	-	N	N
	3521	Central Trail Link	Dart Station	Along Railroad	E	6	6	Y							-			

For Side of Street, choose:

Buffer Types:

08/28/18 Spg Valley L.L. & M.B

DART Red & Blue Line Last Mile Connections Project
Field Data Checklist - Signalized Crossings

Date 08/28/18 Station Area Spg Valley Staff Name L.L. & M.B

Link ID or "New"	Location Type (circle one)	Street Crossed	At/Between Street(s)	Int. Leg	Stop Control?	Lighting Present?	No. Lanes Crossed: Per Direction	No. Lanes Crossed: Total	Med. Refuge Width	Both Ped. Ramps Present?	Permitted: Left Turns?	Permitted: Right Turns?	If Signalized: Countdown Ped. Signals?	If Signalized: Pushbuttons: Functional?	If Signalized: Pushbuttons: w/ APS Signals?	>1 Refuge Island?	No. of Lanes Crossed at Once	>4 legs or high skew	Closed or limited x-walks	Channelized Right Turns	Photo(s)?	Notes
I6.1	I	W Spring Valley	S Central Expy	E	Y	Y	2	4	60	Y	Y	Y				Y	4	N	N	Y		
	I	W Spring Valley	S Sherman St	W	Y		2	3	0	N	Y	Y				N	3	N	N	N		
	I	W Spring Valley	S Sherman St	E	Y		2	3	0	N	Y	Y				N	3	N	N	N		
	I	S Sherman St	W Spring Valley	N	Y		4	9	2	Y	Y	Y				N	9	N	N	N		
	I	S Sherman St	W Spring Valley	S	Y		4	9	2	Y	Y	Y				N	9	N	N	N		
	I	W Spring Valley	Lingco Dr	W	Y		2	4	0	Y	Y	Y				N	5	N	N	N		
	I	W Spring Valley	Lingco Dr	E	Y		2	4	0	Y	Y	Y				N	5	N	N	Y		
	I	Lingco Dr	W Spring Valley	N	Y		2	4	0	Y	Y	Y				N	4	N	N	N		
	I	Centennial Blvd	E Spring Valley Rd	W	Y	N	4	8	0	Y	Y	Y	Y	Y	Y	N	8	N	N	N	✓	on all corners
	I	Centennial Blvd	E Spring Valley Rd	E	Y	N	4	8	0	Y	Y	Y	Y	Y	Y	N	8	N	N	N	✓	on all corners
	I	E Spring Valley Rd	Centennial Blvd	N	Y	N	2	4	0	Y	Y	Y	Y	Y	N	N	4	N	N	N	✓	
	I	Centennial Blvd	S Greenville Ave	W	Y	N	3	6	0	Y	Y	Y	Y	Y	N	N	6	N	N	N	✓	
	I	Centennial Blvd	S Greenville Ave	E	Y	N	3	6	0	Y	Y	Y	Y	Y	N	N	6	N	N	N	✓	
	I	S Greenville Ave	Centennial Blvd	N	Y	N	3	6	0	Y	Y	Y	Y	Y	N	N	6	N	N	N	✓	
	I	S Greenville Ave	Centennial Blvd	S	Y	N	3	6	0	Y	Y	Y	Y	Y	N	N	6	N	N	N	✓	
	I	Centennial Blvd	Abrams Rd	W	Y		4	9	0	Y	Y	Y				N	9	N	N	N		
	I	Centennial Blvd	Abrams Rd	E	Y		4	9	0	Y	Y	Y				N	9	N	N	N		
	I	Abrams Rd	Centennial Blvd	N	Y		4	9	0	Y	Y	Y				N	9	N	N	N		
	I	Abrams Rd	Centennial Blvd	S	Y		4	9	0	Y	Y	Y				N	9	N	N	N		
	I	Prestonwood Dr	S Sherman St	W	Y	Y	2	4	0	Y	Y	Y	Y	Y	N	N	4	N	N	N	✓	
	I	Prestonwood Dr	S Sherman St	E	Y	Y	2	4	0	Y	Y	Y	Y	Y	N	N	4	N	N	N	✓	
	I	S Sherman St	Prestonwood Dr	N	Y	Y	2	4	0	Y	Y	Y	Y	Y	N	N	4	N	N	N	✓	
	I	S Sherman St	Prestonwood Dr	S	Y	Y	2	4	0	Y	Y	Y	Y	Y	N	N	4	N	N	N	✓	
	I	W Buckingham Rd	S Greenville Ave	W	Y	Y	2	5	0	Y	Y	Y	Y	Y	N	N	6	N	N	N	✓	
	I	W Buckingham Rd	S Greenville Ave	E	Y	Y	2	5	0	Y	Y	Y	Y	Y	N	N	6	N	N	N	✓	
	I	S Greenville Ave	W Buckingham Rd	N	Y	Y	3	8	0	Y	Y	Y	Y	Y	N	N	8	N	N	N		
	I	S Greenville Ave	W Buckingham Rd	S	Y	Y	3	8	0	Y	Y	Y	Y	Y	N	N	8	N	N	N		
	I	E Spring Valley Rd	S Greenville Ave	W	Y	Y	4	4	0	Y	Y	Y	Y	Y	N	N	4	N	N	N	✓	
	I	E Spring Valley Rd	S Greenville Ave	E	Y	Y	4	3	0	Y	Y	Y	Y	Y	N	N	3	N	N	N	✓	
	I	S Greenville Ave	E Spring Valley Rd	N	Y	Y	2	5	0	Y	Y	Y	Y	Y	N	N	5	N	N	N	✓	
	I	S Greenville Ave	E Spring Valley Rd	S	Y	Y	2	5	0	Y	Y	Y	Y	Y	N	N	5	N	N	N	✓	
	I	E Spring Valley Rd	Abrams Rd	W	Y		4	7	0	Y	Y	Y				N	8	N	N	N		
	I	E Spring Valley Rd	Abrams Rd	E	Y		4	7	0	Y	Y	Y				N	8	N	N	N		
	I	Abrams Rd	E Spring Valley Rd	N	Y	Y	2	4	0	Y	Y	Y	Y	Y	N	N	4	N	N	Y	✓	
	I	Abrams Rd	E Spring Valley Rd	S	Y	Y	2	4	0	Y	Y	Y	Y	Y	N	N	4	N	N	N	✓	
	I M																					

Choose:
I = Intersection
M = Mid-Block

For Int. Leg, choose:
N NE
S SE
E NW
W SW
(N/A for mid-block)

Buffer Types:
N = None
S = Solid Surface
L = Landscaped
T = Landscaped w/ Trees
V = Vertical (retaining wall)

*All lanes for 2-way street

Legend:
Complete in office, confirm in field
Confirm in field

LEE ENGINEERING

See http://www.oregon.gov/ODOT/Planning/Documents/APMv2_Ch14.pdf (Sect. 14.5) for more details.
Consider adding items from Page 9 of https://www.fhwa.dot.gov/innovation/everydaycounts/edc_4/guide_to_improve_uncontrolled_crossings.pdf

DART Red & Blue Line Last Mile Connections Project
Field Data Checklist - Signalized Crossings

Date 08/28/18 Station Area Spg Valley Staff Name L.L. & M.B

Link ID or "New"	Location Type (circle one)	Street Crossed	At/Between Street(s)	Int. Leg	Stop Control?	Lighting Present?	No. Lanes Crossed: Per Direction	No. Lanes Crossed: Total	Med. Refuge Width	Both Ped. Ramps Present?	Permitted: Left Turns?	Permitted: Right Turns?	If Signalized: Countdown Ped. Signals?	If Signalized: Pushbuttons: Functional?	If Signalized: Pushbuttons: w/ APS Signals?	>1 Refuge Island?	No. of Lanes Crossed at Once	>4 legs or high skew	Closed or limited x-walks	Channelized Right Turns	Photo(s)?	Notes
I6.1	I	W Spring Valley	S Central Expy	E	Y	Y	2	4	60	Y	Y	Y				Y	4	N	N	Y		
	I	W Spring Valley	S Sherman St	W	Y	N	2	3	0	N	Y	Y				N	3	N	N	N		
	I	W Spring Valley	S Sherman St	E	Y	N	2	3	0	N	Y	Y				N	3	N	N	N		
	I	S Sherman St	W Spring Valley	N	Y	N	4	9	2	Y	Y	Y				N	9	N	N	N		
	I	S Sherman St	W Spring Valley	S	Y	N	4	9	2	Y	Y	Y				N	9	N	N	N		
	I	W Spring Valley	Lingco Dr	W	Y	N	2	4	0	Y	Y	Y				N	4	N	N	N		
	I	W Spring Valley	Lingco Dr	E	Y	N	2	4	0	Y	Y	Y				N	4	N	N	Y		
	I	Lingco Dr	W Spring Valley	N	Y	N	2	4	0	Y	Y	Y				N	4	N	N	N		
	I	Centennial Blvd	E Spring Valley Rd	W	Y		4	8	0	Y	Y	N				N	8	N	N	N		
	I	Centennial Blvd	E Spring Valley Rd	E	Y		4	8	0	Y	N	Y				N	8	N	N	N		
	I	E Spring Valley Rd	Centennial Blvd	N	Y		2	4	0	Y	Y	Y				N	4	N	N	N		
	I	Centennial Blvd	S Greenville Ave	W	Y		4	8	2	Y	Y	N				N	8	N	N	N		
	I	Centennial Blvd	S Greenville Ave	E	Y		4	8	2	Y	N	Y				N	8	N	N	N		
	I	S Greenville Ave	Centennial Blvd	N	Y		4	9	0	Y	Y	Y				N	9	N	N	N		
	I	S Greenville Ave	Centennial Blvd	S	Y		4	9	0	Y	Y	Y				N	9	N	N	N		
	I	Centennial Blvd	Abrams Rd	W	Y	N	4	9	0	Y	Y	Y	Y	Y	N	N	9	N	N	N		
	I	Centennial Blvd	Abrams Rd	E	Y	N	4	9	0	Y	Y	Y	Y	Y	N	N	9	N	N	N		
	I	Abrams Rd	Centennial Blvd	N	Y	N	2	5	0	Y	Y	Y	Y	Y	N	N	5	N	N	N		
	I	Abrams Rd	Centennial Blvd	S	Y	N	2	5	0	Y	Y	Y	Y	Y	N	N	5	N	N	N		
	I	Prestonwood Dr	S Sherman St	W	Y		4	9	0	Y	Y	Y				N	8	N	N	N		
	I	Prestonwood Dr	S Sherman St	E	Y		4	9	0	Y	Y	Y				N	8	N	N	N		
	I	S Sherman St	Prestonwood Dr	N	Y		4	9	0	Y	Y	Y				N	9	N	N	N		
	I	S Sherman St	Prestonwood Dr	S	Y		4	9	0	Y	Y	Y				N	9	N	N	N		
	I	W Buckingham Rd	S Greenville Ave	W	Y		4	7	8	Y	Y	Y				N	8	N	N	N		
	I	W Buckingham Rd	S Greenville Ave	E	Y		4	9	0	Y	Y	Y				N	8	N	N	N		
	I	S Greenville Ave	W Buckingham Rd	N	Y		4	9	0	Y	Y	Y				N	9	N	N	N		
	I	S Greenville Ave	W Buckingham Rd	S	Y		4	9	0	Y	Y	Y				N	9	N	N	N		
	I	E Spring Valley Rd	S Greenville Ave	W	Y		4	7	0	Y	Y	Y				N	8	N	N	N		
	I	E Spring Valley Rd	S Greenville Ave	E	Y		4	7	0	Y	Y	Y				N	8	N	N	N		
	I	S Greenville Ave	E Spring Valley Rd	N	Y		4	9	0	Y	Y	Y				N	9	N	N	N		
	I	S Greenville Ave	E Spring Valley Rd	S	Y		4	9	0	Y	Y	Y				N	9	N	N	N		
	I	E Spring Valley Rd	Abrams Rd	W	Y		4	7	0	Y	Y	Y				N	8	N	N	N		
	I	E Spring Valley Rd	Abrams Rd	E	Y		4	7	0	Y	Y	Y				N	8	N	N	N		
	I	Abrams Rd	E Spring Valley Rd	N	Y		4	7	0	Y	Y	Y				N	9	N	N	Y		
	I	Abrams Rd	E Spring Valley Rd	S	Y		4	7	0	Y	Y	Y				N	9	N	N	N		
	I M																					

Choose:
I = Intersection
M = Mid-Block

For Int. Leg, choose:
N NE
S SE
E NW
W SW
(N/A for mid-block)

Buffer Types:
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V = Vertical (retaining wall)

*All lanes for 2-way street

Legend:
Complete in office, confirm in field
Confirm in field

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See http://www.oregon.gov/ODOT/Planning/Documents/APMv2_Ch14.pdf (Sect. 14.5) for more details.
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DART Red & Blue Line Last Mile Connections Project
Field Data Checklist - Unsignalized Crossings

Date 08/28/18 Station Area Spring Valley Staff Name L.L. & H.B

Link ID or "New"	Location Type (circle one)	Street Crossed	At/Between Street(s)	Int. Leg	Stop Control?	Lighting Present?	If No Stop Control (i.e. if Free or Signal): No. Lanes Crossed: Per Direction	Total	Med. Refuge Width	Both Ped. Ramps Present?	If Unsignalized with no Stop Control (i.e. Free): Speed Limit (mph)	One Way?	2-Min. Traffic Count*: Time	Volume	Treatment present (circle all)	Photo(s)?	Notes
	I	S Sherman St	Lingco Dr	NE	N	N	2	4	0	N		Y N			Mkg RSg RRFB InSgn Cex RCwk		
	I	S Sherman St	Lingco Dr	SW	N	N	2	4	0	N		Y N			Mkg RSg RRFB InSgn Cex RCwk		
	I	Lingco Dr	S Sherman St	SE	Y	N	3	3	0	N		Y N			Mkg RSg RRFB InSgn Cex RCwk		
	M	Lingco Dr	Dart Station	N	N	N	3	3	0	N		Y N			Mkg RSg RRFB InSgn Cex RCwk		
	I	Maple St	S Greenville Ave	W	Y	N	1	3	5	Y		Y N			Mkg RSg RRFB InSgn Cex RCwk		
	I	Maple St	S Greenville Ave	E	Y	N	1	2	0	Y		Y N			Mkg RSg RRFB InSgn Cex RCwk		
	I	S Greenville Ave	Maple St	N	N	N	2	5	0	Y		Y N			Mkg RSg RRFB InSgn Cex RCwk		
	I	S Greenville Ave	Maple St	S	N	N	2	5	0	Y		Y N			Mkg RSg RRFB InSgn Cex RCwk		
	I	Pittman St	S Greenville Ave	W	Y	N	1	3	0	Y		Y N			Mkg RSg RRFB InSgn Cex RCwk		
	I	Pittman St	S Greenville Ave	E	Y	N	1	2	0	Y		Y N			Mkg RSg RRFB InSgn Cex RCwk		
	I	S Greenville Ave	Pittman St	N	N	N	2	5	0	Y		Y N			Mkg RSg RRFB InSgn Cex RCwk		
	I	S Greenville Ave	Pittman St	S	N	N	2	5	0	Y		Y N			Mkg RSg RRFB InSgn Cex RCwk		
	I	Huffhines St	S Greenville Ave	E	Y	N	1	2	0	Y		Y N			Mkg RSg RRFB InSgn Cex RCwk		
	I	S Greenville Ave	Huffhines St	N	N	N	2	5	0	Y		Y N			Mkg RSg RRFB InSgn Cex RCwk		
	I	S Greenville Ave	Huffhines St	S	N	N	2	5	0	Y		Y N			Mkg RSg RRFB InSgn Cex RCwk		
	I	E Phillips St	S Greenville Ave	W	Y	N	1	2	0	Y		Y N			Mkg RSg RRFB InSgn Cex RCwk		
	I	E Phillips St	S Greenville Ave	E	Y	N	1	2	0	Y		Y N			Mkg RSg RRFB InSgn Cex RCwk		
	I	S Greenville Ave	E Phillips St	N	N	N	2	5	0	Y		Y N			Mkg RSg RRFB InSgn Cex RCwk		
	I	S Greenville Ave	E Phillips St	S	N	N	2	5	0	Y		Y N			Mkg RSg RRFB InSgn Cex RCwk		
	I M	Arams	Willigham	N	N	N	2	5	0	Y	35	Y N	7:39	12	Mkg RSg RRFB InSgn Cex RCwk	✓	light on SE C
	I M	—	—	S	N	N	2	3	0	Y	35	Y N	7:39	12	Mkg RSg RRFB InSgn Cex RCwk	✓	
	I M	Willihom	Arams	E	Y	N	1	2	0	Y	30	Y N			Mkg RSg RRFB InSgn Cex RCwk	✓	
	I M	Willigham	Abrams	W	Y	N	1	2	0	Y	30	Y N			Mkg RSg RRFB InSgn Cex RCwk	✓	
	I M											Y N			Mkg RSg RRFB InSgn Cex RCwk		
	I M											Y N			Mkg RSg RRFB InSgn Cex RCwk		
	I M											Y N			Mkg RSg RRFB InSgn Cex RCwk		
	I M											Y N			Mkg RSg RRFB InSgn Cex RCwk		
	I M											Y N			Mkg RSg RRFB InSgn Cex RCwk		
	I M											Y N			Mkg RSg RRFB InSgn Cex RCwk		
	I M											Y N			Mkg RSg RRFB InSgn Cex RCwk		
	I M											Y N			Mkg RSg RRFB InSgn Cex RCwk		
	I M											Y N			Mkg RSg RRFB InSgn Cex RCwk		
	I M											Y N			Mkg RSg RRFB InSgn Cex RCwk		
	I M											Y N			Mkg RSg RRFB InSgn Cex RCwk		
	I M											Y N			Mkg RSg RRFB InSgn Cex RCwk		
	I M											Y N			Mkg RSg RRFB InSgn Cex RCwk		
	I M											Y N			Mkg RSg RRFB InSgn Cex RCwk		
	I M											Y N			Mkg RSg RRFB InSgn Cex RCwk		
	I M											Y N			Mkg RSg RRFB InSgn Cex RCwk		
	I M											Y N			Mkg RSg RRFB InSgn Cex RCwk		
	I M											Y N			Mkg RSg RRFB InSgn Cex RCwk		
	I M											Y N			Mkg RSg RRFB InSgn Cex RCwk		
	I M																

DART Red & Blue Line Last Mile Connections Project
Field Data Checklist - Unsignalized Crossings

Date 08/28/18 Station Area Spring Valley Staff Name SS & JS

Link ID or "New"	Location Type (circle one)	Street Crossed	At/Between Street(s)	Int. Leg	Stop Control?	Lighting Present?	If No Stop Control (i.e. if Free or Signal): No. Lanes Crossed: Per Direction	Total	Med. Refuge Width	Both Ped. Ramps Present?	If Unsignalized with no Stop Control (i.e. Free): Speed Limit (mph)	One Way?	2-Min. Traffic Count*: Time	Volume	Treatment present (circle all)	Photo(s)?	Notes
	I	S Sherman St	Lingco Dr	NE	Y N	N	2	4	0	N		Y N	1115	7	Mkg RSg RRFB InSgn Cex RCwk		
	I	S Sherman St	Lingco Dr	SW	N	N	2	4	0	N		Y N	1115	7	Mkg RSg RRFB InSgn Cex RCwk		
	I	Lingco Dr	S Sherman St	SE	Y	N	3	3	0	N		Y N			Mkg RSg RRFB InSgn Cex RCwk		
	M	Lingco Dr	Dart Station	N	N	N	3	3	0	N		Y N			Mkg RSg RRFB InSgn Cex RCwk		
	I	Maple St	S Greenville Ave	W	Y	N	1	3	5	Y		Y N			Mkg RSg RRFB InSgn Cex RCwk		
	I	Maple St	S Greenville Ave	E	Y	N	1	2	0	Y		Y N			Mkg RSg RRFB InSgn Cex RCwk		
	I	S Greenville Ave	Maple St	N	N	N	2	5	0	Y		Y N			Mkg RSg RRFB InSgn Cex RCwk		
	I	S Greenville Ave	Maple St	S	N	N	2	5	0	Y		Y N			Mkg RSg RRFB InSgn Cex RCwk		
	I	Pittman St	S Greenville Ave	W	Y	N	1	3	0	Y		Y N			Mkg RSg RRFB InSgn Cex RCwk		
	I	Pittman St	S Greenville Ave	E	Y	N	1	2	0	Y		Y N			Mkg RSg RRFB InSgn Cex RCwk		
	I	S Greenville Ave	Pittman St	N	N	N	2	5	0	Y		Y N			Mkg RSg RRFB InSgn Cex RCwk		
	I	S Greenville Ave	Pittman St	S	N	N	2	5	0	Y		Y N			Mkg RSg RRFB InSgn Cex RCwk		
	I	Huffhines St	S Greenville Ave	E	Y	N	1	2	0	Y		Y N			Mkg RSg RRFB InSgn Cex RCwk		
	I	S Greenville Ave	Huffhines St	N	N	N	2	5	0	Y		Y N	915	35	Mkg RSg RRFB InSgn Cex RCwk		no crosswalk
	I	S Greenville Ave	Huffhines St	S	N	N	2	5	0	Y		Y N	915	35	Mkg RSg RRFB InSgn Cex RCwk		↓
	I	E Phillips St	S Greenville Ave	W	Y	N	1	2	0	Y		Y N			Mkg RSg RRFB InSgn Cex RCwk		
	I	E Phillips St	S Greenville Ave	E	Y	N	1	2	0	Y		Y N			Mkg RSg RRFB InSgn Cex RCwk		
	I	S Greenville Ave	E Phillips St	N	N	N	2	5	0	Y	35	Y N	9:18	35	Mkg RSg RRFB InSgn Cex RCwk		
	I	S Greenville Ave	E Phillips St	S	N	N	2	5	0	Y	35	Y N	9:18	35	Mkg RSg RRFB InSgn Cex RCwk		
	I M	Brick Row	Greenville	E	Y	N	2	4	0	Y	35	Y N			Mkg RSg RRFB InSgn Cex RCwk		
	I M	↓	↓	W	Y	N	2	4	0	Y	35	Y N	↓	↓	Mkg RSg RRFB InSgn Cex RCwk		
	I M	Abrams	Pittman	E	Y	N	2	4	0	Y	30	Y N	3	23	Mkg RSg RRFB InSgn Cex RCwk		20 mph school
	I M	↓	↓	W	Y	N	2	4	0	Y	30	Y N	3	23	Mkg RSg RRFB InSgn Cex RCwk		↓
	I M	Maple	Maple	E	Y	N						Y N			Mkg RSg RRFB InSgn Cex RCwk		no curb/gutter on Maple
	I M	↓	↓	W	Y	N	↓	↓	↓		↓	Y N	↓	↓	Mkg RSg RRFB InSgn Cex RCwk		↓
	I M											Y N			Mkg RSg RRFB InSgn Cex RCwk		
	I M											Y N			Mkg RSg RRFB InSgn Cex RCwk		
	I M											Y N			Mkg RSg RRFB InSgn Cex RCwk		
	I M											Y N			Mkg RSg RRFB InSgn Cex RCwk		
	I M											Y N			Mkg RSg RRFB InSgn Cex RCwk		
	I M											Y N			Mkg RSg RRFB InSgn Cex RCwk		
	I M											Y N			Mkg RSg RRFB InSgn Cex RCwk		
	I M											Y N			Mkg RSg RRFB InSgn Cex RCwk		
	I M											Y N			Mkg RSg RRFB InSgn Cex RCwk		
	I M											Y N			Mkg RSg RRFB InSgn Cex RCwk		
	I M											Y N			Mkg RSg RRFB InSgn Cex RCwk		
	I M											Y N			Mkg RSg RRFB InSgn Cex RCwk		
	I M											Y N			Mkg RSg RRFB InSgn Cex RCwk		
	I M											Y N			Mkg RSg RRFB InSgn Cex RCwk		
	I M											Y N			Mkg RSg RRFB InSgn Cex RCwk		
	I M											Y N			Mkg RSg RRFB InSgn Cex RCwk		
	I M											Y N			Mkg RSg RRFB InSgn Cex RCwk		
	I M											Y N			Mkg RSg RRFB InSgn Cex RCwk		

DART Red & Blue Line Last Mile Connections Project
Field Data Checklist - Sidewalk Gaps

Date 08/28/18
Station Spg. Valley
Staff Name L.L. & H.B.
Location Burlington Rd. between Railway Track & bridge (SS)

Instructions : When coding/confirming sidewalk condition of "Nonexistant" on sidewalk checklist, review the following and make notes here and/or on the sidewalk checklist.

What challenges are there to the feasibility/practicability of sidewalk?
Circle items below and add notes/sketches as applicable.

Utility poles? No
Underground utilities? Maybe
Trees? Yes
Slopes? No
Other structures? No
Rail crossings? No
Business parking/access management issues? No
Insufficient bridge width? No
Take photos and notes to document. ✓

Other Notes:

LEE ENGINEERING

DART Red & Blue Line Last Mile Connections Project
Field Data Checklist - Sidewalk Gaps

Date 08/28/18
Station Spg. Valley
Staff Name L.L. & H.B.
Location Burlington Rd. between bridge & Greenville Ave. (SS)

Instructions : When coding/confirming sidewalk condition of "Nonexistant" on sidewalk checklist, review the following and make notes here and/or on the sidewalk checklist.

What challenges are there to the feasibility/practicability of sidewalk?
Circle items below and add notes/sketches as applicable.

Utility poles? NO
Underground utilities? Maybe
Trees? Yes
Slopes? No
Other structures? Yes (signs)
Rail crossings? No
Business parking/access management issues? No
Insufficient bridge width? No
Take photos and notes to document. ✓

Other Notes:

LEE ENGINEERING

DART Red & Blue Line Last Mile Connections Project
Field Data Checklist - Sidewalk Gaps

Date 08/28/18.
Station SP1 Valley
Staff Name L.L. & H.B.
Location Willing Ham Brew
Abrants & E boundary

Instructions : When coding/confirming sidewalk condition of "Nonexistant" on sidewalk checklist, review the following and make notes here and/or on the sidewalk checklist.

What challenges are there to the feasibility/practicability of sidewalk?
Circle items below and add notes/sketches as applicable.

Utility poles? No
Underground utilities? Maybe
Trees? No
Slopes? No
Other structures? ~~No~~ Signs.
Rail crossings? No
Business parking/access management issues? No
Insufficient bridge width? No
Take photos and notes to document. ✓

Other Notes:

DART Red & Blue Line Last Mile Connections Project
Field Data Checklist - Sidewalk Gaps

Date 08/28/18
Station SP1 Valley
Staff Name L.L. & H.B.
Location Central ~~SB~~FR Brew.
Driveway & North boundary

Instructions : When coding/confirming sidewalk condition of "Nonexistant" on sidewalk checklist, review the following and make notes here and/or on the sidewalk checklist.

What challenges are there to the feasibility/practicability of sidewalk?
Circle items below and add notes/sketches as applicable.

Utility poles? ~~Maybe~~ ~~No~~ ~~Yes~~ Some.
Underground utilities? Maybe.
Trees? ~~No~~ Yes.
Slopes? ~~Yes~~ Some
Other structures? ~~No~~ Signs.
Rail crossings? No
Business parking/access management issues? No
Insufficient bridge width? No
Take photos and notes to document. ✓.

Other Notes:

LEE ENGINEERING

DART Red & Blue Line Last Mile Connections Project
Field Data Checklist - Sidewalk Gaps

Date 9/28/18
Station Spring Valley
Staff Name Texas St
Location Phillips to N Boundary

Instructions : When coding/confirming sidewalk condition of "Nonexistant" on sidewalk checklist, review the following and make notes here and/or on the sidewalk checklist.

What challenges are there to the feasibility/practicability of sidewalk?
Circle items below and add notes/sketches as applicable.

Utility poles? No

Underground utilities? maybe

Trees? Yes

Slopes? minor

Other structures? No

Rail crossings? No

Business parking/access management issues? No

Insufficient bridge width? No

Take photos and notes to document. ✓

Other Notes:

LEE ENGINEERING

DART Red & Blue Line Last Mile Connections Project
Field Data Checklist - Sidewalk Gaps

Date 08/28/18
Station Spring Valley
Staff Name Texas St.
Location Phillips to N Boundary (east side)

Instructions : When coding/confirming sidewalk condition of "Nonexistant" on sidewalk checklist, review the following and make notes here and/or on the sidewalk checklist.

What challenges are there to the feasibility/practicability of sidewalk?
Circle items below and add notes/sketches as applicable.

Utility poles? No

Underground utilities? Yes - drainage culvert ~~existing pipe~~ exposed

Trees? Yes - leaning

Slopes? Yes

Other structures? No

Rail crossings? No

Business parking/access management issues? No

Insufficient bridge width? No

Take photos and notes to document. ✓

Other Notes:

LEE ENGINEERING

DART Red & Blue Line Last Mile Connections Project
Field Data Checklist - Sidewalk Gaps

Date 08/28/18.
Station Sej Valley.
Staff Name SS&JS.
Location Spring Valley Hwy (centerline to DART)

Instructions : When coding/confirming sidewalk condition of "Nonexistant" on sidewalk checklist, review the following and make notes here and/or on the sidewalk checklist.

What challenges are there to the feasibility/practicability of sidewalk?
Circle items below and add notes/sketches as applicable.

Utility poles? No

Underground utilities? maybe

Trees? Yes

Slopes? minor

Other structures? NO

Rail crossings? No

Business parking/access management issues? No

Insufficient bridge width? No

Take photos and notes to document. ✓

Other Notes:

LEE ENGINEERING

DART Red & Blue Line Last Mile Connections Project
Field Data Checklist - Sidewalk Gaps

Date 08/28/18
Station Spg Valley
Staff Name SS&JS.
Location US 75 Phillip to N Boundary (east & west side)

Instructions : When coding/confirming sidewalk condition of "Nonexistant" on sidewalk checklist, review the following and make notes here and/or on the sidewalk checklist.

What challenges are there to the feasibility/practicability of sidewalk?
Circle items below and add notes/sketches as applicable.

Utility poles? NO

Underground utilities? Maybe

Trees? NO - east, Yes - west

Slopes? NO

Other structures? No

Rail crossings? No

Business parking/access management issues? No - 2 dwy

Insufficient bridge width? No

Take photos and notes to document. ✓

Other Notes:
fh, fibre optic, irrigation sprinkler

LEE ENGINEERING

DART Red & Blue Line Last Mile Connections Project
Field Data Checklist - Sidewalk Gaps

Date 08/28/18
Station Spg Valley
Staff Name S.S. & J.S.
Location US 75
Hawkins Rd
Lowe Model

Instructions : When coding/confirming sidewalk condition of "Nonexistant" on sidewalk checklist, review the following and make notes here and/or on the sidewalk checklist.

What challenges are there to the feasibility/practicability of sidewalk?
Circle items below and add notes/sketches as applicable.

Utility poles? No

Underground utilities? No buried cable, utility box, 1gu storm drainage

Trees? No

Slopes? minor

Other structures? No

Rail crossings? No

Business parking/access management issues? 3 dwy, 5 ped ramp

Insufficient bridge width? No

Take photos and notes to document. ✓

Other Notes:

- fh
- 3' avail. b/w face of curb to tree

DART Red & Blue Line Last Mile Connections Project
Field Data Checklist - Sidewalk Gaps

Date 08/28/18
Station Spg Valley
Staff Name US 75
Location Porch Dog Hotel Dwy to Spring Valley

Instructions : When coding/confirming sidewalk condition of "Nonexistant" on sidewalk checklist, review the following and make notes here and/or on the sidewalk checklist.

What challenges are there to the feasibility/practicability of sidewalk?
Circle items below and add notes/sketches as applicable.

Utility poles? No

Underground utilities? water meter

Trees? No

Slopes? 6:1

Other structures? No

Rail crossings? No

Business parking/access management issues? 10 drwy, 0 ramp

Insufficient bridge width? No

Take photos and notes to document.

Other Notes:

fh

LEE ENGINEERING

LEE ENGINEERING

DART Red & Blue Line Last Mile Connections Project
Field Data Checklist - Sidewalk Gaps

Date 08/28/18
Station Spy Valley
Staff Name S.S & J.S.
Location Hutchines Greenwell to E Boundary (North & South)

Instructions : When coding/confirming sidewalk condition of "Nonexistant" on sidewalk checklist, review the following and make notes here and/or on the sidewalk checklist.

What challenges are there to the feasibility/practicability of sidewalk?
Circle items below and add notes/sketches as applicable.

Utility poles? Yes
Underground utilities? drainage
Trees? Yes
Slopes? minor
Other structures? No
Rail crossings? No
Business parking/access management issues? No
Insufficient bridge width? No
Take photos and notes to document. ✓

Other Notes:
construction (south)

DART Red & Blue Line Last Mile Connections Project
Field Data Checklist - Sidewalk Gaps

Date 08/28/18
Station Spy Valley
Staff Name S.S & J.S.
Location Vista Vista dead end Abrams to [redacted] (north & south)

Instructions : When coding/confirming sidewalk condition of "Nonexistant" on sidewalk checklist, review the following and make notes here and/or on the sidewalk checklist.

What challenges are there to the feasibility/practicability of sidewalk?
Circle items below and add notes/sketches as applicable.

Utility poles? NO
Underground utilities? drainage
Trees? NO
Slopes? minor
Other structures? No
Rail crossings? No
Business parking/access management issues? No
Insufficient bridge width? No
Take photos and notes to document. ✓

Other Notes:
- sewage gutter
- dead end, no culde sac

DART Red & Blue Line Last Mile Connections Project
Field Data Checklist - Sidewalk Gaps

Date 08/28/18
Station Spg Valley
Staff Name S.S. & J.S.
Location Pittman Abrams to Greenville (north : south)

Instructions : When coding/confirming sidewalk condition of "Nonexistant" on sidewalk checklist, review the following and make notes here and/or on the sidewalk checklist.

What challenges are there to the feasibility/practicability of sidewalk?
Circle items below and add notes/sketches as applicable.

Utility poles? No
Underground utilities? drainage
Trees? No
Slopes? minor
Other structures? No
Rail crossings? No
Business parking/access management issues? No
Insufficient bridge width? No
Take photos and notes to document. ✓

Other Notes:
- construction (south)
- parking issues

LEE ENGINEERING

DART Red & Blue Line Last Mile Connections Project
Field Data Checklist - Sidewalk Gaps

Date 08/28/18
Station Spg Valley
Staff Name H.B & L.C.
Location Greenville bet^n = Buckingha S. boundry

Instructions : When coding/confirming sidewalk condition of "Nonexistant" on sidewalk checklist, review the following and make notes here and/or on the sidewalk checklist.

What challenges are there to the feasibility/practicability of sidewalk?
Circle items below and add notes/sketches as applicable.

	E side	W side
Utility poles?	yes	No
Underground utilities?	May be	may be
Trees?	yes	No
Slopes?	at Lonsdale drive	No
Other structures?	No	No
Rail crossings?	No	No
Business parking/access management issues?	No	No
Insufficient bridge width?	No	No
Take photos and notes to document.	✓	✓

Other Notes:

LEE ENGINEERING

DART Red & Blue Line Last Mile Connections Project
Field Data Checklist - Sidewalk Gaps

Date 08/28/18.
Station Spg Valley
Staff Name H.B & L.C.
Location centenial Blvd Abrams and E boundary N side

Instructions : When coding/confirming sidewalk condition of "Nonexistant" on sidewalk checklist, review the following and make notes here and/or on the sidewalk checklist.

What challenges are there to the feasibility/practicability of sidewalk?
Circle items below and add notes/sketches as applicable.

Utility poles? No
Underground utilities? No
Trees? No
Slopes? No
Other structures? No
Rail crossings? No
Business parking/access management issues? No
Insufficient bridge width? Yes
Take photos and notes to document. ✓

Other Notes:

LEE ENGINEERING

DART Red & Blue Line Last Mile Connections Project
Field Data Checklist - Sidewalk Gaps

Date 08/28/18.
Station Spg Valley
Staff Name H.B & L.C.
Location Greenville betn Buckingham and DART bus stop E side

Instructions : When coding/confirming sidewalk condition of "Nonexistant" on sidewalk checklist, review the following and make notes here and/or on the sidewalk checklist.

What challenges are there to the feasibility/practicability of sidewalk?
Circle items below and add notes/sketches as applicable.

Utility poles? No
Underground utilities? may be
Trees? No
Slopes? No
Other structures? signs
Rail crossings? No
Business parking/access management issues? No
Insufficient bridge width? No
Take photos and notes to document. ✓

Other Notes:

LEE ENGINEERING

DART Red & Blue Line Last Mile Connections Project
Field Data Checklist - Sidewalk Gaps

Date 08/28/18.
Station Spg Valley
Staff Name H.B.&L.C.
Location ~~Greenville bet~~ Driveway and Centennial Blvd W side

Instructions : When coding/confirming sidewalk condition of "Nonexistant" on sidewalk checklist, review the following and make notes here and/or on the sidewalk checklist.

What challenges are there to the feasibility/practicability of sidewalk?
Circle items below and add notes/sketches as applicable.

Utility poles? No

Underground utilities? ~~No~~ may be

Trees? Yes

Slopes? No

Other structures? Signs

Rail crossings? No

Business parking/access management issues? No

Insufficient bridge width? No

Take photos and notes to document. ✓

Other Notes:

LEE ENGINEERING

DART Red & Blue Line Last Mile Connections Project
Field Data Checklist - Sidewalk Gaps

Date 08/28/18.
Station Spg Valley.
Staff Name H.B.&L.C.
Location ~~Spring Valley~~ Abrams E.B. and N side.

Instructions : When coding/confirming sidewalk condition of "Nonexistant" on sidewalk checklist, review the following and make notes here and/or on the sidewalk checklist.

What challenges are there to the feasibility/practicability of sidewalk?
Circle items below and add notes/sketches as applicable.

Utility poles? No

Underground utilities? may be

Trees? Yes

Slopes? No

Other structures? Signs

Rail crossings? No

Business parking/access management issues? No

Insufficient bridge width? No

Take photos and notes to document. ✓

Other Notes:

LEE ENGINEERING

DART Red & Blue Line Last Mile Connections Project
Field Data Checklist - Sidewalk Gaps

Date 08/28/18
Station Spg Valley
Staff Name H.B & L.L.
Location US 75 SBFR N/of James Dr.

Instructions : When coding/confirming sidewalk condition of "Nonexistant" on sidewalk checklist, review the following and make notes here and/or on the sidewalk checklist.

What challenges are there to the feasibility/practicability of sidewalk?
Circle items below and add notes/sketches as applicable.

Utility poles? No

Underground utilities? may be

Trees? No

Slopes? No

Other structures? No

Rail crossings? No

Business parking/access management issues? Some

Insufficient bridge width? No

Take photos and notes to document. ✓

Other Notes:

LEE ENGINEERING

DART Red & Blue Line Last Mile Connections Project
Field Data Checklist - Sidewalk Gaps

Date 08/28/18
Station Spg Valley
Staff Name HB & LL.
Location Mapple bet 2 E boundry and Abrams

Instructions : When coding/confirming sidewalk condition of "Nonexistant" on sidewalk checklist, review the following and make notes here and/or on the sidewalk checklist.

What challenges are there to the feasibility/practicability of sidewalk?
Circle items below and add notes/sketches as applicable.

Utility poles? No

Underground utilities? may be

Trees? No

Slopes? No

Other structures? No

Rail crossings? No

Business parking/access management issues? No

Insufficient bridge width? No

Take photos and notes to document. ✓

Other Notes:

LEE ENGINEERING

APPENDIX C: Crosswalk Improvement Evaluation Details

At existing or proposed crosswalks without existing stop sign or signal control, potential improvements were evaluated based on guidance in the Federal Highway Administration's (FHWA) recent publication, "Guide for Improving Pedestrian Safety at Uncontrolled Crossing Locations", dated July 2018. Table 1 of this publication, reproduced herein also as Table C1, includes enhanced guidance on countermeasures that can or should be considered for uncontrolled crosswalks with various combinations of vehicular speed, traffic flow, and number of lanes to be crossed. This appendix describes how the consultant team used Table C1 to produce consistent recommendations for crosswalk improvements, as well as how roadway speed and daily traffic volume data required as inputs to the process were estimated where otherwise unavailable.

In the reproduction of Table 1, red boxes have been added to highlight an example crosswalk to illustrate how the table was used for each evaluation. In the example, four-lane undivided roadways with average annual daily traffic (AADT) over 15,000 vehicles/day and speeds greater than 40 miles per hour have up to six potential countermeasures recommended for possible consideration, as indicated by the six one-digit numbers in the lower right cell of the table. The strongest recommendations are indicated by white numbers in solid black circles. The number "1" inside an outlined circle denotes that marked and signed crosswalks should always occur in conjunction with other listed countermeasures. Numbers without circles around them indicate other improvements which may optionally be considered.

In the example, the number "1" in the lower right cell of the table indicates that high visibility crosswalk markings, parking restrictions on the crosswalk approach, adequate lighting levels, and crossing warning signs should all be employed to create a high visibility crosswalk wherever significant pedestrians demand exists or may be anticipated. But the outlined circle around the number "1" in the table indicates that implementation of these countermeasures alone is insufficent due to the high traffic volumes, high speeds, and large number of lanes to be crossed. One or more of the other options should always therefore be implemented.

The other options to be given strong consideration (based on the white number in the dark circle legend) include "Advance Yield Here for Pedestrian" signs (#3), a median pedestrian refuge island (#6), or a pedestrian hybrid beacon (#9). Other candidate countermeasures that may also be considered include curb extensions (#5) and a road diet (#8).

Note that the unavailable options for these circumstances include a raised crosswalk (#2), in-street pedestrian crossing signs (#4), and rectangular rapid-flashing beacons (RRFB's/#7). Where options such as the RRFB are listed as incompatible with context, research had demonstrated that the combination of speed, volume, or crossing distance would render the treatments less than acceptably effective. The footnotes indicate that some options are mutually exclusive of others.

A Microsoft Excel spreadsheet was created to automate Table 1 as a lookup table and quickly produce the list potentially recommended improvements given the inputs entered for each candidate crosswalk improvement location to be considered for the project. The analyst in each case still used engineering judgment to select which countermeasure options would ultimately be recommended, as indicated by the red boxes around items #1, #3 and #9 (but not #6) in the bottom right corner of the table. Notes as to the rationale for each improvement were made. The inputs, options, recommendations, and notes are tabulated in tables found in Appendix D.

The inputs to the spreadsheet analysis of crosswalk improvements were straightforward for the number of lanes in each case. Posted speed limit was also generally straightforward, though in a few cases with low posted speed limits and high number of lanes (for example, six-lane divided

Table C1: Application of Pedestrian Crash Countermeasures by Roadway Feature

Roadway Configuration	Posted Speed Limit and AADT								
	Vehicle AADT <9,000			Vehicle AADT 9,000–15,000			Vehicle AADT >15,000		
	≤30 mph	35 mph	≥40 mph	≤30 mph	35 mph	≥40 mph	≤30 mph	35 mph	≥40 mph
2 lanes (1 lane in each direction)	❶ 2 4 5 6	❶ 5 6 7 9	① 5 6 ❼ ❾	❶ 4 5 6	❶ 5 6 7 9	① 5 6 ❼ ❾	❶ 4 5 6 7 9	① 5 6 7 9	① 5 6 ❾
3 lanes with raised median (1 lane in each direction)	❶ 2 3 4 5	❶ ❸ 5 7 9	① ❸ 5 ❼ ❾	① 3 4 5 7 9	① ❸ 5 ❼ ❾	① ❸ 5 ❼ ❾	① ❸ 4 5 7 9	① ❸ 5 ❼ ❾	① ❸ 5 ❾
3 lanes w/o raised median (1 lane in each direction with a two-way left-turn lane)	❶ 2 3 4 5 6 7 9	❶ ❸ 5 6 7 9	① ❸ 5 6 ❾	① 3 4 5 6 7 9	① ❸ 5 6 ❼ ❾	① ❸ 5 6 ❾	① ❸ 4 5 6 7 9	① ❸ 5 6 ❾	① ❸ 5 6 ❾
4+ lanes with raised median (2 or more lanes in each direction)	❶ ❸ 5 7 8 9	❶ ❸ 5 7 8 9	① ❸ 5 8 ❾	① ❸ 5 7 8 9	① ❸ 5 ❼ 8 ❾	① ❸ 5 8 ❾	① ❸ 5 ❼ 8 ❾	① ❸ 5 8 ❾	① ❸ 5 8 ❾
4+ lanes w/o raised median (2 or more lanes in each direction)	❶ ❸ 5 6 7 8 9	① ❸ 5 ❻ 7 8 9	① ❸ 5 ❻ 8 ❾	① ❸ 5 ❻ 7 8 9	① ❸ 5 ❻ ❼ 8 ❾	① ❸ 5 ❻ 8 ❾	① ❸ 5 ❻ ❼ 8 ❾	① ❸ 5 ❻ 8 ❾	① ❸ 5 ❻ 8 ❾

Given the set of conditions in a cell,

- # Signifies that the countermeasure is a candidate treatment at a marked uncontrolled crossing location.
- ● Signifies that the countermeasure should always be considered, but not mandated or required, based upon engineering judgment at a marked uncontrolled crossing location.
- ○ Signifies that crosswalk visibility enhancements should always occur in conjunction with other identified countermeasures.*

The absence of a number signifies that the countermeasure is generally not an appropriate treatment, but exceptions may be considered following engineering judgment.

1 High-visibility crosswalk markings, parking restrictions on crosswalk approach, adequate nighttime lighting levels, and crossing warning signs
2 Raised crosswalk
3 Advance Yield Here To (Stop Here For) Pedestrians sign and yield (stop) line
4 In-Street Pedestrian Crossing sign
5 Curb extension
6 Pedestrian refuge island
7 Rectangular Rapid-Flashing Beacon (RRFB)**
8 Road Diet
9 Pedestrian Hybrid Beacon (PHB)**

*Refer to Chapter 4, 'Using Table 1 and Table 2 to Select Countermeasures,' for more information about using multiple countermeasures.

**It should be noted that the PHB and RRFB are not both installed at the same crossing location.

This table was developed using information from: Zegeer, C.V., J.R. Stewart, H.H. Huang, P.A. Lagerwey, J. Feaganes, and B.J. Campbell. (2005). Safety effects of marked versus unmarked crosswalks at uncontrolled locations: Final report and recommended guidelines. FHWA, No. FHWA-HRT-04-100, Washington, D.C.; FHWA. Manual on Uniform Traffic Control Devices, 2009 Edition, (revised 2012). Chapter 4F, Pedestrian Hybrid Beacons. FHWA, Washington, D.C.; FHWA. Crash Modification Factors (CMF) Clearinghouse. http://www.cmfclearinghouse.org/; FHWA. Pedestrian Safety Guide and Countermeasure Selection System (PEDSAFE). http://www.pedbikesafe.org/PEDSAFE/; Zegeer, C., R. Srinivasan, B. Lan, D. Carter, S. Smith, C. Sundstrom, N.J. Thirsk, J. Zegeer, C. Lyon, E. Ferguson, and R. Van Houten. (2017). NCHRP Report 841: Development of Crash Modification Factors for Uncontrolled Pedestrian Crossing Treatments. Transportation Research Board, Washington, D.C.; Thomas, Thirsk, and Zegeer. (2016). NCHRP Synthesis 498: Application of Pedestrian Crossing Treatments for Streets and Highways. Transportation Research Board, Washington, D.C.; and personal interviews with selected pedestrian safety practitioners.

roadways with posted speed limits of 35 mph) a higher prevailing speed was assumed based on engineering judgment and substituted for the posted speed limit.

In many cases, recent AADT volumes for the subject roadways for the crosswalks being evaluated were available from City or TxDOT data. Historic AADT volumes were grown at 2% annually to 2019 and used directly as inputs for the crosswalk countermeasure selection analysis.

In other cases where AADT data was not already available, particularly on collector streets, a "short-cut" method for estimating AADT without collecting new 24-hour traffic counts was developed to balance accuracy with the large amount of data to be collected and the lack of precision necessary to select the appropriate sets of columns in Table C1.

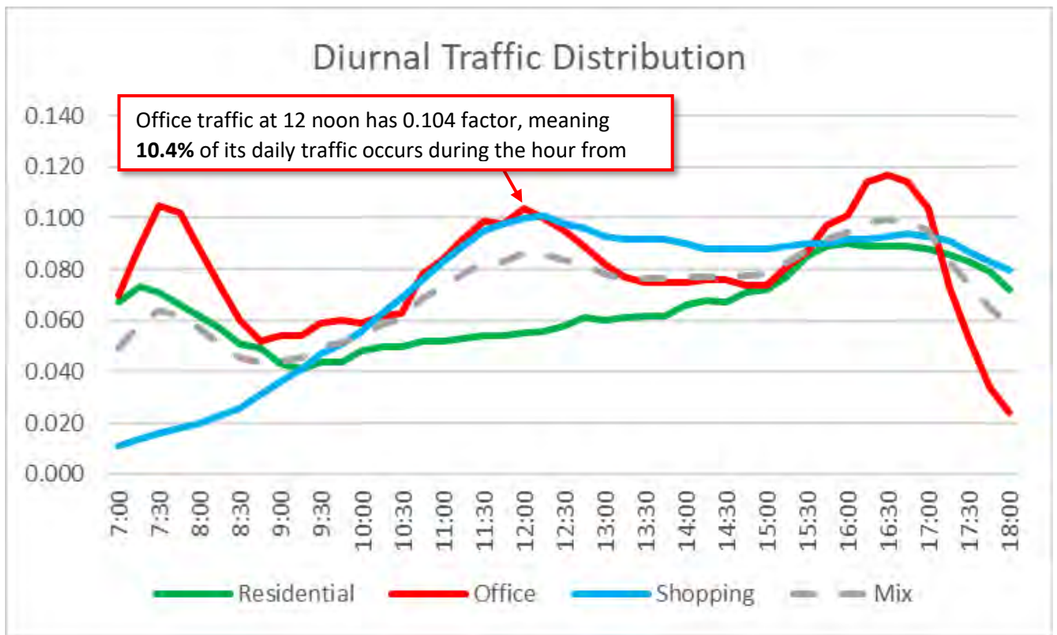
Short two-minute traffic counts were collected by consultant staff in the field at crosswalks that had been pre-selected as candidates for improvements. A two-minute time period was selected to account for the cycle length of most signalized intersections that might be nearby and therefore affect the distribution of traffic volumes. The count could be taken anytime during daylight hours to maximize field work efficiency for multiple locations.

These two-minute volumes were factored by the Excel spreadsheet program to represent approximate AADTs. The two-minute volumes are expanded to hourly volumes by multiplying by 30. The hourly volumes are then expanded to daily volumes using a lookup table based on the 15-minute period during the day that the two-minute count was taken, the adjacent land use category noted by data collection staff, and factors that were derived from data in the Institute of Transportation Engineers' (ITE) *Trip Generation Manual*, 10th Edition for the percentage of traffic generated by different land uses at different times of day.

For each crosswalk, the analysis characterized the land use contributing to traffic at a particular crosswalk as residential, office, shopping center, or a mix of the three. Figure C1 identifies the hourly-to-daily converstion factors derived for each land use by time of day. The "mix" category was computed by averaging the values from the other three land uses.

Note that office traffic has the most distinct "peaks" with the largest percentage of its traffic occuring near morning arrival, lunch hour, and afternoon departure times. Residential traffic peaks in the morning and afternoon without the distinct lunch peak, while generally increasing in the afternoon. Shopping center traffic is very low in the morning, with higher levels in the afternoon and evening.

Figure C1: Hourly to Daily Traffic Conversion Factors, by Land Use & Time of Day



To convert from hourly to daily traffic, the hourly total was divided by the selected conversion factor to get a daily traffic estimate. For example, a two-minute count of 40 vehicles taken at noon across an uncontrolled crosswalk near a large office building would first be converted to an hourly volumes of 1,200 vehicles/hour (=40 x 30). Then, the hourly volume would be converted to a daily volume by dividing 1,200 vehicles/hour by the 0.104 factor selected from Figure 7 to yield ~11,540 vehicles/day.

Note that daily traffic volume estimates derived in this way are not assumed to be accurate enough for most traffic analysis purposes, but were assumed to be valid for planning-level purposes such as selection of the appropriate columns in Table C1.

In cases where road diets were recommended, the consultant team compared the City/TxDOT AADT or estimated daily volume and the proposed number of lanes for the roadway with the maximum service volumes assumed per lane in NCTCOG's Dallas-Fort Worth Regional Travel Model, shown in Table C2. Road diets were only recommended if roadways would likely still have excess capacity after the lane reductions.

Table C2: NCTCOG Roadway Capacity for Divided or One-way Roads

Area Type	Functional Class						
	Freeway	Principal Arterial	Minor Arterial	Collector	Ramp	Frontage Road	HOV
	Hourly Service Volume Per Lane						
CBD	2,050	725	725	475	1,250	725	2,050
Fringe	2,125	775	775	500	1,375	775	2,125
Urban Residential	2,150	850	825	525	1,425	850	2,150
Suburban Residential	2,225	925	900	575	1,600	900	2,225
Rural	2,300	1,025	975	600	1,725	975	2,300

APPENDIX D: Crosswalk Improvement Selection Tables

DART Last Mile Connections Project - Unsignalized Crosswalk Evaluations - City of Richardson - July 2020

Unsignalized Crosswalk Improvement Legend

1	Crosswalk Signs, Markings & Lighting	5	Curb Extension
2	Raised Crosswalk	6	Ped. Refuge Island
3	Advance "Yield Here" Sign	7	RRFB
4	In-Street Pedestrian Crossing	8	Road Diet
		9	Ped. Hybrid Beacon

Signalized Crosswalk Improvement Legend

10	Add Marked Crosswalks & Provide Countdown, Accessible Pedestrian Signals
11	Traffic Signal

Legend: Strength of Consideration to be Given to Improvement

#	Signifies that the countermeasure is a candidate treatment at a marked uncontrolled crossing location.
#	Signifies that the countermeasure should always be considered, but not mandated or required, based upon engineering judgment at a marked uncontrolled crossing location.
#	Signifies that crosswalk visibility enhancements should always occur in conjunction with other identified countermeasures.

Station ID	Station Name	Street Crossed	At/Between	Posted/ Prevailing Speed of Street Crossed	Number of Lanes Crossed	Median Present?[1]	AADT from Count Map	AADT Street Name	Source	Land Use (legend below)[2]	2-Min. Traffic Count[2] Time	2-Min. Traffic Count[2] Volume	Hourly Traffic Estimate	AADT Estimate	Assumed AADT	Improvements (See Legends Above) Options	Improvements (See Legends Above) Recommended	Notes
2A	Galatyn Park	N Collins Blvd	Palisades Blvd	40	4	Y	5,500	N Collins Blvd	https://www.cor.net/home/showdocument?id=25378	M	9:50	9	270	5,300	5,500	1 **3** 5 8 **9**	GR	No access to the single-family homes west of Collins Blvd exists due to walls and fencing, so a crosswalk here would not provide meaningful access.
2A	Galatyn Park	N Collins Blvd	Fall Creek Blvd	40	4	N	5,500	N Collins Blvd	https://www.cor.net/home/showdocument?id=25378	M	9:50	9	270	5,300	5,500	1 **3** 5 **6** 8 **9**	1, 3	Install a signed, marked and lit crosswalk. Add yield line and "Yield Here to Pedestrians" signing in each direction approaching crosswalk to mitigate risk of dual threat situation for pedestrians. Consider additional improvements if a study of pedestrian volumes warrants them, given the long distance to stop-controlled crossing locations in either direction.
2A	Galatyn Park	Palisades Blvd	South Gate Dr	30	2	N	2,000		Rough Estimate	-	-	-	-	-	2,000	**1** 2 4 5 6	1, 5, 6	Provide marked, signed, and lit crosswalks across Palisades Blvd. Consider curb extensions or a median refuge island in the wide 34-ft roadway. Care should be taken to provide advance warning signs in the eastbound direction due to the crest vertical curve in the roadway to the west. (Need for this improvement is contingent on a pedestrian connection across the Galatyn Pkwy bridge over U.S. 75).
2A	Galatyn Park	Glenville Dr	Central Trail	35	4	Y	8,000	Glenville Dr	Rough estimate based on https://www.cor.net/home/showdocument?id=25378	M	-	-	-	-	8,000	**1** **3** 5 7 8 9	1	Install bicycle/pedestrian warning signs and white crosswalk lines parallel to existing crosswalk with faded, non-conforming brick pattern and dark outline. White edge lines as traffic control devices are required to make crosswalks legally enforceable. Add yield line and "Yield Here to Pedestrians" signing in each direction approaching crosswalk to mitigate risk of dual threat situation for pedestrians.
2A	Galatyn Park	Glenville Dr	Infosys Driveway	35	4	Y	8,000	Glenville Dr		M	-	-	-	-	8,000	**1** **3** 5 7 8 9	1, 3, 7	Consider installing pedestrian warning signs, a marked crosswalk, and pedestrian-actuated rectangular rapid flashing beacons (RRFB's) for more direct access to the Infosys corporate campus if coordinating sidewalk improvements to the building front door to the east can also be made. Add yield line and "Yield Here to Pedestrians" signing in each direction approaching crosswalk to mitigate risk of dual threat situation for pedestrians.
2A	Galatyn Park	Glenville Dr	Waterwood Dr	35	4	Y	8,000	Glenville Dr		M	-	-	-	-	8,000	**1** **3** 5 7 8 9	1, 3, 7	Consider installing pedestrian warning signs, a marked crosswalk, and pedestrian-actuated rectangular rapid flashing beacons (RRFB's) for more direct access to the Hampton Inn hotel. Add yield line and "Yield Here to Pedestrians" signing in each direction approaching crosswalk to mitigate risk of dual threat situation for pedestrians.

[1] with sufficient 6' width for ped. refuge?
[2] if AADT Estimate is not available.

Land Use Code Legend

R	Residential	S	Shopping
O	Office	M	Mix

Based on FHWA's "Guide for Improving Pedestrian Safety at Uncontrolled Crossing Locations", July 2018, Table 1: Application of pedestrian crash countermeasures by roadway feature

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DART Last Mile Connections Project - Unsignalized Crosswalk Evaluations - City of Richardson - July 2020

Unsignalized Crosswalk Improvement Legend

1	Crosswalk Signs, Markings & Lighting	5	Curb Extension
2	Raised Crosswalk	6	Ped. Refuge Island
3	Advance "Yield Here" Sign	7	RRFB
4	In-Street Pedestrian Crossing	8	Road Diet
		9	Ped. Hybrid Beacon

Signalized Crosswalk Improvement Legend

10	Add Marked Crosswalks & Provide Countdown, Accessible Pedestrian Signals
11	Traffic Signal

Legend: Strength of Consideration to be Given to Improvement

#	Signifies that the countermeasure is a candidate treatment at a marked uncontrolled crossing location.
#	Signifies that the countermeasure should always be considered, but not mandated or required, based upon engineering judgment at a marked uncontrolled crossing location.
#	Signifies that crosswalk visibility enhancements should always occur in conjunction with other identified countermeasures.

Station ID	Station Name	Street Crossed	At/Between	Posted/ Prevailing Speed of Street Crossed	Number of Lanes Crossed	Median Present?[1]	AADT from Count Map	AADT Street Name	Source	Land Use (legend below)[2]	2-Min. Traffic Count[2]		Hourly Traffic Estimate	AADT Estimate	Assumed AADT	Improvements (See Legends Above)									Notes
											Time	Volume				Options								Recommended	
2A	Galatyn Park	Lookout Dr	Central Trail	30	3	Y	5,000		Rough estimate	-	-	-	-	-	5,000	**1**	2	3	4	5				1	Install bicycle/pedestrian warning signs and white crosswalk lines parallel to existing crosswalk with faded, non-conforming brick pattern and dark outline. White edge lines as traffic control devices are required to make crosswalks legally enforceable.
2A	Galatyn Park	Lookout Dr	Performance Dr	30	4	Y	5,000		Rough estimate	-	-	-	-	-	5,000									1, 3	Install pedestrian warning signs and white crosswalk lines parallel to existing crosswalk with faded, brick pattern. White edge lines as traffic control devices are required to make crosswalks legally enforceable. Add yield line and "Yield Here to Pedestrians" signing in each direction approaching crosswalk to mitigate risk of dual threat situation for pedestrians.
2A	Galatyn Park	Lookout Dr	BCBS Garage Entrance	30	4	Y	5,000		Rough estimate	-	-	-	-	-	5,000									1, 3	Add marked crosswalks at existing signed pedestrian crossing. Add yield line and "Yield Here to Pedestrians" signing in each direction approaching crosswalk to mitigate risk of dual threat situation for pedestrians.
2A	Galatyn Park	Lakeside Blvd	Central Trail	30	3	Y	3,900	Lakeside Dr	https://www.cor.net/home/showdocument?id=25378	M	-	-	-	-	3,900									1	Install bicycle/pedestrian warning signs and white crosswalk lines parallel to existing crosswalk with faded, non-conforming brick pattern and dark outline. White edge lines as traffic control devices are required to make crosswalks legally enforceable.
2A	Galatyn Park	Lakeside Blvd	Central Trail & Waterwood Rd	30	4	N	3,900	Lakeside Dr	https://www.cor.net/home/showdocument?id=25378	M	-	-	-	-	3,900									1, 3	Add marked crosswalks at existing signed pedestrian crossing. Add yield line and "Yield Here to Pedestrians" signing in each direction approaching crosswalk to mitigate risk of dual threat situation for pedestrians.
2A	Galatyn Park	Lakeside Blvd	Lawnview Dr & Southwest Study Boundary	30	4	N	3,900	Lakeside Dr	https://www.cor.net/home/showdocument?id=25378	M	-	-	-	-	3,900									1, 3	Add marked crosswalks at existing signed pedestrian crossing. Add yield line and "Yield Here to Pedestrians" signing in each direction approaching crosswalk to mitigate risk of dual threat situation for pedestrians.

[1] with sufficient 6' width for ped. refuge?
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Station ID	Station Name	Street Crossed	At/Between	Posted/ Prevailing Speed of Street Crossed	Number of Lanes Crossed	Median Present?[1]	AADT from Count Map	AADT Street Name	Source	Land Use (legend below)[2]	2-Min. Traffic Count[2]		Hourly Traffic Estimate	AADT Estimate	Assumed AADT	Improvements (See Legends Above)		Notes
											Time	Volume				Options	Recommended	
2B	Arapaho Center	Richardson Dr	Jolee St	35	4	N	3,400	Richardson Dr	https://www.cor.net/home/showdocument?id=25378	R	-	-	-	-	3,400		1, 3, 5, 6, 7, 8	Add a high-visibility signed and marked crosswalk where the sidewalk on the west side of Richardson Dr ends and sidewalk improvements to the north are infeasible. The location of the crosswalk must be designed carefully to both maximize and provide adequate sight distance around the hedges on the crosswalk's west end and the tree-lined horizontal curve in the roadway geometry to the north. Trim the hedge row back as necessary to provide good pedestrian sight distance. Add yield lines and "Yield Here to Pedestrians" signing in each direction to mitigate risk of dual threat situation for pedestrians. Give strong consideration to installing pedestrian-actuated rectangular rapid flashing beacons (RRFB's), particularly due to the sight distance limitations. A road diet to introduce curb extensions and/or a median refuge island for pedestrians might also be considered to increase available pedestrian sight distance.
2B	Arapaho Center	Richardson Dr	Monte Blaine Ln & Jolee St	35	4	N	3,400	Richardson Dr	https://www.cor.net/home/showdocument?id=25378	R	-	-					1, 3, 5, 6, 7, 8	Add a high-visibility signed and marked crosswalk where the sidewalk on the west side of Richardson Dr ends and sidewalk improvements to the south are infeasible. The location of the crosswalk must be designed carefully to both maximize and provide adequate sight distance around the horizontal curves in the tree-lined roadway geometry. Add yield lines and "Yield Here to Pedestrians" signing in each direction to mitigate risk of dual threat situation for pedestrians. Give strong consideration to installing pedestrian-actuated rectangular rapid flashing beacons (RRFB's), particularly due to the sight distance limitations. A road diet to introduce curb extensions and/or a median refuge island for pedestrians might also be considered to increase available pedestrian sight distance.
2C	Spring Valley	Lingco Dr	DART Park & Ride Lot	30	3	N	2,000		Rough estimate		-	-					3, 6, 7	Add yield line and "Yield Here to Pedestrians" signing for two lanes in southbound direction approaching existing signed and marked crosswalk to mitigate risk of dual threat situation for pedestrians. Consider instead implementing a road diet to add a median refuge island. Pedestrian-actuated rectangular rapid flashing beacons (RRFB's) should also be considered for increased pedestrian visibility in either case.

[1] with sufficient 6' width for ped. refuge?
[2] if AADT Estimate is not available.

Land Use Code Legend

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Signalized Crosswalk Improvement Legend

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Station ID	Station Name	Street Crossed	At/Between	Posted/ Prevailing Speed of Street Crossed	Number of Lanes Crossed	Median Present?[1]	AADT from Count Map	AADT Street Name	Source	Land Use (legend below)[2]	2-Min. Traffic Count[2] Time	2-Min. Traffic Count[2] Volume	Hourly Traffic Estimate	AADT Estimate	Assumed AADT	Improvements (See Legends Above) Options	Improvements (See Legends Above) Recommended	Notes
2C	Spring Valley	Sherman St	Lingco Dr	30	2	N	3,500	Sherman St	TxDOT 2014 Sat. Counts	O	11:15	7	210	2,300	3,500	**1** 2 4 5 6	1	Install new signed, marked, and lit crosswalk with pedestrian ramps.
2C	Spring Valley	Sherman St	Spring Valley Rd & Buckingham Rd	40	6	N	7,100	Sherman St	https://www.cor.net/home/showdocument?id=25378	M	-	-	-	-	7,100	1 **3** 5 **6** 8 **9**	3, 6, 9	Add yield line and "Yield Here to Pedestrians" signing for the three lanes in each direction approaching existing signed and marked crosswalk to mitigate risk of dual threat situation for pedestrians. Consider adding an accessible cut-through refuge area in the existing median and a pedestrian hybrid beacon if warranted by a study of pedestrian volumes during before/after services or other events at the adjacent church. (Note this improvement is not necessary for access between the church and the DART Station.)
2C	Spring Valley	Greenville Ave	Phillips St	35	5	N	15,500	Greenville Ave	Interpolated from TxDOT 2014 Sat. Counts	M	9:15	35	1,050	23,200	23,200	1 **3** 5 **6** 8 **9**	3, 9	Add yield line and "Yield Here to Pedestrians" signing for the two lanes in each direction approaching existing signed and marked crosswalk to mitigate risk of dual threat situation for pedestrians. Consider adding a pedestrian hybrid beacon if warranted by a study of pedestrian volumes during arrival and dismissal times for the First Baptist Church of Hamilton Park and the Richardson ISD Math Science Technology magnet school, both located nearby to the east.
2C	Spring Valley	Greenville Ave	Pittman St	35	4	N	15,500	Greenville Ave		M	9:15	35	1,050	23,200	23,200	1 **3** 5 **6** 8 **9**	1, 3, 6	Consider a new signed, marked, and lit crosswalk across the south leg of the intersection, with yield lines and "Yield Here to Pedestrians" signing for the two lanes in each direction to mitigate risk of dual threat situation for pedestrians. The existing median would be modified to provide a pedestrian refuge area.
2C	Spring Valley	Buckingham Rd	East of DART Tracks	35	4	Y	6,900	Buckingham Rd	https://www.cor.net/home/showdocument?id=25378	M	-	-	-	-	6,900	**1** **3** 5 7 8 9	1, 3, 11	Install white crosswalk lines parallel to existing patterned concrete crosswalk that already has lighting, pedestrian ramps and a median refuge. White edge lines as traffic control devices are required to make crosswalks legally enforceable. Add pedestrian warning signs at the crosswalk and advance pedestrian warning signs for the eastbound direction (currently installed only for westbound). Add yield lines and "Yield Here to Pedestrians" signing for both directions to mitigate risk of dual threat situation for pedestrians. Consider a traffic signal to facilitate crossings, particularly in conjunction with the future extension of the Central Trail south of Buckingham Rd at this location. A full traffic signal should be considered instead of a RRFB or pedestrian hybrid beacon due to adjacency to railroad crossing gates and potential confusion with alternative meanings of flashing red lights.

North Central Texas Council of Governments

DART Red & Blue Line Corridors Last Mile Connections

[1] with sufficient 6' width for ped. refuge?

[2] if AADT Estimate is not available.

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APPENDIX E: Half-Mile Area Improvement Prioritization – Initial Trial Methodology Details

To provide opportunities for the greatest number of additional people to walk or bike to DART stations by building sidewalk, shared use path, and crosswalk connections, the prioritization of identified improvements was structured to provide balance between estimating this objective accurately and applying the methodology to a large study area.

Initially, a prioritization scheme that attempted to track as closely as possible to potential ridership increases was tested for the Parker Road Station in Plano, with adjustments for safety, key destination access, and equity. Though some of the elements of this initial prioritization methodology were ultimately discarded for this study, they are documented here as being potentially useful for later studies on a smaller scale. Also, many of the assumptions and methodologies explained below were retained in the ultimate methodology.

For the ridership component of the initial methodology, the likelihood of land parcels around each station to contribute potential transit customers walking or biking to the station was assumed to be related to three primary factors:

1. The distance of the parcel from the station,
2. The number of people living or employed at the parcel, and
3. People's tolerance for different levels of stress experienced along the route between the parcel and the station.

For the first input to ridership, distance, NCTCOG had previously collected appraisal district parcel data from Collin and Dallas Counties and provided a GIS shapefile containing the data. Consultants used ArcGIS Network Analyst tools to calculate the distance of each parcel to the station along the nearest available walking route, which was created by editing sidewalk shapefiles provided by NCTCOG to ensure end-to-end connectivity. The NCTCOG sidewalk files were found to require significant numbers of edits in this regard.

For the second component of ridership, population density, NCTCOG had included in the parcel-level data assumed population and employment values for individual parcels in the study area that had been calculated as part of a previous project. These values had been calculated by land use based on building square footage and assumed densities (for example 300 square feet/person for office land use).

Consultants used GIS tools to tabulate the total number of people who might use each sidewalk and crosswalk segment for first and last mile trips based on the parcel population totals and the shortest distance routes along available sidewalks and crosswalks between each parcel and the station. This collection of routes was designated as the "pedestrian tree" for the station. Figure E1 shows an example pedestrian tree for Parker Road Station, with one "branch" of the tree to a 662-resident apartment complex highlighted in purple that could be shortened by constructing new sidewalk along a path worn in the grass by pedestrians who already take the shortcut.

This technique allowed modeling of how individual travelers would collectively contribute greater ridership increases along pedestrian routes with the highest density of population and employment.

Figure E1: Concept of Pedestrian Trees Illustrated

For the third assumed input to ridership, pedestrian stress could be due to uncomfortable circumstances such as high traffic speeds along the route, narrow sidewalks in close proximity to traffic, or multi-lane crossings of busy streets. This concept of "Pedestrian Level of Traffic Stress" (PLTS), was adapted for pedestrians by the Oregon Department of Transportation[1] from a similar method developed for bicyclists in 2012 by researchers from San Jose State University and the Northeastern University College of Engineering[2].

The PLTS method assigns scores to sidewalk and crosswalk segments for their levels of pedestrian stress, with scores ranging from 1 for low stress to 4 for high stress conditions. Details on the PLTS model methodology are available at the sources indicated in the footnotes.

Consultants used inputs from the field data collection in the half-mile area around Parker Road Station to create a spreadsheet program for calculating PLTS scores based on a series of look-up tables defined in ODOT's methodology, with some adaptations for local Dallas-area conditions. They then joined these scores to sidewalk shapefiles in an ArcGIS model. An example map produced from this model is shown in Figure E2, highlighting in red the higher stress PLTS 4 conditions present along higher speed arterials near Parker Road Station. Potential riders unwilling to walk along higher stress PLTS 3 or PLTS 4 sidewalks in orange and red would only have access between the Parker Road Station, its adjacent parking lots, and some commercial properties to the west, but not to any residential areas in the vicinity.

The PLTS results were then used to refine the earlier estimates of how many residents and employees might use each sidewalk and crosswalk segment for their first and last mile trips. Generalized assumptions were developed for the percentage of transit riders with trip ends within a half-mile of

[1] See Oregon Department of Transportation, "Analysis Procedures Manual, Version 2," November 2018, pages 14-28 to 14-51. Accessed at: https://www.oregon.gov/ODOT/Planning/Documents/APMv2_Ch14.pdf

[2] See Mekuria, Furth & Nixon, "Low-Stress Bicycling and Network Connectivity," May 2012. Accessed at: https://transweb.sjsu.edu/research/low-stress-bicycling-and-network-connectivity

Figure E2: Existing PLTS Ratings for Portion of Parker Rd Station Area

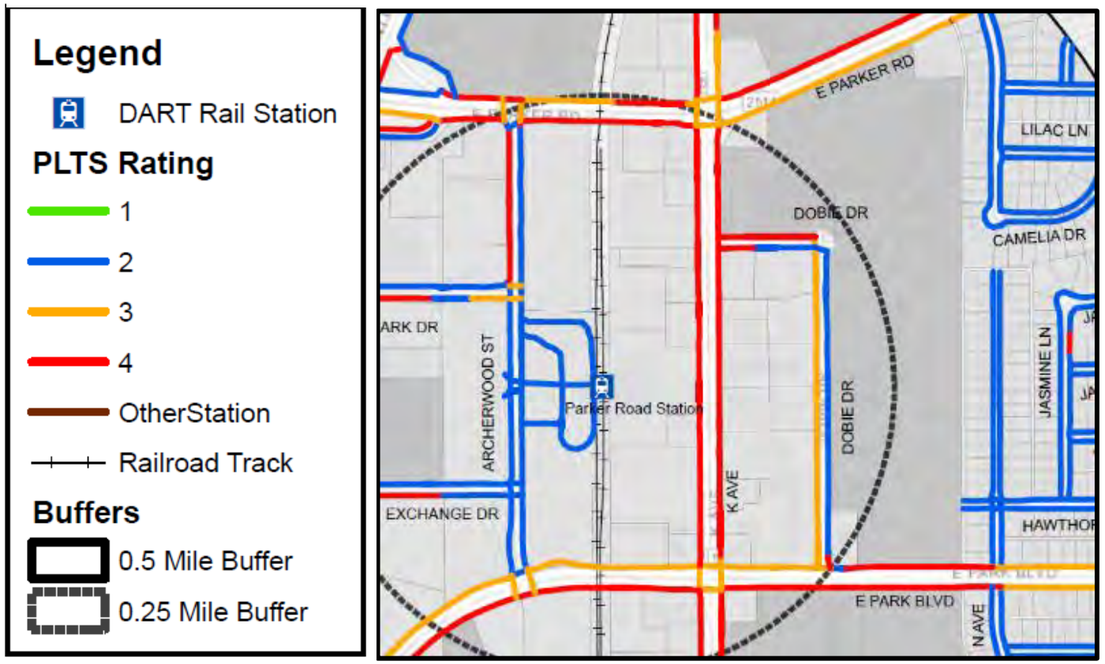
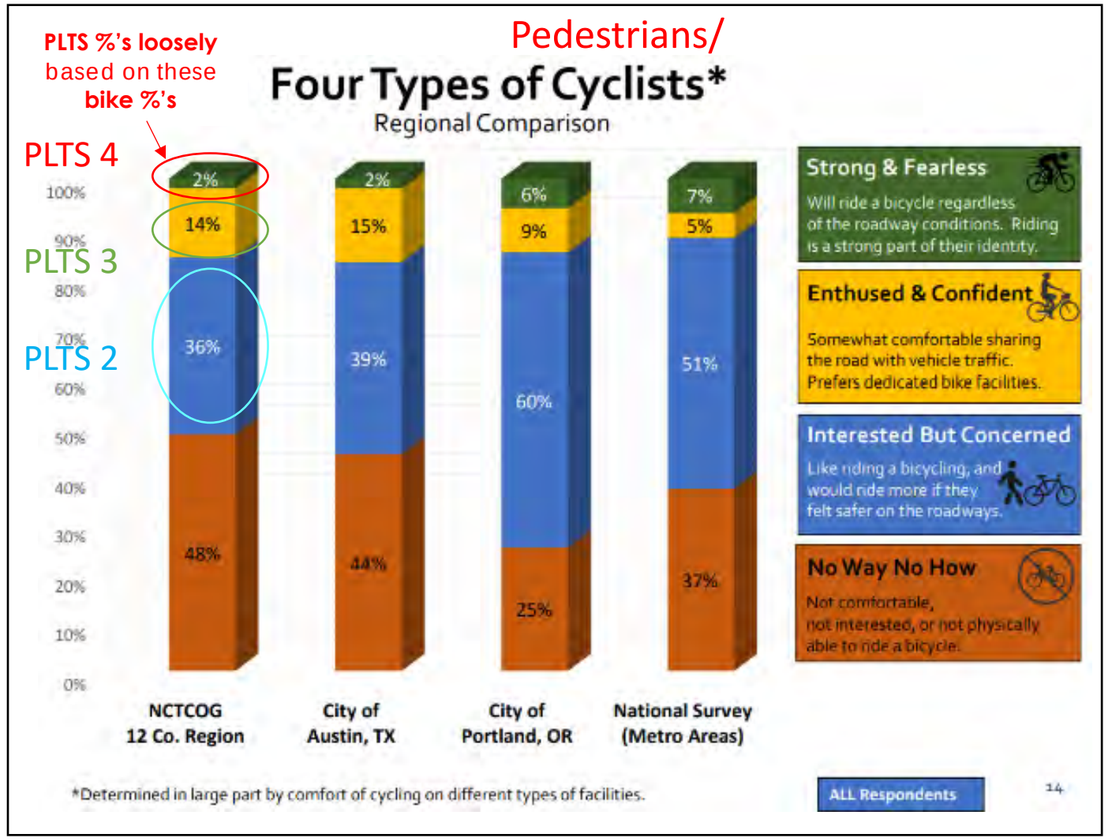


Figure E3: Data for Four Types of Cyclists Assumed Speculatively as Similar for Pedestrians



the station who would be willing or able to travel via sidewalks and crosswalks of varying PLTS stress levels. Absent more specific data, these percentages were aligned loosely (and admittedly speculatively) with survey data about the four types of cyclists as found in a recent NCTCOG survey illustrated in Figure E3. The assumed split for different groups of transit riders follows:

- 45% of transit riders were assumed to not walk or bike to transit regardless of the stress level, either based on ability or preference for car travel (similar to 48% No Way No How for bikes).
- Up to 35% of transit riders were assumed to walk or bike to transit if they could travel exclusively on PLTS 1 or PLTS 2 sidewalk and crosswalk facilities (similar to 36% Interested But Concerned for bikes).
- Up to 15% of transit riders were assumed willing to travel on PLTS 3 facilities (similar to 14% Enthused & Confident for bikes).
- Up to 5% of transit riders were assumed willing to travel on PLTS 4 facilities (similar to 2% Stong & Fearless for bikes).

More research would be ideal to investigate actual values for these assumptions.

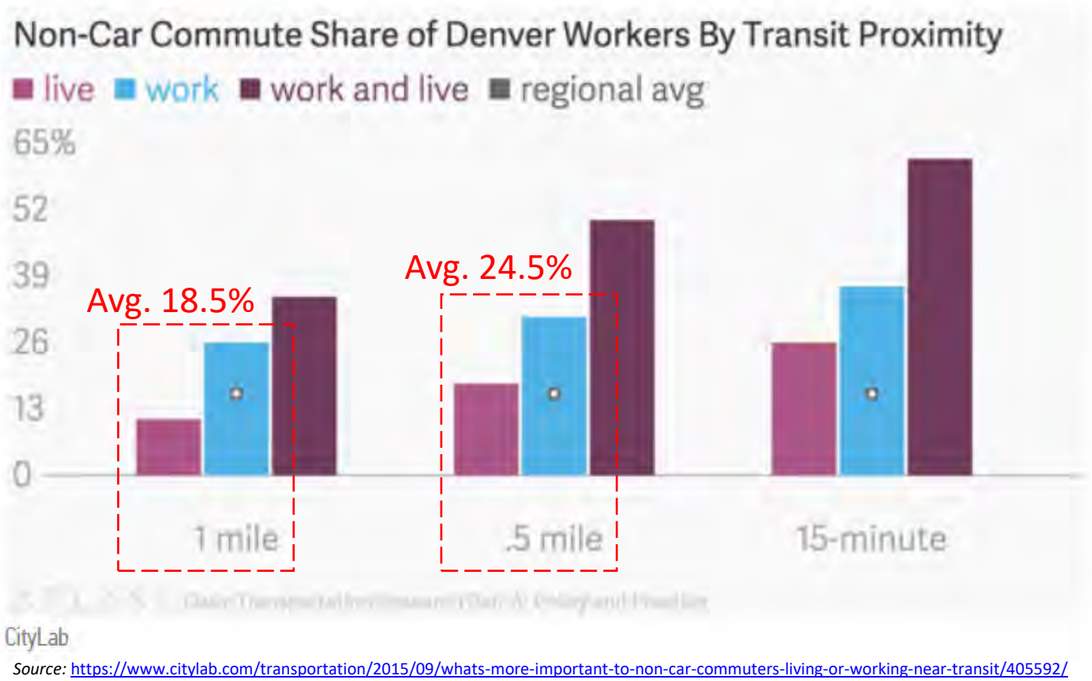
Note that some of the in the PLTS 3 or 4 categories might be termed transit-dependent riders who don't have access to a car and for whom bus transfers to the station are not sufficiently convenient.

Each of the above assumed percentages was reduced based on a sliding scale for the distance of the parcel in question from the station. The sliding scale was based on data from a 2015 University of Denver study illustrated in Figure E4 that explored the proximity relationship of the non-car commute share of Denver workers based on transit proximity. The study found that the average percentage of people living or working within 1 mile of the station who used a non-car commute mode was about 18.5%. Within a half-mile of the station, the percentage increased to about 24.5%.

As shown in Figure E5, plotting these two points from Figure E4 in a linear relationship allows for an extrapolated assumption that no more than 30% of people living or working immediately adjacent to a transit station (at a theoretical 0 mile walking distance) would use a non-car commute mode.

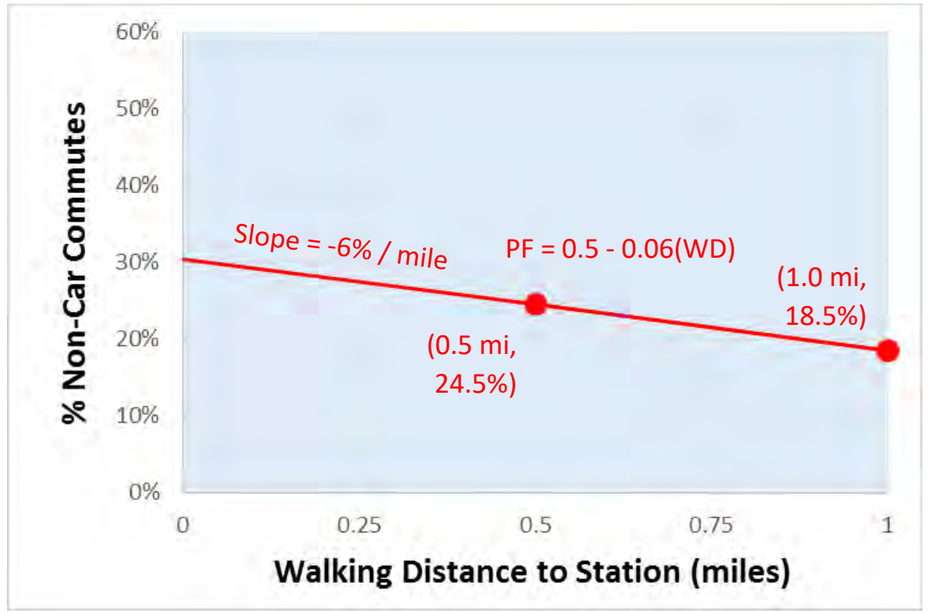
It was surmised that the Denver data (as with all real-world cases) would represent non-ideal conditions constrained by imperfect sidewalks and pedestrian stress levels similar to those present in the Dallas metroplex and other cities. Therefore, since the object of the above-described analysis was to account for pedestrian stress more directly, it was surmised that a nominal value of 20% be added to the equation shown in Figure E5 to normalize the relationship for ideal conditions and adjustment using the PLTS methods instead. This adjusted relationship for a proximity factor to

Figure E4: Findings of 2015 University of Denver Study



Source: https://www.citylab.com/transportation/2015/09/whats-more-important-to-non-car-commuters-living-or-working-near-transit/405592/

Figure E5: Extrapolated Relationship from 2015 University of Denver Study



provide the percentage of transit riders using non-car modes to reach the station under ideal sidewalk and crosswalk conditions based on distance from the station is shown in Figure E6.

Separate ArcGIS models were created around the Parker Road Station for two different partial pedestrian networks in addition to the full existing pedestrian network described earlier. These represented pedestrian networks that would be accepted by the segments of the transit riding population "Interested but Concerned" and "Enthused and Confident" about walking or riding to the station.

One network included only PLTS 1 and PLTS 2 links as route options (the blue lines in Figure 9) and therefore served the most limited number of parcels. Another network allowed for travel on PLTS 3 segments (the orange lines in Figure 9) in addition to PLTS 1 and PLTS 2. This network would serve a larger number of parcels. An overall estimate of existing ridership for Parker Road Station was calculated using the above-described inputs. For each parcel, a separate calculation for each PLTS group of transit riders was made as follows:

PLTS 1+2: Parcel population x Proximity Factor x 35% of transit riders in PLTS Group

PLTS 3: Parcel population x Proximity Factor x 15% of transit riders in PLTS Group

PLTS 4: Parcel population x Proximity Factor x 5% of transit riders in PLTS Group

Figure E6: Adjusted Relationship Assumed for Proximity Factor

Criteria	Weight
Employment and Population Density (Number of potential riders connected by the improvement's catchment area)	50
Distance / Proximity of Improvements to the Station	25
Walkshed Trip Length Reduction (Catchment area benefitting from a reduced walk distance to the station)	5
Land Use Types and Key Destinations (e.g. schools, government buildings, social services, hospitals, large shopping centers, parks)	5
Crash History (Number of crashes in the general area of the project improvement)	5
Safety Benefit (Speed limit as a surrogate for systemic safety of the project improvement)	5
Equity / Transit Dependent Populations (Minority households, % below poverty line)	5

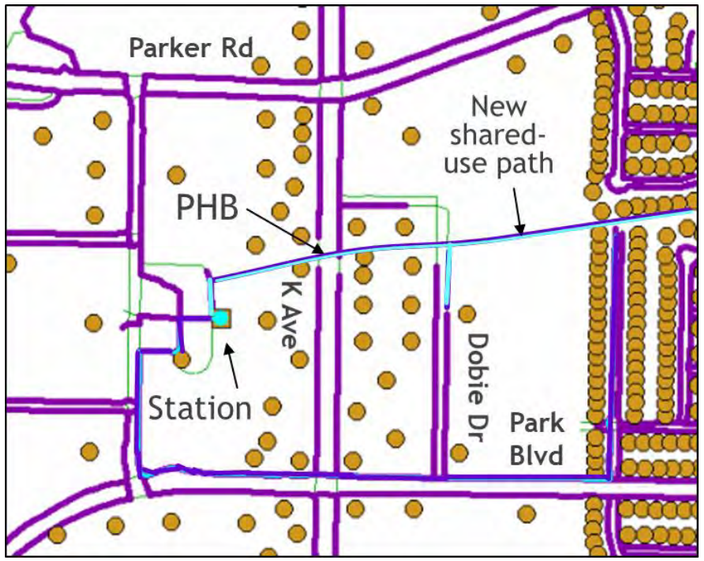
Note that the proximity factor was potentially different for each PLTS group, indicating that more selective travelers could only reach the station by following a longer path consistent with their intolerance for more stressful conditions. For parcels not connected to the station at all at a given PLTS (including PLTS 4) no ridership was assumed for that parcel as a simplifying assumption (despite the fact that many travelers, including those dependent on transit, can and do walk to the station without the benefit of sidewalk or crosswalk facilities).

The resulting estimate of existing non-car commuting trips to and from Parker Road Station was 631 people for existing conditions. This compared very favorably with 2015 survey data that had been provided by DART, indicating that 619 of the daily average riders either walked or biked to Parker Road Station.

Proposed sidewalk and crosswalk improvements were then added to the ArcGIS models for Parker Road Station so that an increase in ridership could be forecast. These are illustrated in Figure E7, which is an annotated screen capture from the GIS model where sidewalks and crosswalks are shown in purple or blue and parcel centroids are shown as brown circles.

With the originally proposed improvements, including a shared use path and pedestrian hybrid beacon (PHB) extending east of the station across K Ave, forecast ridership by non-car commute to the station was forecast to increase from 631 people to 1,018 people, a 61% increase.

Figure E7: Excerpt of Sidewalk Network, Including Originally Proposed Improvements near Parker Road Station

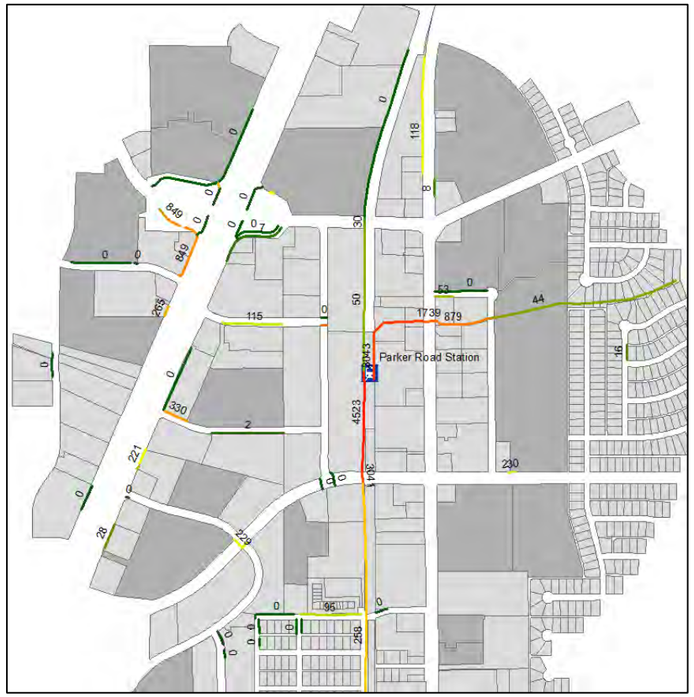


APPENDIX F: Half-Mile Area Improvement Prioritization – Final Methodology Details

After review of the process described in Appendix E, NCTCOG and the consultant team determined that the extensive editing required to the GIS shapefiles for existing sidewalks would not allow for the same level of effort at each of the 27 additional stations without compromising in other areas of the analysis. Data entry from field work could be reduced by bypassing the PLTS calculations. Finally, it was felt that some of the inputs were too speculative, despite the reasonable agreement between the existing condition model forecast and the recent DART ridership surveys.

Consequently, the prioritization process was simplified by providing separate scores for employment and population density without attempting to correlate these to ridership levels. The methods described previously were used to identify the parcel employment and population tributary to each sidewalk and crosswalk segment, without using a proximity factor or PLTS scores. Distance of each improvement from the station (measured linearly in a straight line for greater simplicity) was separated into a distinct scoring criterion, along with other scoring criteria for walkshed trip length reduction, land use types, key destinations, crash history, safety benefits, and equity. The weighting given to each criterion is shown in Table 1, in Section 2.9 of the report.

Figure F1: **Employment and Population "Tributary" to** Sidewalk & Crosswalk Improvements



Employment & Population Density

Figure F1 illustrates the process used to score improvements on the first criterion in Table 1, employment and population density. It shows the parcels in the Parker Road Station area, with darker shades of gray representing higher population/ employment totals. Note that, while some of the improvements shown in Figure F1 and other figures that follow, such as the sidewalk, pedestrian hybrid beacon, and shared use path to the east of the station, were later revised based on input from the City of Plano, the principles illustrated still apply.

In the figure, each sidewalk and crosswalk improvement link is shown in red, orange, yellow, or green colors depending on the total employment plus population that would be "tributary" to the station via the improvement once all proposed improvements are constructed. The tributary employment plus population values are shown next to each link, with the red links closest to the station having the highest values.

As a simplifying assumption, parcels straddling the half-mile boundary from the station were included in their entirety without any reductions, but parcels beyond the half-mile boundary were not considered to contribute to the analysis even though some travelers (particularly bicyclists) may be willing to travel without a car for longer distances.

Note that some improvements would have zero expected employment and population because the links connect to parcels that are currently vacant or to parcels that were assumed to have redundant, shorter routes to the station via another street or via the opposite side of the same street.

Figure F2: Proximity of Improvements to Station

Each improvement was assigned a score of 0-50 points, interpolated linearly based on the relative level of employment and population for the improvement, ranging from 0 to the maximum project-wide estimated value of 11,787.

Distance

Figure F2 illustrates the process used to score improvements on the second criterion in Table 1, distance to the station. Each improvement is shown color-coded based on the distance of its midpoint to the station, measured linearly "as the crow flies" for simplicity. Improvements that connect directly to the station have a distance of 0.0 miles. The figure shows the closer improvements shown in green and the most distant improvements in red. Points were assigned to each improvement on a linear scale ranging from 25 points for 0 miles from the station to 0 points at 0.5 mile from the station.

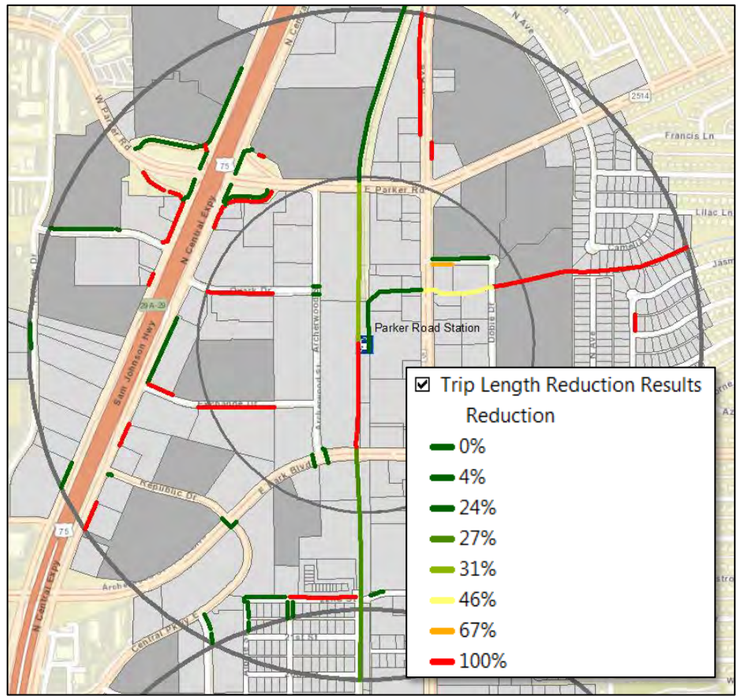
Walkshed Trip Length Reduction

Figure F3 illustrates the process used to score improvements on the third criterion in Table 1, walkshed trip length reduction. Each improvement is shown color-coded based on the percentage reduction in walking distance to the station that would occur for the population of a reference parcel selected as representative of most parcels tributary to the improvement in question. In general, the highest population parcel was chosen. When most parcels were of similar population, such as in single-family home neighborhoods, the farthest parcel was usually selected.

For each improvement, the walking distances from the reference parcel to the station along the existing and proposed pedestrian networks were measured using Network Analyst in ArcGIS. The difference between the two values was calculated as the walkshed trip length reduction.

Consideration had been given to creating a weighted average trip length reduction for all parcels, but this would have required tedious measurements and/or custom macros in ArcGIS. Therefore, this idea was abandoned for the final analysis.

Figure F3: Walkshed Trip Length Reduction



In Figure F3, improvements that would reduce trip length by a high percentage are shown in red or orange. These include improvements that would connect parcels with no existing sidewalk access to the station, which was considered for scoring purposes a 100% reduction (to avoid divide by zero errors). Lower percentages of trip length reduction are shown in yellow and shades of green. Scores for this category were assigned ranging from 0 points for no reduction in walking distance to 5 points for either a newly connected reference parcel or a reduction in walking distance greater than 40%.

Access to Land Use Types & Key Destinations

The fourth criterion for scoring improvements was access to other land use types and key destinations. Proximity to residential and employment uses had already been accounted for in the first criterion. However, other land uses with a high number of visitors also needed to be accounted for. Land uses and destinations deserving of special access consideration were as follows:

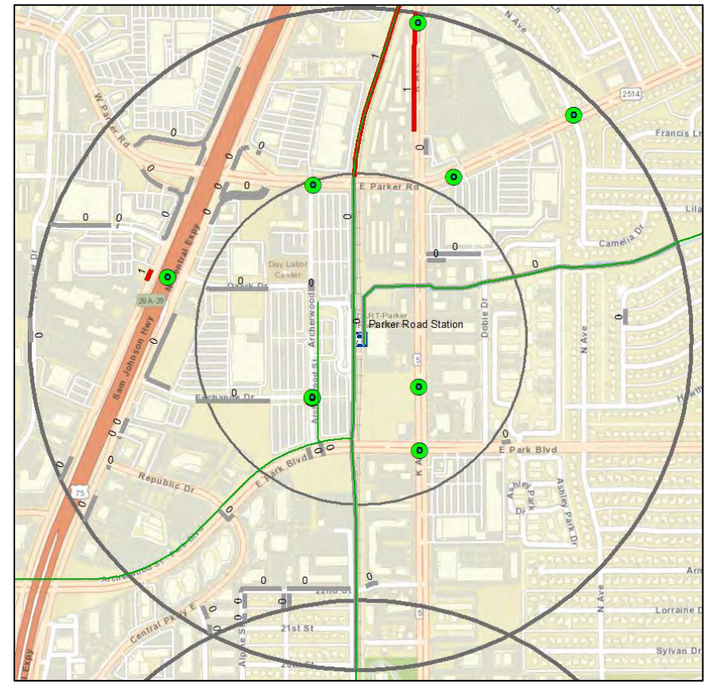
- Hospitals, clinics, urgent care
- Places of worship
- Schools
- Government buildings[3]
- Libraries, museums
- Grocery stores, malls, supercenters, hotels, motels
- Entertainment, fine arts, parks, landmarks, athletic facilities
- Senior living, community centers, gardens
- Bus stops with >25 daily boardings

A shapefile was created for locations in the above categories. Bus stop boarding information in GIS format was obtained from DART for analysis. Bus stops immediately adjacent to the DART rail stations were excluded as being redundant to the distance prioritization criteria, which already prioritizes proximity of the improvement to the station.

For each improvement, the number of key destinations within 250 feet were tabulated. Also tabulated for improvements greater than ¼ mile from the station were the number of bus *routes* within 50 feet of the improvement. The intent of this last criterion was to add emphasis on routes that would more often save time for those walking or biking to the station. Routes closer than ¼ mile were generally considered less useful for this purpose, since a walk to the station would more frequently take less time than waiting for the next bus.

For the access criterion, points were assigned ranging from 0 points for no nearby destinations or qualifying bus routes to 5 points for 5 or more nearby destinations or bus routes. Since some arterial streets may have several bus routes without necessarily having many stops or destinations nearby, the number of points contributed by bus routes was limited to no more than 3 points.

Figure F4: Relative Scarcity of Bicycle & Pedestrian Crashes



Crash History

The fifth criterion for scoring improvements in Table 1 is crash history. A GIS shapefile was used containing the point location of all reported bicycle and pedestrian crash locations for the study area from 2013 to 2017.

Figure F4 shows that in many places, such as the Parker Road Station half-mile area, bicycle and pedestrian crashes shown by green circles are relatively rare and random occurrences. In areas of lower density development and pedestrian activity, the crashes tend to be scattered throughout the study area, mostly along major arterials. Other station areas with higher density development and greater multi-modal activity experienced higher numbers of pedestrian and bicycle crashes. Since it was not possible within the scope of this project to collect pedestrian volume data, the crash data was observed to serve as somewhat of a surrogate for pedestrian demand. Therefore, a cluster of crashes may be more indicative of a place where many people walk than of a place that's more dangerous to walk in terms of the risk to individual pedestrians.

[3] in categories with an assumed high number of visitors, such as courthouses

Unfortunately, the available crash database had little detail on the nature of the crashes. For the crash shown along U.S. 75 in Figure F4, for example, the database indicated it involved a pedestrian with an incapacitating injury. However, the database did not detail what either the pedestrian or the driver involved were doing prior to the crash.

There is a sidewalk gap at this location, so perhaps the pedestrian was walking in the travel lanes of the southbound frontage road to avoid the gap. But the pedestrian could also just as well have been changing a flat tire or jaywalking across the freeway mainlanes. So, the crash data may offer some insights, but is still limited in its value for assigning relative benefits to different improvements.

The project team considered requesting police crash reports for the individual crashes and classifying them using the Federal Highway Administration's Pedestrian and Bicycle Crash Analysis Tool (PBCAT). This tool would allow for more significant insights to be drawn from a greater wealth of crash data, leading to better screening of which crash locations might be more or less susceptible to correction by certain countermeasures versus others. However, the extra effort required to code crashes was outside the scope of the project.

For the crash history criterion, improvements were scored from 0 to 5 points based on the number of bicyle- and pedestrian-related crashes within 250 feet of the improvement during the 5-year period analyzed. Figure F4 shows that only two improvements scored points near Parker Road Station. The two links in red each received 1 point for being near a single crash.

No differentiation was made in the scoring for bicycle versus pedestrian crashes or between crashes of different severity. While this data was available in the database, most bicycle and pedestrian crashes have a high potential for being serious or fatal, so it was determined any differentiation in the sparse data could be the result of statistical noise and was therefore less significant in differentiating which improvements would be of greatest benefit for positive safety outcomes.

Safety Benefit

A more recent development in transportation safety research that is designed to combat the drawbacks of traditional crash analysis mentioned in the previous section is the concept of "systemic safety." Systemic safety is a term that refers to safety approaches that are data driven, network-wide, and which consider improvements at locations with similar characteristics to high crash locations, even if the locations where improvements are to be considered or proposed don't themselves have significant crash history. The process is somewhat akin to extrapolating where it is believed crashes are more likely to occur over a longer period of perhaps 20 or 30 years, based on risk factors identified at the locations of recent crashes.

The scope for this project is in itself somewhat systemic in that areas within a half mile of light rail stations were generally observed to show higher bicycle- and pedestrian-related crash frequency than were other areas of the Dallas-Fort Worth region in general. Again, this result is not surprising due to the expected higher prevalence of multi-modal travel demand near transit stations.

As a second measure of systemic safety, the project team opted to use the posted speed limit of the roadway adjacent to sidewalk improvements or crossed by crosswalk improvements. Vehicular speed is widely regarded as having a high correlation to safety outcomes in bicycle and pedestrian crashes, as illustrated by a popular graphic in Figure F5 from the Seattle Department of Transportation.

Figure F5: Generalized Relationships between Impact Speed & Pedestrian Survival Rates

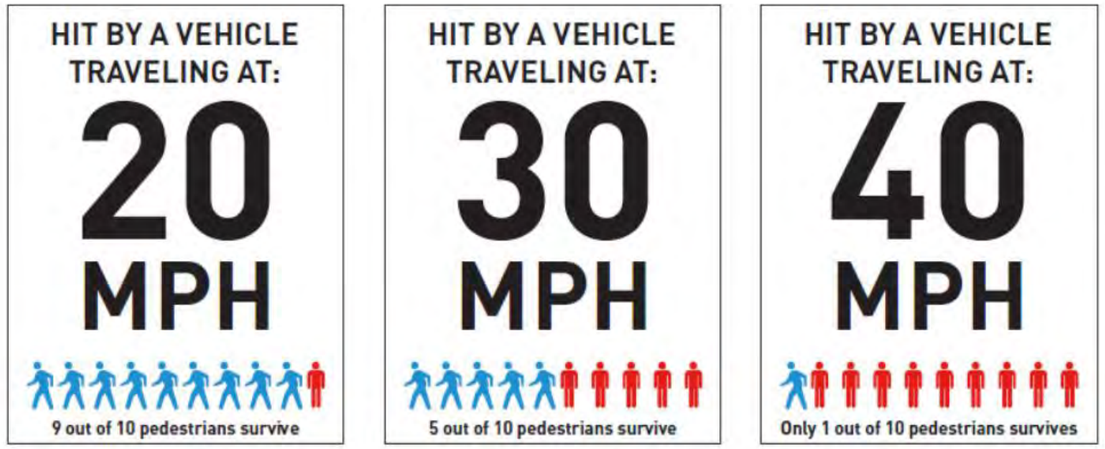


Image: Seattle Department of Transportation

The project team felt that posted speed limit was the single most important safety variable that could be easily measured and isolated, since data on posted speed was readily available in a GIS shapefile. While other variables such as 85th percentile speed and traffic volumes may be important to consider in a more detailed systemic safety study, they were determined to be outside the data collection scope of this project.

The associated scores for the safety benefit criterion ranged from 0 points at or below 20 mph to 5 points at or above 45 mph.

Shared use paths or sidewalks not adjacent to roadway alignments received 0 points for this category. Some consideration was given to assigning points for these types of off-street facilities or sidewalks along low-speed streets to prioritize safer alternatives to walking along high-speed roads. However, ultiimately it was decided that inverting the scoring system in this way would de-prioritize existing gaps along higher speed streets, which are typically the "weakest links" in the multi-modal network that lead to the greatest number of decisions to avoid pedestrian and bicycle trips.

Figure F6 shows the Parker Road Station area with the speed limit of the adjacent or crossed street identified next to each improvement, which is color-coded based on the speed limit. Red and orange improvements are near roadways with speed limits of 45 mph or greater, yellow improvements are along or crossing 40 mph roadways, and improvements are shown in green for 30 mph streets.

Equity

The final criterion for prioritizing projects was equity, which seeks to emphasize improving communities with populations that have not historically received equal access to resources. The consultants were provided spatial data covering the project area for an equity metric, the Environmental Justice Index. This index is compiled by NCTCOG to comply with federal rules for identifying Environmental Justice populations. It is based on data from the 2013-2017 American

Community Survey, aggregated at the census block level. Each census block is categorized if the percentage of its residents is higher than the regional average for minority population, low income, or both. Figure F7 shows a map of Environmental Justice Index areas for the areas including the 28 half-mile station areas for the Red & Blue Lines Last Mile Connections project.

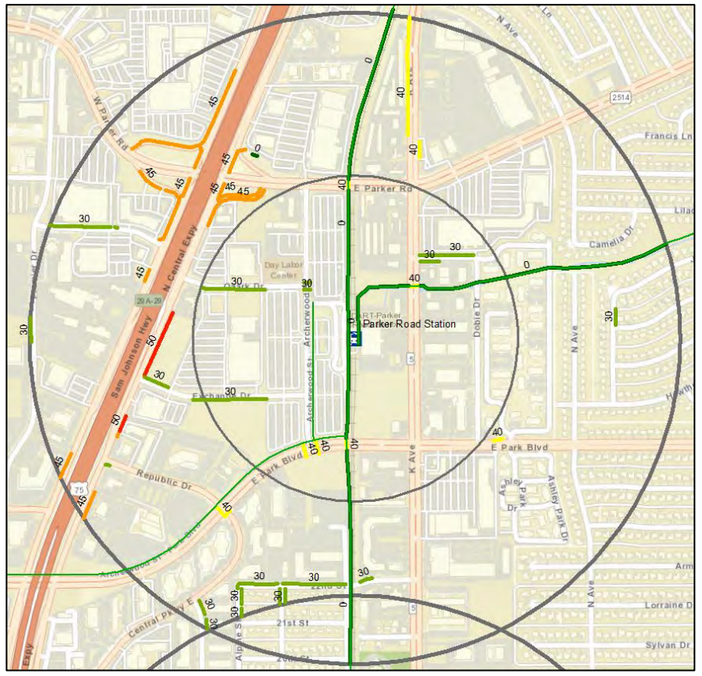
The map shows yellow areas with an above average percentage of low income residents, blue areas with an above average percentage of minority residents, and green areas with an above average percentage of both low income and minority residents. For areas where the map background is visible without any yellow, blue, or green color, no points were scored for the equity criterion. For low income and minority areas (yellow and blue), 3 points were scored for each improvement. For areas with both a higher than average percentage of low income and minority residents (green), 5 points were scored for each improvement.

Gaps to Remain

The consulting team categorized some segments where gaps in the pedestrian network had been identified by NCTCOG during preliminary GIS work to be gaps to remain for the final project listing. This decision was based on field conditions that would be impractical to analyze or would make sidewalk construction extremely cost-prohibitive. Examples include:

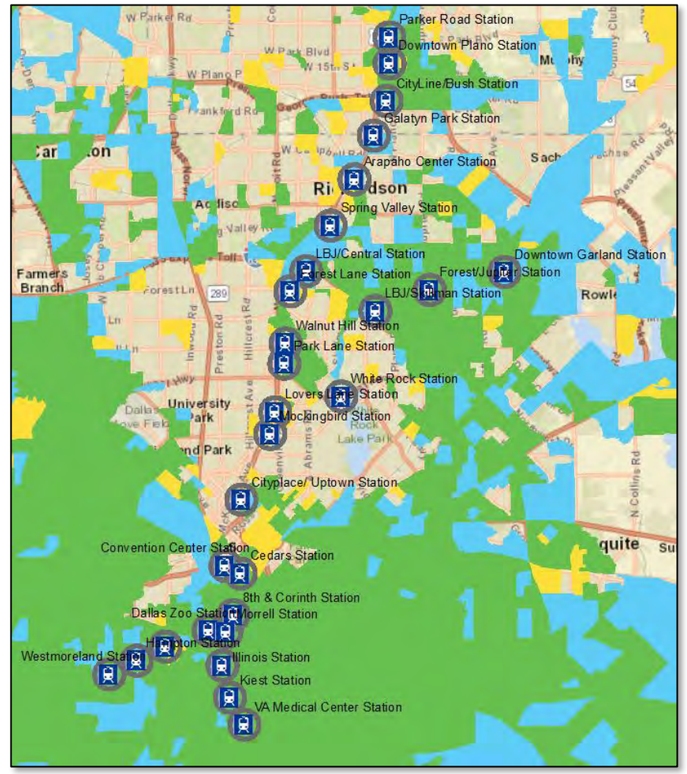
- Segments not connecting to the station without exiting the half-mile area.
- Right-of-way would be needed from a cemetery.
- Widening of existing bridge structures would be required without significant likely pedestrian demand.
- A building structure would need to be removed or modified.
- Parallel pedestrian access is provided a short distance away by a trail or another sidewalk such that new sidewalk adjacent to the street would be redundant.
- Street function is as a fire lane, service drive, or alleyway exclusively for vehicular use and pedestrian access is provided by sidewalk on the opposite side of the building.
- Inadequate space exists for sidewalk between roadway edge and DART tracks, without sufficient right-of-way or spare capacity to recommend a road diet.
- Environmental obstacles such as slopes down to creekbeds.
- Excessive impacts to residential properties (particularly those in older single-family home neighborhoods with very small yards, very short setbacks between the street and home and/or no garages or on-street parking width).
- Locked code-controlled pedestrian gates providing sidewalk access through private property (typically apartment complexes). These were modeled as gaps for the general public while still providing access to apartment residents.
- Sidewalk not needed due to lack of developable adjacent land use and existence of parallel sidewalk on opposite side of street.

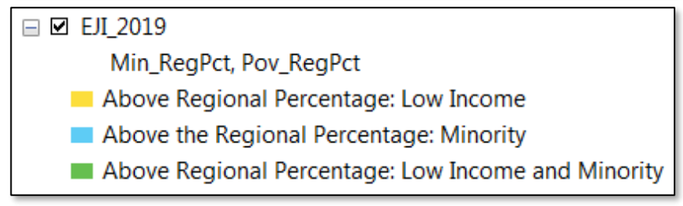
Figure F6: Improvement Scoring by Adjacent or Crossing Posted Speed Limit



- Off-street parking for small businesses blocking the way of sidewalk where parking removal would likely cause significant harm to the business.

Figure F7: NCTCOG Environmental Justic Index Mapping





In most cases where sidewalk obstacles exist, the likely challenges were documented for each improvement in notes designed to guide future planning and selection of improvements for actual projects. In some cases, the obstacles might be overcome by narrowing the roadway pavement or lane widths. If this was deemed potentially feasible, the Gap to Remain category was not used. Only where obstacles were deemed exceedingly challenging or sidewalk was judged highly unlikely to be used by anyone was the Gap to Remain category used.

Prioritization Scoring

Improvements were scored using a Microsoft Excel spreadsheet program and sorted based the overall score. The spreadsheet also summarized information on multiple consecutive GIS sidewalk

Figure F8: Screen Capture (Excerpt) from Improvement Prioritization Spreadsheet

Improvement Number	Distance		Tributary Employment & Population		Trip Length Reduction		Access					Crash History		Systemic Safety		Equity		Total Points	Priority
	Distance	Points	Tributary Emplymt + Population	Points	Trip Length Reduction	Trip Length Reduction Points	Key Destinations (incl. high rider bus stops)	Key Destination Points	Bus Routes	Bus Routes Points	Access Points	Crashes	Points	Speed Limit	Points	EJI	Points		
1B-DP-SW-127	0.30	10	2	0	100%	5	2	2	0	0	2	0	0	30	2	Low Income and Minority	5	24	High
1B-DP-SW-128	0.34	8	10	0	100%	5	4	4	0	0	4	0	0	30	2	Low Income and Minority	5	24	High
1B-DP-SW-13	0.29	11	15	0	100%	5	0	0	0	0	0	1	1	30	2	Low Income and Minority	5	24	High
1B-DP-SW-131	0.28	11	39	0	100%	5	1	1	0	0	1	0	0	30	2	Low Income and Minority	5	24	High
1B-DP-SW-35	0.34	8	1,023	4	100%	5	0	0	0	0	0	0	0	30	2	Low Income and Minority	5	24	High
1B-DP-SW-40	0.24	13	40	0	15%	2	1	1	1	1	2	0	0	30	2	Low Income and Minority	5	24	High
1B-DP-SW-66	0.26	12	543	2	100%	5	0	0	0	0	0	0	0	30	2	Low Income	3	24	High
1B-DP-CW-93	0.21	15	0	0	0%	0	1	1	0	0	1	0	0	30	2	Low Income and Minority	5	23	High
1B-DP-CW-94	0.21	15	0	0	0%	0	1	1	0	0	1	0	0	30	2	Low Income and Minority	5	23	High
1B-DP-SW-129	0.32	9	2	0	100%	5	2	2	0	0	2	0	0	30	2	Low Income and Minority	5	23	High
1B-DP-SW-143	0.32	9	33	0	100%	5	0	0	0	0	0	0	0	40	4	Low Income and Minority	5	23	High
1B-DP-SW-145	0.34	8	124	1	100%	5	0	0	0	0	0	0	0	40	4	Low Income and Minority	5	23	High
1B-DP-SW-48	0.47	2	37	0	100%	5	0	0	1	1	1	5	5	45	5	Low Income and Minority	5	23	High
1B-DP-SW-108	0.33	9	5	0	100%	5	1	1	0	0	1	0	0	30	2	Low Income and Minority	5	22	Medium
1B-DP-SW-114	0.37	7	410	2	100%	5	1	1	0	0	1	0	0	30	2	Low Income and Minority	5	22	Medium
1B-DP-SW-120	0.34	8	22	0	100%	5	2	2	0	0	2	0	0	30	2	Low Income and Minority	5	22	Medium
1B-DP-SW-133	0.35	8	8	0	100%	5	2	2	0	0	2	0	0	30	2	Low Income and Minority	5	22	Medium
1B-DP-SW-33	0.37	7	784	3	100%	5	0	0	0	0	0	0	0	30	2	Low Income and Minority	5	22	Medium
1B-DP-SW-57	0.23	14	0	0	0%	0	0	0	1	1	1	0	0	30	2	Low Income and Minority	5	22	Medium
1B-DP-SW-98	0.28	11	7	0	100%	5	0	0	0	0	0	1	1	30	2	Low Income	3	22	Medium
1B-DP-VW-V03	0.26	12	114	0	100%	5	0	0	0	0	0	0	0	0	0	Low Income and Minority	5	22	Medium
1B-DP-SW-107	0.35	8	65	0	100%	5	1	1	0	0	1	0	0	30	2	Low Income and Minority	5	21	Medium

segments on each street block to simplify the resulting improvement tables. Figure F8 shows a screen capture from the Excel spreadsheet for Downtown Plano Station. The figure does not represent a complete listing of all improvements for this station, but is shown for illustrative purposes only. The left-hand column in Figure F8 lists the identifcation number for each improvement.

Consultants evaluated each improvement for the seven criteria described above, as shown by the column headers in the top row of Figure F8. Points were assigned for each improvement based on the values of the reference inputs.

In Figure F8, the partial list of improvements is shown sorted by total points, with possible total values ranging from 0-100 points. The rows of the spreadsheet were color coded based on the priority of the improvement, with dark red for high-priority improvements, orange for medium priority, and light pink for low priority.

APPENDIX G: Cost Estimating Details

DART Station Properties

At NCTCOG and DART's direction, no additional contingencies were provided to account for the pre-design nature of the estimates, made without benefit of survey, subsurface utility investigation, or engineering design practices.

Most engineering projects at early design submittals such as 30% include additional contingencies to account for unknown design details to be addressed later in design. These contingencies are typically lowered with each successive design submission and then minimized by final 100% design submission once all design procedures have been completed.

Without additional contingencies to supplement the preliminary nature of the OPCC's, the uncertainty inherent in this decision was mitigated by a general attempt to be conservative in quantity and unit price estimation. Unit prices and other elements of the OPCC's were developed consistent with the assumptions used for the half-mile areas surrounding each station.

Half-Mile Areas

Opinions of Probable Construction Cost (OPCC) were developed for each high-priority improvement that was not assumed by City staff to be built as part of another project (developer, City, TxDOT, etc.) in the near future.

OPCC's were not developed for *individual* low- or medium-priority improvements, but could be developed by the City in the future based on similar assumptions as outlined below. Rather, estimates for the overall cost of low- and medium-priority improvements were developed on a unit length basis for each station area. The low- and medium priority OPCC estimates are therefore of a lower fidelity and thus the City may consider verifiying them with more detailed individual improvement estimates prior to making further design or construction funding decisions.

The following is a discussion of simplifying assumptions that were made in order to provide quality, yet preliminary OPCC's for the DART Station on-site improvements and nearly 1,100 separate high-priority improvements totalling nearly 58 linear miles over the 28 station areas project-wide.

Table G1 lists the project-wide number and length of improvements *not* assumed to be built by others. The listing is organized by station area, priority and type of improvement (sidewalk/shared use path vs. crosswalk).

Unit Costs

Consultants compared TxDOT and City of Dallas unit prices from recent bid tabulations for various items related to construction of the proposed improvements.

Adjustments were made in the comparisons due to differences in how the specifications, measurement, and payment for the City of Dallas and TxDOT are written. For example, the comparisons were made more balanced by averaging the Dallas values for different spellings of the same item number, or by adding remove and replace items together for comparison with an item that included both in the other agency's specifications.

TxDOT unit prices were in most cases much less expensive for sidewalk related items. This may be because TxDOT is the beneficiary of economies of scale from their contractors on projects of larger size where the items being constructed are contiguous, even though the City on their projects probably builds more sidewalk-related items overall. While this theory is impossible to confirm, since the Dallas prices don't have meta-data like TxDOT does on the quantities and number of times each item was used, the project team felt this effect was most likely present in the data nonetheless.

The City of Dallas bid tabulations also featured a wider array of bid items that would be used in these type of projects compared to the TXDOT standard bid items. Nonetheless, there were some bid items identified from TxDOT that were not available in the City list of bid items. In these cases, or when TxDOT listed a higher, more conservative unit price, the TxDOT items were used for OPCC's for this project.

In all other cases, including for the unit price for sidewalk, City of Dallas unit prices were used. The project team believes that City of Dallas prices would more likely reflect what local contractors would be bidding for sidewalk projects based on size of the proposed construction packages and our experience completing these type of projects in the DFW Metroplex.

Standard Assumptions

The following standard assumptions were used for most OPCC's developed for this project, though exceptions were sometimes made on a case-by-case basis as per engineering judgment.

Facility Width & Alignment

- All new and reconstructed sidewalks were assumed to be 5 feet wide.
- All shared use paths were assumed to be 10 feet wide.
- Sidewalks and shared use paths were assumed to have alignments that could meander slightly around obstacles if necessary and if permitted by the apparent right-of-way width.

Buffer Space & Setbacks

- Reconstructed sidewalk was assumed to be set back from the street where remnants of existing sidewalk had also been set back.
- For new sidewalk, a buffer between the sidewalk and roadway edge was assumed where the apparent available right-of-way seemed to be generally at least 8 feet wide.

Curb & Gutter

- Where sufficient space for buffers did not appear to exist, or where existing, damaged sidewalk that needs to be replaced is attached to the roadway curb, removal and replacement of any existing curb and gutter was assumed to also be necessary, so these costs were also included.
- New curb, gutter, and drainage systems were assumed to be necessary where not existing adjacent to sidewalk gaps.

Retaining Walls

- Retaining walls were estimated to be needed for certain lengths and heights based on engineering judgement where slopes were deemed steep enough to require them.
- Unit costs for retaining walls were estimated based on City of Dallas standard details for short retaining walls and the unit prices for their component features as follows:
  - 1' wall height = $20/linear foot
  - 2' wall height = $40/linear foot
  - 3' wall height = $75/linear foot
  - 4' wall height = $100/linear foot
  - 5' wall height = $125/linear foot

Landscaping

- A two-foot strip of sod was assumed to be needed on each side of the work area in addition to the landscaping allowance noted below.
- Removal and replacement of trees were developed as a blended cost estimate between TxDOT costs for the item "Remove Tree and Install Plant Material" and City of Dallas costs for installing trees.

Driveways

- Standard sizes were developed for assumed reconstruction of residential and commercial driveways where needed to construct level sidewalk crossings. The standard sizes (250 sq. ft. for residential and 500 sq. ft for commercial) helped simplify the task of making variable estimates for hundreds or thousands of driveways project-wide. Instead, estimators needed only to count the number of each type of driveway likely to be affected.
- Greater variability than indicated in the estimates may be expected in the actual construction cost in areas with steeper slopes near driveway crossings.

Table G1: Summary Improvement Statistics by Station Area, Priority & Improvement Type

Station Area		High Priority Improvements				Medium Priority Improvements				Low Priority Improvements				Gaps to Remain	
		Sidewalks & Shared-Use Paths		Crosswalks		Sidewalks & Shared-Use Paths		Crosswalks		Sidewalks & Shared-Use Paths		Crosswalks			
		#	Miles	#	Miles	#	Miles	#	Miles	#	Miles	#	Miles	#	Miles
1A	Parker Rd	15	1.57	8	0.15	12	0.71	3	0.12	12	0.31	1	0.08	4	0.28
1B	Downtown Plano	26	1.17	8	0.08	59	3.09	2	0.02	48	2.32	1	0.01	8	0.71
1C	CityLine Bush	25	2.14	9	0.13	17	1.85	3	0.04	13	0.90	0	-	6	0.20
2A	Galatyn Park	8	0.60	6	0.11	12	0.46	5	0.10	21	1.64	7	0.11	11	1.09
2B	Arapaho Center	13	0.51	3	0.02	11	0.46	2	0.02	16	1.50	1	0.00	11	1.40
2C	Spring Valley	7	0.32	3	0.04	9	0.29	1	0.01	18	1.32	2	0.03	12	0.61
3A	Downtown Garland	54	3.65	3	0.03	69	2.93	4	0.05	65	1.94	5	0.04	9	0.25
3B	Forest Jupiter	26	3.28	4	0.07	16	1.38	0	-	25	1.72	1	0.02	0	-
3C	LBJ Central	29	2.31	3	0.04	19	1.80	0	-	6	0.33	0	-	2	0.02
3D	Forest Ln	15	0.83	5	0.10	18	1.08	0	-	33	1.13	1	0.01	0	-
4A	Walnut Hill	11	0.66	3	0.06	22	1.77	0	-	4	0.35	0	-	3	0.10
4B	Park Lane	35	3.03	3	0.07	23	1.35	0	-	15	0.82	0	-	3	0.11
4C	Lovers Lane	11	0.45	0	-	5	0.20	2	0.02	5	0.08	4	0.04	20	0.24
4D	Mockingbird	5	0.19	1	0.02	6	0.25	2	0.03	35	1.61	0	-	11	0.77
4E	LBJ Skillman	32	3.89	1	0.02	16	1.00	1	0.02	35	1.61	3	0.04	3	0.32
4F	White Rock	21	2.13	3	0.05	29	2.73	2	0.02	45	3.30	1	0.02	1	0.06
5A	Eight and Corinth	39	2.15	5	0.08	47	2.57	0	-	42	1.36	0	-	6	0.25
5B	Dallas Zoo	57	3.09	1	0.01	54	2.45	0	-	45	1.25	0	-	1	0.07
5C	Morrell	58	2.30	5	0.06	34	2.01	1	0.02	48	1.53	2	0.03	3	0.40
6A	Tyler Vernon	63	4.24	4	0.06	78	4.76	10	0.12	97	3.59	5	0.06	1	0.03
6B	Hampton	60	2.05	8	0.13	65	2.22	2	0.02	71	2.33	3	0.05	0	-
6C	Westmoreland	44	2.46	15	0.23	39	1.46	3	0.13	45	1.63	1	0.02	0	-
7A	Illinois	126	4.74	19	0.23	135	5.18	4	0.04	78	2.98	1	0.01	0	-
7B	Kiest	41	2.20	0	-	83	3.95	4	0.05	67	2.70	3	0.04	0	-
7C	VA Medical	55	2.65	9	0.07	69	3.43	9	0.11	75	2.93	2	0.02	6	0.49
8A	City Place	3	0.03	11	0.16	4	0.40	1	0.01	21	0.67	6	0.08	1	0.21
8B	Convention Center	8	0.34	2	0.04	4	0.69	2	0.04	3	0.06	1	0.01	6	0.27
8C	Cedars	43	1.25	10	0.12	32	1.39	3	0.03	20	0.97	0	-	9	0.62
	Totals	**930**	**54.23**	**152**	**2.16**	**987**	**51.86**	**66**	**1.00**	**1008**	**42.90**	**51**	**0.73**	**137**	**8.48**

Total High-Priority Improvements (Sidewalks + Shared Use Paths + Crosswalks) = 1,082
Total High-Priority Improvements (Sidewalks + Shared Use Paths + Crosswalks) = 56.39 miles

Streetlighting

- Where new streetlighting was recommended in conjunction with proposed crosswalk improvements, standard unit prices for the entire installation were developed for different roadway cross sections as follows:

- Two-lane undivided street = $26,500
- Three-lane undivided street = $27,200
- Four-lane undivided street = $40,500
- Four-lane divided street = $41,200
- Six-lane undivided street = $41,900
- Six-lane divided street = $42,700

- For purposes of the OPCC's, streets with medians less than 6' wide were considered undivided, with luminaire poles only on intersection corners rather than mounted in the median.

- For segments of new streetlighting along sidewalk segments on DART property, site-specific streetlighting estimates were developed.

Signals & Beacons at Crosswalks

For crosswalks where proposed traffic signal, Pedestrian Hybrid Beacon (PHB), or Rectangular Rapid Flashing Beacon (RRFB) installations are recommended, the following standard unit prices per installation were developed based on improvement type and roadway cross-section, based on typical recent experience with previous projects:

- RRFB – Three-lane crossing without median island - $24,000
- RRFB – with one solar unit sign with flashers/pushbutton in median refuge island - $36,000
- RRFB – with two solar unit signs with flashers/pushbutton in median refuge island - $48,000
- PHB or Pedestrian Traffic Signal – Three-lane undivided - $150,000
- PHB or Pedestrian Traffic Signal – Four-lane divided - $175,000
- PHB – Six-lane divided - $200,000
- Pedestrian Traffic Signal – Six-lane divided - $210,000
- Add APS pushbuttons, countdown pedestrian heads at existing signal - $3,500 per intersection + $6,000 per crosswalk

Road Diets

- Where road diets are recommended to provide shorter pedestrian crossings and/or provide space for pedestrian amenities such as median refuge islands and posts for signs, beacons and/or pushbuttons, the recommendations are made for consideration with the understanding that further, corridor-wide analysis outside the scope of this project will be required.

- The costs estimated are for making changes within a block in either direction of the pedestrian crossing, which would likely be the minimum viable improvement. In many cases, cities may consider a longer corridor for road diet implementation if spare capacity for auto traffic along the route is confirmed. However, costs associated with additional project length, or other costs associated with reconstructing curbs and islands beyond the one-block transition area or changes to signalized intersections, have *not* been included since they would difficult to estimate without additional study.

Median Anti-Climb Fencing

At a few locations where eliminating barriers to more direct pedestrian travel was determined to be impractical, aesthetic, anti-climb fencing is recommended to channelize pedestrians to the safest street crossings a reasonable distance away. City of Dallas and TxDOT standard bid items were found to be insufficient to account for this type of fencing. Consultants identified two aesthetic, anti-climb fencing system products and requested pricing information on each from vendors and contractors. Photographs of the types of fencing available have been included in the figures shown previously for the relevant locations.

Criteria in identifying a suitable type of fencing for these applications were that it be tall enough and without hand or finger holds to allow it to be climbed. Also, since several systems would be installed in close proximity to moving traffic, it should either be crashworthy as a stand-alone installation or capable of being mounted on crash-tested standard median concrete traffic barrier.

One type of custom fencing identified had been built in recent years along the relatively narrow median of a high-speed state highway near touristed beach areas in Ocean City, Maryland. Consultants spoke with the vendor who provided the fencing and the contractor who built it. It was built to resemble a white picket fence, with pointed bars at the top to discourage climbing. The fencing was mounted on breakaway supports and a specially designed concrete foundation for wind loading in an area prone to hurricanes.

The contractor indicated the bid cost for this fencing was about $440 per linear foot, which included all miscellaneous related items such as mobilization and temporary traffic control. The same wind load and foundation design would not likely be required for fencing in North Texas, but it isn't clear how much cost savings might be achieved with this change.

The contractor did not have examples of this type of fencing being built on top of concrete traffic barrier that would reduce the maintenance requirements for the fencing. If struck by errant vehicles traversing the curbed median, a significant amount of labor would be involved in replacing damaged sections.

The other type of fencing system identified was the ClearVu Invisible Wall system from Cochrane USA. This system was used as median pedestrian fencing in a recent project by TxDOT in the City of Fort Worth on Lancaster Ave. Quotes for fencing systems were obtained from Cochrane USA for the specific locations recommended for this proejct. Pricing varied from $52 to $73 per linear foot for the entire system, depending mostly whether the fencing was to be installed on ground mounted posts in wide medians or away from roadways or on top of concrete traffic barriers in narrow medians.

For the Lancaster Ave project, where a wide median was available, TxDOT indicated that bid prices including contractor labor for the project were about $90 per linear foot. However, a representative from the contractor was also contacted and indicated that he would bid a higher price of $130 to $140 per linear foot for future contracts. Their experience after installing the fencing for the first time was that it was a labor-intensive process that would not go more quickly with additional experience. Another local contractor who has installed this type of fencing on other projects indicated a typical bid price of $110 to $120 per linear foot.

After reviewing the above information, consultants decided on a unit cost of $130 / linear foot for anti-climb pedestrian fencing. This was based on 6' high fencing for stand-alone applications, or 3.5' fencing on top of 2.5' tall concrete traffic barrier for a total barrier height of 6' in narrow median applications. The $130 per linear foot value provides for a relatively generous extra labor allowance for the Clearview Invisible Wall system and/or for vendors of other similar products to be identfied.

Where median anti-climb fencing is recommended on top of concrete traffic barrier, standard TxDOT bid items for constructing concrete traffic barrier and end treatments were assumed independent of the cost of the remainder of the fence.

Right-of-Way

- No right-of-way acquisition is assumed for any improvements. Right-of-way data was unavailable for the high-level planning purposes of this study. Some assumptions about the apparent right-of-way location were made based on factors such as the location of utility poles in order to make other assumptions necessary for cost estimation.

- Some improvements on private property (such as that of hospitals or other large employers) assume that cooperation of the property owners and negotiation of easements would be necessary. However, no additional cost has been assumed for these activities.

Contingencies

The following contingencies (totaling 25%) were applied to all costs, as directed and approved by both NCTCOG and DART:

- 10% design fee
- 4% mobilization
- 4% for landscaping allowance
- 2% for Erosion & Sediment Control Allowance
- 3% for traffic control
- 2% extra contingency for federal aid project

At NCTCOG and DART's direction, no additional contingencies were provided to account for the pre-design nature of the estimates, made without benefit of survey, subsurface utility investigation, or engineering design practices.

Most engineering projects at early design submittals such as 30% include additional contingencies to account for unknown design details to be addressed later in design. These contingencies are typically lowered with each successive design submission and then eliminated at final 100% design submission once all design procedures have been completed.

Without additional contingencies to supplement the preliminary nature of the OPCC's, the uncertainty inherent in this decision was mitigated by a general attempt to be conservative in quantity and unit price estimation, as already discussed.

APPENDIX H: Estimated Quantities & Opinions of Probable Construction Cost – Station Property Improvements

Station Improvements Matrix

CityLine/Bush Station

Opinion of Probable Constr. Cost = $152,600

Improvement Code Legend
ID: 1A-PR-ST-01
1A ← Station Number
ST ← Station Improvement
PR ← Station Abbreviation
01 ← Improvement Number (matches 1 on Map)

North Central Texas Council of Governments
DART Red & Blue Line Corridors Last Mile Connections

Location ID	Ownership	Project Type	Description	Opinion of Probable Cost
1C-CB-ST-01	DART	Tourist Sign Relocation	The Dallas tourism "BiG" sign on Routh West Dr just south of the station should be reversed to face the opposite direction or the sign should be relocated to a safer position. The sign faces the street, a poor orientation since those taking photographs of others posing at the sign will be tempted to stand in the travel lanes.	$ 900
1C-CB-ST-02	DART	ADA Ramp Adjustment	Widen the ADA ramp to Routh West Dr from the south end of the platform to allow wheelchair users to bypass the large vine sculpture blocking the top of the ramp.	$ 2,800
1C-CB-ST-04	DART/City of Richardson	Warning Signs & Ramps	Add pedestrian warning signs on the right-hand side of the roadway at the six crosswalks to the station platform across Routh East Dr and Routh West Dr. Existing signs are mounted on the left-hand side only. (The signs on the west side of Routh West Drive would be on City of Richardson property, but the signs on the east side of Routh East Drive would be on DART property). Add missing ADA ramps at two of the same locations. Of the total $10,400 cost listed at right, half is assumed attributable to DART and half to City of Richardson.	$ 10,400
1C-CB-ST-07	DART/ TxDOT/ City of Plano	Sidewalk, Crosswalk Signs & Markings, PHB	Construct a new, short segment of sidewalk on the west side of the Crawford Rd/Topridge Dr crossing under the PGBT, near the north end of the underpass adjacent to the PGBT westbound frontage road (WBFR). Add marked, signed crosswalks across the east and west legs of the WBFR. The existing sidewalk on the west side extends north from the PGBT eastbound frontage road (EBFR), but ends just south of the WBFR. These crosswalks would provide added conspicuity for pedestrians who decide crossing at the signal proposed at Location 8 would be too far out of their desired travel path. Provide pedestrian hybrid beacon with advance "Yield Here to Pedestrians" signing for crossing PGBT westbound frontage road. Cost amount shown at right (1/3 of overall cost) is assumed shared responsibility by DART, with remainder by TxDOT and City of Plano. See half-mile area improvements 1C-CB-CW-042 and 1C-CB-CW-043 for more details and cost information.	$ 63,000
1C-CB-ST-08	DART/ City of Plano/ City of Richardson	Sidewalk	Construct new sidewalk on the east side of the Crawford Rd/Topridge Dr crossing under the PGBT between the PGBT westbound frontage road (WBFR) and eastbound frontage road (EBFR). Cost amount shown (1/3 of overall cost) is assumed shared responsibility by DART, with remainder by the Cities of Plano and Richardson. See half-mile area improvement 1C-CB-CW-056 for more details and cost information.	$ 13,100
1C-CB-ST-09	DART/ TxDOT/ City of Richardson	Crosswalk Signs & Markings, PHB	Add a crosswalk across the east leg of the PGBT Eastbound Frontage Road (EBFR) at Topridge Dr. Provide pedestrian hybrid beacon with advance "Yield Here to Pedestrians" signing. See also half-mile area improvement 1C-CB-CW-059. Cost amount shown (1/3 of overall cost) is assumed shared responsibility by DART, with remainder by TxDOT and/or City of Richardson. See half-mile area improvement 1C-CB-CW-056 for more details and cost information.	$ 59,000
Opinion of Probable Cost - DART/Mixed Ownership Subtotal (DART Portion of Costs Only)				$ 144,000
Opinion of Probable Cost - City of Richardson Subtotal				$ 5,200
1C-CB-ST-03	DART/ Private Property	Sidewalk	Coordinate with the adjacent property owner to add a direct sidewalk connection between train platform & bus loop. A worn path in the grass ("goat trail)" exists between the southwest corner of the Alexan Central Apartments dog park on Pipeline Dr and the DART bus stops along the PGBT eastbound frontage road. This is the most direct route between the train station platform and the bus stops, shorter than walking north along Routh West Dr and the frontage road. See off-site improvement 1C-CB-CW-071. No assumed cost responsibility by DART.	$ -
1C-CB-ST-06	DART/ Private Property	Sidewalk	Coordinate with the adjacent property owner to construct a short segment of sidewalk for more direct travel between the southern crosswalk to the train platform and the south sidewalk along State St. A "goat trail" cuts the corner where the existing sidewalk is offset from the crosswalk, indicating existing pedestrian demand. See off-site improvement 1C-CB-CW-044. No assumed cost responsibility by DART.	$ -
Opinion of Probable Cost - DART/Private Property Subtotal				$ -
1C-CB-ST-05	TxDOT	Sidewalk repair	Repair the sidewalk panel where settlement has created a trip hazard near the pedestrian pushbutton on the north side of the President George Bush Turnpike (PGBT) eastbound frontage road at Routh West Dr.	$ 3,400
1C-CB-ST-10	TxDOT	Add Traffic Signal with Crosswalk Markings	Coordinate with TxDOT to add signalized crosswalk across the PGBT WBFR just east of the track crossing. This crosswalk will provide safer access to the DART station for residents of the apartments on the north side of the westbound frontage road. See off-site half-mile area improvement 1C-CB-CW-045 for more details. This improvement is being constucted as part of the Silver Line Project.	$ -
Opinion of Probable Cost - TxDOT Subtotal				$ 3,400
General	---	Pedestrian Ramps	Many pedestrian ramps in the station area are missing detectable warning surfaces, which should be added.	N/A
Opinion of Probable Cost - Total for All Recommendations at Station				$ 152,600

DART Last Mile Connections Project - CityLine/Bush Station Station Preliminary Opinion of Probable Construction Cost

Improvement No./ Description	City of Dallas Bid Item No.	Item Description	Unit	Unit Price	Quantity	Rounded Quantity	Bid Estimate	Assumptions
1C-CB-ST-01	728	REMOVE AND RESET SIGN	Each	$ 223.00	3	3	$ 669.00	"BIG" was assumed to be 3 signs
Tourist Sign Relocation		*Contingency*				*25%*	$ 167.25	
	Subtotal						*$ 900.00*	
1C-CB-ST-02	618	BARRIER FREE RAMP	Each	$ 2,182.75	1	1	$ 2,182.75	Assumed widening ramp to double its current width would be same cost as standard ramp.
ADA Ramp Adjustment		*Contingency*				*25%*	$ 545.69	
	Subtotal						*$ 2,800.00*	
1C-CB-ST-03	*Project straddling DART & adjacent private property - quantified under half-mile area off-site improvements.*							
Add Sidewalk	*Cost assumed attributable to City of Richardson if coordination with private property owner is successful. See off-site improvement 1C-CB-SW-071.*							
1C-CB-ST-04	729 A	INSTALL GR. MOUNTED REG/GUIDE SIGN	Each	$ 650.00	6	6	$ 3,900.00	6 signs for 6 crosswalks (right-side only) and 2 ramps
Add Warning Signs and ramps	618	BARRIER FREE RAMP	Each	$ 2,182.75	2	2	$ 4,365.50	
		Contingency				*25%*	$ 2,066.38	
	Subtotal						*$ 10,400.00*	
1C-CB-ST-05	203	REMOVE CONCRETE SIDEWALK	SF	$ 4.00	240	240	$ 960.00	Replace 12' x 20' area of sidewalk; may be less if lower panel adjacent to pole is replaced instead.
Sidewalk repair	7580	REINFORCED CONCRETE SIDEWALK	Sq. Yd.	$ 63.00	26.7	27	$ 1,701.00	
		Contingency				*25%*	$ 665.25	
	Subtotal						*$ 3,400.00*	
1C-CB-ST-06	*Project straddling DART & adjacent private property - quantified under half-mile area off-site improvements.*							
Add Sidewalk	*Cost assumed attributable to City of Richardson if coordination with private property owner is successful. See off-site improvement 1C-CB-SW-044.*							
1C-CB-ST-07	*Project straddling DART & adjacent City of Plano & TxDOT ROW - costs quantified under half-mile area off-site improvements. See off-site improvements 1C-CB-SW-042, 1C-CB-CW-042 and 1C-CB-CW-043 for detailed cost information.*							*Of total $188,900 estimated cost for crosswalks and west-side sidewalk, 1/3 is assumed for DART & 2/3 for TxDOT/City of Plano.*
Add Sidewalk, Crosswalk Signs & Markings, PHB	***Subtotal***						*$ 63,000.00*	
1C-CB-ST-08	*Project straddling DART & adjacent City of Plano & City of Richardson ROW - costs quantified under half-mile area off-site improvements. See off-site improvement 1C-CB-SW-056 for detailed cost information.*							*Of total $39,400 estimated cost for east-side sidewalk, 1/3 is assumed for DART & 2/3 for City of Plano/City of Richardson.*
Add Sidewalk	***Subtotal***						*$ 13,100.00*	
1C-CB-ST-09	*Project straddling DART & adjacent City of Plano & City of Richardson ROW - costs quantified under half-mile area off-site improvements. See off-site improvement 1C-CB-CW-059 for detailed cost information.*							*Of total $176,900 estimated cost for the crosswalk & PHB, 1/3 is assumed for DART & 2/3 for TxDOT/City of Richardson.*
Crosswalk Signs & Markings, PHB	***Subtotal***						*$ 59,000.00*	
1C-CB-ST-10	*Separate Project straddling DART & adjacent TxDOT/City of Plano ROW - See off-site improvement 1C-CB-CW-045.*							*Currently under construction as part of Silver Line Project, so no additional funding is required.*
Pedestrian Traffic Signal								
Grand Total							***$ 152,600.00***	

Contingency Items:	Contingency	Contingency Items:	Contingency	
Design Fee	10%	Erosion & Sediment Control Allowance	2%	25%
Mobilization	4%	Traffic Control Allowance	3%	Total Contingency
Landscaping Allowance	4%	Extra Contingency for Federal Aid Projec	2%	

Station Improvements Matrix

Galatyn Park Station

Opinion of Probable Constr. Cost = $0

Improvement Code Legend

ID: 2A-GP-ST-01

2A ← Station Number ST ← Station Improvement

GP ← Station Abbreviation

01 ← Improvement Number (matches 1 on Map)

North Central Texas Council of Governments

DART Red & Blue Line Corridors Last Mile Connections

Location ID	Ownership	Project Type	Description	Opinion of Probable Cost
2A-GP-ST-01	DART	Sidewalk	Build sidewalk connection to the existing Central Trail on the south end of the DART train platform. This connection is already planned and funded under DART's ongoing Red and Blue Platform Extension Project.	N/A

Opinion of Probable Cost - DART Subtotal $ -

Opinion of Probable Cost - Total for All Recommendations at Station $ -

DART Last Mile Connections Project - Parker Road Station Preliminary Opinion of Probable Construction Cost

Improvement No./ Description	City of Dallas Bid Item No.	Item Description	Unit	Unit Price	Quantity	Rounded Quantity	Bid Estimate	Assumptions
2A-GP-ST-01	*Not Applicable - Planned and funded under DART's ongoing Red and Blue Platform Extension Project*							
Grand Total							***$ -***	

Contingency Items:	Contingency	Contingency Items:	Contingency
Design Fee	10%	Erosion & Sediment Control Allowance	2%
Mobilization	4%	Traffic Control Allowance	3%
Landscaping Allowance	4%	Extra Contingency for Federal Aid Project	2%

25%	Total Contingency

Station Improvements Matrix

Spring Valley Station

Opinion of Probable Constr. Cost = $239,900

Improvement Code Legend
ID: 2C-SV-ST-01
2C ← Station Number ST ← Station Improvement
SV ← Station Abbreviation
01 ← Improvement Number (matches 1 on Map)

North Central Texas Council of Governments
DART Red & Blue Line Corridors Last Mile Connections

Location ID	Ownership	Project Type	Description	Opinion of Probable Cost
2C-SV-ST-01	DART	Sidewalk repair	Correct pedestrian trip hazard.	$ 800
2C-SV-ST-02	DART	Bus stop sign relocation	Relocate bus station sign to the far side of the crosswalk to ensure pedestrian safety.	$ 300
2C-SV-ST-03 2C-SV-ST-04 2C-SV-ST-05	DART	Update pedestrian signs	Update pedestrian warning signs to meet MUTCD standards. The existing signs are fading, have the wrong panel shape, and do not have supplemental arrow plaques as required to meet MUTCD standards.	$ 4,900
2C-SV-ST-06	DART	Add Pedestrian Lighting	Install pedestrian lighting along the Central Trail near the station.	$ 168,900
2C-SV-ST-07	DART	Update Do Not Enter Sign	Update “DO NOT ENTER” signs to meet MUTCD standards.	$ 900
2C-SV-ST-08	DART	Sidewalk repair	Correct pedestrian trip hazard.	$ 1,500
Opinion of Probable Cost - DART Subtotal				$ 177,300
2C-SV-ST-09	City of Richardson	Add fencing	Install median fence along Spring Valley Road in front of DART station to ensure pedestrians cross at the crosswalks.	$ 62,600
Opinion of Probable Cost - City of Richardson Subtotal				$ 62,600
Opinion of Probable Cost - Total for All Recommendations at Station				$ 239,900

DART Last Mile Connections Project - Spring Valley Station Preliminary Opinion of Probable Construction Cost

Improvement No./ Description	City of Dallas Bid Item No.	Item Description	Unit	Unit Price	Quantity	Rounded Quantity	Bid Estimate	Assumptions
2C-SV-ST-01	203	REMOVE CONCRETE SIDEWALK	SF	$ 4.00	49	50	$ 200.00	Assume 7*7=49 sf
Sidewalk repair	7580	REINFORCED CONCRETE SIDEWALK	Sq. Yd.	$ 63.00	5.44	6	$ 378.00	
		Contingency				*25%*	$ 144.50	
	Subtotal						*$ 800.00*	
2C-SV-ST-02	728	REMOVE AND RESET SIGN	Each	$ 223.00	1	1	$ 223.00	1 sign
Bus stop sign relocation		*Contingency*				*25%*	$ 55.75	
	Subtotal						*$ 300.00*	
2C-SV-ST-03 2C-SV-ST-04 2C-SV-ST-05	729 A	INSTALL GR. MOUNTED REG/GUIDE SIGN	Each	$ 650.00	6	6	$ 3,900.00	6 signs
Update pedestrian signs		*Contingency*				*25%*	$ 975.00	
	Subtotal						*$ 4,900.00*	
2C-SV-ST-06	680 A	2"PVC STREET LIGHT CONDUIT - BORE	Lin. Ft.	$ 18.00	1400	1400	$ 25,200.00	Lighting needed for approx. 1400'; assumed 60' spacing, or 23 poles
Add Pedestrian Lighting	687	PEDESTRIAN LIGHT FOUNDATION	Each	$ 1,208.00	23	23	$ 27,784.00	
	688	STREET LIGHT PULL BOXES	Each	$ 860.00	7	7	$ 6,020.00	
	691	PROCURE AND INSTALL PEDESTRIAN LIGHT POLE	Each	$ 2,158.00	23	23	$ 49,634.00	
	692	PROCURE AND INSTALL PEDESTRIAN LIGHT FIXTURES	Each	$ 1,382.00	23	23	$ 31,786.00	
	841	#6 STREET LIGHT WIRE	Lin. Ft.	$ 3.00	3080	3100	$ 9,300.00	
	842	ELECTRICAL METER AND BASE	Lump Sum	$ 12,797.00	1	1	$ 12,797.00	
		Contingency				*25%*	$ 6,300.00	
	Subtotal						*$ 168,900.00*	
2C-SV-ST-07	729 A	INSTALL GR. MOUNTED REG/GUIDE SIGN	Each	$ 650.00	1	1	$ 650.00	1 signs
Update Do Not Enter Sign		*Contingency*				*25%*	$ 162.50	
	Subtotal						*$ 900.00*	
2C-SV-ST-08	203	REMOVE CONCRETE SIDEWALK	SF	$ 4.00	120	120	$ 480.00	Assuming remove 3 panels, 6*20=120 sf
Sidewalk repair	7580	REINFORCED CONCRETE SIDEWALK	Sq. Yd.	$ 63.00	13.33	14	$ 882.00	
		Contingency				*25%*	$ 120.00	
	Subtotal						*$ 1,500.00*	
2C-SV-ST-09	XXXX	Architectural quality 6' metal fence	Lin. Ft.	$ 130.00	385	385	$ 50,050.00	385' fence
		Contingency				*25%*	$ 12,512.50	
Add fencing	***Subtotal***						*$ 62,600.00*	
		Grand Total					***$ 239,900.00***	

Contingency Items:	Contingency	Contingency Items:	Contingency
Design Fee	10%	Erosion & Sediment Control Allowance	2%
Mobilization	4%	Traffic Control Allowance	3%
Landscaping Allowance	4%	Extra Contingency for Federal Aid Project	2%

25%
Total Contingency

APPENDIX I: Half-Mile Area Recommendation Details & Detailed Improvement Mapping

Figures 1C-3 through 2C-4 on the following pages of this appendix identify existing conditions and recommended improvements for the half-mile areas around each station in Richardson. The first figure in each set indicates existing conditions and the second figure indicates the recommended improvements.

In each figure, existing sidewalks are shown in light blue, as well as Regional Veloweb shared use paths (bright green) and local shared use paths (dark green). Existing shared use paths are shown with solid lines, while proposed shared use paths are shown in dashed lines.

The density of individual parcels' population plus employment totals are shown in a multi-color scale on the existing conditions figure. The population and employment density is shown in grayscale on the recommended improvements figure to allow the improvements to stand out more clearly.

Sidewalk and crosswalk gaps are shown in red on the existing conditions figures, and in multiple colors on the recommended improvements figures, according to the priority assigned to the gap: red for high-priority, orange for medium-priority, and light pink for low-priority. Gaps to remain are shown in dark pink. For more details on these gap categories, refer to Appendix F.

Each high- medium- and low-priority improvement, along with all gaps to remain, are indicated by the boxed number labels near each improvement location. The lower right corner of each recommended improvements figure includes a legend that describes the abbreviations in the improvement ID codes, which can be used to cross-reference the improvement matrices that appear in Appendix J.

For solid red, orange, or light pink lines, the recommended improvement for a sidewalk gap is either a new or repaired 5-foot wide sidewalk along the length shown. Repairs are noted in the matrix notes for each improvement in Appendix J, and assume full removal of damaged, existing sidewalk prior to replacement.

Note that in some places dashed green lines for planned shared use paths appear on top of other colored lines. Where dashed green lines appear on top of light blue lines, this indicates that a sidewalk of adequate width exists for basic pedestrian connectivity, and that a wider shared use path is also planned in the future. Such "sidewalk widening" improvements were ***not*** considered essential to provide multi-modal connectivity to transit for the purposes of this project, and as such were not listed as numbered improvements or included in any cost estimation of high-priority improvements. They are shown on the map figures for informational purposes only.

Other dashed green lines in the existing conditions and recommended improvements figures appear on top of red, orange, or light pink lines. On the existing condtions figures, dashed green over red indicates a gap where no current sidewalk or shared use path exists but a future local or regional shared use path is planned. On the recommended improvements figures, dashed green over red, orange, or light pink also indicates a gap (of the priority indicated by the non-green color) where no current sidewalk or shared use path exists but a future local or regional shared use path is planned. In these cases, 10'-wide shared use paths ***were*** considered essential as high-priority improvements (dashed green over red) to provide multi-modal connectivity to transit, and as such were listed as numbered improvements and included in the cost estimates that follow.

For crosswalk gaps, the type of improvement recommended is shown with numbered dark blue circles located near each crosswalk. The numbers in the blue circles correspond to the legend of possible pedestrian safety countermeasures appearing at the upper right of the figure. The first nine items in this legend correspond to the standard nine items in Table 1 of FHWA's publication, "Guide for Improving Pedestrian Safety at Uncontrolled Crossing Locations," referenced earlier in Section 2.6, Appendix C, and Appendix D. Treatments recommended somewhere on a particular figure have a red box around them in the legend for easier reference.

The right-hand side of each existing and recommended improvements figure includes a legend for "Primary Routes." These are street segments identified by NCTCOG as candidates for further evaluation during preliminary analyses that preceeded the subject project by the consultant team. Primary Routes are denoted with a darkened black street centerline and a letter designation matching a street name indicated in the legned. Comparing the primary routes with high priority gaps on the recommended improvements figures illustrates differences between the results of this preliminary methodology with the final methodology.

The "Half Mile Area Improvements Matrices" appearing in Appendix J for each station list for each improvement the owner, improvement type, location, length, notes, priority score, and (in the case of high priority improvements not built by others) the opinion of probable construction cost. A matrix for sidewalks and shared use paths appears first, followed by a second matrix for crosswalks sorted separately. Each of the matrices is sorted by ownership and then by ID number.

The notes discuss any observations from the field visits deemed relevant, as well as challenging conditions the City and other agencies may want to consider when advancing recommended projects to design and/or construction. This type of information captured in the notes was a primary component of developing the quantities that form the basis for the opinions of probable construction cost. Also included in the notes (where provided) is feedback received from the City about upcoming projects or development that may construct the improvement. The absence of a note indicates that the sidewalk improvement appears to be relatively straightforward without obvious challenges.

In some cases, ownership of or responsibility for improvements was assumed to be shared among agencies, such as for a sidewalk crossing the Plano/Richardson City boundary or for a crosswalk from DART property across an adjacent City street. Such mixed ownership cases appear at the end of each listing with separate OPCC subtotals. In these cases, the OPCC for individual improvements or groups of improvements was split equally among each agency in the summary tables that follow in the main body of the report.

CityLine Bush Station

Figure 1C-3 illustrates the existing conditions in the half-mile area around the CityLine Bush Station. Central Expy (U.S. 75), the President George Bush Tpk (SH 190) and K Ave/N Plano Rd all pose boundaries to multi-modal access to the station. While the station is located just south of the Richardson City line formed by the PGBT, new transit-oriented residential development has occurred north of the PGBT in Plano, with other undeveloped parcels expected to bring more such development. The current configuration of the Park & Ride lots located below the PGBT bridge

structures is oriented primarily to serve DART riders driving to the station, with fewer accomodations for pedestrian and bicycle trips through the large parking lots.

Figure 1C-4 shows the recommended improvements in the half-mile area around the CityLine Bush Station. Several sidewalks and connecting crosswalks should be built through and around the Park & Ride lots below the PGBT bridges. The high posted speed limits along the PGBT frontage roads create the need for high-visibility crosswalks. Therefore, pedestrian hybrid beacons are recommended at the Crawford Rd/Topridge Dr crossings of the PGBT frontage roads (1C-CB-CW-42, 1C-CB-CW-43, and 1C-CB-CW-59). Also, a pedestrian traffic signal is recommended for the crossing of the PGBT westbound frontage road just east of the DART tracks (1C-CB-CW-45). The existing crosswalk across the WBFR west of the tracks will be removed as part of the Silver Line Construction, which is still under design but will reconfigure other existing sidewalks and crosswalks in and around the station.

Three existing signalized intersections should receive pedestrian access improvements. Marked crosswalks and countdown, accessible pedestrian signals should be added at the intersections of Plano Pkwy with F Ave/Executive Dr and with K Ave. Though pedestrian indications are already present at the K Ave/N Plano Rd intersection with the PGBT frontage roads, sidewalks (1C-CB-SW-046, 1C-CB-SW-047, and 1C-CB-SW-061) need to be added so that pedestrian travel through these intersections can occur during all weather and for DART riders of different abilities.

Most of the recommended improvements south of the station in Richardson are anticipated for construction by others, either as part of the Silver Line project or the ongoing construction of the CityLine mixed-use development.

A shared use path as part of the Regional Veloweb is funded as part of the construction of the Silver Line Project. The shared use path will parallel the track alignment, on the east side of the tracks north of the station and curving to the west south of the station to cross under Central Expy (U.S. 75). Connecting trails will need to be provided to link the shared use path to other shared use paths planned by the City of Richardson and TxDOT along the U.S. 75 frontage roads. From CityLine Dr to Renner Rd, the local shared use path on the east side of U.S. 75 is funded.

Other shared use paths are planned by the City of Richardson along the south side of the PGBT eastbound frontage road and along the west side of N Plano Rd. In some places the shared use path would widen existing sidewalk, while in other places it would fill a gap where no existing sidewalk is present.

Additional details about other improvements recommended in Figure 1C-4, as well as challenges associated with the recommended gaps to remain, are included in the matrix notes for CityLine Bush Station that can be found in Appendix J.

Galatyn Park Station

Figure 2A-3 illustrates the existing conditions in the half-mile area around the Galatyn Park Station. Central Expy (U.S. 75) currently blocks all bicycle and pedestrian travel to and from the west since the only bridge that crosses it within the half-mile area, on Galatyn Pkwy, does not include sidewalk. A DART shuttle (Route 824) connects the station to areas west of U.S. 75 at 15- to 20-minute intervals during weekday peak hours. This route previously included more expanded hours of operation, but service has been scaled back due to COVID-19 travel demand changes.

The Central Trail, part of the Regional Veloweb shared use path network, runs along the east side of the DART right-of-way along its entire length within the half-mile area. On-street bike lanes are present along N Collins Blvd throughout the half-mile area. Local shared use paths exist or are planned farther west on either side of Prairie Creek. To the northeast of the station, a local shared use path that is partially complete along the north side of Glenville Dr is planned by the City of Richardson to extend to the intersection with Lookout Dr, where it will continue along the north side of Lookout Dr to points eastward.

Figure 2A-4 shows the recommended improvements in the half-mile area around the Galatyn Park Station. The City of Richardson should consider improved bicycle and pedestrian access across U.S. 75. Many pedestrians and cyclists would likely prefer the increased convenience of a sidewalk connection over the 15- to 20-minute intervals provided by DART Bus Route 824, even after the return of mid-day bus service. A sidewalk connection would also be available at night or on weekends.

The Galatyn Pkwy bridge over U.S. 75 is currently posted with a "No Pedestrians" prohibition. The bridge would either need to be widened to provide sidewalk, or a road diet would need to be implemented. Between the ramp signals, about 44 feet is allocated to four travel lanes. Narrowing lanes from 11 feet wide to 10 feet wide could provide space for a minimal 4-ft wide sidewalk on one side of the bridge only.

A better alternative for a road diet may be to reconsider the lane geometry of the tight-diamond interchange. Northbound and southbound vehicular through movements from the ramps are unnecessary and can be eliminated because the frontage roads provide through movements underneath the Galatyn Pkwy Bridge that does not require crossing Galatyn Pkwy at-grade via the ramps. With elimination of the through movements, the interchange could potentially be converted to a diverging diamond interchange (DDI) configuration with a single lane in each of the eastbound and westbound directions.

This configuration would require a median, but sidewalk could then be provided either along one side of the bridge or (as is relatively common in the DDI configuration) in the median between opposing lanes, each traveling in a counterflow direction. Geometric studies would be needed to see if such a configuration, including required signal displays, could fit on the existing bridge structure, while capacity analysis would be needed to evaluate the strategy's operational effectiveness relative to existing and projected future conditions with build-out of adjacent developments. However, despite the expectation of increased development and auto traffic in the area, the concept holds potential, since DDI's frequently outperform traditional tight diamond interchanges like the existing configuration by a large margin and/or with fewer lanes.

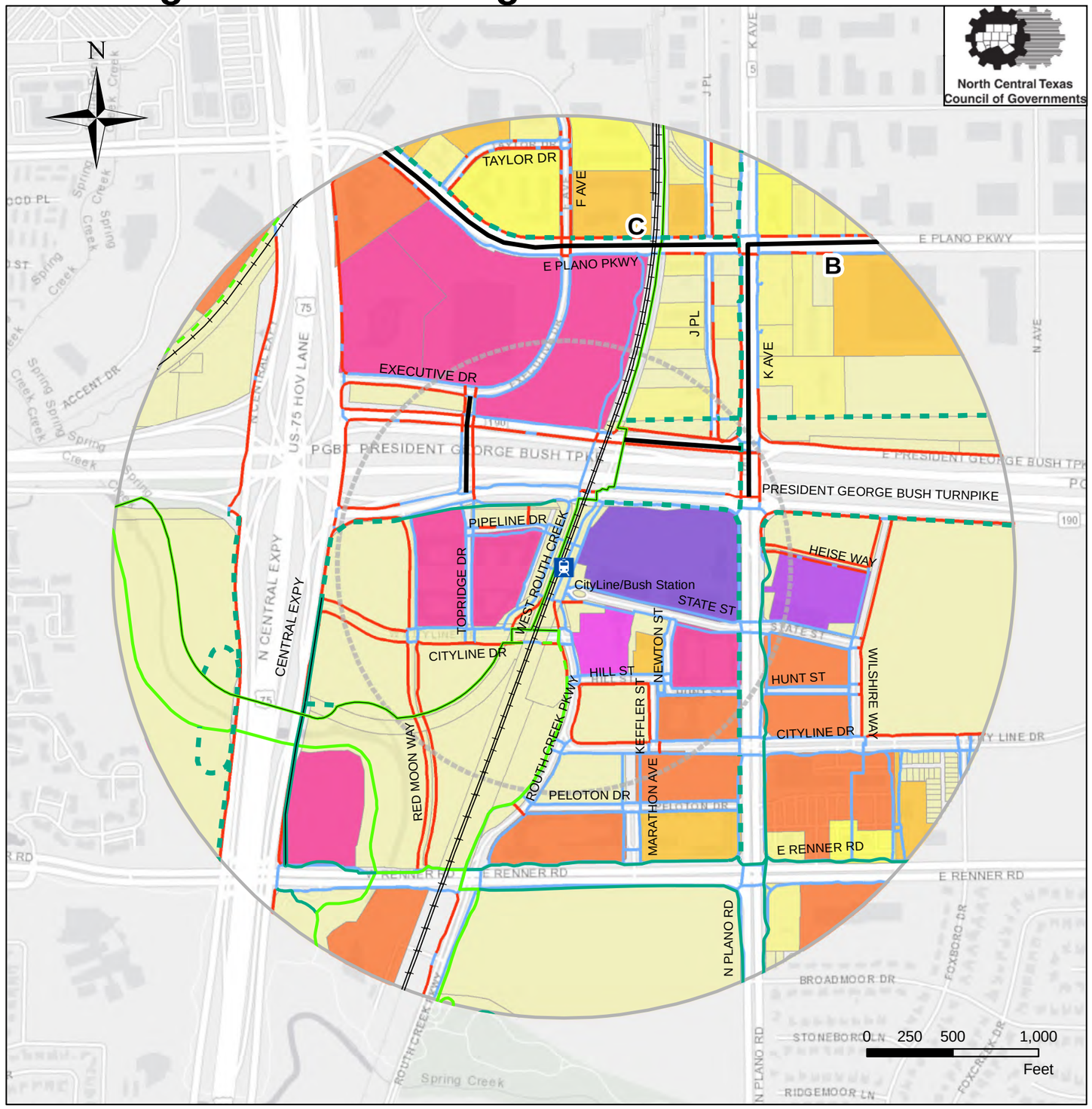
Drainage would need to be modified on the west bridge approach to add sidewalk, since grate inlets are present along the curb. On the east bridge approach, narrowing lanes from 11 feet wide to 10 feet wide (along with narrowing and realigning of the roadway median) could provide some of the space needed for new sidewalk, with additional space coming from the potential changes to lane configurations and phasing at the signalized interchange of Galatyn Pkwy with the U.S. 75 ramps.

In addition to new sidewalk in some locations to fill network gaps, other recommended improvements include:

FTA DART Stations
Last Mile Connections
Cityline Bush Station
November 2020

North Central Texas Council of Governments
DART Red & Blue Line Corridors Last Mile Connections

Figure 1C-3 Existing Conditions



Legend

- DART Rail Station
- Railroad Track

Segment Category

- Existing Sidewalk/Crosswalk
- Sidewalk/Crosswalk Gap

Regional Veloweb (Mobility 2045)

- Regional Existing
- Regional Funded
- Regional Planned

Local Shared Use Paths

- Local Existing
- Local Funded
- Local Planned

Local On-Street Bikeways

- Local Existing Bicycle Facilities
- Local Funded Bicycle Facilities
- Local Planned Bicycle Facilities

DISPLAY

- 0.5 Mile Buffer
- 0.25 Mile Buffer
- Primary Routes

Existing Residential and Employment Population (Number of People)

- 0 - 10
- 11 - 50
- 51 - 100
- 101 - 250
- 251 - 578
- 579 - 1000
- 1001 - 1500
- 1501 - 2500
- 2501 - 5000
- 5001 - 24170

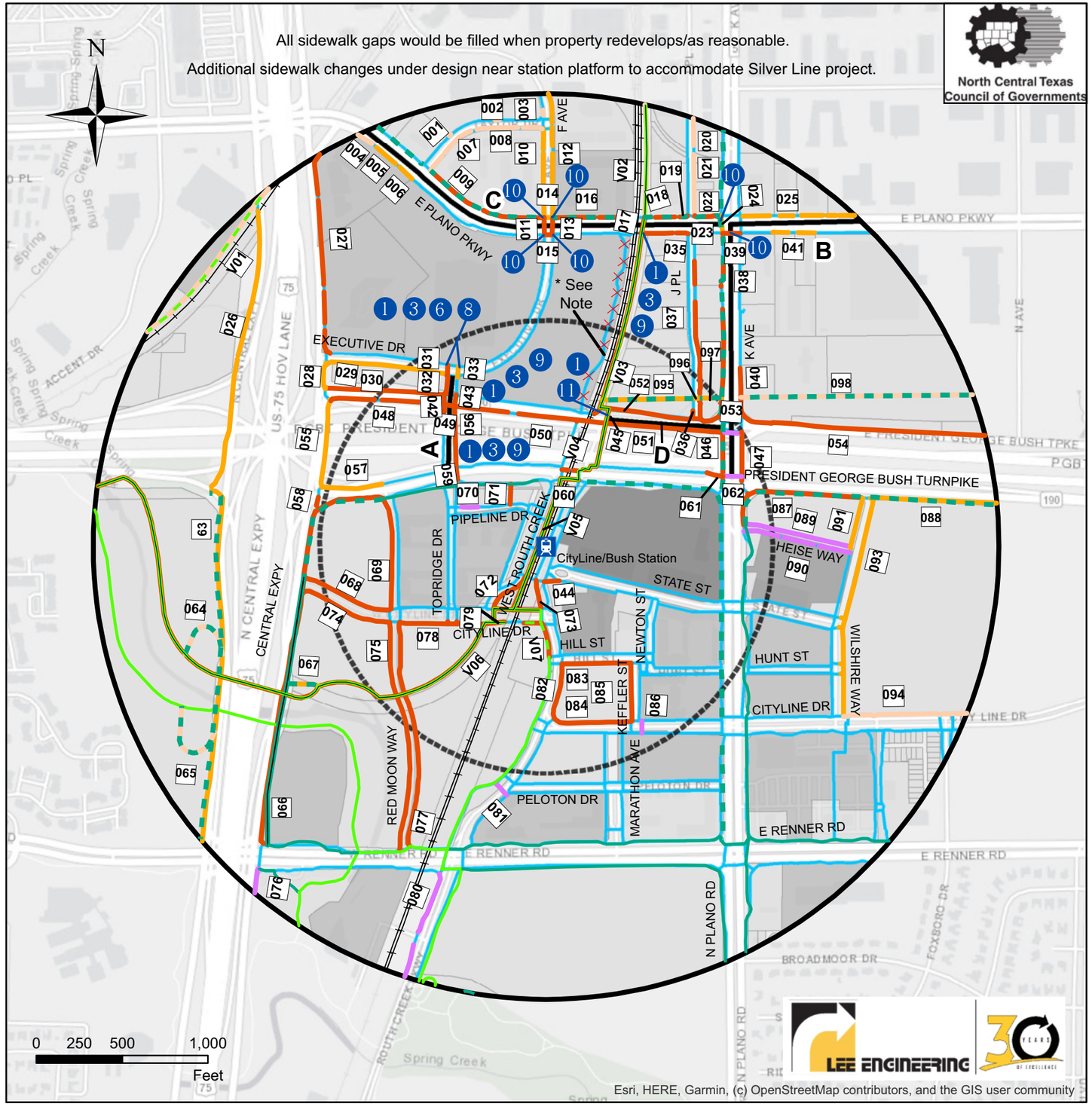
Primary Routes

Route	Street
A	Topridge Drive
B	Plano Pkwy / K Ave
C	Plano Pkwy
D	N President George Bush Turnpike

FTA DART Stations Last Mile Connections
City Line Bush Station
November 2020

Figure 1C-4 Recommended Improvements

North Central Texas Council of Governments
DART Red & Blue Line Corridors Last Mile Connections



Legend

- DART Rail Station
- Railroad Track

Sidewalk

- Existing Sidewalk/Crosswalk
- **Proposed Sidewalk/ Crosswalk by Priority** 1
  - High
  - Medium
  - Low
  - Gap to Remain

Regional Veloweb (Mobility 2045)

- Regional Existing
- Regional Funded
- Regional Planned

Local Shared Use Paths

- Local Existing
- Local Funded
- Local Planned

Local On-Street Bikeways

- Local Existing Bicycle Facilities
- Local Funded Bicycle Facilities
- Local Planned Bicycle Facilities

Buffers

- 0.5 Mile Buffer
- 0.25 Mile Buffer
- Primary Routes

Existing Residential and Employment Population (Number of People)

Ppl

- 0 - 234
- 235 - 1049
- 1050 - 2586
- 2587 - 5364
- 5365 - 10339

*Note: Sidewalk to be removed to make way for DART Silver Line tracks.

Possible Pedestrian Safety Countermeasures

Unsignalized Crosswalk Improvements

1. Crosswalk Signs, Markings & Lighting
2. Raised Crosswalk
3. Advance "Yield Here" Sign
4. In-Street Pedestrian Crossing
5. Curb Extension
6. Pedestrian Refuge Island
7. Rectangular Rapid Flashing Beacon
8. Road Diet
9. Pedestrian Hybrid Beacon

Signalized Crosswalk Improvements

10. Add Marked Crosswalks & Provide Countdown, Accessible Pedestrian Signals
11. Traffic Signal

Primary Routes

Route	Street
A	Topridge Drive
B	Plano Pkwy / K Ave
C	Plano Pkwy
D	N President George Bush Turnpike

Improvement Code Legend (See Matrix)

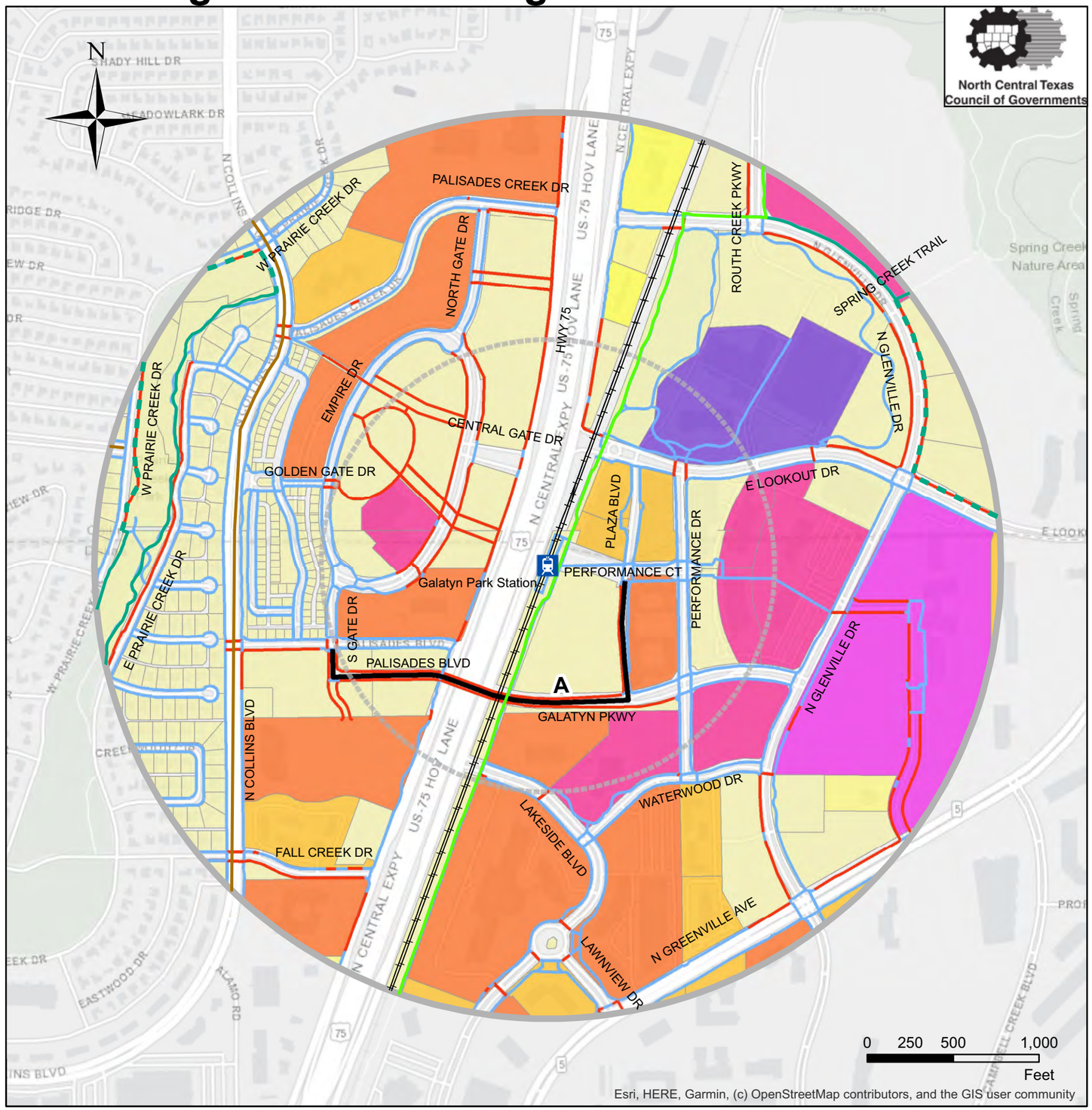
1C-CB-SW-01

- 1C ← Station Number
- CB ← Station Abbreviation
- SW ← Sidewalk (or CW for Crosswalk)
- 01 ← Improvement Number (Matches 1 on Map)

FTA DART Stations
Last Mile Connections
Galatyn Park Station
November 2020

North Central Texas Council of Governments
DART Red & Blue Line Corridors Last Mile Connections

Figure 2A-3 Existing Conditions



Legend

- DART Rail Station
- Railroad Track

Segment Category

- Existing Sidewalk/Crosswalk
- Sidewalk/Crosswalk Gap

Regional Veloweb (Mobility 2045)

- Regional Existing
- Regional Funded
- Regional Planned

Local Shared Use Paths

- Local Existing
- Local Funded
- Local Planned

Local On-Street Bikeways

- Local Existing Bicycle Facilities
- Local Funded Bicycle Facilities
- Local Planned Bicycle Facilities

DISPLAY

- 0.5 Mile Buffer
- 0.25 Mile Buffer
- Primary Routes

Existing Residential and Employment Population (Number of People)

- 0 - 10
- 11 - 50
- 51 - 100
- 101 - 250
- 251 - 578
- 579 - 1000
- 1001 - 1500
- 1501 - 2500
- 2501 - 5000
- 5001 - 24170

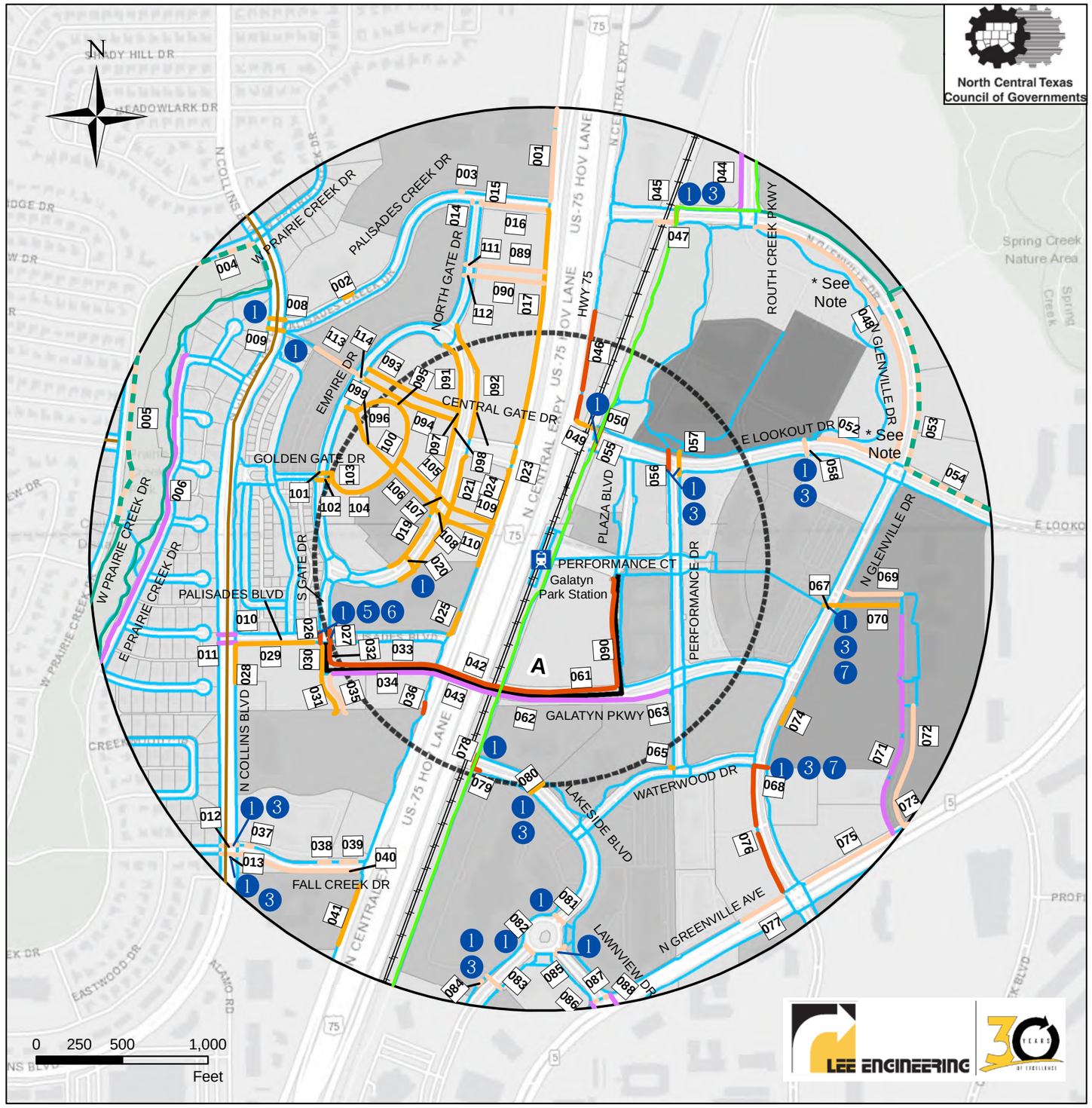
Primary Routes

Route	Street
A	Plaza Blvd/Galatyn Pkwy

FTA DART Stations Last Mile Connections
Galatyn Park Station
November 2020

Figure 2A-4 Recommended Improvements

North Central Texas Council of Governments
DART Red & Blue Line Corridors Last Mile Connections



Legend

- DART Rail Station
- Railroad Track

Sidewalk

- Existing Sidewalk/Crosswalk
- **Proposed Sidewalk/ Crosswalk by Priority** 1
  - High
  - Medium
  - Low
  - Gap to Remain
- **Regional Veloweb (Mobility 2045)**
  - Regional Existing
  - Regional Funded
  - Regional Planned
- **Local Shared Use Paths**
  - Local Existing
  - Local Funded
  - Local Planned
- **Local On-Street Bikeways**
  - Local Existing Bicycle Facilities
  - Local Funded Bicycle Facilities
  - Local Planned Bicycle Facilities
- Buffers
  - 0.5 Mile Buffer
  - 0.25 Mile Buffer
  - Primary Routes

Existing Residential and Employment Population (Number of People)

Ppl
- 0 - 234
- 235 - 1049
- 1050 - 2586
- 2587 - 5364
- 5365 - 10339

*Note: Existing path is a well-graded but soft-surface walking trail. If adjacent development does not upgrade it to a concrete sidewalk, consider upgrading and/or building new sidewalk closer to the Glenville Dr curbline.

Possible Pedestrian Safety Countermeasures

Unsignalized Crosswalk Improvements

1. Crosswalk Signs, Markings & Lighting
2. Raised Crosswalk
3. Advance "Yield Here" Sign
4. In-Street Pedestrian Crossing
5. Curb Extension
6. Pedestrian Refuge Island
7. Rectangular Rapid Flashing Beacon
8. Road Diet
9. Pedestrian Hybrid Beacon

Signalized Crosswalk Improvements

10. Add Marked Crosswalks & Provide Countdown, Accessible Pedestrian Signals
11. Traffic Signal

Primary Routes

Route	Street
A	Plaza Blvd/Galatyn Pkwy

Improvement Code Legend (See Matrix)
2A-GP-SW-01
2A ← Station Number
GP ← Station Abbreviation
SW ← Sidewalk (or CW for Crosswalk)
01 ← Improvement Number (Matches 1 on Map)

- New crosswalks with rectangular rapid-flashing beacons (RRFB's) for crossing Glenville Dr at two locations (improvement 2A-GP-CW-67 and 68) across a long stretch where the street has no other controlled crossings. The northern location would connect existing sidewalk from the station to the Infosys corporate campus, but would require coordination with the private property owner to extend sidewalk to the building front doors.
- Marked crosswalks and pedestrian ramps to cross N Collins Blvd at Palisades Creek Dr, a wide crossing of an all-way stop-controlled intersection (improvements 2A-GP-CW-08 and 09).
- New signed, marked and lit crosswalks at the intersection of N Collins Blvd and Fall Creek Dr (improvements 2A-GP-CW-12 and 13). Add yield lines and "Yield Here to Pedestrians" signing in each direction approaching crosswalk to mitigate risk of dual threat situation for pedestrians. Consider additional improvements if a study of pedestrian volumes warrants them, given the long distance to stop-controlled crossing locations in either direction.
- Marked, signed, and lit crosswalks across Palisades Blvd at South Gate Dr (improvements 2A-GP-CW-26 and 27). Consider curb extensions or a median refuge island in the wide 34-ft roadway. Care should be taken to provide advance warning signs in the eastbound direction due to the crest vertical curve in the roadway to the west. Or, the potential also exists for revising traffic signage to make the north-south route primary. In addition, the Palisades master plan does include the possibility of Palisades Blvd abandonment east of Empire Dr.
- Pedestrian or bicycle/pedestrian warning signs and white crosswalk lines parallel to the existing crosswalks for the Central Trail crossings of N Glenville Dr, E Lookout Dr, and Lakeside Blvd and at the intersection of E Lookout Dr and Performance Dr (improvements 2A-GP-CW-45, 55-57, and 78). The existing crosswalks have a faded, non-conforming brick pattern and dark outlines. White edge lines as traffic control devices are required to make crosswalks legally enforceable. Add yield lines and "Yield Here to Pedestrians" signing in each direction approaching the crosswalks across N Glenville Dr and at the intersection of E Lookout Dr and Performance Dr to mitigate the risk of a dual threat situation for pedestrians.
- A marked crosswalk at the existing signed pedestrian crossing across E Lookout Dr midway between Performance Dr and N Glenville Dr (improvements 2A-GP-CW-58). Add yield lines and "Yield Here to Pedestrians" signing in each direction approaching the crosswalk to mitigate the risk of a dual threat situation for pedestrians.
- Marked crosswalks at the existing signed pedestrian crossing across Lakeside Blvd between Central Trail and Waterwood Dr (improvement 2A-GP-CW-80). Add yield lines and "Yield Here to Pedestrians" signing in each direction approaching the crosswalks to mitigate the risk of a dual threat situation for pedestrians.
- White edge lines on the outside of brick crosswalks at the roundabout entries and exits where Lakeside Blvd intersects Lawnview Dr (improvements 2A-GP-CW-81, 82 and 85). White edge lines as traffic control devices are required to make crosswalks legally enforceable. Also, the only way to reach the roundabout crosswalks from adjacent sidewalks is via stairs to/from the sidewalks above. Explore alternatives for ADA-compliant access, and add pedestrian ramps at each crosswalk.
- A marked crosswalk at the existing signed pedestrian crossing across Lakeside Blvd mid-block between Lawnview Dr and the southern study boundary (improvement 2A-GP-CW-83). Add yield lines and "Yield Here to Pedestrians" signing in each direction approaching the crosswalk to mitigate risk of dual threat situation for pedestrians.

Many missing sidewalks will be constructed by the Palisades development as it is completed just west of Central Expy and the station. The developer will bear the cost for these improvements.

Additional details about other improvements recommended in Figure 2A-4, as well as challenges associated with the recommended gaps to remain, are included in the matrix notes for Galatyn Park Station that can be found in Appendix J.

Arapaho Center Station

Figure 2B-3 illustrates the existing conditions in the half-mile area around the Arapaho Center Station. Central Expy (U.S. 75), Collins Blvd, and Arapaho Rd are all arterials that provide barriers to multi-modal travel to and from the station. Due to a lack of street and intersection density in the areas east of the station, multi-modal travel to and from that direction is significantly more circuitous, and a large number of auto-oriented businesses and offices with large parking lots also impede connectivity.

The Central Trail provides multi-modal access along the east side of Greenville Ave north of the station, switching to the west side of Greenville Ave south of the station via the tunnel between the train platform and the park & ride lot/bus loop. A local shared use path is present along the west side of Alma Rd from Collins Blvd to Woodall Dr, while on-street bike lanes are provided along both Greenville Ave and Alma Rd for the length of the study area, as well as along Collins Blvd east of Alma Rd.

Figure 2B-4 shows the recommended improvements in the half-mile area around the Arapaho Center Station. Coordination between the City, DART, and adjacent private property owners would be required to construct a sidewalk connection southwest of the train platform to connect more directly to the U.S. 75 northbound frontage road and the businesses located there (improvement 2B-AC-SW-37). Also highly recommended is the construction of sidewalk fronting several of those businesses farther south (improvement 2B-AC-SW-37).

A shared use pathway as part of the Regional Veloweb network is planned along the Kansas City Southern rail line entering the north part of the study area and connecting to Collins Blvd west of U.S. 75 (improvement 2B-AC-VW-V01). A sidewalk connecting this improvement and the existing sidewalk along the west side of Collins Blvd to the sidewalk along the U.S. 75 southbound frontage road should be constructed as well (improvement 2B-AC-SW-03).

The City of Richardson is planning local shared use paths along the south side of Arapaho Rd west of Greenville Ave and along the Kansas City Southern freight rail line southeast from its crossing of Alma Rd. On-street bike lanes are planned for Collins Blvd west of Alma Rd and across the bridge over U.S. 75. The City of Richardson plans to implement a road diet on the Collins Blvd bridge that will allow for wider sidewalks and protected bike lanes. The project should include signed and marked crosswalks with pedestrian-actuated rectangular rapid-flashing beacons (RRFB's) for crossing each of the four ramps between Collins Blvd and the U.S. 75 frontage roads, since the geometry of these ramps is conducive to high vehicular speeds.

Two new crosswalks are recommended for crossing Richardson Dr. One is recommended south of Monte Blaine Ln (improvement 2B-AC-CW-53), where the existing sidewalk on the west side ends and the City's zoning code precludes removal of hedges from a narrow space to the south. The hedges provide necessary screening and would need to be removed to add sidewalk (improvement 2B-AC-CW-55), so the crosswalk will provide an alternate route via new and proposed sidewalk on the west side. The other crosswalk location (improvement 2B-AC-CW-53) aligns with an existing break in the hedges that aligns with the east end of Jolee St (which does not connect for car traffic to Richardson Dr).

Both crosswalks must be designed carefully to maximize sight distance around the hedges and the tree-lined horizontal curves in the roadway geometry. Both should include yield lines and "Yield Here to Pedestrians" signing in each direction to mitigate risk of dual threat situation for pedestrians. Give strong consideration to installing pedestrian-actuated rectangular rapid flashing beacons (RRFB's), particularly due to the sight distance limitations. A road diet to introduce curb extensions and/or a median refuge island for pedestrians might also be considered to increase available pedestrian sight distance.

Additional details about other improvements recommended in Figure 2B-4, as well as challenges associated with the recommended gaps to remain, are included in the matrix notes for Arapaho Center Station that can be found in Appendix J.

FTA DART Stations
Last Mile Connections

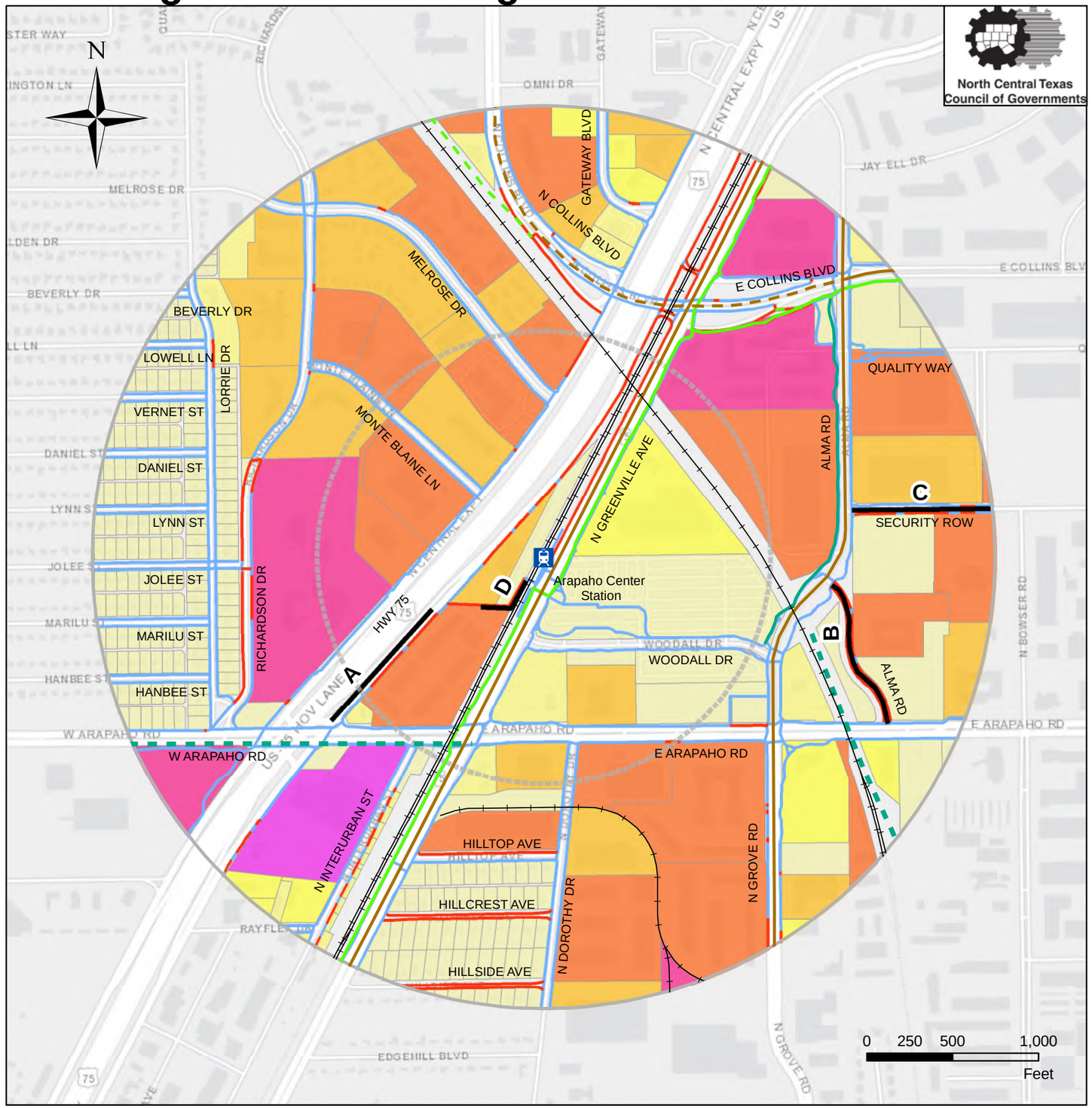
Arapaho Center Station

November 2020

North Central Texas Council of Governments

DART Red & Blue Line Corridors Last Mile Connections

Figure 2B-3 Existing Conditions



Existing Residential and Employment Population (Number of People)

- 0 - 10
- 11 - 50
- 51 - 100
- 101 - 250
- 251 - 578
- 579 - 1000
- 1001 - 1500
- 1501 - 2500
- 2501 - 5000
- 5001 - 24170

Legend

- DART Rail Station
- Railroad Track

Segment Category

- Existing Sidewalk/Crosswalk
- Sidewalk/Crosswalk Gap

Regional Veloweb (Mobility 2045)

- Regional Existing
- Regional Funded
- Regional Planned

Local Shared Use Paths

- Local Existing
- Local Funded
- Local Planned

Local On-Street Bikeways

- Local Existing Bicycle Facilities
- Local Funded Bicycle Facilities
- Local Planned Bicycle Facilities

DISPLAY

- 0.5 Mile Buffer
- 0.25 Mile Buffer
- Primary Routes

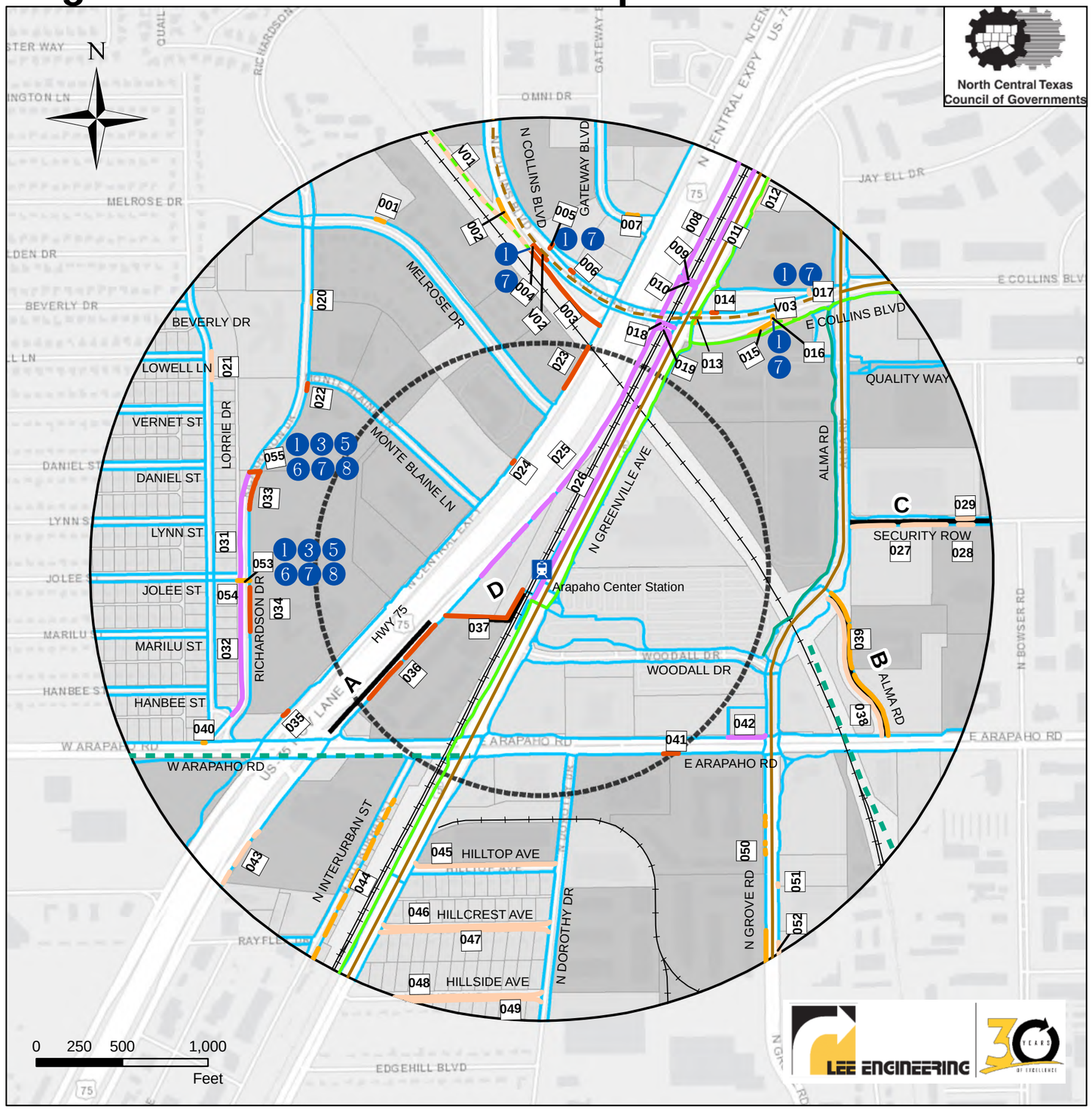
Primary Routes

Route	Street
A	Central Expwy
B	Alma Rd
C	Security Row
D	DART/Private ROW

FTA DART Stations
Last Mile Connections
Arapaho Center Station
November 2020

North Central Texas Council of Governments
DART Red & Blue Line Corridors Last Mile Connections

Figure 2B-4 Recommended Improvements



Legend

- DART Rail Station
- Railroad Track

Sidewalk

- Existing Sidewalk/Crosswalk
- **Proposed Sidewalk/ Crosswalk by Priority** 1
  - High
  - Medium
  - Low
  - Gap to Remain

Regional Veloweb (Mobility 2045)

- Regional Existing
- Regional Funded
- Regional Planned

Local Shared Use Paths

- Local Existing
- Local Funded
- Local Planned

Local On-Street Bikeways

- Local Existing Bicycle Facilities
- Local Funded Bicycle Facilities
- Local Planned Bicycle Facilities

Buffers

- 0.5 Mile Buffer
- 0.25 Mile Buffer
- Primary Routes

Existing Residential and Employment Population (Number of People)

Ppl

- 0 - 234
- 235 - 1049
- 1050 - 2586
- 2587 - 5364
- 5365 - 10339

Possible Pedestrian Safety Countermeasures

Unsignalized Crosswalk Improvements

1. Crosswalk Signs, Markings & Lighting
2. Raised Crosswalk
3. Advance "Yield Here" Sign
4. In-Street Pedestrian Crossing
5. Curb Extension
6. Pedestrian Refuge Island
7. Rectangular Rapid Flashing Beacon
8. Road Diet
9. Pedestrian Hybrid Beacon

Signalized Crosswalk Improvements

10. Add Marked Crosswalks & Provide Countdown, Accessible Pedestrian Signals
11. Traffic Signal

Primary Routes

Route	Street
A	Central Expwy
B	Alma Rd
C	Security Row
D	DART/Private ROW

Improvement Code Legend (See Matrix)

2B-AC-SW-01

2B ← Station Number
AC ← Station Abbreviation
SW ← Sidewalk (or CW for Crosswalk)
01 ← Improvement Number (Matches 1 on Map)

Spring Valley Station

Figure 2C-3 illustrates the existing conditions in the half-mile area around the Spring Valley Station. U.S. 75, Spring Valley Rd, and Centennial Blvd are major arterials that pose barriers to bicycle and pedestrian travel, though signalized crossings generally provide good access opportunities. Access to the transit-oriented development east of the station is good with new sidewalk, though somewhat indirect. The area west of U.S. 75 is only accessible to the station by traveling south along the southbound frontage road to the intersection with Spring Valley Ln, slightly outside the study half-mile area. Several gaps in the sidewalk are present along the U.S. 75 frontage roads and along the neighborhood streets east of Greenville Ave.

The Central Trail runs parallel to the DART track on the east side to the north of the station and crosses under the DART overpass just south of Spring Valley Rd to an alignment west of the tracks south of the station to Buckingham Dr.

Figure 2C-4 shows the recommended improvements in the half-mile area around the Spring Valley Station. In addition to building sidewalk to fill gaps in the network, the recommended improvements include:

- At the west end of McKamy Springs Ct, consider providing short break in the existing fence to provide a sidewalk connection to the Central Trail. This would require removal of a short section of fence and part of a short retaining wall, as well as a few medium-sized trees, but would provide a shorter walking distance to the station for many apartment and townhome residents to the east. The City of Richardson indicates they will need to work with the property owner on whether they have a desire for this improvement.
- New or improved crosswalks across Lingco Dr between the station platform and park & ride lot, across Sherman St at Lingco Dr, and across Greenville Ave at Pittman St (improvements 2C-SV-CW-16, 17 and 38). Yield lines, "Yield Here to Pedestrians" signing, and a pedestrian refuge island are recommended at the Lingco Dr and Greenville Ave crossings, while pedestrian-actuauted RRFB's are recommended at Lingco Dr. The Lingco Dr crossing should be coordinated with DART, as discussed in Section 3.1.4.
- New yield lines and "Yield Here to Pedestrians" signing for the two lanes in each direction approaching the existing signed and marked crosswalk across Greenville Ave at E Phillips St, near the northeast half-mile area boundary (improvements 2C-SV-CW-30 and 31). Consider adding a pedestrian hybrid beacon if warranted by a study of pedestrian volumes during arrival and dismissal times for the First Baptist Church of Hamilton Park and the Richardson ISD Math Science Technology magnet school, both located nearby to the east.
- White crosswalk lines parallel to the existing patterned concrete crosswalk across Bucknghamm Rd at the Central Trail crossing (improvement 2C-SV-CW-27), which already has lighting, pedestrian ramps and a median refuge. White edge lines as traffic control devices are required to make crosswalks legally enforceable. Add pedestrian warning signs at the crosswalk and advance pedestrian warning signs for the eastbound direction (currently installed only for westbound). Add yield lines and "Yield Here to Pedestrians" signing for both directions to mitigate the risk of a dual threat situation for pedestrians. Consider a traffic signal to facilitate crossings, particularly in conjunction with the future extension of the Central Trail south of Buckingham Rd at this location. A full traffic signal should be considered instead of a RRFB or pedestrian hybrid beacon due to the adjacency to the existing DART railroad crossing gates and potential driver confusion with alternative meanings of flashing red lights.

As discussed in Section 3.1.4, some pedestrians were observed crossing Spring Valley Rd, a busy six-lane arterial, directly below the rail overpass instead of at the adjacent signalized crosswalks at Lingco Dr 200 feet to the west or Spring Valley Rd 200 feet to the east. The alignment of the Central Trail, which intersects the Spring Valley Rd sidewalks here without a direct crosswalk, likely contributes to this behavior. A crosswalk improvement for more direct pedestrian travel along the trail would pose an undue constraint on vehicular signal coordination given the short distance to the signalized crosswalks. The City of Richardson should coordinate with DART to consider adjusting the location of bus stops and installing aesthetic anti-climb median fencing (improvement 2C-SV-GR-25) along the median of Spring Valley Rd in front of the DART station to ensure pedestrians cross at the crosswalks.

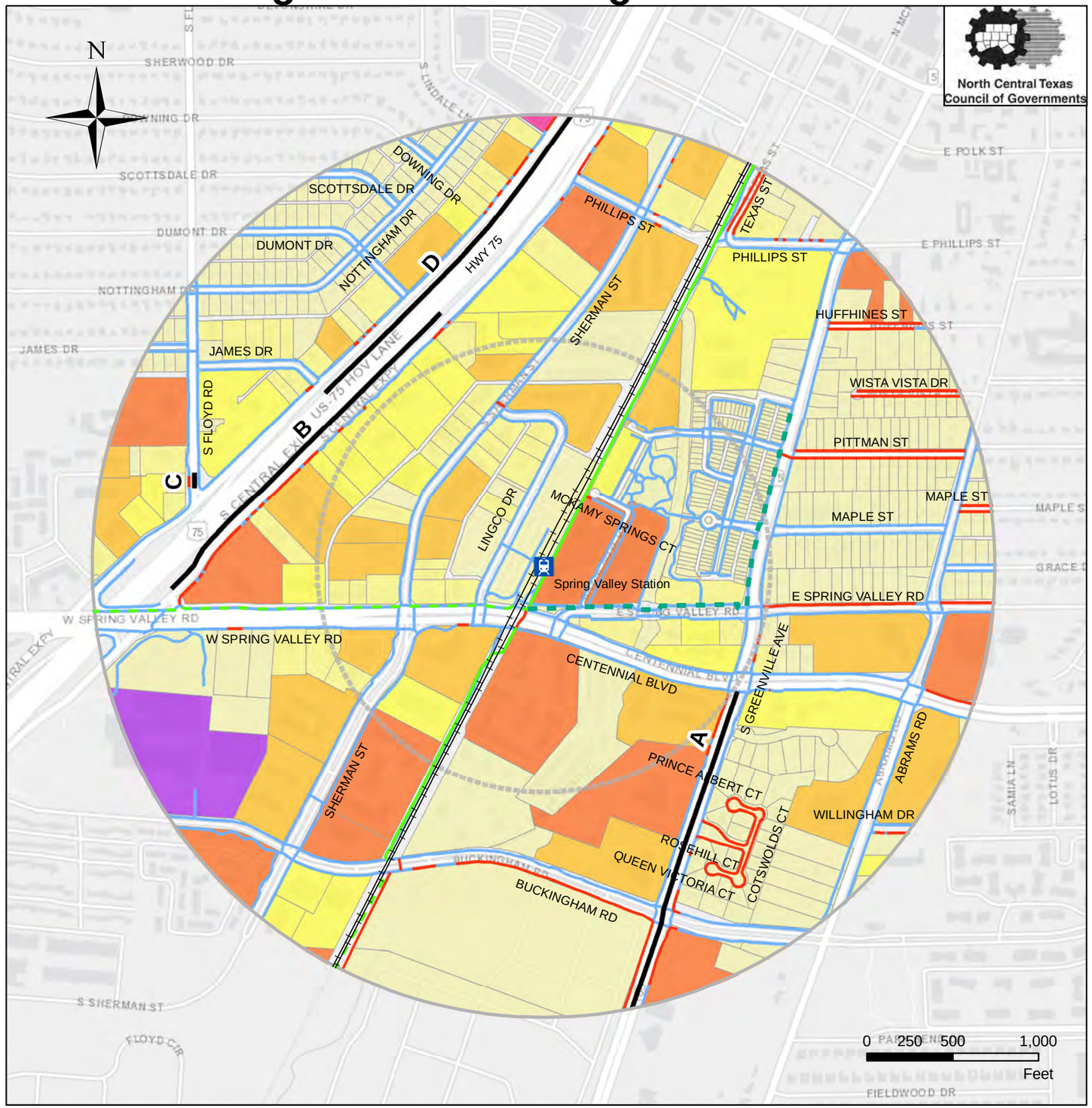
The City of Richardson is planning to widen the sidewalk on the north side of Spring Valley Rd west of the station to become a shared use path on the Regional Veloweb network. East of the station, the sidewalk on the north side would also be widened for a local shared use path that continues to Greenville Ave and along the west side of Greenville Ave north of Spring Valley Rd. The Central Trail is planned to be extended south of Buckingham Dr parallel to the DART tracks on the east side.

Additional details about other improvements recommended in Figure 2C-4, as well as challenges associated with the recommended gaps to remain, are included in the matrix notes for Spring Valley Station that can be found in Appendix J.

FTA DART Stations
Last Mile Connections
Spring Valley Station
December 2020

North Central Texas Council of Governments
DART Red & Blue Line Corridors Last Mile Connections

Figure 2C-3 Existing Conditions



Legend

- DART Rail Station
- Railroad Track

Segment Category

- Existing Sidewalk/Crosswalk
- Sidewalk/Crosswalk Gap

Regional Veloweb (Mobility 2045)

- Regional Existing
- Regional Funded
- Regional Planned

Local Shared Use Paths

- Local Existing
- Local Funded
- Local Planned

Local On-Street Bikeways

- Local Existing Bicycle Facilities
- Local Funded Bicycle Facilities
- Local Planned Bicycle Facilities

DISPLAY

- 0.5 Mile Buffer
- 0.25 Mile Buffer
- Primary Routes

Existing Residential and Employment Population (Number of People)

- 0 - 10
- 11 - 50
- 51 - 100
- 101 - 250
- 251 - 578
- 579 - 1000
- 1001 - 1500
- 1501 - 2500
- 2501 - 5000
- 5001 - 24170

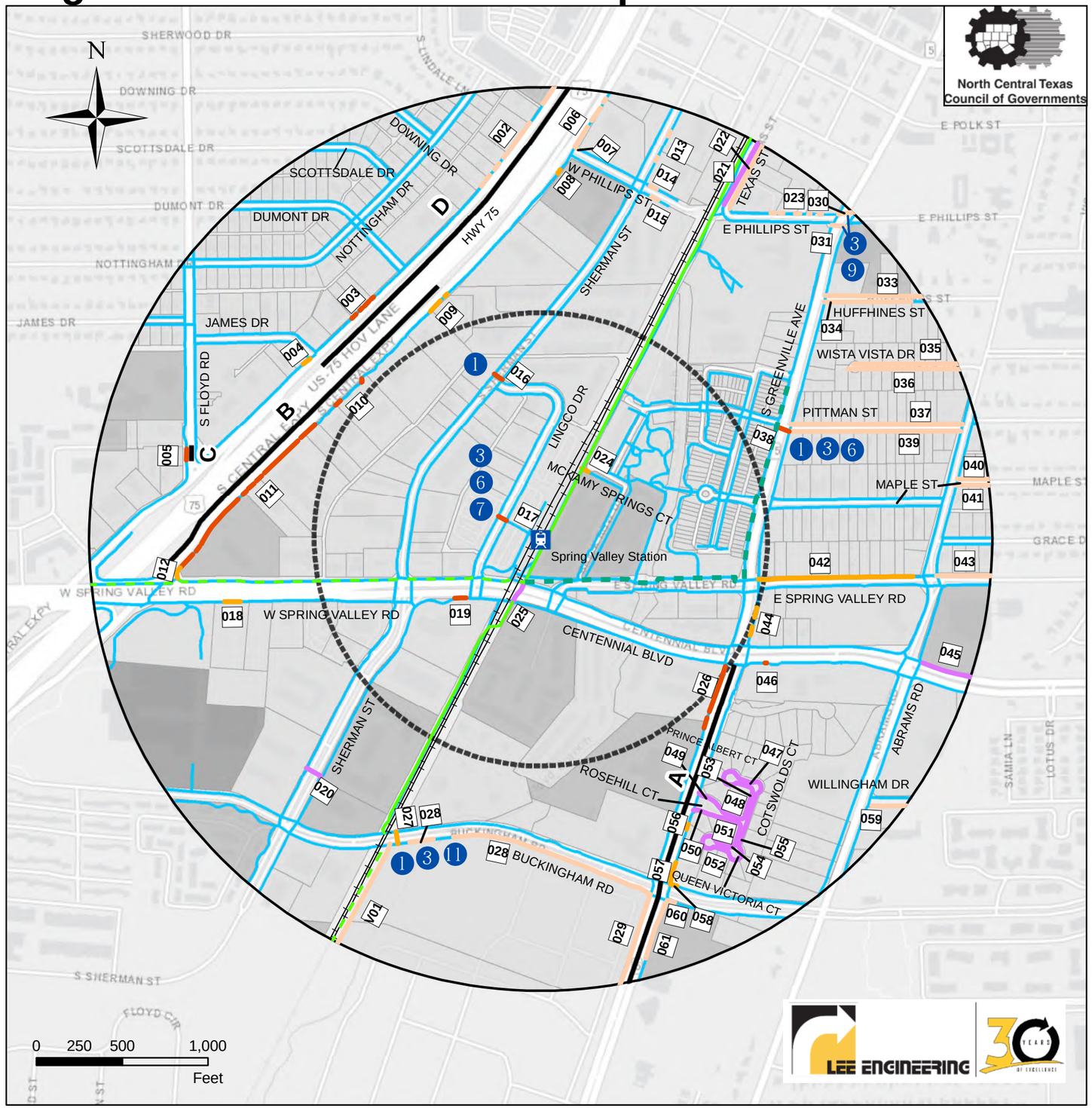
Primary Routes

Route	Street
A	S Greenville Ave
B	S Central Expy
C	S Floyd Rd
D	S Central Expy

FTA DART Stations
Last Mile Connections
Spring Valley Station
November 2020

North Central Texas Council of Governments
DART Red & Blue Line Corridors Last Mile Connections

Figure 2C-4 Recommended Improvements



Legend

- DART Rail Station
- Railroad Track

Sidewalk

- Existing Sidewalk/Crosswalk
- Proposed Sidewalk/ Crosswalk by Priority 1
  - High
  - Medium
  - Low
  - Gap to Remain

Regional Veloweb (Mobility 2045)

- Regional Existing
- Regional Funded
- Regional Planned

Local Shared Use Paths

- Local Existing
- Local Funded
- Local Planned

Local On-Street Bikeways

- Local Existing Bicycle Facilities
- Local Funded Bicycle Facilities
- Local Planned Bicycle Facilities

Buffers

- 0.5 Mile Buffer
- 0.25 Mile Buffer
- Primary Routes

Existing Residential and Employment Population (Number of People)

Ppl

- 0 - 234
- 235 - 1049
- 1050 - 2586
- 2587 - 5364
- 5365 - 10339

Possible Pedestrian Safety Countermeasures

Unsignalized Crosswalk Improvements

1. Crosswalk Signs, Markings & Lighting
2. Raised Crosswalk
3. Advance "Yield Here" Sign
4. In-Street Pedestrian Crossing
5. Curb Extension
6. Pedestrian Refuge Island
7. Rectangular Rapid Flashing Beacon
8. Road Diet
9. Pedestrian Hybrid Beacon

Signalized Crosswalk Improvements

10. Add Marked Crosswalks & Provide Countdown, Accessible Pedestrian Signals
11. Traffic Signal

Primary Routes

Route	Street
A	S Greenville Ave
B	S Central Expy
C	S Floyd Rd
D	S Central Expy

Improvement Code Legend (See Matrix)

2C-SV-SW-01

- 2C ← Station Number
- SV ← Station Abbreviation
- SW ← Sidewalk (or CW for Crosswalk)
- 01 ← Improvement Number (Matches 1 on Map)

LEE ENGINEERING

APPENDIX J: Half-Mile Improvement Matrices

Half Mile Area Improvements Matrix

CityLine Bush Station

Opinion of Probable Constr. Cost = $1,495,600

Sidewalk & Shared Use Path Segments

Improvement Code Legend: ID: 1A-PR-SW-01
1A ← Station Number
PR ← Station Abbreviation
01 ← Improvement Number (matches 1 on Map)
SW ← Sidewalk (or CW=Crosswalk, VW=Veloweb, RP=Sidewalk Repair GR=Gap to Remain)

North Central Texas Council of Governments
DART Red & Blue Line Corridors Last Mile Connections

ID	Owner	Improvement Type	Street Name	Between	Side of Street	Length (ft)	Notes	Priority Score	Opinion of Probable Cost
1C-CB-RP-001	City of Plano	Sidewalk Repair	Taylor Dr	E Plano Pkwy & F Ave	North	15	Settlement has created significant trip hazard at driveway ramp.	15	N/A
1C-CB-RP-002	City of Plano	Sidewalk Repair	Taylor Dr	E Plano Pkwy & F Ave	North	20	Damage near water meter creates significant trip hazard.	9	N/A
1C-CB-RP-003	City of Plano	Sidewalk Repair	F Ave	North Study Boundary & Taylor Dr	West	20	Settlement has created trip hazard with >2" drop.	8	N/A
1C-CB-SW-004	City of Plano	New Sidewalk	E Plano Pkwy	North Study Boundary & Taylor Dr	South	100		13	N/A
1C-CB-SW-005	City of Plano	New Sidewalk	E Plano Pkwy	North Study Boundary & Taylor Dr	South	150		20	N/A
1C-CB-SW-006	City of Plano	New Sidewalk	E Plano Pkwy	North Study Boundary & Taylor Dr	South	100		21	N/A
1C-CB-SW-007	City of Plano	New Sidewalk	Taylor Dr	E Plano Pkwy & F Ave	South	315		13	N/A
1C-CB-SW-008	City of Plano	New Sidewalk	Taylor Dr	E Plano Pkwy & F Ave	South	365		9	N/A
1C-CB-SW-009	City of Plano	New Sidewalk	E Plano Pkwy	Taylor Dr & F Ave	North	725	Short retaining walls, tree removal would be needed to construct sidewalk. A City of Plano local shared use path is planned for this segment.	25	$ 107,900
1C-CB-SW-010	City of Plano	New Sidewalk	F Ave	Taylor Dr & E Plano Pkwy	West	480	Tree removal would be needed to construct sidewalk.	21	N/A
1C-CB-SW-012	City of Plano	New Sidewalk	F Ave	North Study Boundary & E Plano Pkwy	East	630	Short retaining walls, tree removal would be needed to construct sidewalk. UPS mailbox may also need to be relocated.	21	N/A
1C-CB-SW-016	City of Plano	New Sidewalk	E Plano Pkwy	F Ave & DART Tracks	North	420	Tree root damage likely if sidewalk installed on this segment. A City of Plano local shared use path is planned for this segment.	25	$ 62,600
1C-CB-SW-018	City of Plano	New Sidewalk	E Plano Pkwy	DART Tracks & J Pl	North	10	Sidewalk would require tree removal, provision of parking stops in adjacent parking lot to prevent parked cars from encroaching in narrow sidewalk space. A City of Plano local shared use path is planned for this segment.	19	N/A
1C-CB-SW-019	City of Plano	New Sidewalk	E Plano Pkwy	DART Tracks & J Pl	North	165	A City of Plano local shared use path is planned for this segment.	24	$ 108,900
1C-CB-SW-020	City of Plano	New Sidewalk	J Pl	North Study Boundary & E Plano Pkwy	East	160		8	N/A
1C-CB-SW-021	City of Plano	New Sidewalk	J Pl	North Study Boundary & E Plano Pkwy	East	165		10	N/A
1C-CB-SW-022	City of Plano	New Sidewalk	J Pl	North Study Boundary & E Plano Pkwy	East	180		14	N/A
1C-CB-SW-023	City of Plano	New Sidewalk	E Plano Pkwy	J Pl & K Ave	North	160	A City of Plano local shared use path is planned for this segment.	23	$ 165,100
1C-CB-SW-025	City of Plano	New Sidewalk	E Plano Pkwy	K Ave & North Study Boundary	North	510	Tree removal and mid-size retaining wall would be needed for sidewalk near K Ave intersection. Tree root damage likely elsewhere along segment.	21	N/A
1C-CB-SW-029	City of Plano	New Sidewalk	Executive Dr	N Central Expy & Crawford Rd	South	720		20	N/A
1C-CB-SW-032	City of Plano	New Sidewalk	Crawford Rd	Executive Dr & N President George Bush Hwy	West	120		25	$ 10,800

Half Mile Area Improvements Matrix

CityLine Bush Station

Opinion of Probable Constr. Cost = $1,495,600

Sidewalk & Shared Use Path Segments

Improvement Code Legend: ID: 1A-PR-SW-01
1A ← Station Number
PR ← Station Abbreviation
01 ← Improvement Number (matches 1 on Map)
SW ← Sidewalk (or CW=Crosswalk, VW=Veloweb, RP=Sidewalk Repair GR=Gap to Remain)

North Central Texas Council of Governments
DART Red & Blue Line Corridors Last Mile Connections

ID	Owner	Improvement Type	Street Name	Between	Side of Street	Length (ft)	Notes	Priority Score	Opinion of Probable Cost
1C-CB-SW-035	City of Plano	New Sidewalk	E Plano Pkwy	Executive Dr & J Pl	South	255	Sidewalk construction would require tree removal, fill material, retaining wall near business parking lot just east of DART bridge.	24	$ 61,100
1C-CB-SW-037	City of Plano	New Sidewalk	J Pl	E Plano Pkwy & N President George Bush Hwy	East	810	City of Plano reports a portion of this is under construction with new development - see SP2018-001	29	$ 5,800
1C-CB-SW-038	City of Plano	New Sidewalk	K Ave	E Plano Pkwy & N President George Bush Hwy	West	815	Worn path in grass on this segment indicates existing pedestrian demand. City of Plano reports a portion of this is under construction with new development - see SP2018-001. Also, a City of Plano local shared use path is planned for this segment.	23	$ 28,300
1C-CB-SW-040	City of Plano	New Sidewalk	K Ave	E Plano Pkwy & N President George Bush Hwy	East	280		28	$ 34,000
1C-CB-SW-041	City of Plano	New Sidewalk	E Plano Pkwy	K Ave & North Study Boundary	South	195		20	N/A
1C-CB-SP-095	City of Plano	New Shared Use Path	N/A	Central Trail & J Pl	N/A	535	A City of Plano local shared use path is planned for this alignment, set back to the north of the President George Bush Turnpike.	22	N/A
1C-CB-SP-097	City of Plano	New Shared Use Path	N/A	J Pl & K Ave	N/A	130	A City of Plano local shared use path is planned for this alignment, set back to the north of the President George Bush Turnpike.	22	N/A
1C-CB-SP-098	City of Plano	New Shared Use Path	N/A	K Ave & East Study Boundary	N/A	1355	A City of Plano local shared use path is planned for this alignment, set back to the north of the President George Bush Turnpike.	15	N/A
Opinion of Probable Cost - City of Plano Subtotal									***$ 584,500***
1C-CB-SP-064	City of Richardson	Shared Use Path	N Central Expy	Connector to Cotton Belt Line Regional Veloweb	West	425	Slopes and tree clearing will increase cost for shared use path for this connection.	9	N/A
1C-CB-SP-065	City of Richardson	Shared Use Path	N Central Expy	Connector to Spring Creek Trail Regional Veloweb	West	505	Slopes and tree clearing will increase cost for shared use path for this connection.	5	N/A
1C-CB-SP-067	City of Richardson	Shared Use Path	N Central Expy	Connector to Cotton Belt Line Regional Veloweb	East	200	Slopes and tree clearing will increase cost for shared use path for this connection.	16	N/A
1C-CB-SW-068	City of Richardson	New Sidewalk	W Cityline Dr	N Central Expy & Routh West Dr	North	540	City of Richardson reports sidewalk construction anticipated as part of upcoming development.	23	N/A
1C-CB-SW-069	City of Richardson	New Sidewalk	Red Moon Way	E President George Bush Hwy & W Cityline Dr	West	660	City of Richardson reports sidewalk construction anticipated as part of upcoming development.	25	N/A
1C-CB-GR-070	City of Richardson	Gap to Remain	Pipeline Dr	Topridge Dr & West Routh Creek Pkwy	North	100	New segment of soft surface trail with benches is an existing break in the new sidewalk south of the apartment complex park. This appears to have been by design, and a parallel hard surface sidewalk is available on the south side of Pipeline Dr.	0	N/A
1C-CB-SW-074	City of Richardson	New Sidewalk	W Cityline Dr	N Central Expy & Routh West Dr	South	545	Sidewalk construction anticipated as part of upcoming development.	23	N/A

Half Mile Area Improvements Matrix

CityLine Bush Station

Opinion of Probable Constr. Cost = $1,495,600

Sidewalk & Shared Use Path Segments

Improvement Code Legend: ID: 1A-PR-SW-01
1A ← Station Number
PR ← Station Abbreviation
01 ← Improvement Number (matches 1 on Map)
SW ← Sidewalk (or CW=Crosswalk, VW=Veloweb, RP=Sidewalk Repair GR=Gap to Remain)

North Central Texas Council of Governments
DART Red & Blue Line Corridors Last Mile Connections

ID	Owner	Improvement Type	Street Name	Between	Side of Street	Length (ft)	Notes	Priority Score	Opinion of Probable Cost
1C-CB-SW-075	City of Richardson	New Sidewalk	Red Moon Way	W Cityline Dr & E Renner Rd	West	1350	Sidewalk construction anticipated as part of upcoming development.	30	N/A
1C-CB-SW-077	City of Richardson	New Sidewalk	Red Moon Way	W Cityline Dr & E Renner Rd	East	1335	Existing soft surface trail already present here. Anticipated sidewalk construction as part of upcoming development.	22	N/A
1C-CB-SW-078	City of Richardson	New Sidewalk	W Cityline Dr	N Central Expy & Routh West Dr	South	530	Sidewalk construction anticipated as part of upcoming development.	26	N/A
1C-CB-SW-079	City of Richardson	New Sidewalk	W Cityline Dr	N Central Expy & Routh West Dr	South	20	Sidewalk construction anticipated as part of upcoming development.	37	N/A
1C-CB-GR-080	City of Richardson	Gap to Remain	Routh West Dr	W Renner Rd & South Study Boundary	West	570	Bridge over Spring Creek does not have sufficient width for sidewalk. West side of Routh Creek Parkway in this area is adjacent to only DART tracks and an office building that has alternative pedestrian access via Renner Road.	0	N/A
1C-CB-GR-081	City of Richardson	Gap to Remain	Routh West Dr	Peloton Dr & W Renner Rd	East	100	A crosswalk across the south leg of the intersection would cause unnecessary disruption to landscaping and the existing boardwalk portion of the sidewalk on the west side of Routh Creek Parkway. The north crosswalk should be sufficient for serving pedestrian demand since land uses on the west side are primarily recreational.	0	N/A
1C-CB-SW-082	City of Richardson	New Sidewalk	Routh West Dr	Hill St & Cityline Dr	East	330	Sidewalk construction adjacent to informal temporary park anticipated as part of master-planned development.	24	N/A
1C-CB-SW-083	City of Richardson	New Sidewalk	Hill St	Routh West Dr & Newton St	South	405	Sidewalk construction adjacent to informal temporary park anticipated as part of master-planned development.	32	N/A
1C-CB-SW-084	City of Richardson	New Sidewalk	Cityline Dr	Routh West Dr & N Plano Rd	North	465	Sidewalk construction adjacent to informal temporary park anticipated as part of master-planned development.	22	N/A
1C-CB-SW-085	City of Richardson	New Sidewalk	Keffler St	Hill St & Cityline Dr	West	340	Sidewalk construction adjacent to informal temporary park anticipated as part of master-planned development.	29	N/A
1C-CB-GR-086	City of Richardson	Gap to Remain	Cityline Dr	Keffler St	West	75	Crosswalk would require elimination of on-street parking spaces on south side of street. Alternative path available via west leg crosswalk.	0	N/A
1C-CB-GR-089	City of Richardson	Gap to Remain	Heise Way	N Plano Rd & Wilshire Way	North	640	Heise Way is a fire lane/service drive/alley for development on both sides of the pavement, so sidewalk is not required or desirable.	0	N/A
1C-CB-GR-090	City of Richardson	Gap to Remain	Heise Way	N Plano Rd & Wilshire Way	South	575	Heise Way is a fire lane/service drive/alley for development on both sides of the pavement, so sidewalk is not required or desirable.	0	N/A
1C-CB-SW-091	City of Richardson	New Sidewalk	Wilshire Way	President George Bush Hwy EB Frontage Rd & Heise Way	West	305	Sidewalk construction anticipated as part of upcoming development.	17	N/A
1C-CB-SW-093	City of Richardson	New Sidewalk	Wilshire Way	President George Bush Hwy EB Frontage Rd & Cityline Dr	East	1380	A portion of this section will be completed as part of multi-family building under construction.	17	N/A
1C-CB-SW-094	City of Richardson	New Sidewalk	Cityline Dr	Wilshilre Way & East Study Boundary	North	725	Existing soft surface trail already present here. Anticipated sidewalk construction as part of upcoming development.	10	N/A

Half Mile Area Improvements Matrix

CityLine Bush Station

Opinion of Probable Constr. Cost = $1,495,600

Sidewalk & Shared Use Path Segments

Improvement Code Legend: ID: 1A-PR-SW-01
1A ← Station Number
PR ← Station Abbreviation
01 ← Improvement Number (matches 1 on Map)
SW ← Sidewalk (or CW=Crosswalk, VW=Veloweb, RP=Sidewalk Repair GR=Gap to Remain)

North Central Texas Council of Governments
DART Red & Blue Line Corridors Last Mile Connections

ID	Owner	Improvement Type	Street Name	Between	Side of Street	Length (ft)	Notes	Priority Score	Opinion of Probable Cost
Opinion of Probable Cost - City of Richardson Subtotal									***$ -***
1C-CB-SW-046	Cities of Plano/Richardson	New Sidewalk	K Ave	N President George Bush Hwy	West	290	Lighting under PGBT bridges should be installed along with sidewalk.	32	$ 61,500
1C-CB-SW-047	Cities of Plano/Richardson	New Sidewalk	K Ave	N President George Bush Hwy & E President George Bush Hwy	East	295	Lighting under PGBT bridges should be installed along with sidewalk.	25	$ 49,000
1C-CB-SW-056	DART/Cities of Plano/Richardson	New Sidewalk	Crawford Rd/Topridge Dr	President George Bush Hwy EB & WB Frontage Rds	East	360	Of the total $39,400 cost for this improvement, 2/3 as listed at right is assumed attributable to the Cities of Plano & Richardson, while 1/3 is assumed attributable to DART (see DART cost matrix). See station area improvements 1C-CB-ST-08 for more information.	38	$ 26,300
Opinion of Probable Cost - Cities of Plano/Richardson Subtotal									***$ 136,800***
1C-CB-SW-044	DART/Private Property	New Sidewalk	Station Platform Connector	Routh East Dr & State St	South	100	Coordinate with the adjacent property owner to construct a short segment of sidewalk for more direct travel between the southern crosswalk to the train platform and the south sidewalk along State St. A "goat trail" cuts the corner where the existing sidewalk is offset from the crosswalk, indicating existing pedestrian demand. See DART Station Area improvement 1C-CB-ST-06 for more information. Cost assumed attributable to City of Richardson if negotiation with private property owner is successful since improvement is located just off DART station property.	28	$ 4,500
1C-CB-SW-071	DART/Private Property	New Sidewalk	N/A	E President George Bush Hwy & Pipeline Dr	N/A	120	Worn path in grass indicates existing pedestrian demand for more direct path between DART rail platform and bus loop. Sidewalk would be on private property between volleyball courts and dog run on north side of Pipeline Dr. See DART Station Area improvement 1C-CB-ST-03 for more information. Cost assumed attributable to City of Richardson if negotiation with private property owner is successful since improvement is located just off DART station property.	41	$ 6,200
Opinion of Probable Cost - DART/Private Property Subtotal (assumed City of Richardson Cost)									***$ 10,700***
1C-CB-SW-072	DART	New Sidewalk	West Routh Creek	Pipeline Dr & Cityline Dr	East	270	As Routh West Drive will be replaced by the upcoming Cotton Belt/Silver Line station platform, this segment will be part of that platform design.	38	N/A
1C-CB-SW-073	DART	New Sidewalk	Routh Creek Pkwy	Pipeline Dr & Cityline Dr	West	165	City of Richardson reports connectivity could be considered in conjunction with development of parcel to the south.	39	$ 22,000
1C-CB-VW-V01	DART	Shared Use Path	Regional Veloweb	West Study Boundary	N/A	1105		6	N/A
1C-CB-VW-V02	DART	Shared Use Path	Regional Veloweb	North Study Boundary & E Plano Pkwy	East	655	City of Plano reports this segment is under construction as part of the Plano Transit Village Veloweb project.	11	N/A
1C-CB-VW-V03	DART	Shared Use Path	Regional Veloweb	E Plano Pkwy & N President George Bush Hwy	East	1030	City of Plano reports this segment is under construction as part of the Plano Transit Village Veloweb project.	33	N/A

Half Mile Area Improvements Matrix

CityLine Bush Station

Opinion of Probable Constr. Cost = $1,495,600

Sidewalk & Shared Use Path Segments

Improvement Code Legend: ID: 1A-PR-SW-01
1A ← Station Number
PR ← Station Abbreviation
01 ← Improvement Number (matches 1 on Map)
SW ← Sidewalk (or CW=Crosswalk, VW=Veloweb, RP=Sidewalk Repair GR=Gap to Remain)

North Central Texas Council of Governments
DART Red & Blue Line Corridors Last Mile Connections

ID	Owner	Improvement Type	Street Name	Between	Side of Street	Length (ft)	Notes	Priority Score	Opinion of Probable Cost
1C-CB-VW-V04	DART	Shared Use Path	Regional Veloweb	President George Bush Hwy	N/A	285	City of Plano to coordinate this segment as part of Cotton Belt Trail.	41	N/A
1C-CB-VW-V05	DART	Shared Use Path	Regional Veloweb	E President George Bush Hwy & Cityline Dr	East	675	City of Richardson reports this segment is under design as part of the Plano Transit Village Veloweb project.	20	N/A
1C-CB-VW-V06	DART	Shared Use Path	Regional Veloweb	West Study Boundary & DART Tracks	N/A	3445	Veloweb trail to be built as part of Cotton Belt DART rail expansion.	37	N/A
1C-CB-VW-V07	DART	Shared Use Path	Regional Veloweb	W Cityline Dr & Hill St	West	310	Veloweb trail to be built as part of Cotton Belt DART rail expansion.	25	N/A
Opinion of Probable Cost - DART Subtotal									***$ 22,000***
1C-CB-SW-026	TxDOT	New Sidewalk	N Central Expy	North Study Boundary & WB On Ramp	West	1610	Some tree removal may be needed near north part of segment to provide adequate sidewalk offset from U.S. 75 frontage road. Short retaining walls may be needed to level ground for sidewalk in several places, particularly under flyover ramps to westbound PGBT.	17	N/A
1C-CB-SW-027	TxDOT	New Sidewalk	N Central Expy	North Study Boundary & Executive Dr	East	1095	Utility pole and low wall at north study boundary (right turn to Plano Pkwy) would need to be relocated to make room for sidewalk. Retaining walls and large guide sign relocation likely needed farther south.	27	$ 116,500
1C-CB-SW-028	TxDOT	New Sidewalk	N Central Expy	Executive Dr & N President George Bush Hwy	West	165		20	N/A
1C-CB-SW-030	TxDOT	New Sidewalk	N President George Bush Hwy	N Central Expy & Crawford Rd	North	705		24	$ 38,300
1C-CB-SW-036	TxDOT	New Sidewalk	N President George Bush Hwy	DART Tracks & J Pl	North	50		29	$ 5,000
1C-CB-SW-048	TxDOT	New Sidewalk	N President George Bush Hwy	N Central Expy & Crawford Rd	South	630		27	$ 39,100
1C-CB-SW-050	TxDOT	New Sidewalk	N President George Bush Hwy	Crawford Rd & DART Tracks	South	660		31	$ 40,000
1C-CB-SW-051	TxDOT	New Sidewalk	President George Bush Hwy WB Frontage Rd	DART Tracks & K Ave	South	825	New sidewalk on north side of DART parking lot would include crosswalk across U-turn lane at K Ave/N Plano Rd signal.	35	$ 201,400
1C-CB-SW-052	TxDOT	New Sidewalk	N President George Bush Hwy	DART Tracks & K Ave	North	760	Worn path in grass on this segment indicates existing pedestrian demand. City of Plano reports a portion of this segment is under construction with new development - see SP2018-001.	34	$ 48,100
1C-CB-GR-053	TxDOT	Gap to Remain	N President George Bush Hwy	K Ave	South	110	Crosswalks on inside legs of diamond interchange would not serve any demand between pedestrian generators and would interfere unnecessarily with vehicular traffic.	0	N/A
1C-CB-SW-054	TxDOT	New Sidewalk	N President George Bush Hwy	K Ave & East Study Boundary	North	1440		25	$ 78,600

Half Mile Area Improvements Matrix

CityLine Bush Station

Opinion of Probable Constr. Cost = $1,495,600

Sidewalk & Shared Use Path Segments

Improvement Code Legend: ID: 1A-PR-SW-01
1A ← Station Number
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SW ← Sidewalk (or CW=Crosswalk, VW=Veloweb, RP=Sidewalk Repair GR=Gap to Remain)

North Central Texas Council of Governments
DART Red & Blue Line Corridors Last Mile Connections

ID	Owner	Improvement Type	Street Name	Between	Side of Street	Length (ft)	Notes	Priority Score	Opinion of Probable Cost
1C-CB-SW-055	TxDOT	New Sidewalk	N Central Expy	N President George Bush Hwy & E President George Bush Hwy	East	525		20	N/A
1C-CB-SW-057	TxDOT	New Sidewalk	E President George Bush Hwy	N Central Expy & Topridge Dr	North	360		25	N/A
1C-CB-SW-058	TxDOT	New Sidewalk	N Central Expy	E President George Bush Hwy & W Cityline Dr	East	55	City of Richardson reports sidewalk construction anticipated as part of upcoming development.	23	N/A
1C-CB-SW-060	TxDOT	New Sidewalk	E President George Bush Hwy	Routh East Dr & Routh West Dr	North	70	Track crossing would add expense to this short sidewalk segment and may not be necessary since pedestrian trips between the two parking lots on either side of the DART tracks are unlikely.	34	$ 162,100
1C-CB-SW-061	TxDOT	New Sidewalk	E President George Bush Hwy	Routh East Dr & N Plano Rd	North	65	New sidewalk would connect crosswalk across U-turn lane with existing sidewalk for DART parking lot.	25	$ 9,300
1C-CB-GR-062	TxDOT	Gap to Remain	E President George Bush Hwy	K Ave	South	115	Crosswalks on inside legs of diamond interchange would not serve any demand between pedestrian generators and would interfere unnecessarily with vehicular traffic.	0	N/A
1C-CB-SP-063	TxDOT	Shared Use Path	N Central Expy	SB On Ramp from PGBT & South Study Boundary	West	2095	Sidewalk construction may cause drainage impacts near dog park entrance. Tree and shrub removal will be needed for sidewalk south of dog park. Bridge over Spring Creek would be needed, since no space for sidewalk exists on U.S. 75 southbound frontage road bridge over the creek.	19	N/A
1C-CB-SP-066	TxDOT	Shared Use Path	N Central Expy	E Renner Rd & DART Tacks	East	3310	Bridge over Spring Creek will be built as part of currently funded project, since no space for sidewalk exists on U.S. 75 northbound frontage road bridge over the creek.	22	N/A
1C-CB-GR-076	TxDOT	Gap to Remain	N Central Expy	W Renner Rd & South Study Boundary	East	150	Access provided via the Spring Creek Trail.	0	N/A
1C-CB-SP-087	TxDOT	Shared Use Path	President George Bush Hwy EB Frontage Rd	N Plano Rd & Wilshire Way	South	865	Shared use path construction anticipated as part of upcoming development.	24	N/A
1C-CB-SP-088	TxDOT	Shared Use Path	President George Bush Hwy EB Frontage Rd	Wilshire Way & East Study Boundary	South	740	Shared use path construction anticipated as part of upcoming development.	16	N/A

Opinion of Probable Cost - TxDOT Subtotal..... $ 738,400

Half Mile Area Improvements Matrix

CityLine Bush Station

Opinion of Probable Constr. Cost = $1,495,600

Sidewalk & Shared Use Path Segments

Improvement Code Legend: ID: 1A-PR-SW-01

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North Central Texas Council of Governments

DART Red & Blue Line Corridors Last Mile Connections

ID	Owner	Improvement Type	Street Name	Between	Side of Street	Length (ft)	Notes	Priority Score	Opinion of Probable Cost
1C-CB-SW-042	TxDOT/DART/City of Plano	New Sidewalk	Crawford Rd	President George Bush Hwy & EB & WB Frontage Rds	West	45	New segment of sidewalk would connect from crosswalk to existing sidewalk for DART parking lot under PGBT bridges. Provide pedestrian hybrid beacon with advance "Yield Here to Pedestrians" signing for crossing PGBT westbound frontage road. Evaluation and integration with other signals needed. Of the total $4,800 cost for this improvement, 2/3 as listed at right is assumed attributable to TxDOT and/or City of Plano, with the remaining 1/3 assumed attributable to DART. See station area improvement 1C-CB-ST-07 in the DART cost matrix, and half-mile area improvement 1C-CB-CW-042 in the half-mile area crosswalk matrix for more details.	29	$ 3,200

Opinion of Probable Cost - Mixed Ownership Subtotal..... $ 3,200

Opinion of Probable Cost - Total for All Sidewalk Recommendations in Half Mile Area..... $ 1,495,600

Half Mile Area Improvements Matrix

CityLine Bush Station

Opinion of Probable Constr. Cost = $320,000

Improvement Code Legend: **ID:** 1A-PR-SW-01
1A ← Station Number
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North Central Texas Council of Governments

DART Red & Blue Line Corridors Last Mile Connections

Crosswalk Segments

ID	Owner	Improvement Type	Street Name	At/Between	Side of Street	Length (ft)	Notes	Priority Score	Opinion of Probable Cost
1C-CB-CW-011	City of Plano	New Crosswalk	E Plano Pkwy	Executive Dr	West	105	Provide marked crosswalks, pedestrian ramps, and countdown pedestrian signal heads. City of Plano reports this work is part of CIP project #7063.	26	N/A
1C-CB-CW-013	City of Plano	New Crosswalk	E Plano Pkwy	F Ave	East	105	Provide marked crosswalks, pedestrian ramps, and countdown pedestrian signal heads. City of Plano reports this work is part of CIP project #7063.	25	N/A
1C-CB-CW-014	City of Plano	New Crosswalk	F Ave	E Plano Pkwy	North	55	Provide marked crosswalks, pedestrian ramps, and countdown pedestrian signal heads. City of Plano reports this work is part of CIP project #7063.	19	N/A
1C-CB-CW-015	City of Plano	New Crosswalk	Executive Dr	E Plano Pkwy	South	50	Provide marked crosswalks and countdown pedestrian signal heads. City of Plano reports this work is part of CIP project #7063.	30	N/A
1C-CB-CW-017	City of Plano	New Crosswalk	E Plano Pkwy	DART Tracks	East	95	Need for crosswalk contingent on construction of Regional Veloweb shared use path. City of Plano reports this is being constructed as part of the Plano Transit Village Veloweb project. City is exploring a trail bridge alternative as part of the Cotton Belt project.	26	N/A
1C-CB-CW-024	City of Plano	New Crosswalk	E Plano Pkwy	K Ave	West	105	Provide marked crosswalks, pedestrian ramps, and countdown pedestrian signal heads.	17	N/A
1C-CB-CW-031	City of Plano	New Crosswalk	Executive Dr	Crawford Rd	West	60	Provide signed & marked crosswalk across Executive Dr with advance "Yield Here to Pedestrians" signing. Consider road diet for median refuge island.	30	$ 29,400
1C-CB-CW-033	City of Plano	New Crosswalk	Executive Dr	Crawford Rd	East	60	Provide signed & marked crosswalk across Executive Dr with advance "Yield Here to Pedestrians" signing. Consider road diet for median refuge island.	22	N/A
1C-CB-CW-039	City of Plano	New Crosswalk	K Ave	E Plano Pkwy	South	105	Provide marked crosswalks, pedestrian ramps, and countdown pedestrian signal heads.	23	$ 36,100
Opinion of Probable Cost - City of Plano Subtotal									***$ 65,500***
1C-CB-CW-092	City of Richardson	New Crosswalk	Cityline Dr	Wilshire Way	West	95	Ramps and median cut-through need to be built for crosswalk	18	N/A
Opinion of Probable Cost - City of Richardson Subtotal									***$ -***
1C-CB-CW-045	TxDOT	New Crosswalk	Routh West Dr	N President George Bush Hwy	East	90	Install traffic signal for future Veloweb crossing that has existing pedestrian demand. Add a traffic signal, signs, markings, and lighting. A pedestrian hybrid beacon (PHB) was considered for this location, but potential exists for confusion between flashing red lights associated with a PHB and the flashing red lights associated with the rail crossing at the DART tracks. Evaluation and integration with other signals needed. This improvement is under construction in conjunction with DART's Silver Line project.	35	N/A

Half Mile Area Improvements Matrix

CityLine Bush Station

Opinion of Probable Constr. Cost = $320,000

Improvement Code Legend: **ID:** 1A-PR-SW-01
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North Central Texas Council of Governments
DART Red & Blue Line Corridors Last Mile Connections

Crosswalk Segments

ID	Owner	Improvement Type	Street Name	At/Between	Side of Street	Length (ft)	Notes	Priority Score	Opinion of Probable Cost
1C-CB-CW-049	TxDOT	New Crosswalk	N President George Bush Hwy	Crawford Rd	South	60		29	$ 5,200
1C-CB-CW-051	TxDOT	New Crosswalk	President George Bush Hwy WB Frontage Rd	DART Tracks & K Ave	South	50	New sidewalk on north side of DART parking lot would include crosswalk across U-turn lane at K Ave/N Plano Rd signal.	63	$ 5,100
1C-CB-CW-061	TxDOT	New Crosswalk	E President George Bush Hwy	Routh East Dr & N Plano Rd	North	35	New sidewalk would connect crosswalk across U-turn lane with existing sidewalk for DART parking lot.	40	$ 3,600
Opinion of Probable Cost - TxDOT Subtotal									***$ 13,900***
1C-CB-CW-042	TxDOT/DART/ City of Plano	New Crosswalk	Crawford Rd	President George Bush Hwy & EB & WB Frontage Rds	West	65	New segment of sidewalk would connect from crosswalk to existing sidewalk for DART parking lot under PGBT bridges. Provide pedestrian hybrid beacon with advance "Yield Here to Pedestrians" signing for crossing PGBT westbound frontage road. Of the total $92,400 cost for this improvement, 2/3 as listed at right is assumed attributable to TxDOT and/or City of Plano, with the remaining 1/3 assumed attributable to DART (see DART cost matrix).	44	$ 61,600
1C-CB-CW-043	TxDOT/DART/ City of Plano	New Crosswalk	N President George Bush Hwy	Crawford Rd	East	70	Provide pedestrian hybrid beacon with advance "Yield Here to Pedestrians" signing for crossing PGBT westbound frontage road. Evaluation and integration with other signals needed. Of the total $91,700 cost for this improvement, 2/3 as listed at right is assumed attributable to TxDOT and/or City of Plano, with the remaining 1/3 assumed attributable to DART (see DART cost matrix).	40	$ 61,100
1C-CB-CW-059	DART/TxDOT/ City of Richardson	New Crosswalk	N President George Bush Hwy	Topridge Dr	East	75	Provide pedestrian hybrid beacon with advance "Yield Here to Pedestrians" signing for crossing PGBT eastbound frontage road. Of the total $176,900 cost for this improvement, 2/3 as listed at right is assumed attributable to TxDOT and/or City of Richardson, with the remaining 1/3 assumed attributable to DART (see DART cost matrix). See station area improvement 1C-CB-ST-09 for more information.	40	$ 117,900
Opinion of Probable Cost - Mixed Ownership Subtotal									***$ 240,600***
Opinion of Probable Cost - Total for All Crosswalk Recommendations in Half Mile Area									***$ 320,000***

Half Mile Area Improvements Matrix

Galatyn Park Station

Opinion of Probable Constr. Cost = $3,410,800

Sidewalk & Shared Use Path Segments

Improvement Code Legend: ID: 1A-PR-SW-01
1A ← Station Number
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North Central Texas Council of Governments

DART Red & Blue Line Corridors Last Mile Connections

ID	Owner	Improvement Type	Street Name	Between	Side of Street	Length (ft)	Notes	Priority Score	Opinion of Probable Cost
2A-GP-RP-02	City of Richardson	Repair	Palisades Creek Dr	N Collins Blvd & North Gate Dr	North	55	Correct trip hazard due to settled sidewalk panels near storm drain inlet.	16	N/A
2A-GP-RP-03	City of Richardson	Repair	Palisades Creek Dr	N Collins Blvd & North Gate Dr	North	20	Correct trip hazard due to settled sidewalk panels.	14	N/A
2A-GP-SP-04	City of Richardson	Shared Use Path	W Prairie Creek Dr	West Study Boundary & N Collins Blvd	South	275	A worn path in the grass indicates existing pedestrian demand adjacent to park. City of Richardson indicates this is part of Parks Department trail plan with no current funding.	3	N/A
2A-GP-SP-05	City of Richardson	Shared Use Path	W Prairie Creek Dr	North Study Boundary & West Study Boundary	East	1020	Worn trails in the grass indicate existing pedestrian demand along and through Prairie Creek greenbelt park. City of Richardson indicates this is part of Parks Department trail plan with no current funding.	4	N/A
2A-GP-GR-06	City of Richardson	Gap to Remain	E Prairie Creek Dr	Prairie Creek Trail & West Study Boundary	West	1910	Insufficient space exists for sidewalk between street and ornamental brick walls around trees at several points along the west side of E Prairie Creek Dr. Constructing sidewalk would require regrading slopes with impacts to adjacent trees, vegetation, and possibly the soft-surface recreational trail below. The need for sidewalk would be eliminated if the trail were converted to a concrete surface for full accessibility. No other non-recreational land uses exist on this side of the street.	0	N/A
2A-GP-GR-10	City of Richardson	Gap to Remain	N Collins Blvd	Palisades Blvd	North	100	No access to the single-family homes west of Collins Blvd exists within a quarter mile in either direction due to walls and fencing, so a crosswalk here would not provide meaningful access.	0	N/A
2A-GP-GR-11	City of Richardson	Gap to Remain	N Collins Blvd	Palisades Blvd	South	105	No access to the single-family homes west of Collins Blvd exists within a quarter mile in either direction due to walls and fencing, so a crosswalk here would not provide meaningful access.	0	N/A
2A-GP-SW-14	City of Richardson	New Sidewalk	North Gate Dr	Palisades Creek Dr & Empire Dr	West	5		13	N/A
2A-GP-SW-15	City of Richardson	New Sidewalk	North Gate Dr	Palisades Creek Dr & Empire Dr	East	5	Sidewalk construction anticipated as part of upcoming development.	8	N/A
2A-GP-SW-16	City of Richardson	New Sidewalk	Palisades Creek Dr	North Gate Dr & N Central Expy	South	395	Adjacent property expected to develop in the future as part of Palisades development. Timing of development is unknown.	14	N/A
2A-GP-SW-28	City of Richardson	New Sidewalk	N Collins Blvd	Palisades Blvd & Fall Creek Dr	East	220	The sloped retaining wall adjacent to sidewalk north of this gap may need to be continued south along the north part of this gap to construct new sidewalk.	18	N/A
2A-GP-SW-29	City of Richardson	New Sidewalk	Palisades Blvd	N Collins Blvd & South Gate Dr	South	455		19	N/A
2A-GP-SW-30	City of Richardson	New Sidewalk	South Gate Dr	Palisades Blvd & Galatyn Pkwy	West	160		21	N/A

Half Mile Area Improvements Matrix

Galatyn Park Station

Opinion of Probable Constr. Cost = $3,410,800

Sidewalk & Shared Use Path Segments

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North Central Texas Council of Governments

DART Red & Blue Line Corridors Last Mile Connections

ID	Owner	Improvement Type	Street Name	Between	Side of Street	Length (ft)	Notes	Priority Score	Opinion of Probable Cost
2A-GP-SW-32	City of Richardson	New Sidewalk	South Gate Dr	Palisades Blvd & Galatyn Pkwy	East	100		37	$7,900
2A-GP-RP-37	City of Richardson	Repair	Fall Creek Dr	N Collins Blvd & N Central Expy	North	35	Correct trip hazard due to settled sidewalk segment near fire hydrant.	12	N/A
2A-GP-RP-38	City of Richardson	Repair	Fall Creek Dr	N Collins Blvd & N Central Expy	North	60	Remove and replace several severely cracked sidewalk panels that are causing trip hazards. Build up earth around sidewalk where it traverses an underground utility vault, since dropoff from edge of sidewalk is also a significant trip hazard.	8	N/A
2A-GP-RP-39	City of Richardson	Repair	Fall Creek Dr	N Collins Blvd & N Central Expy	North	90	Remove and replace several severely cracked sidewalk panels that are causing trip hazards. Build up earth around sidewalk where it traverses an underground utility vault, since dropoff from edge of sidewalk is also a significant trip hazard.	9	N/A
2A-GP-SW-40	City of Richardson	New Sidewalk	Fall Creek Dr	N Collins Blvd & N Central Expy	South	720	Constructing sidewalk would require removing or significantly trimming back a long row of bushes.	7	N/A
2A-GP-GR-44	City of Richardson	Gap to Remain	Routh Creek Pkwy	North Study Boundary & N Glenville Dr	West	335	Dense vegetation would need to be cleared to make way for sidewalk, which would not support any developed land use between this side of the street and Routh Creek.	0	N/A
2A-GP-SW-48	City of Richardson	New Sidewalk	N Glenville Dr	Routh Creek Pkwy & E Lookout Dr	West	1760	Some regrading of slopes and/or short retaining walls may be needed to build sidewalk here. Sidewalk may not be necessary if the adjacent soft-surface walking trails are upgraded to sidewalk for full accessibility.	6	N/A
2A-GP-SW-49	City of Richardson	New Sidewalk	E Lookout Dr	N Central Expy & DART Tracks	North	75	A worn path in the grass indicates existing pedestrian demand. Landscaping would need to be removed for sidewalk construction. A sidewalk crossing of the tracks may involve additional expense. Sidewalk will be added during the construction of the recently approved hotel at this location.	21	N/A
2A-GP-SW-50	City of Richardson	New Sidewalk	E Lookout Dr	DART Tracks	North	20	A worn path in the grass indicates existing pedestrian demand. Landscaping would need to be removed for sidewalk construction. A sidewalk crossing of the tracks may involve additional expense.	20	N/A
2A-GP-SW-52	City of Richardson	New Sidewalk	E Lookout Dr	Performance Dr & N Glenville Dr	North	450	Sidewalk along part of this block may not be necessary if the adjacent soft-surface walking trails are upgraded to sidewalk for full accessibility.	9	N/A
2A-GP-SP-53	City of Richardson	Shared Use Path	N Glenville Dr	Routh Creek Pkwy & E Lookout Dr	East	1080	Thick vegetation will need to be cleared to build sidewalk or shared use path along a portion of this segment. Slopes and other unknown conflicts may be present but hidden by vegetation.	5	N/A
2A-GP-SP-54	City of Richardson	Shared Use Path	E Lookout Dr	N Glenville Dr & East Study Boundary	North	515	Planned City shared-use path.	5	N/A
2A-GP-SW-60	City of Richardson	New Sidewalk	Plaza Blvd	Performance Ct & Galatyn Pkwy	West	635	Southern portion of adjacent site is currently under construction, which will include new sidewalk. Northern parcel will be constructed at a later time.	48	$6,700

Half Mile Area Improvements Matrix

Galatyn Park Station

Opinion of Probable Constr. Cost = $3,410,800

Sidewalk & Shared Use Path Segments

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North Central Texas Council of Governments

DART Red & Blue Line Corridors Last Mile Connections

ID	Owner	Improvement Type	Street Name	Between	Side of Street	Length (ft)	Notes	Priority Score	Opinion of Probable Cost
2A-GP-GR-63	City of Richardson	Gap to Remain	Galatyn Pkwy	Plaza Blvd & Performance Dr	South	305	The Galatyn Pkwy bridge over U.S. 75 is currently posted with a "No Pedestrians" prohibition. The bridge would either need to be widened to provide sidewalk, or a road diet would need to be implemented. Since bridge widening is presumed impractical, and some possibility for a road diet to provide sidewalk on the north side of the bridge may exist, it is assumed no sidewalk will be provided on the south side. The large parking garage on the south side of the street here precludes the likelihood of any pedestrian demand between the station and the south side of the street west of Performance Dr.	0	N/A
2A-GP-SW-65	City of Richardson	New Sidewalk	Waterwood Dr	Lakeside Blvd & Performance Dr	North	25	An underground utility box would need to be adjusted to construct this short sidewalk segment.	17	N/A
2A-GP-SW-73	City of Richardson	New Sidewalk	N Greenville Ave	Infosys Driveway & East Study Boundary	North	30		7	N/A
2A-GP-RP-74	City of Richardson	Repair	N Glenville Dr	Galatyn Pkwy & Waterwood Dr	East	165	Remove and replace several panels that have settled near a pair of telephone manhoes, creating significant trip hazards.	16	N/A
2A-GP-SW-75	City of Richardson	New Sidewalk	N Greenville Ave	N Glenville Dr & Infosys Driveway	North	575	Adjacent site is currently under construction. Assumed that new sidewalk will be built.	9	N/A
2A-GP-SW-76	City of Richardson	New Sidewalk	N Glenville Dr	Waterwood Dr & N Greenville Ave	West	700	The southern portion of this sidewalk will be installed as part of the development of a recently-approved hotel.	23	$18,200
2A-GP-SW-77	City of Richardson	New Sidewalk	N Greenville Ave	N Glenville Dr & Lawnview Dr	North	280	This sidewalk will be built as part of the development of a recently-approved hotel.	9	N/A
2A-GP-SW-79	City of Richardson	New Sidewalk	Lakeside Blvd	Central Trail & Waterwood Dr	South	45	Two underground utility boxes and a manhole may need to be adjusted to construct this short sidewalk segment near the Greenway Business Park entrance sign.	25	$4,600
2A-GP-RP-84	City of Richardson	Repair	Lakeside Blvd	Lawnview Dr & South Study Boundary	Northwest	5	Remove and replace sidewalk panels near above-ground electric utility box where tree root heaving and poor drainage have created significant trip hazards and mud blocking the sidewalk.	13	N/A
2A-GP-GR-86	City of Richardson	Gap to Remain	N Greenville Ave	Lawnview Dr	West	40	Half-mile distance from station is likely to produce low demand for pedestrian crossings of 6-lane Greenville Ave at this location.	0	N/A
2A-GP-SW-87	City of Richardson	New Sidewalk	Lawnview Dr	N Greenville Ave	North	30	Provide a marked crosswalk, including ramps and sidewalk across channelized right turn islands. Move stop sign back behind crosswalk.	7	N/A
2A-GP-GR-88	City of Richardson	Gap to Remain	N Greenville Ave	Lawnview Dr	East	75	Half-mile distance from station is likely to produce low demand for pedestrian crossings of 6-lane Greenville Ave at this location.	0	N/A

Opinion of Probable Cost - City of Richardson Subtotal……. $37,400

Half Mile Area Improvements Matrix

Galatyn Park Station

Opinion of Probable Constr. Cost = $3,410,800

Sidewalk & Shared Use Path Segments

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North Central Texas Council of Governments

DART Red & Blue Line Corridors Last Mile Connections

ID	Owner	Improvement Type	Street Name	Between	Side of Street	Length (ft)	Notes	Priority Score	Opinion of Probable Cost
2A-GP-SW-47	DART	New Sidewalk	N Glenville Dr	DART Tracks	South	125	Utility pole, fencing, underground utility manhole, drainage culvert, landscaping, and railroad crossing gate all impede the way and could need to be modified as part of future sidewalk construction. A wider sidewalk crossing of the tracks, if needed to bypass the existing railroad gate, will also add additional expense.	8	N/A
Opinion of Probable Cost - DART Subtotal									***$0***
2A-GP-SW-19	Private Property	New Sidewalk	Empire Dr	Central Gate Dr & South Gate Dr	West	855	Trees would likely need to be removed or suffer significant root damage to build sidewalk between street and existing office building parking lot. Short- to medium-height retaining walls, removal of office building landscaping, removal of a concrete wall near a storm drain inlet, and reconstruction of a steep pedestrian walkway connecting to the crosswalks between buildings on either side of the street would also be required. To be built as part of Palisades development.	29	N/A
2A-GP-SW-21	Private Property	New Sidewalk	Empire Dr	Central Gate Dr & South Gate Dr	East	820	Trees would likely need to be removed or suffer significant root damage to build sidewalk between street and existing office building parking lot. Removal of office building landscaping would also be required. To be built as part of Palisades development.	23	N/A
2A-GP-SW-31	Private Property	New Sidewalk	Business Driveway	Galatyn Pkwy & KDC 2323 Investments	West	370	Additional sidewalk beyond that shown along driveway would be needed to connect pedestrians through parking lot to existing business front door on parcel to the south.	18	N/A
2A-GP-SW-35	Private Property	New Sidewalk	Business Driveway	Galatyn Pkwy & KDC 2323 Investments	East	370	Additional sidewalk beyond that shown along driveway would be needed to connect pedestrians through parking lot to existing business front door on parcel to the south.	12	N/A
2A-GP-SW-69	Private Property	New Sidewalk	Infosys Driveway	N Glenville Dr & Infosys Building	North	330	Sidewalk construction through sloped area would require short retaining walls, which could damage roots of several adjacent trees. Private property owner Infosys would need to agree to sidewalk construction.	11	N/A
2A-GP-SW-70	Private Property	New Sidewalk	Infosys Driveway	N Glenville Dr & Infosys Building	South	345	Sidewalk construction through sloped area would require short retaining walls, which could damage roots of several adjacent trees. Private property owner Infosys would need to agree to sidewalk construction.	11	N/A
2A-GP-GR-71	Private Property	Gap to Remain	Infosys Driveway	Infosys Driveway & N Greenville Ave	West	1185	Private property owner Infosys would need to agree to sidewalk construction. Many trees would need to be removed to construct sidewalk. Some street lighting poles would also need to be adjusted. Flattening of slopes or short retaining walls would also be required. The value of sidewalk on the west side of the Infosys driveway adjacent to the parking lot is questionable since sidewalk already exists along the building and a continuous sidewalk on the east side of the driveway may be feasible. However, this sidewalk would not serve a direct route between the business campus and the station.	0	N/A

Half Mile Area Improvements Matrix

Galatyn Park Station

Opinion of Probable Constr. Cost = $3,410,800

Sidewalk & Shared Use Path Segments

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North Central Texas Council of Governments

DART Red & Blue Line Corridors Last Mile Connections

ID	Owner	Improvement Type	Street Name	Between	Side of Street	Length (ft)	Notes	Priority Score	Opinion of Probable Cost
2A-GP-SW-72	Private Property	New Sidewalk	Infosys Driveway	Infosys Driveway & N Greenville Ave	East	735	Private property owner Infosys would need to agree to sidewalk construction. Two or three trees would likely need to be removed to construct sidewalk. A few other trees may incur root damage. This sidewalk would not serve a direct route between the business campus and the station.	5	N/A
2A-GP-SW-89	Private Property	New Sidewalk	Unnamed Street	North Gate Dr & N Central Expy	North	415	To be constructed as part of Palisades development.	11	N/A
2A-GP-SW-90	Private Property	New Sidewalk	Unnamed Street	North Gate Dr & N Central Expy	South	415	To be constructed as part of Palisades development.	12	N/A
2A-GP-SW-91	Private Property	New Sidewalk	Empire Dr	North Gate Dr & Central Gate Dr	West	420	To be constructed as part of Palisades development.	17	N/A
2A-GP-SW-92	Private Property	New Sidewalk	Empire Dr	North Gate Dr & Central Gate Dr	East	665	To be constructed as part of Palisades development.	18	N/A
2A-GP-SW-93	Private Property	New Sidewalk	Unnamed Street	Empire Dr & Empire Dr	North	585	To be constructed as part of Palisades development.	16	N/A
2A-GP-SW-94	Private Property	New Sidewalk	Unnamed Street	Empire Dr & Empire Dr	South	605	To be constructed as part of Palisades development.	16	N/A
2A-GP-SW-95	Private Property	New Sidewalk	Sidewalk Connector	Unnamed St & City Park	N/A	40	To be constructed as part of Palisades development.	14	N/A
2A-GP-SW-96	Private Property	New Sidewalk	Sidewalk around City Park	N/A	N/A	595	To be constructed as part of Palisades development.	15	N/A
2A-GP-SW-98	Private Property	New Sidewalk	Empire Dr	Unnamed Street & Central Gate Dr	West	70	To be constructed as part of Palisades development.	20	N/A
2A-GP-SW-99	Private Property	New Sidewalk	City Park Sidewalk	Empire Dr & Unnamed Street	South	470	To be constructed as part of Palisades development.	14	N/A
2A-GP-SW-100	Private Property	New Sidewalk	Sidewalk around City Park	N/A	N/A	75	To be constructed as part of Palisades development.	16	N/A
2A-GP-SW-103	Private Property	New Sidewalk	Sidewalk around City Park	N/A	N/A	45	To be constructed as part of Palisades development.	15	N/A
2A-GP-SW-104	Private Property	New Sidewalk	Sidewalk around City Park	N/A	N/A	435	To be constructed as part of Palisades development.	15	N/A
2A-GP-SW-105	Private Property	New Sidewalk	Unnamed Street	City Park & Empire Dr	North	315	To be constructed as part of Palisades development.	19	N/A
2A-GP-SW-106	Private Property	New Sidewalk	Unnamed Street	City Park & Empire Dr	South	335	To be constructed as part of Palisades development.	19	N/A
2A-GP-SW-109	Private Property	New Sidewalk	Unnamed Street	Empire Dr & N Central Expy	North	260	To be constructed as part of Palisades development.	24	N/A
2A-GP-SW-110	Private Property	New Sidewalk	Unnamed Street	Empire Dr & N Central Expy	South	265	To be constructed as part of Palisades development.	24	N/A
2A-GP-SW-113	Private Property	New Sidewalk	City Park Connector	Palisades Creek Dr & Empire Dr	N/A	275	To be constructed as part of Palisades development.	9	N/A
Opinion of Probable Cost - Private Property Subtotal									***$0***
2A-GP-SW-01	TxDOT	New Sidewalk	N Central Expy	North Study Boundary & Palisades Creek Dr	West	410	Short retaining walls may be needed to build sidewalk, which will likely cause significant root damage to a few existing trees. Alternatively, trees could be removed, potentially avoiding the need for retaining walls.	10	N/A

Half Mile Area Improvements Matrix

Galatyn Park Station

Opinion of Probable Constr. Cost = $3,410,800

Sidewalk & Shared Use Path Segments

Improvement Code Legend: ID: 1A-PR-SW-01
1A ← Station Number
PR ← Station Abbreviation
01 ← Improvement Number (matches 1 on Map)
SW ← Sidewalk (or CW=Crosswalk, VW=Veloweb, RP=Sidewalk Repair GR=Gap to Remain)

North Central Texas Council of Governments

DART Red & Blue Line Corridors Last Mile Connections

ID	Owner	Improvement Type	Street Name	Between	Side of Street	Length (ft)	Notes	Priority Score	Opinion of Probable Cost
2A-GP-SW-17	TxDOT	New Sidewalk	N Central Expy	Palisades Creek Dr & Central Gate Dr	West	1385	Adjacent property expected to develop in the future as part of Palisades development. Timing of development is unknown.	19	N/A
2A-GP-SW-23	TxDOT	New Sidewalk	N Central Expy	Central Gate Dr	West	70		24	N/A
2A-GP-SW-24	TxDOT	New Sidewalk	N Central Expy	Central Gate Dr & Palisades Blvd	West	600	Adjacent property expected to develop in the future as part of Palisades development. Regrading of the adjacent ditch and adjustments to underground utility boxes and manholes will likely be needed to construct sidewalk. Timing of development is unknown.	27	N/A
2A-GP-RP-25	TxDOT	Repair	N Central Expy	Central Gate Dr & Palisades Blvd	West	145	Remove and replace several sidewalk panels that have settled relative to the roadway curb, creating trip hazards.	25	N/A
2A-GP-SW-33	TxDOT	New Sidewalk	Galatyn Pkwy	South Gate Dr & N Central Expy	North	620	The Galatyn Pkwy bridge over U.S. 75 is currently posted with a "No Pedestrians" prohibition. While widening the bridge to provide sidewalk is considered impractical, there may be a small possibility that a road diet could be implemented to make space for new sidewalk while simultaneously increasing capacity on the bridge to handle traffic for upcoming development nearby. This might be possible by converting the interchange to a Diverging Diamond Interchange (DDI). See discussion on improvement 2A-GP-SW-42 for more details. On the west bridge approach, the striped median could be narrowed and the travel lanes restriped to provide a large portion of the width needed for sidewalk. Drainage would need to be modified, since grate inlets are present along the curb.	41	$523,900
2A-GP-GR-34	TxDOT	Gap to Remain	Galatyn Pkwy	South Gate Dr & N Central Expy	South	585	The Galatyn Pkwy bridge over U.S. 75 is currently posted with a "No Pedestrians" prohibition. The bridge would either need to be widened to provide sidewalk, or a road diet would need to be implemented. Since bridge widening is presumed impractical, and some possibility for a road diet to provide sidewalk on the north side of the bridge may exist, it is assumed no sidewalk will be provided on the south side.	0	N/A
2A-GP-RP-36	TxDOT	Repair	N Central Expy	Galatyn Pkwy & Fall Creek Dr	West	10	Remove and replace sidewalk panels near storm drain inlet where settlement has created a trip hazard.	27	$700
2A-GP-RP-41	TxDOT	Repair	N Central Expy	Fall Creek Dr & South Study Boundary	West	375	Remove and replace several severely settled and cracked sidewalk panels near a utility manhole, where drainage is poor and mud and grass have covered the sidewalk.	17	N/A

Half Mile Area Improvements Matrix

Galatyn Park Station

Opinion of Probable Constr. Cost = $3,410,800

Sidewalk & Shared Use Path Segments

Improvement Code Legend: ID: 1A-PR-SW-01
1A ← Station Number
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North Central Texas Council of Governments

DART Red & Blue Line Corridors Last Mile Connections

ID	Owner	Improvement Type	Street Name	Between	Side of Street	Length (ft)	Notes	Priority Score	Opinion of Probable Cost
2A-GP-SW-42	TxDOT	New Sidewalk	Galatyn Pkwy	N Central Expy SB Ramps & N Central Expy NB Ramps	North	315	The Galatyn Pkwy bridge over U.S. 75 is currently posted with a "No Pedestrians" prohibition. The bridge would either need to be widened to provide sidewalk, or a road diet would need to be implemented. Between the ramp signals, about 44 feet is allocated to four travel lanes. Narrowing lanes from 11 feet wide to 10 feet wide could provide space for a minimal 4-ft wide sidewalk on one side of the bridge only. A better alternative for a road diet may be to reconsider the lane geometry of the tight-diamond interchange. Northbound and southbound vehicular through movements from the ramps are unnecessary and can be eliminated. The interchange could then potentially be converted to a diverging diamond interchange (DDI) configuration with a single lane in each of the eastbound and westbound directions. This configuration would require a median, but sidewalk could then be provided either along one side of the bridge or (as is relatively common in the DDI configuration) in the median between opposing lanes, each traveling in a counterflow direction. Geometric studies would be needed to see if such a configuration, including required signal displays, could fit on the existing bridge structure, while capacity analysis would be needed to evaluate the strategy's operational effectiveness relative to existing and projected future conditions with build-out of adjacent developments.	47	$2,211,500
2A-GP-GR-43	TxDOT	Gap to Remain	Galatyn Pkwy	N Central Expy SB Ramps & N Central Expy NB Ramps	South	310	The Galatyn Pkwy bridge over U.S. 75 is currently posted with a "No Pedestrians" prohibition. The bridge would either need to be widened to provide sidewalk, or a road diet would need to be implemented. Since bridge widening is presumed impractical, and some possibility for a road diet to provide sidewalk on the north side of the bridge may exist, it is assumed no sidewalk will be provided on the south side.	0	N/A
2A-GP-SW-46	TxDOT	New Sidewalk	N Central Expy	N Glenville Dr & E Lookout Dr	East	615	A worn path in the grass indicates existing pedestrian demand. Utilities present but mostly avoidable along vacant parcel. Fill may be needed to elevate sidewalk outside low-lying areas that would present a drainage problem. Sidewalk will be added during the construction of the recently approved hotel at this location.	26	N/A

Half Mile Area Improvements Matrix

Galatyn Park Station

Opinion of Probable Constr. Cost = $3,410,800

Sidewalk & Shared Use Path Segments

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North Central Texas Council of Governments

DART Red & Blue Line Corridors Last Mile Connections

ID	Owner	Improvement Type	Street Name	Between	Side of Street	Length (ft)	Notes	Priority Score	Opinion of Probable Cost
2A-GP-SW-61	TxDOT	New Sidewalk	Galatyn Pkwy	N Central Expy & Plaza Blvd	North	760	The Galatyn Pkwy bridge over U.S. 75 is currently posted with a "No Pedestrians" prohibition. While widening the bridge to provide sidewalk is considered impractical, there may be a small possibility that a road diet could be implemented to make space for new sidewalk while simultaneously increasing capacity on the bridge to handle traffic for upcoming development nearby. This might be possible by converting the interchange to a Diverging Diamond Interchange (DDI). See discussion on improvement 2A-GP-SW-42 for more details. On the east bridge approach, narrowing lanes from 11 feet wide to 10 feet wide (along with narrowing and realigning of the roadway median) could provide some of the space needed for new sidewalk, with additional space coming from the potential changes to lane configurations and phasing at the signalized interchange of Galatyn Parkway with the U.S. 75 ramps.	47	$637,300
2A-GP-GR-62	TxDOT	Gap to Remain	Galatyn Pkwy	N Central Expy & Plaza Blvd	South	795	The Galatyn Pkwy bridge over U.S. 75 is currently posted with a "No Pedestrians" prohibition. The bridge would either need to be widened to provide sidewalk, or a road diet would need to be implemented. Since bridge widening is presumed impractical, and some possibility for a road diet to provide sidewalk on the north side of the bridge may exist, it is assumed no sidewalk will be provided on the south side.	0	N/A

Opinion of Probable Cost - TxDOT Subtotal……. $3,373,400

Opinion of Probable Cost - Total for All Sidewalk Recommendations in Half Mile Area…… $3,410,800

Half Mile Area Improvements Matrix

Galatyn Park Station

Opinion of Probable Constr. Cost = $139,900

Improvement Code Legend: **ID:** 1A-PR-SW-01
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North Central Texas Council of Governments

DART Red & Blue Line Corridors Last Mile Connections

Crosswalk Segments

ID	Owner	Improvement Type	Street Name	At/Between	Side of Street	Length (ft)	Notes	Priority Score	Opinion of Probable Cost
2A-GP-CW-08	City of Richardson	New Crosswalk	N Collins Blvd	Palisades Creek Dr	North	95	Add marked crosswalks and pedestrian ramps to cross N Collins Blvd at these wide crossings of an all-way stop-controlled intersection.	15	N/A
2A-GP-CW-09	City of Richardson	New Crosswalk	N Collins Blvd	Palisades Creek Dr	South	95	Add marked crosswalks and pedestrian ramps to cross N Collins Blvd at these wide crossings of an all-way stop-controlled intersection.	16	N/A
2A-GP-CW-12	City of Richardson	New Crosswalk	N Collins Blvd	Fall Creek Dr	North	100	Install a signed, marked and lit crosswalk. Add yield line and "Yield Here to Pedestrians" signing in each direction approaching crosswalk to mitigate risk of dual threat situation for pedestrians. Consider additional improvements if a study of pedestrian volumes warrants them, given the long distance to stop-controlled crossing locations in either direction.	12	N/A
2A-GP-CW-13	City of Richardson	New Crosswalk	N Collins Blvd	Fall Creek Dr	South	95	Install a signed, marked and lit crosswalk. Add yield line and "Yield Here to Pedestrians" signing in each direction approaching crosswalk to mitigate risk of dual threat situation for pedestrians. Consider additional improvements if a study of pedestrian volumes warrants them, given the long distance to stop-controlled crossing locations in either direction.	7	N/A
2A-GP-CW-26	City of Richardson	New Crosswalk	Palisades Blvd	South Gate Dr	West	65	Provide marked, signed, and lit crosswalks across Palisades Blvd. Consider curb extensions or a median refuge island in the wide 34-ft roadway. Care should be taken to provide advance warning signs in the eastbound direction due to the crest vertical curve in the roadway to the west. Or, the potential also exists for revising traffic signage to make the north-south route primary. In addition, the Palisades master plan does include the possibility of Palisades Boulevard abandonment east of Empire Dr.	25	$39,900
2A-GP-CW-27	City of Richardson	New Crosswalk	Palisades Blvd	South Gate Dr	East	80	Provide marked, signed, and lit crosswalks across Palisades Blvd. Consider curb extensions or a median refuge island in the wide 34-ft roadway. Care should be taken to provide advance warning signs in the eastbound direction due to the crest vertical curve in the roadway to the west. Or, the potential also exists for revising traffic signage to make the north-south route primary. In addition, the Palisades master plan does include the possibility of Palisades Boulevard abandonment east of Empire Dr.	30	$37,100

Half Mile Area Improvements Matrix

Galatyn Park Station

Opinion of Probable Constr. Cost = $139,900

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North Central Texas Council of Governments
DART Red & Blue Line Corridors Last Mile Connections

Crosswalk Segments

ID	Owner	Improvement Type	Street Name	At/Between	Side of Street	Length (ft)	Notes	Priority Score	Opinion of Probable Cost
2A-GP-CW-45	City of Richardson	Upgrade Crosswalk	N Glenville Dr	Central Trail	N/A	90	Install bicycle/pedestrian warning signs and white crosswalk lines parallel to existing crosswalk with faded, non-conforming brick pattern and dark outline. White edge lines as traffic control devices are required to make crosswalks legally enforceable. Add yield line and "Yield Here to Pedestrians" signing in each direction approaching crosswalk to mitigate risk of dual threat situation for pedestrians.	16	N/A
2A-GP-CW-55	City of Richardson	Upgrade Crosswalk	E Lookout Dr	Central Trail	N/A	135	Install bicycle/pedestrian warning signs and white crosswalk lines parallel to existing crosswalk with faded, non-conforming brick pattern and dark outline. White edge lines as traffic control devices are required to make crosswalks legally enforceable.	29	$4,900
2A-GP-CW-56	City of Richardson	Upgrade Crosswalk	E Lookout Dr	Performance Dr	West	120	Install pedestrian warning signs and white crosswalk lines parallel to existing crosswalk with faded, brick pattern. White edge lines as traffic control devices are required to make crosswalks legally enforceable. Add yield line and "Yield Here to Pedestrians" signing in each direction approaching crosswalk to mitigate risk of dual threat situation for pedestrians.	36	$5,700
2A-GP-CW-57	City of Richardson	Upgrade Crosswalk	E Lookout Dr	Performance Dr	East	140	Install pedestrian warning signs and white crosswalk lines parallel to existing crosswalk with faded, brick pattern. White edge lines as traffic control devices are required to make crosswalks legally enforceable. Add yield line and "Yield Here to Pedestrians" signing in each direction approaching crosswalk to mitigate risk of dual threat situation for pedestrians.	18	N/A
2A-GP-CW-58	City of Richardson	Upgrade Crosswalk	E Lookout Dr	Performance Dr & N Glenville Dr	N/A	90	Add marked crosswalk at existing signed pedestrian crossing. Add yield line and "Yield Here to Pedestrians" signing in each direction approaching crosswalk to mitigate risk of dual threat situation for pedestrians.	11	N/A
2A-GP-CW-67	City of Richardson	New Crosswalk	N Glenville Dr	Infosys Driveway	South	90	Consider installing pedestrian warning signs, a marked crosswalk, and pedestrian-actuated rectangular rapid flashing beacons (RRFB's) for more direct access to the Infosys corporate campus if coordinating sidewalk improvements to the building front door via Infosys private property to the east can also be made. Add yield line and "Yield Here to Pedestrians" signing in each direction approaching crosswalk to mitigate risk of dual threat situation for pedestrians.	27	N/A

Half Mile Area Improvements Matrix

Galatyn Park Station

Opinion of Probable Constr. Cost = $139,900

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North Central Texas Council of Governments
DART Red & Blue Line Corridors Last Mile Connections

Crosswalk Segments

ID	Owner	Improvement Type	Street Name	At/Between	Side of Street	Length (ft)	Notes	Priority Score	Opinion of Probable Cost
2A-GP-CW-68	City of Richardson	New Crosswalk	N Glenville Dr	Waterwood Dr	South	85	Consider installing pedestrian warning signs, a marked crosswalk, and pedestrian-actuated rectangular rapid flashing beacons (RRFB's) for more direct access to the Hampton Inn hotel. Add yield line and "Yield Here to Pedestrians" signing in each direction approaching crosswalk to mitigate risk of dual threat situation for pedestrians.	23	$47,800
2A-GP-CW-78	City of Richardson	Upgrade Crosswalk	Lakeside Blvd	Central Trail	N/A	80	Install bicycle/pedestrian warning signs and white crosswalk lines parallel to existing crosswalk with faded, non-conforming brick pattern and dark outline. White edge lines as traffic control devices are required to make crosswalks legally enforceable.	26	$4,500
2A-GP-CW-80	City of Richardson	Upgrade Crosswalk	Lakeside Blvd	Central Trail & Waterwood Dr	N/A	90	Add marked crosswalks at existing signed pedestrian crossing. Add yield line and "Yield Here to Pedestrians" signing in each direction approaching crosswalk to mitigate risk of dual threat situation for pedestrians.	19	N/A
2A-GP-CW-81	City of Richardson	Upgrade Crosswalk	Lakeside Blvd	Lawnview Dr	Northeast	70	Add white edge lines on outside of brick crosswalk at roundabout entry/exit. White edge lines as traffic control devices are required to make crosswalks legally enforceable. Also, the only way to reach the roundabout crosswalks from adjacent sidewalks is via stairs to/from the sidewalks above. Explore alternatives for ADA-compliant access, and add pedestrian ramps at each crosswalk.	11	N/A
2A-GP-CW-82	City of Richardson	Upgrade Crosswalk	Lakeside Blvd	Lawnview Dr	Southwest	70	Add white edge lines on outside of brick crosswalk at roundabout entry/exit. White edge lines as traffic control devices are required to make crosswalks legally enforceable. Also, the only way to reach the roundabout crosswalks from adjacent sidewalks is via stairs to/from the sidewalks above. Explore alternatives for ADA-compliant access, and add pedestrian ramps at each crosswalk.	12	N/A
2A-GP-CW-83	City of Richardson	Upgrade Crosswalk	Lakeside Blvd	Lawnview Dr & South Study Boundary	N/A	105	Add marked crosswalks at existing signed pedestrian crossing. Add yield line and "Yield Here to Pedestrians" signing in each direction approaching crosswalk to mitigate risk of dual threat situation for pedestrians.	13	N/A
2A-GP-CW-85	City of Richardson	Upgrade Crosswalk	Lawnview Dr	Lakeside Blvd	Southeast	75	Add white edge lines on outside of brick crosswalk at roundabout entry/exit. White edge lines as traffic control devices are required to make crosswalks legally enforceable. Also, the only way to reach the roundabout crosswalks from adjacent sidewalks is via stairs to/from the sidewalks above. Explore alternatives for ADA-compliant access, and add pedestrian ramps at each crosswalk.	10	N/A

Opinion of Probable Cost - City of Richardson Subtotal ***$139,900***

Half Mile Area Improvements Matrix

Galatyn Park Station

Opinion of Probable Constr. Cost = $139,900

Improvement Code Legend: **ID:** 1A-PR-SW-01
1A ← Station Number
PR ← Station Abbreviation
01 ← Improvement Number (matches 1 on Map)
SW ← Sidewalk (or CW=Crosswalk, VW=Veloweb, RP=Sidewalk Repair GR=Gap to Remain)

North Central Texas Council of Governments

DART Red & Blue Line Corridors Last Mile Connections

Crosswalk Segments

ID	Owner	Improvement Type	Street Name	At/Between	Side of Street	Length (ft)	Notes	Priority Score	Opinion of Probable Cost
2A-GP-CW-20	Private Property	Upgrade Crosswalk	Empire Dr	Central Gate Dr & South Gate Dr	N/A	110	Add pedestrian warning signs, pedestrian ramps, and median cut-through at existing marked crosswalk.	21	N/A
2A-GP-CW-97	Private Property	New Crosswalk	Unnamed Street	Empire Dr	West	65	To be constructed as part of Palisades development.	19	N/A
2A-GP-CW-101	Private Property	New Crosswalk	Empire Dr	Golden Gate Dr	North	85	To be constructed as part of Palisades development.	14	N/A
2A-GP-CW-102	Private Property	New Crosswalk	Empire Dr	Golden Gate Dr	South	95	To be constructed as part of Palisades development.	14	N/A
2A-GP-CW-107	Private Property	New Crosswalk	Empire Dr	Unnamed Street	North	110	To be constructed as part of Palisades development.	22	N/A
2A-GP-CW-108	Private Property	New Crosswalk	Empire Dr	Unnamed Street	South	100	To be constructed as part of Palisades development.	22	N/A
2A-GP-CW-111	Private Property	New Crosswalk	North Gate Dr	Unnamed Street	North	55	To be constructed as part of Palisades development.	11	N/A
2A-GP-CW-112	Private Property	New Crosswalk	North Gate Dr	Unnamed Street	South	60	To be constructed as part of Palisades development.	11	N/A
2A-GP-CW-114	Private Property	New Crosswalk	Empire Dr	Unnamed Street	N/A	55	To be constructed as part of Palisades development.	13	N/A

Opinion of Probable Cost - Private Property Subtotal ***$0***

Opinion of Probable Cost - Total for All Crosswalk Recommendations in Half Mile Area ***$139,900***

Half Mile Area Improvements Matrix

Arapaho Center Station

Opinion of Probable Constr. Cost = $261,300

Sidewalk & Shared Use Path Segments

Improvement Code Legend: ID: 1A-PR-SW-01
1A ← Station Number
PR ← Station Abbreviation
01 ← Improvement Number (matches 1 on Map)
SW ← Sidewalk (or CW=Crosswalk, VW=Veloweb, RP=Sidewalk Repair GR=Gap to Remain)

North Central Texas Council of Governments

DART Red & Blue Line Corridors Last Mile Connections

ID	Owner	Improvement Type	Street Name	Between	Side of Street	Length (ft)	Notes	Priority Score	Opinion of Probable Cost
2B-AC-SW-01	City of Richardson	New Sidewalk	Melrose Dr	Richardson Dr & Central Expy	North	55		16	N/A
2B-AC-SW-02	City of Richardson	New Sidewalk	N Collins Blvd	North Study Boundary & Central Expy	South	210	Some fill dirt may be needed to level path for sidewalk on slope adjacent to ramp. One tree may need to be removed, and a few others may incur root damage depending on sidewalk's alignment. The City of Richardson reports plans to implement a road diet on the Collins Blvd bridge that will allow for wider sidewalks and protected bike lanes in the vicinity of this improvement. The City also reports this segment will be included in an upcoming Dallas County MCIP application.	21	N/A
2B-AC-VW-V02	City of Richardson	Shared Use Path	N Collins Blvd	Southbound Ramps & Central Expy	South	120	Sidewalk construction in narrow gore area between Collins Blvd main lanes and ramp would require constructing a short retaining wall to level the sloped surface. A pedestrian railing would likely be needed between the sidewalk and the main lanes due to the drop-off. The existing vehicular guard rail end treatment protecting the wall at the beginning of the bridge abutment would need to be removed, and a new end treatment designed and constructed to protect the sidewalk retaining wall. City of Richardson staff reported that schoolchildren from the Winfree Academy northwest of U.S. 75 have been known to cross to and from the Arapaho Center station via the freight rail bridge just to the south of Collins Blvd. To discourage this type of behavior, fencing should be provided around the perimeter of the railroad property, and the Collins Blvd bridge pedestrian experience should be made safer and more comfortable. The City of Richardson reports plans to implement a road diet on the Collins Blvd bridge that will allow for wider sidewalks and protected bike lanes in the vicinity of this improvement. The City also reports this segment will be included in an upcoming Dallas County MCIP application.	27	$39,500
2B-AC-SW-03	City of Richardson	New Sidewalk	Ramp from Southbound Collins Blvd to Southbound Central Expy	Collins Blvd & Central Expy	South	610	Some fill dirt may be needed to level path for sidewalk on slope adjacent to ramp. One tree may need to be removed, and a few others may incur root damage depending on sidewalk's alignment. The City of Richardson reports this segment will be included in an upcoming Dallas County MCIP application.	25	$28,000
2B-AC-VW-V03	City of Richardson	Shared Use Path	Regional Veloweb	N Greenville Ave & Alma Rd	South	160	On the south side of the crosswalk, a portion of the guardrail protecting errant vehicles from the downhill slope below would need to be removed. Regrading of the slope, a retaining wall, and/or a pedestrian railing would be needed to add sidewalk that angles down the slope in either direction from the crosswalk to connect to existing sidewalk along the bottom of the slope. The City of Richardson reports this segment will be included in an upcoming Dallas County MCIP application.	10	N/A

Half Mile Area Improvements Matrix

Arapaho Center Station

Opinion of Probable Constr. Cost = $261,300

Sidewalk & Shared Use Path Segments

Improvement Code Legend: ID: 1A-PR-SW-01
1A ← Station Number
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North Central Texas Council of Governments

DART Red & Blue Line Corridors Last Mile Connections

ID	Owner	Improvement Type	Street Name	Between	Side of Street	Length (ft)	Notes	Priority Score	Opinion of Probable Cost
2B-AC-RP-06	City of Richardson	Repair	Southbound Ramps & Central Expy	South	North	25	Sidewalk over the Collins Blvd overpass is only 4 feet wide with no buffer. A storm drain inlet at this location reduces the width further, and the sidewalk adjacent to it has settled, creating a trip hazard. Consider if drainage can be redesigned to accommodate continuous sidewalk of acceptable width. The City of Richardson reports plans to implement a road diet on the Collins Blvd bridge that will allow for wider sidewalks and protected bike lanes. The number of lanes on the Collins Blvd overpass will be reduced from two to one in each direction. The City of Richardson's recent traffic counts from 2018 indicate a peak-hour, peak-direction traffic volume of only about 1,000 vehicles/hour, which can be reasonably accomodated with a single lane per direction. The City of Richardson reports this segment will be included in an upcoming Dallas County MCIP application.	24	$5,600
2B-AC-RP-07	City of Richardson	Repair	Gateway Blvd	North Study Boundary & Central Expy	North	60	Remove and replace a few sidewalk panels that have settled and cracked near a water manhole, creating significant trip hazards.	16	N/A
2B-AC-GR-09	City of Richardson	Gap to Remain	N Collins Blvd	Central Expy & N Greenville Ave	North	115	Because the DART tracks run immediately east of the U.S. 75 Northbound Frontage Road, with Greenville Ave on the east side of the tracks, no meaningful land use for pedestrian access would be provided by building sidewalk adjacent to the tracks. Furthermore, landscaping would need to be removed and the travel experience would be highly uncomfortable for pedestrians.	0	N/A
2B-AC-GR-10	City of Richardson	Gap to Remain	N Collins Blvd	Central Expy & N Greenville Ave	South	115	Because the DART tracks run immediately east of the U.S. 75 Northbound Frontage Road, with Greenville Ave on the east side of the tracks, no meaningful land use for pedestrian access would be provided by building sidewalk adjacent to the tracks. Furthermore, landscaping would need to be removed and the travel experience would be highly uncomfortable for pedestrians.	0	N/A
2B-AC-GR-11	City of Richardson	Gap to Remain	N Greenville Ave	North Study Boundary & N Collins Blvd	West	905	Because the DART tracks run immediately east of the U.S. 75 Northbound Frontage Road, with Greenville Ave on the east side of the tracks, no meaningful land use for pedestrian access would be provided by building sidewalk adjacent to the tracks. Furthermore, landscaping would need to be removed and the travel experience would be highly uncomfortable for pedestrians. Just south of the westbound ramps for Collins Blvd, a large pole for high-voltage overhead electric lines occupies most of the greenway between the curb and the DART fence, allowing insufficient space for sidewalk.	0	N/A
2B-AC-RP-12	City of Richardson	Repair	N Greenville Ave	North Study Boundary & E Collins Blvd	East	255	Existing asphalt pathway has severe cracking and rutting, and should be replaced with concrete sidewalk.	1	N/A
2B-AC-RP-13	City of Richardson	Repair	N Greenville Ave	N Collins Blvd	East	75	Consider changes to drainage of bridge abutment headwall so that moisture and slime does not accumulate on shared-use path under bridge.	16	N/A

Half Mile Area Improvements Matrix

Arapaho Center Station

Opinion of Probable Constr. Cost = $261,300

Sidewalk & Shared Use Path Segments

Improvement Code Legend: ID: 1A-PR-SW-01

1A ← Station Number
PR ← Station Abbreviation
01 ← Improvement Number (matches 1 on Map)
SW ← Sidewalk (or CW=Crosswalk, VW=Veloweb, RP=Sidewalk Repair GR=Gap to Remain)

North Central Texas Council of Governments

DART Red & Blue Line Corridors Last Mile Connections

ID	Owner	Improvement Type	Street Name	Between	Side of Street	Length (ft)	Notes	Priority Score	Opinion of Probable Cost
2B-AC-SW-14	City of Richardson	New Sidewalk	N Collins Blvd	N Greenville Ave & Alma Rd	North	35	Sidewalk over the Collins Blvd overpass is only 4 feet wide with no buffer. A storm drain inlet at this location reduces the width further, and the sidewalk adjacent to it has settled, creating a trip hazard. Consider if drainage can be redesigned to accommodate continuous sidewalk of acceptable width. The City of Richardson reports plans to implement a road diet on the Collins Blvd bridge that will allow for wider sidewalks and protected bike lanes. The number of lanes on the Collins Blvd overpass will be reduced from two to one in each direction. The City of Richardson's recent traffic counts from 2018 indicate a peak-hour, peak-direction traffic volume of only about 1,000 vehicles/hour, which can be reasonably accomodated with a single lane per direction. The City of Richardson reports this segment will be included in an upcoming Dallas County MCIP application.	22	$6,000
2B-AC-SW-15	City of Richardson	New Sidewalk	N Collins Blvd	N Greenville Ave & Alma Rd	South	160	On the south side of the crosswalk, a portion of the guardrail protecting errant vehicles from the downhill slope below would need to be removed. Regrading of the slope, a retaining wall, and/or a pedestrian railing would be needed to add sidewalk that angles down the slope in either direction from the crosswalk to connect to existing sidewalk along the bottom of the slope. The City of Richardson reports this segment will be included in an upcoming Dallas County MCIP application.	20	N/A
2B-AC-GR-18	City of Richardson	Gap to Remain	N Collins Blvd	Central Expy & N Greenville Ave	North	105	Because the DART tracks run immediately east of the U.S. 75 Northbound Frontage Road, with Greenville Ave on the east side of the tracks, no meaningful land use for pedestrian access would be provided by building sidewalk adjacent to the tracks. Furthermore, landscaping would need to be removed and the travel experience would be highly uncomfortable for pedestrians.	0	N/A
2B-AC-GR-19	City of Richardson	Gap to Remain	N Collins Blvd	Central Expy & N Greenville Ave	South	115	Because the DART tracks run immediately east of the U.S. 75 Northbound Frontage Road, with Greenville Ave on the east side of the tracks, no meaningful land use for pedestrian access would be provided by building sidewalk adjacent to the tracks. Furthermore, landscaping would need to be removed and the travel experience would be highly uncomfortable for pedestrians.	0	N/A
2B-AC-RP-20	City of Richardson	Repair	Richardson Dr	Melrose Dr & Monte Blaine Ln	East	10	Remove and replace a sidewalk panel that has settled and cracked near an above-ground utility box, creating a trip hazard.	21	N/A
2B-AC-SW-21	City of Richardson	New Sidewalk	Lorrie Dr	Lowell Ln & Vernet St	East	170		15	N/A
2B-AC-RP-22	City of Richardson	Repair	Richardson Dr	Monte Blaine Ln & W Arapaho Rd	East	15	Remove and replace sidewalk panels that have settled significantly near a driveway, creating a trip hazard.	28	$1,100

Half Mile Area Improvements Matrix

Arapaho Center Station

Opinion of Probable Constr. Cost = $261,300

Sidewalk & Shared Use Path Segments

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North Central Texas Council of Governments
DART Red & Blue Line Corridors Last Mile Connections

ID	Owner	Improvement Type	Street Name	Between	Side of Street	Length (ft)	Notes	Priority Score	Opinion of Probable Cost
2B-AC-GR-26	City of Richardson	Gap to Remain	N Greenville Ave	E Collins Blvd & E Arapaho Rd	West	1745	Because the DART tracks run immediately east of the U.S. 75 Northbound Frontage Road, with Greenville Ave on the east side of the tracks, no meaningful land use for pedestrian access would be provided by building sidewalk adjacent to the tracks. Furthermore, landscaping would need to be removed and the travel experience would be highly uncomfortable for pedestrians. Just south of the westbound ramps for Collins Blvd, a large pole for high-voltage overhead electric lines occupies most of the greenway between the curb and the DART fence, allowing insufficient space for sidewalk.	0	N/A
2B-AC-SW-27	City of Richardson	New Sidewalk	Security Row	Alma Rd & East Study Boundary	South	505	An architectural wall that extends a short distance from the corner with Alma Road would need to be removed or rebuilt farther from the curb to make way for sidewalk. Trees farther to the east could suffer root damage depending on the sidewalk's alignment. Short retaining walls may be needed if sidewalk will be built adjacent to curb.	18	N/A
2B-AC-RP-28	City of Richardson	Repair	Security Row	Alma Rd & East Study Boundary	South	90	Remove and replace sidewalk panels that have settled near tree roots, creating trip hazards and acculmulation of sediment.	10	N/A
2B-AC-RP-29	City of Richardson	Repair	Security Row	Alma Rd & East Study Boundary	North	95	Repair sidewalk that has settled around storm drain inlet, creating a trip hazard.	4	N/A
2B-AC-GR-31	City of Richardson	Gap to Remain	Richardson Dr	Monte Blaine Ln & Jolee St	West	600	A long row of hedges would need to be removed to accommodate sidewalk in a narrow space. About a dozen trees may either also need to be removed or would suffer significant root damage. The hedges cannot be removed as they provide necessary screening for the neighborhood alley as per the City's zoning code. Also, the sidewalk is not necessary as it would not provide development connectivity.	0	N/A
2B-AC-GR-32	City of Richardson	Gap to Remain	Richardson Dr	Jolee St & W Arapaho Rd	West	870	A long row of hedges would need to be removed to accommodate sidewalk in a narrow space. More than a dozen trees may either also need to be removed or would suffer significant root damage. The hedges cannot be removed as they provide necessary screening for the neighborhood alley as per the City's zoning code. Also, the sidewalk is not necessary as it would not provide development connectivity.	0	N/A
2B-AC-RP-33	City of Richardson	Repair	Richardson Dr	Monte Blaine Ln & W Arapaho Rd	East	200	Remove and replace a few sidewalk panels that have settled and cracked, creating trip hazards.	29	$3,500
2B-AC-RP-34	City of Richardson	Repair	Richardson Dr	Monte Blaine Ln & W Arapaho Rd	East	260	Remove and replace a few sidewalk panels that have settled and cracked due to tree root upheaval or where poor drainage has caused erosion and sediment accumulation on top of the sidewalk, creating trip hazards.	29	$4,500

Half Mile Area Improvements Matrix

Arapaho Center Station

Opinion of Probable Constr. Cost = $261,300

Sidewalk & Shared Use Path Segments

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North Central Texas Council of Governments

DART Red & Blue Line Corridors Last Mile Connections

ID	Owner	Improvement Type	Street Name	Between	Side of Street	Length (ft)	Notes	Priority Score	Opinion of Probable Cost
2B-AC-SW-38	City of Richardson	New Sidewalk	Alma Rd	Alma Rd & E Arapaho Rd	West	900	Regrading of adjacent ditch may be necessary to provide level way for sidewalk. Modification of drainage structures may be required. The City of Richardson notes that the southern portion of the roadway, which today nearly connects with Arapaho Rd, may be removed as part of future development on private property and may therefore also preclude a sidewalk connection to Arapaho Rd.	13	N/A
2B-AC-SW-39	City of Richardson	New Sidewalk	Alma Rd	Alma Rd & E Arapaho Rd	East	870	Short retaining walls would be needed adjacent to some sloped areas, with associated street light pole relocation, tree root damage, underground utility adjustments, and removal of business landscaping. The City of Richardson notes that the southern portion of the roadway, which today nearly connects with Arapaho Rd, may be removed as part of future development on private property and may therefore also preclude a sidewalk connection to Arapaho Rd.	20	N/A
2B-AC-RP-40	City of Richardson	Repair	W Arapaho Rd	West Study Boundary & Richardson Dr	North	5	Adjust traffic signal hand box to be same elevation as sidewalk so it does not cause a trip hazard.	17	N/A
2B-AC-RP-41	City of Richardson	Repair	E Arapaho Rd	N Dorothy Dr & Grove Rd	South	95	Remove and replace several sidewalk panels near a steel electric utility pole and utility manhole, where severe settlement has created significant trip hazards.	25	$11,100
2B-AC-GR-42	City of Richardson	Gap to Remain	E Arapaho Rd	N Dorothy Dr & Grove Rd	North	225	Utility poles, a traffic signal pole, and a steep driveway block the way for sidewalk in the narrow space between the curb and the fence for a historic cemetery. Regrading and resetting of the fence would be needed to add sidewalk, with likely disturbance to some graves in the cemetery. A sidewalk already exists to bypass the cemetery on its north and west boundaries away from the roadway.	0	N/A
2B-AC-SW-44	City of Richardson	New Sidewalk	N Interurban St	E Arapaho Rd & South Study Boundary	East	695	Steep driveways, the accessibility ramp to a business, concrete steps to entries of several other businesses, sloped concrete retaining walls to business landscaping, and right angle parking flush with the street would all combine to make construction of sidewalk on this side of the street extremely challenging. On-street parallel parking is prevalent on both sides of the street, so a road diet to build sidewalk would also be an unlikely option.	18	N/A
2B-AC-SW-45	City of Richardson	New Sidewalk	Hilltop Ave	N Greenville Ave & N Dorothy Dr	North	830	Three large trees could suffer root damage by constructing sidewalk here. A brick wall adjacent to the greenway runs the entire length of the block with no pedestrian access to the businesses to the north of this otherwise residential street, so demand for pedestrian travel on this side of the street is unlikely. The businesses to the north have access via a driveway on Dorothy Dr, and existing residential sidewalk on the south side of the street provides connectivity.	15	N/A

Half Mile Area Improvements Matrix

Arapaho Center Station

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North Central Texas Council of Governments
DART Red & Blue Line Corridors Last Mile Connections

ID	Owner	Improvement Type	Street Name	Between	Side of Street	Length (ft)	Notes	Priority Score	Opinion of Probable Cost
2B-AC-SW-46	City of Richardson	New Sidewalk	Hillcrest Ave	N Greenville Ave & N Dorothy Dr	North	980	Street lacks existing curb and gutter, which should be constructed together with sidewalk if possible to avoid drainage problems. Culverts are not present under residential driveways, which slope downward away from the street and would need to be reconstructed to provide level sidewalk crossings. City of Richardson reports when approached about street reconstruction, residents in the neighborhood were against the idea.	16	N/A
2B-AC-SW-47	City of Richardson	New Sidewalk	Hillcrest Ave	N Greenville Ave & N Dorothy Dr	South	990	Street lacks existing curb and gutter, which should be constructed together with sidewalk if possible to avoid drainage problems. Culverts are not present under residential driveways, which slope downward away from the street and would need to be reconstructed to provide level sidewalk crossings. City of Richardson reports when approached about street reconstruction, residents in the neighborhood were against the idea.	16	N/A
2B-AC-SW-48	City of Richardson	New Sidewalk	Hillside Ave	West Study Boundary & N Dorothy Dr	North	865	Street lacks existing curb and gutter, which should be constructed together with sidewalk if possible to avoid drainage problems. Culverts are not present under residential driveways, which slope downward away from the street and would need to be reconstructed to provide level sidewalk crossings. City of Richardson reports when approached about street reconstruction, residents in the neighborhood were against the idea.	11	N/A
2B-AC-SW-49	City of Richardson	New Sidewalk	Hillside Ave	West Study Boundary & N Dorothy Dr	South	795	Street lacks existing curb and gutter, which should be constructed together with sidewalk if possible to avoid drainage problems. Culverts are not present under residential driveways, which slope downward away from the street and would need to be reconstructed to provide level sidewalk crossings. A short retaining wall would be needed to construct sidewalk near the intersection with Dorothy Dr. City of Richardson reports when approached about street reconstruction, residents in the neighborhood were against the idea.	11	N/A
2B-AC-RP-50	City of Richardson	Repair	Grove Rd	E Arapaho Rd & South Study Boundary	West	280	Remove and replace a few sidewalk panels where settlement has created significant trip hazards.	21	N/A
2B-AC-RP-51	City of Richardson	Repair	Grove Rd	E Arapaho Rd & South Study Boundary	East	20	Remove and replace a sidewalk panel near a utility pole where settlement has created a significant trip hazard.	11	N/A
2B-AC-RP-52	City of Richardson	Repair	Grove Rd	E Arapaho Rd & South Study Boundary	East	75	Remove and replace a few sidewalk panels near a utility manhole where settlement has created a significant trip hazard.	7	N/A
2B-AC-SW-54	City of Richardson	New Sidewalk	Jolee St	Lorrie Dr & Richardson Dr	South	25	Remove existing paver stones and replace with full-width sidewalk at break in hedge row.	15	N/A

Opinion of Probable Cost - City of Richardson Subtotal……. $99,300

Half Mile Area Improvements Matrix

Arapaho Center Station

Opinion of Probable Constr. Cost = $261,300

Sidewalk & Shared Use Path Segments

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North Central Texas Council of Governments
DART Red & Blue Line Corridors Last Mile Connections

ID	Owner	Improvement Type	Street Name	Between	Side of Street	Length (ft)	Notes	Priority Score	Opinion of Probable Cost
2B-AC-SW-37	DART/Private Property	New Sidewalk	N/A	Central Expy & Station Platform	N/A	550	Build sidewalk connecting train platform to U.S. 75 frontage road. See station improvement 2B-AC-ST-13. A bent chain link fence and nearby makeshift stepstool near the tracks indicate existing pedestrian demand for this connection. Improvement will require adjusting chain link fence, handrail, and other utilities near the station platform. A right-of-way easement or acquisition would be needed to connect through private property, and adjacent business parking would need to be monitored to ensure it remains available for businesses and not used by DART park-and-ride customers. Some tree roots and business landscaping would be affected. A very short retaining wall may be needed between adjacent parking lots at slightly different elevations. City of Richardson reports this improvement is currently under discussion with DART and the property owners.	53	N/A
Opinion of Probable Cost - DART/Private Property Subtotal									***$0***
2B-AC-SP-V01	Kansas City Southern Railroad	Shared Use Path	Regional Veloweb	North Study Boundary & N Collins Blvd	N/A	910	Some backfill may be needed to level path for sidewalk on slope adjacent to railroad tracks. City of Richardson reports no near-term plans for trail along KCS Railroad line.	17	N/A
Opinion of Probable Cost - Kansas City Southern Railroad Subtotal									***$0***
2B-AC-GR-08	TxDOT	Gap to Remain	Central Expy	North Study Boundary & N Collins Blvd	East	1025	Because the DART tracks run immediately east of the U.S. 75 Northbound Frontage Road, with Greenville Ave on the east side of the tracks, no meaningful land use for pedestrian access would be provided by building sidewalk adjacent to the tracks. Furthermore, landscaping would need to be removed and the travel experience would be highly uncomfortable for pedestrians.	0	N/A
2B-AC-RP-23	TxDOT	Repair	Central Expy	N Collins Blvd & Melrose Dr	West	285	The sidewalk has settled significantly relative to the curb, creating an unacceptable cross slope. Several panels should be removed and replaced.	22	$34,000
2B-AC-RP-24	TxDOT	Repair	Central Expy	Melrose Dr & Monte Blaine Ln	West	5	Remove and replace sidewalk panels that have settled, creating significant trip hazards.	37	$1,800
2B-AC-GR-25	TxDOT	Gap to Remain	Central Expy	E Collins Blvd & E Arapaho Rd	East	1650	Handrail near fire hydrant would need to be adjusted to continue sidewalk north near the Ten 50 BBQ restaurant. Some landscaping adjacent to the restaurant would need to be removed. Farther north, the greenway tapers into a narrow space between the frontage road and the DART tracks. No meaningful land use for pedestrian access would be provided by building sidewalk adjacent to the tracks. Furthermore, landscaping would need to be removed and the travel experience would be highly uncomfortable for pedestrians.	0	N/A
2B-AC-RP-35	TxDOT	Repair	Central Expy	Monte Blaine Ln & W Arapaho Rd	West	45	Remove and replace settled sidewalk panels near drainage problem area at corner of church parking lot since they create a significant trip hazard.	34	$3,200

Half Mile Area Improvements Matrix

Arapaho Center Station

Opinion of Probable Constr. Cost = $261,300

Sidewalk & Shared Use Path Segments

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North Central Texas Council of Governments

DART Red & Blue Line Corridors Last Mile Connections

ID	Owner	Improvement Type	Street Name	Between	Side of Street	Length (ft)	Notes	Priority Score	Opinion of Probable Cost
2B-AC-SW-36	TxDOT	New Sidewalk	Central Expy	N Collins Blvd & E Arapaho Rd	East	440	Some short retaining walls may be needed to build sidewalk in narrow space between frontage road curb and higher elevation business parking lots. Underground utility boxes and a drainage structrure for the parking lot may need to be modified. Streetlight poles may need to be relocated. Two trees could suffer significant root damage.	54	$123,000
2B-AC-SW-43	TxDOT	New Sidewalk	Central Expy	E Arapaho Rd & South Study Boundary	East	280	Underground utility manholes and boxes would need to be adjusted to build sidewalk in the narrow space between the frontage road curb and a car dealership parking lot. Some short retaining walls may be needed, and adjustments to drainage features of the adjacent parking lot would likely need to be modified near the north end of the sidewalk gap.	14	N/A

Opinion of Probable Cost - TxDOT Subtotal ***$162,000***

Opinion of Probable Cost - Total for All Sidewalk Recommendations in Half Mile Area ***$261,300***

Half Mile Area Improvements Matrix

Arapaho Center Station

Opinion of Probable Constr. Cost = $220,300

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North Central Texas Council of Governments

DART Red & Blue Line Corridors Last Mile Connections

Crosswalk Segments

ID	Owner	Improvement Type	Street Name	At/Between	Side of Street	Length (ft)	Notes	Priority Score	Opinion of Probable Cost
2B-AC-CW-04	City of Richardson	New Crosswalk	Ramp from Southbound Collins Blvd to Southbound Central Expy	Collins Blvd & Central Expy	N/A	35	Add signed, marked, and lit crosswalk to cross high-speed ramp from Collins Blvd to U.S. 75. Consider pedestrian-actuated rectangular rapid flashing beacons (RRFB's) to increase yielding compliance by drivers. The City of Richardson reports plans to implement a road diet on the Collins Blvd bridge that will allow for wider sidewalks and protected bike lanes in the vicinity of this improvement. The City also reports this segment will be included in an upcoming Dallas County MCIP application.	24	$29,300
2B-AC-CW-05	City of Richardson	New Crosswalk	Ramp from Southbound Collins Blvd to Southbound Central Expy	Collins Blvd & Central Expy	N/A	30	Add signed, marked, and lit crosswalk to cross high-speed ramp from U.S. 75 to Collins Blvd. Consider pedestrian-actuated rectangular rapid flashing beacons (RRFB's) to increase yielding compliance by drivers. The City of Richardson reports this segment will be included in an upcoming Dallas County MCIP application.	23	$29,300
2B-AC-CW-16	City of Richardson	New Crosswalk	Ramp from Northbound Greenville Ave to Eastbound Collins Blvd	N Greenville Ave & Alma Rd	N/A	35	Add signed, marked, and lit crosswalk to cross high-speed ramp from U.S. 75 to Collins Blvd. Consider pedestrian-actuated rectangular rapid flashing beacons (RRFB's) to increase yielding compliance by drivers. The City of Richardson reports this segment will be included in an upcoming Dallas County MCIP application.	20	N/A
2B-AC-CW-17	City of Richardson	New Crosswalk	Ramp from Westbound Collins Blvd to Northbound Central Expy	Central Expy & Alma Rd	N/A	25	Add signed, marked, and lit crosswalk to cross high-speed ramp from Collins Blvd to U.S. 75. Consider pedestrian-actuated rectangular rapid flashing beacons (RRFB's) to increase yielding compliance by drivers. The City of Richardson reports this segment will be included in an upcoming Dallas County MCIP application.	14	N/A

Half Mile Area Improvements Matrix

Arapaho Center Station

Opinion of Probable Constr. Cost = $220,300

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North Central Texas Council of Governments

DART Red & Blue Line Corridors Last Mile Connections

Crosswalk Segments

ID	Owner	Improvement Type	Street Name	At/Between	Side of Street	Length (ft)	Notes	Priority Score	Opinion of Probable Cost
2B-AC-CW-53	City of Richardson	New Crosswalk	Richardson Dr	Jolee St	South	60	Add a high-visibility signed and marked crosswalk where the sidewalk on the west side of Richardson Dr ends and sidewalk improvements to the north are infeasible. The location of the crosswalk must be designed carefully to both maximize and provide adequate sight distance around the hedges on the crosswalk's west end and the tree-lined horizontal curve in the roadway geometry to the north. Trim the hedge row back as necessary to provide good pedestrian sight distance. Add yield lines and "Yield Here to Pedestrians" signing in each direction to mitigate risk of dual threat situation for pedestrians. Give strong consideration to installing pedestrian-actuated rectangular rapid flashing beacons (RRFB's), particularly due to the sight distance limitations. A road diet to introduce curb extensions and/or a median refuge island for pedestrians might also be considered to increase available pedestrian sight distance.	15	N/A
2B-AC-CW-55	City of Richardson	New Crosswalk	Richardson Dr	Monte Blaine Ln & Jolee St	N/A	65	Add a high-visibility signed and marked crosswalk where the sidewalk on the west side of Richardson Dr ends and sidewalk improvements to the south are infeasible. The location of the crosswalk must be designed carefully to both maximize and provide adequate sight distance around the horizontal curves in the tree-lined roadway geometry. Add yield lines and "Yield Here to Pedestrians" signing in each direction to mitigate risk of dual threat situation for pedestrians. Give strong consideration to installing pedestrian-actuated rectangular rapid flashing beacons (RRFB's), particularly due to the sight distance limitations. A road diet to introduce curb extensions and/or a median refuge island for pedestrians might also be considered to increase available pedestrian sight distance.	22	$161,700

Opinion of Probable Cost - City of Richardson Subtotal ***$220,300***

Opinion of Probable Cost - Total for All Crosswalk Recommendations in Half Mile Area ***$220,300***

Half Mile Area Improvements Matrix

Spring Valley Station

Opinion of Probable Constr. Cost = $380,800

Sidewalk & Shared Use Path Segments

Improvement Code Legend: ID: 1A-PR-SW-01
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North Central Texas Council of Governments

DART Red & Blue Line Corridors Last Mile Connections

ID	Owner	Improvement Type	Street Name	Between	Side of Street	Length (ft)	Notes	Priority Score	Opinion of Probable Cost
2C-SV-SW-61	City of Richardson	New Sidewalk	S Greenville Ave	Buckingham Dr & South Study Boundary	East	360	Sidewalk construction would involve impacts to residential landscaping for one home. The distance from the station for this segment is relatively high, and there is a lack of development to the south.	18	N/A
2C-SV-SW-05	City of Richardson	New Sidewalk	S Floyd Rd	James Dr & S Central Expy	West	70		25	$19,300
2C-SV-SW-07	City of Richardson	New Sidewalk	W Phillips St	S Central Expy & S Sherman St	North	20	City of Richardson reports that Town North Mazda is expected to be filing new development plans for their site within the year that will address this issue.	6	N/A
2C-SV-RP-13	City of Richardson	Repair	S Sherman St	North Study Boundary & W Phillips St	East	20	Remove and replace sidewalk panels where trip hazards exist due to tree root upheaval and settlement near storm drain manholes.	14	N/A
2C-SV-RP-14	City of Richardson	Repair	W Phillips St	S Sherman St & DART Tracks	North	5	Remove and replace sidewalk panels where trip hazard exists due to severe cracking adjacent to underground utility box.	7	N/A
2C-SV-RP-15	City of Richardson	Repair	W Phillips St	S Sherman St & DART Tracks	South	45	Correct trip hazard that has occurred due to tree root upheaval.	7	N/A
2C-SV-RP-18	City of Richardson	Repair	W Spring Valley Rd	S Central Expy & S Sherman St	South	95	Correct trip hazards caused by differential settlement near a fire hydrant and driveway.	17	N/A
2C-SV-RP-19	City of Richardson	Repair	W Spring Valley Rd	S Sherman St & Lingco Dr	South	70	Correct trip hazard caused by settlement of narrow sidewalk panel behind storm drain inlet.	45	$12,800
2C-SV-GR-20	City of Richardson	Gap to Remain	S Sherman St	North Dallas Community Bible Fellowship	N/A	100	This existing crosswalk across a six-lane divided arterial without other safety countermeasures should be removed. It is not accessible, and the City of Richardson reports it is not utilized and they have recently removing the pedestrian warning signs. If the crosswalk remains, signing should be re-installed along with additional measures, including yield lines and "Yield Here to Pedestrians" signing for the three lanes in each direction at a minimum. (Note removal of this crosswalk will not negatively impact access to and from the DART Station.)	0	N/A
2C-SV-GR-21	City of Richardson	Gap to Remain	Texas St	North Study Boundary & E Phillips St	West	420	The street lacks curb and gutter. Removal of over a dozen trees and some regrading would need to occur to provide sidewalk in the narrow space between the street and a guardrail and a large concrete drainage channel. Sidewalk is unnecessary on this side of the street since the Central Trail shared-use path is already present on the west side of the drainage channel.	0	N/A

Half Mile Area Improvements Matrix

Spring Valley Station

Opinion of Probable Constr. Cost = $380,800

Sidewalk & Shared Use Path Segments

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North Central Texas Council of Governments

DART Red & Blue Line Corridors Last Mile Connections

ID	Owner	Improvement Type	Street Name	Between	Side of Street	Length (ft)	Notes	Priority Score	Opinion of Probable Cost
2C-SV-SW-22	City of Richardson	New Sidewalk	Texas St	North Study Boundary & E Phillips St	East	425	Street does not have existing curb and gutter, which should be constructed with sidewalk to avoid drainage problems. A ditch would need to be filled, with several existing pipe culverts modified or replaced. Some vegetation would need to be removed, and tree root impacts could occur. Except for one 4-plex building on the corner, which already has sidewalk access via Phillips St, the land along this segment is undeveloped. City of Richardson reports this sidewalk will probably be built when the property is redeveloped.	4	N/A
2C-SV-RP-23	City of Richardson	Repair	E Phillips St	Texas St & S Greenville Ave	North	30	Remove and replace sidewalk panels where trip hazards exist due to panel settlement near driveways.	10	N/A
2C-SV-SW-24	City of Richardson	New Sidewalk	McKamy Springs Ct	Central Trail & Brick Row	South	45	Consider providing short break in fence to provide a sidewalk connection to the Central Trail. This would require removal of a short section of fence and part of a short retaining wall, as well as a few medium-sized trees, but would provide a shorter walking distance to the station for many apartment and townhome residents. The City of Richardson indicates they will need to work with the property owner on whether they have a desire for this improvement.	21	N/A
2C-SV-GR-25	City of Richardson	Gap to Remain	Central Trail	Spring Valley Rd	N/A	135	Signalized crosswalks are available at less than 200 feet in either direction along Spring Valley Rd from the station platform and the adjacent Central Trail running along the DART tracks. A crosswalk improvement for more direct pedestrian travel along the trail would pose an undue constraint on vehicular signal coordination given the short distance of the trail detour to cross. Nonetheless, pedestrian crossing demand was observed in the field. Consider adjusting the location of bus stops and adding aesthetic but anti-climb fencing in the median of Spring Valley Road to channelize all pedestrian and bicyclist crossings to the nearby crosswalks. See station improvement 2C-SV-ST-09.	0	N/A
2C-SV-SW-26	City of Richardson	New Sidewalk	S Greenville Ave	Centennial Blvd & Buckingham Dr	West	350	Five large trees would need to be removed to provide sidewalk in narrow space between curb and business parking lot. Above-ground and underground utility boxes and manholes would need to be modified, and excavation would be needed to level the existing mound of earth. A DART bus stop without sidewalk access is posted along this segment.	31	$39,300
2C-SV-SW-28	City of Richardson	New Sidewalk	Buckingham Rd	DART Tracks & S Greenville Ave	South	1355	Sidewalk construction would likely cause root damage to some large trees lining the edge of the Restland Cemetery. Other trees may need to be removed, and short retaining walls could be needed in some places due to the cemetery's elevation above street level. Vegetation and tree branches hanging over the future sidewalk's path would also need to be cleared, particularly for a large stand of bamboo trees near the west end of the gap. A DART bus stop without sidewalk access is posted along this segment.	17	N/A

Half Mile Area Improvements Matrix

Spring Valley Station

Opinion of Probable Constr. Cost = $380,800

Sidewalk & Shared Use Path Segments

Improvement Code Legend: ID: 1A-PR-SW-01
1A ← Station Number
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North Central Texas Council of Governments
DART Red & Blue Line Corridors Last Mile Connections

ID	Owner	Improvement Type	Street Name	Between	Side of Street	Length (ft)	Notes	Priority Score	Opinion of Probable Cost
2C-SV-SW-29	City of Richardson	New Sidewalk	S Greenville Ave	Buckingham Dr & South Study Boundary	West	560	Sidewalk construction would require adjustments to underground utility boxes and traffic signs.	13	N/A
2C-SV-SW-33	City of Richardson	New Sidewalk	Huffhines St	S Greenville Ave & East Study Boundary	North	570	Street does not have existing curb and gutter, which should be constructed with sidewalk to avoid drainage problems. Underground utility boxes and manholes would need to be adjusted and residential landscaping would need to be removed. Residential driveways would also need to be reconstructed. City of Richardson reports that when approached about street reconstruction, residents in the neighborhood were against the idea of new sidewalk.	12	N/A
2C-SV-SW-34	City of Richardson	New Sidewalk	Huffhines St	S Greenville Ave & East Study Boundary	South	510	Street does not have existing curb and gutter, which should be constructed with sidewalk to avoid drainage problems. Above-ground and underground utility boxes and manholes would need to be adjusted. Residential landscaping and other vegetation would need to be removed. Utility poles are present but likely avoidable. City of Richardson reports that when approached about street reconstruction, residents in the neighborhood were against the idea of new sidewalk.	13	N/A
2C-SV-SW-35	City of Richardson	New Sidewalk	Wista Vista Dr	West Terminus & East Study Boundary	North	615	Street does not have existing curb and gutter, which should be constructed with sidewalk to avoid drainage problems. Sump drainage inlet would need to be removed. Backfill to regrade ditch for level sidewalk could impact residential landscaping. Tree root damage could occur. Housing density is low, and street does not connect to rest of study area pedestrian network without exiting half-mile radius, so pedestrian walking trips to the station are less likely. City of Richardson reports that when approached about street reconstruction, residents in the neighborhood were against the idea of new sidewalk.	5	N/A
2C-SV-SW-36	City of Richardson	New Sidewalk	Wista Vista Dr	West Terminus & East Study Boundary	South	660	Street does not have existing curb and gutter, which should be constructed with sidewalk to avoid drainage problems. Several grate drainage inlets would need to be removed. Backfill to regrade ditch for level sidewalk could impact residential landscaping. Tree root damage could occur. Underground utility boxes would need to be adjusted. Housing density is low, and street does not connect to rest of study area pedestrian network without exiting half-mile radius, so pedestrian walking trips to the station are less likely. City of Richardson reports that when approached about street reconstruction, residents in the neighborhood were against the idea of new sidewalk.	5	N/A

Half Mile Area Improvements Matrix

Spring Valley Station

Opinion of Probable Constr. Cost = $380,800

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North Central Texas Council of Governments

DART Red & Blue Line Corridors Last Mile Connections

ID	Owner	Improvement Type	Street Name	Between	Side of Street	Length (ft)	Notes	Priority Score	Opinion of Probable Cost
2C-SV-SW-37	City of Richardson	New Sidewalk	Pittman St	S Greenville Ave & Abrams Rd	North	9	Street does not have existing curb and gutter, which should be constructed with sidewalk to avoid drainage problems. Several grate drainage inlets would need to be removed. Backfill to regrade ditch for level sidewalk could impact residential landscaping. Some vegetation would need to be removed. City of Richardson reports that when approached about street reconstruction, residents in the neighborhood were against the idea of new sidewalk.	16	N/A
2C-SV-SW-39	City of Richardson	New Sidewalk	Pittman St	S Greenville Ave & Abrams Rd	South	1000	Street does not have existing curb and gutter, which should be constructed with sidewalk to avoid drainage problems. Several grate drainage inlets would need to be removed. Backfill to regrade ditch for level sidewalk could impact residential landscaping. Some vegetation would need to be removed, and tree root damage could occur. Above-ground and underground utility boxes, manholes, and possibly utility poles would need to be adjusted. City of Richardson reports that when approached about street reconstruction, residents in the neighborhood were against the idea of new sidewalk.	16	N/A
2C-SV-SW-40	City of Richardson	New Sidewalk	Maple St	Abrams Rd & East Study Boundary	North	190		10	N/A
2C-SV-SW-41	City of Richardson	New Sidewalk	Maple St	Abrams Rd & East Study Boundary	South	205	Steep driveways may need to be reconstructed or bypassed in order to provide sidewalk.	10	N/A
2C-SV-RP-42	City of Richardson	Repair	E Spring Valley Rd	S Greenville Ave & Abrams Rd	North	920	Several significant trip hazards exist along this block due to severely cracked sidewalk. Much of the rest of the sidewalk on the block is in fair condition at best and likely to deteriorate to poor conditions in coming years. Consider removing and replacing sidewalk for the entire block.	21	N/A
2C-SV-SW-43	City of Richardson	New Sidewalk	E Spring Valley Rd	Abrams Rd & East Study Boundary	North	325	Two medium-sized trees, a signal mast arm pole, and a signal cabinet occupy the space that would be needed for sidewalk. Due to the cross slope, each may need to be either removed or adjusted to level for sidewalk. The north side of Spring Valley Road on this block faces mostly back yard fences for the adjacent homes, all of which have existing sidewalk access fronting Grace Dr to the north.	12	N/A
2C-SV-RP-44	City of Richardson	Repair	S Greenville Ave	E Spring Valley Rd & Centennial Blvd	East	115	Remove and replace sidewalk panels where trip hazards exist due to tree root upheaval from trees on either side of residential back yard fence.	20	N/A
2C-SV-GR-45	City of Richardson	Gap to Remain	Centennial Blvd	Abrams Rd & East Study Boundary	North	300	Insufficient space exists for sidewalk between roadway curb and wall protecting Lois Branch concrete-lined drainage channel. A road diet or modification of the drainage channel would be needed to provide sidewalk, which would not connect to any pedestrian access points to adjacent land.	0	N/A
2C-SV-RP-46	City of Richardson	Repair	Centennial Blvd	S Greenville Ave & Abrams Rd	South	15	Correct trip hazard caused by settlement of narrow sidewalk panel behind storm drain inlet.	22	$6,300

Half Mile Area Improvements Matrix

Spring Valley Station

Opinion of Probable Constr. Cost = $380,800

Sidewalk & Shared Use Path Segments

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North Central Texas Council of Governments
DART Red & Blue Line Corridors Last Mile Connections

ID	Owner	Improvement Type	Street Name	Between	Side of Street	Length (ft)	Notes	Priority Score	Opinion of Probable Cost
2C-SV-RP-56	City of Richardson	Repair	S Greenville Ave	Rosehill Ct & Buckingham Dr	East	35	Adjust an underground communications utility box that has settled significantly below the elevation of surrounding sidewalk, creating a significant trip hazard.	20	N/A
2C-SV-SW-57	City of Richardson	New Sidewalk	S Greenville Ave	Rosehill Ct & Buckingham Dr	East	130	A worn path in the grass indicates existing pedestrian demand leading to a DART bus stop at the north end of the gap. Sidewalk construction would involve adjusting the guy wire for a utility pole, possibly reconstructing a steep residential driveway, and potential adjustments to underground utility boxes. At the northeast corner of the intersection with Buckingham Dr, a utility pole blocks access to the existing crosswalks where the curb is depressed to street level for a diagonal pedestrian ramp that has not yet been built. Realignment of crosswalks, construction of the curb for two perpendicular pedestrian ramps, and associated changes to stop bar locations and vehicle detection loops may be required unless the utility pole can be relocated.	19	N/A
2C-SV-SW-58	City of Richardson	New Sidewalk	Buckingham Rd	S Greenville Ave & East Study Boundary	North	45	Sidewalk construction may require adjustments to traffic signal ground boxes.	18	N/A
2C-SV-SW-59	City of Richardson	New Sidewalk	Willingham Dr	Abrams Rd & East Study Boundary	South	195	Sidewalk construction may require adjustments to underground utility boxes. City of Richardson reports that sidewalk construction would be required as part of development plans for these sites.	7	N/A
2C-SV-SW-60	City of Richardson	New Sidewalk	Buckingham Rd	S Greenville Ave & East Study Boundary	South	45	Sidewalk construction may require adjustments to traffic signal ground boxes. Significant root damage may occur to a tree near the corner with Greenville Ave unless the signal mast arm pole on the corner can be reconstructed in a new location to make way for sidewalk.	12	N/A
Opinion of Probable Cost - City of Richardson Subtotal									***$77,700***
2C-SV-GR-47	Private Property	Gap to Remain	Prince Albert Ct	West Terminus & Cotswolds Ct	North	205	Because the neighborhood is gated, access was not available to inventory any constraints that may apply to future sidewalk construction. This is a private neighborhood street outside of the City's purview, so it is assumed that sidewalk construction would not be able to be coordinated.	0	N/A
2C-SV-GR-48	Private Property	Gap to Remain	Prince Albert Ct	West Terminus & Cotswolds Ct	South	200	Because the neighborhood is gated, access was not available to inventory any constraints that may apply to future sidewalk construction. This is a private neighborhood street outside of the City's purview, so it is assumed that sidewalk construction would not be able to be coordinated.	0	N/A
2C-SV-GR-49	Private Property	Gap to Remain	Rosehill Ct	S Greenville Ave & Cotswolds Ct	North	300	Trees and landscaping would need to be removed to provide sidewalk. The access gate to the neighborhood would also need to be modified since there is no existing pedestrian gate. Beyond the access gate, access was not available to inventory any constraints that may apply to future sidewalk construction. This is a private neighborhood street outside of the City's purview, so it is assumed that sidewalk construction would not be able to be coordinated.	0	N/A

Half Mile Area Improvements Matrix

Spring Valley Station

Opinion of Probable Constr. Cost = $380,800

Sidewalk & Shared Use Path Segments

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North Central Texas Council of Governments

DART Red & Blue Line Corridors Last Mile Connections

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2C-SV-GR-50	Private Property	Gap to Remain	Rosehill Ct	S Greenville Ave & Cotswolds Ct	South	290	Trees and landscaping would need to be removed to provide sidewalk. The access gate to the neighborhood would also need to be modified since there is no existing pedestrian gate. Beyond the access gate, access was not available to inventory any constraints that may apply to future sidewalk construction. This is a private neighborhood street outside of the City's purview, so it is assumed that sidewalk construction would not be able to be coordinated.	0	N/A
2C-SV-GR-51	Private Property	Gap to Remain	Queen Victoria Ct	West Terminus & Cotswolds Ct	North	195	Because the neighborhood is gated, access was not available to inventory any constraints that may apply to future sidewalk construction. This is a private neighborhood street outside of the City's purview, so it is assumed that sidewalk construction would not be able to be coordinated.	0	N/A
2C-SV-GR-52	Private Property	Gap to Remain	Queen Victoria Ct	West Terminus & Cotswolds Ct	South	195	Because the neighborhood is gated, access was not available to inventory any constraints that may apply to future sidewalk construction. This is a private neighborhood street outside of the City's purview, so it is assumed that sidewalk construction would not be able to be coordinated.	0	N/A
2C-SV-GR-53	Private Property	Gap to Remain	Cotswolds Ct	Prince Albert Ct & Rosehill Ct	West	205	Because the neighborhood is gated, access was not available to inventory any constraints that may apply to future sidewalk construction. This is a private neighborhood street outside of the City's purview, so it is assumed that sidewalk construction would not be able to be coordinated.	0	N/A
2C-SV-GR-54	Private Property	Gap to Remain	Cotswolds Ct	Rosehill Ct & Queen Victoria Ct	West	160	Because the neighborhood is gated, access was not available to inventory any constraints that may apply to future sidewalk construction. This is a private neighborhood street outside of the City's purview, so it is assumed that sidewalk construction would not be able to be coordinated.	0	N/A
2C-SV-GR-55	Private Property	Gap to Remain	Cotswolds Ct	Prince Albert Ct & Queen Victoria Ct	East	625	Because the neighborhood is gated, access was not available to inventory any constraints that may apply to future sidewalk construction. This is a private neighborhood street outside of the City's purview, so it is assumed that sidewalk construction would not be able to be coordinated.	0	N/A
Opinion of Probable Cost - Private Property Subtotal……									***$0***
2C-SV-SW-02	TxDOT	New Sidewalk	S Central Expy	North Study Boundary & Dumont Dr	West	440	Driveways between these sidewalk gaps may be steep enough to require reconstruction in order to build sidewalk that avoids utility poles, private property, or other adjacent constraints. Short retaining walls would likely be needed to level the way for sidewalk in the narrow, sloped space between the roadway curb and parking lots at a higher elevation. Some business landscaping would need to be removed. Underground utility boxes and manholes would likely need to be adjusted. This gap is on the outside edge of the study area and a long travel distance from the station.	16	N/A

Half Mile Area Improvements Matrix

Spring Valley Station

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Sidewalk & Shared Use Path Segments

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North Central Texas Council of Governments
DART Red & Blue Line Corridors Last Mile Connections

ID	Owner	Improvement Type	Street Name	Between	Side of Street	Length (ft)	Notes	Priority Score	Opinion of Probable Cost
2C-SV-SW-03	TxDOT	New Sidewalk	S Central Expy	Dumont Dr & James Dr	West	120	Driveways between these sidewalk gaps may be steep enough to require reconstruction in order to build sidewalk that avoids utility poles, private property, or other adjacent constraints.	22	$73,100
2C-SV-SW-04	TxDOT	New Sidewalk	S Central Expy	James Dr & S Floyd Rd	West	55	A utility pole blocks the path of existing sidewalk at the southern end of this gap. Two other utility poles and a streetlight pole may also need to be adjusted to build sidewalk. Two wide, steep driveways, one of them to right-angle business parking, would need to be reconstructed or bypassed. Short retaining walls would likely be needed to level the way for sidewalk in the narrow, sloped space between the roadway curb and parking lots at a higher elevation. City of Richardson reports this sidewalk will be built when the property is redeveloped.	20	N/A
2C-SV-SW-06	TxDOT	New Sidewalk	S Central Expy	North Study Boundary & W Phillips St	East	255	Sidewalk construction may require reconstruction of somewhat steep business driveways and adjustments to underground utility boxes. City of Richardson reports that Town North Mazda is expected to be filing new development plans for their site within the year that will address this issue.	8	N/A
2C-SV-RP-08	TxDOT	Repair	S Central Expy	W Phillips St & W Spring Valley Rd	East	25	Correct trip hazard that has occurred due to uneven sidewalk panel settlement.	15	N/A
2C-SV-SW-09	TxDOT	New Sidewalk	S Central Expy	W Phillips St & W Spring Valley Rd	East	105	Backfill would need to be added to provide a level surface for sidewalk adjacent to the Como Motel, requiring a re-design of the drainage system for the site. A grate inlet and underground utility box would need to be adjusted.	21	N/A
2C-SV-RP-10	TxDOT	Repair	S Central Expy	W Phillips St & W Spring Valley Rd	East	65	Remove and replace a few sidewalk panels near a crape myrtle tree and a low point where poor drainage may have caused sidewalk spalling. Repair several other trip hazards caused by sidewalk settlement or tree root heaving.	24	$4,500
2C-SV-SW-11	TxDOT	New Sidewalk	S Central Expy	W Phillips St & W Spring Valley Rd	East	990	A large tree would need to be removed near the corner with Spring Valley Road to build sidewalk unless parking spaces in the adjacent office building surface lot were removed to provide a sidewalk bypass. Bypassing this tree would likely still cause root damage, which is also likely for two other trees nearby. Short retaining walls would likely be needed to build sidewalk in narrow spaces between the curb and elevated parking lots. One or more steep driveways would probably need to be reconstructed. Fire hydrants and streetlight poles may need to be adjusted. City of Richardson reports that redevelopment of the Comerica Bank site is slated to occur in next few years, fixing the issues on that parcel.	25	$225,500

Half Mile Area Improvements Matrix

Spring Valley Station

Opinion of Probable Constr. Cost = $380,800

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North Central Texas Council of Governments

DART Red & Blue Line Corridors Last Mile Connections

ID	Owner	Improvement Type	Street Name	Between	Side of Street	Length (ft)	Notes	Priority Score	Opinion of Probable Cost
2C-SV-RP-12	TxDOT	Repair	S Central Expy	W Phillips St & W Spring Valley Rd	East	70	Correct trip hazards due to tree root upheaval and/or other differential settlement near storm drain inlet. City of Richardson reports that redevelopment of the Comerica Bank site is slated to occur in next few years, fixing the issues on that parcel.	17	N/A

Opinion of Probable Cost - TxDOT Subtotal..... $303,100

Opinion of Probable Cost - Total for All Sidewalk Recommendations in Half Mile Area..... $380,800

Half Mile Area Improvements Matrix

Spring Valley Station

Opinion of Probable Constr. Cost = $147,800

Improvement Code Legend: **ID:** 1A-PR-SW-01
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North Central Texas Council of Governments
DART Red & Blue Line Corridors Last Mile Connections

Crosswalk Segments

ID	Owner	Improvement Type	Street Name	At/Between	Side of Street	Length (ft)	Notes	Priority Score	Opinion of Probable Cost
2C-SV-CW-16	City of Richardson	New Crosswalk	S Sherman St	Lingco Dr	North	60	Install new signed, marked, and lit crosswalk with pedestrian ramps.	27	$40,000
2C-SV-CW-17	City of Richardson	Upgrade Crosswalk	Lingco Dr	DART Station Park & Ride	N/A	55	Add yield line and "Yield Here to Pedestrians" signing for two lanes in southbound direction approaching existing signed and marked crosswalk to mitigate risk of dual threat situation for pedestrians. Consider instead implementing a road diet to add a median refuge island. Pedestrian-actuated rectangular rapid flashing beacons (RRFB's) should also be considered for increased pedestrian visibility in either case.	29	$56,000
2C-SV-CW-27	City of Richardson	Upgrade Crosswalk	Buckingham Rd	Central Trail	East	75	Install white crosswalk lines parallel to existing patterned concrete crosswalk that already has lighting, pedestrian ramps and a median refuge. White edge lines as traffic control devices are required to make crosswalks legally enforceable. Add pedestrian warning signs at the crosswalk and advance pedestrian warning signs for the eastbound direction (currently installed only for westbound). Add yield lines and "Yield Here to Pedestrians" signing for both directions to mitigate risk of dual threat situation for pedestrians. Consider a traffic signal to facilitate crossings, particularly in conjunction with the future extension of the Central Trail south of Buckingham Rd at this location. A full traffic signal should be considered instead of a RRFB or pedestrian hybrid beacon due to adjacency to railroad crossing gates and potential confusion with alternative meanings of flashing red lights.	15	N/A
2C-SV-CW-30	City of Richardson	Upgrade Crosswalk	S Greenville Ave	E Phillips St	North	95	Add yield line and "Yield Here to Pedestrians" signing for the two lanes in each direction approaching existing signed and marked crosswalk to mitigate risk of dual threat situation for pedestrians. Consider adding a pedestrian hybrid beacon if warranted by a study of pedestrian volumes during arrival and dismissal times for the First Baptist Church of Hamilton Park and the Richardson ISD Math Science Technology magnet school, both located nearby to the east.	7	N/A

Half Mile Area Improvements Matrix

Spring Valley Station

Opinion of Probable Constr. Cost = $147,800

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North Central Texas Council of Governments

DART Red & Blue Line Corridors Last Mile Connections

Crosswalk Segments

ID	Owner	Improvement Type	Street Name	At/Between	Side of Street	Length (ft)	Notes	Priority Score	Opinion of Probable Cost
2C-SV-CW-31	City of Richardson	Upgrade Crosswalk	S Greenville Ave	E Phillips St	South	85	Add yield line and "Yield Here to Pedestrians" signing for the two lanes in each direction approaching existing signed and marked crosswalk to mitigate risk of dual threat situation for pedestrians. Consider adding a pedestrian hybrid beacon if warranted by a study of pedestrian volumes during arrival and dismissal times for the First Baptist Church of Hamilton Park and the Richardson ISD Math Science Technology magnet school, both located nearby to the east.	9	N/A
2C-SV-CW-38	City of Richardson	New Crosswalk	S Greenville Ave	Pittman St	South	85	Consider a new signed, marked, and lit crosswalk across the south leg of the intersection, with yield lines and "Yield Here to Pedestrians" signing for the two lanes in each direction to mitigate risk of dual threat situation for pedestrians. The existing median would be modified to provide a pedestrian refuge area.	23	$51,800

Opinion of Probable Cost - City of Richardson Subtotal ***$147,800***

Opinion of Probable Cost - Total for All Crosswalk Recommendations in Half Mile Area ***$147,800***

APPENDIX K: Estimated Quantitiies & Opinions of Probable Construction Cost – Half-Mile Improvements

Opinion of Probable Construction Cost

CityLine Bush Station

Improvement Code Legend: **ID:** 1A-PR-SW-01
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OPCC 1C				1C-CB-SW-009		1C-CB-SW-016		1C-CB-SW-019		1C-CB-SW-023		1C-CB-SW-032		1C-CB-SW-035		1C-CB-SW-038		1C-CB-SW-040	
ENTITY	ITEM	UNIT	COST	QUANTITY	COST	QUANTITY	COST	QUANTITY	COST	QUANTITY	COST	QUANTITY	COST	QUANTITY	COST	QUANTITY	COST	QUANTITY	COST
DALLAS	**SIDEWALK (5')**	LF	$35.00		$0.00		$0.00		$0.00		$0.00	120	$4,200.00	255	$8,925.00		$0.00	280	$9,800.00
DALLAS	**SIDEWALK (10' PATH)**	LF	$70.00	725	$50,750.00	450	$31,500.00	300	$21,000.00	160	$11,200.00		$0.00		$0.00	250	$17,500.00		$0.00
DALLAS	**REMOVE SIDEWALK**	LF	$20.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00	30	$600.00		$0.00
DALLAS	**RETAINING WALL (1')**	LF	$20.00	350	$7,000.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00
DALLAS	**RETAINING WALL (2')**	LF	$40.00		$0.00		$0.00		$0.00		$0.00		$0.00	120	$4,800.00		$0.00		$0.00
DALLAS	**RETAINING WALL (3')**	LF	$75.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00
DALLAS	**RETAINING WALL (4')**	LF	$100.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00
DALLAS	**RETAINING WALL (5')**	LF	$125.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00
DALLAS	**CURB AND GUTTER**	LF	$39.72		$0.00		$0.00	160	$6,355.20		$0.00		$0.00	250	$9,930.00		$0.00		$0.00
DALLAS	**DRAINAGE INLETS (MODIFY)**	EA	$3,518.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00
DALLAS	**RCP 18"**	LF	$58.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00
TXDOT	**PED RAMPS**	EA	$2,182.75	4	$8,731.00	4	$8,731.00	4	$8,731.00		$0.00	2	$4,365.50	2	$4,365.50	2	$4,365.50	4	$8,731.00
TXDOT	**MEDIAN CUT (5')**	LF	$36.15		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00
TXDOT	**MEDIAN CUT (10' PATH)**	LF	$72.30		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00
DALLAS	**DRIVEWAY (RESIDENTIAL)**	EA	$3,972.22		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00
DALLAS	**DRIVEWAY (COMMERCIAL)**	EA	$8,444.44		$0.00		$0.00	2	$16,888.88		$0.00		$0.00	1	$8,444.44		$0.00	1	$8,444.44
N/A	**UTILITY POLE RELOCATED**	EA	$22,000.00		$0.00		$0.00	1	$22,000.00		$0.00		$0.00		$0.00		$0.00		$0.00
DALLAS	**MANHOLE ADJUSTMENT**	EA	$572.00		$0.00	1	$572.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00
DALLAS	**TREE RELOCATIONS**	EA	$2,768.00	6	$16,608.00		$0.00	4	$11,072.00		$0.00		$0.00	4	$11,072.00		$0.00		$0.00
DALLAS	**TREE REMOVALS**	EA	$886.00		$0.00	4	$3,544.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00
N/A	**RAILROAD CROSSING**	EA	$120,000.00		$0.00		$0.00		$0.00	1	$120,000.00		$0.00		$0.00		$0.00		$0.00
DALLAS	**TRAFFIC SIGNS RELOCATED**	EA	$223.00	2	$446.00	1	$223.00	2	$446.00		$0.00		$0.00	1	$223.00		$0.00		$0.00
TXDOT	**TRAFFIC SIGNS NEW**	EA	$650.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00
DALLAS	**PAVEMENT MARKINGS (CROSSWALK)**	LF	$9.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00
DALLAS	**PAVEMENT MARKINGS (STOP BAR)**	LF	$8.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00
N/A	**PAVEMENT MARKINGS (TRIANGLES)**	EA	$60.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00
TXDOT	**UTILITY BOX RELOCATION**	EA	$729.33	3	$2,187.99	7	$5,105.31		$0.00		$0.00		$0.00	1	$729.33		$0.00		$0.00
DALLAS	**MEDIAN ISLAND (SEE SHEET[S] THAT FOLLOW FOR MORE INFO)**	EA	SEE OTHER SHEET		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00
DALLAS	**LIGHT POLE RELOCATION**	EA	$4,758.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00
DALLAS	**FENCE (REMOVE AND REPLACE)**	LF	$53.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00
DALLAS	**FIRE HYDRANT RELOCATED**	EA	$3,640.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00
DALLAS	**PARKING STOP**	EA	$97.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00
N/A	**PED GENERAL LIGHTING (NOT FOR CROSSWALK)**	EA	$21,000.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00
N/A	**PED CROSSWALK LIGHTING (#1) - 2 LANE UNDIVIDED**	EA	$26,435.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00
N/A	**PED CROSSWALK LIGHTING (#1) - 3 LANE UNDIVIDED**	EA	$27,182.50		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00
N/A	**PED CROSSWALK LIGHTING (#1) - 4 LANE UNDIVIDED**	EA	$40,407.50		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00
N/A	**PED CROSSWALK LIGHTING (#1) - 4 LANE DIVIDED**	EA	$41,183.75		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00
N/A	**PED CROSSWALK LIGHTING (#1) - 6 LANE UNDIVIDED**	EA	$41,839.25		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00
N/A	**PED CROSSWALK LIGHTING (#1) - 6 LANE DIVIDED**	EA	$42,615.50		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00
N/A	**RRFB (#7) - 3 LANES W/O MEDIAN**	EA	$24,000		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00
N/A	**RRFB (#7) - 1 SOLAR SIGN & PUSH BUTTON IN MEDIAN**	EA	$36,000		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00
N/A	**RRFB (#7) - 2 SOLAR SIGNS & PUSHBUTTON IN MEDIAN**	EA	$48,000		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00
N/A	**PED HYBRID BEACON (#9) - 3 LANE UNDIVIDED**	EA	$150,000		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00
N/A	**PED HYBRID BEACON (#9) - 4 LANE DIVIDED**	EA	$175,000		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00
N/A	**PED HYBRID BEACON (#9) - 6 LANE DIVIDED**	EA	$200,000		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00
N/A	**APS & COUNTDOWN PED SIGNAL (#10) - 1 CW**	EA	$9,500		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00
N/A	**APS & COUNTDOWN PED SIGNAL (#10) - 2 CW**	EA	$15,500		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00
N/A	**APS & COUNTDOWN PED SIGNAL (#10) - 3 CW**	EA	$21,500		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00
N/A	**APS & COUNTDOWN PED SIGNAL (#10) - 4 CW**	EA	$27,500		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00
N/A	**PED TRAFFIC SIGNAL (#11) - 3 LANE UNDIVIDED**	EA	$150,000		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00
N/A	**PED TRAFFIC SIGNAL (#11) - 4 LANE DIVIDED**	EA	$175,000		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00
N/A	**PED TRAFFIC SIGNAL (#11) - 6 LANE DIVIDED**	EA	$210,000		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00
	CONSTRUCTION COST (WITHOUT SIGNALS)	TOTAL			$85,722.99		$49,675.31		$86,493.08		$131,200.00		$8,565.50		$48,489.27		$22,465.50		$26,975.44
	CONSTRUCTION COST	TOTAL			$85,722.99		$49,675.31		$86,493.08		$131,200.00		$8,565.50		$48,489.27		$22,465.50		$26,975.44
	ENGINEERING DESIGN	10%			$8,572.30		$4,967.53		$8,649.31		$13,120.00		$856.55		$4,848.93		$2,246.55		$2,697.54
	GENERAL LANDSCAPING	4%			$3,428.92		$1,987.01		$3,459.72		$5,248.00		$342.62		$1,939.57		$898.62		$1,079.02
	SWPPP	2%			$1,714.46		$993.51		$1,729.86		$2,624.00		$171.31		$969.79		$449.31		$539.51
	TRAFFIC CONTROL	3%			$2,571.69		$1,490.26		$2,594.79		$3,936.00		$256.97		$1,454.68		$673.97		$809.26
	MOBILIZATION	4%			$3,737.52		$2,165.84		$3,771.10		$5,720.32		$373.46		$2,114.13		$979.50		$1,176.13
	FEDERAL CONTINGENCY	2%			$2,114.96		$1,225.59		$2,133.96		$3,236.97		$211.33		$1,196.33		$554.27		$665.54
	OPCC	TOTAL			$107,900.00		$62,600.00		$108,900.00		$165,100.00		$10,800.00		$61,100.00		$28,300.00		$34,000.00
	AVERAGE COST PER LF OF SIDEWALK				$148.83 PER LF		$139.11 PER LF		$363.00 PER LF		$1031.88 PER LF		$90.00 PER LF		$239.61 PER LF		$113.20 PER LF		$121.43 PER LF
	GRAND TOTAL FOR GROUP 1C	$1,950,700.00		Min Cost/LF	$44.62 PER LF														
				Max Cost/LF	$1246.92 PER LF														

Opinion of Probable Construction Cost

CityLine Bush Station

Improvement Code Legend: **ID:** 1A-PR-SW-01
1A ← Station Number
PR ← Station Abbreviation
SW ← Sidewalk (or CW=Crosswalk, VW=Veloweb, RP=Sidewalk Repair, GR=Gap to Remain)
01 ← Improvement Number (matches 1 on Map)

OPCC 1C				1C-CB-SW-046		1C-CB-SW-047		1C-CB-SW-073		1C-CB-SW-027		1C-CB-SW-030		1C-CB-SW-036		1C-CB-SW-037		1C-CB-SW-048	
ENTITY	ITEM	UNIT	COST	QUANTITY	COST	QUANTITY	COST	QUANTITY	COST	QUANTITY	COST	QUANTITY	COST	QUANTITY	COST	QUANTITY	COST	QUANTITY	COST
DALLAS	**SIDEWALK (5')**	LF	$35.00		$0.00	295	$10,325.00	165	$5,775.00	1095	$38,325.00	705	$24,675.00	50	$1,750.00	130	$4,550.00	630	$22,050.00
DALLAS	**SIDEWALK (10' PATH)**	LF	$70.00	290	$20,300.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00
DALLAS	**REMOVE SIDEWALK**	LF	$20.00		$0.00		$0.00		$0.00	50	$1,000.00		$0.00		$0.00		$0.00		$0.00
DALLAS	**RETAINING WALL (1')**	LF	$20.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00
DALLAS	**RETAINING WALL (2')**	LF	$40.00		$0.00		$0.00		$0.00	260	$10,400.00		$0.00		$0.00		$0.00		$0.00
DALLAS	**RETAINING WALL (3')**	LF	$75.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00
DALLAS	**RETAINING WALL (4')**	LF	$100.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00
DALLAS	**RETAINING WALL (5')**	LF	$125.00		$0.00		$0.00		$0.00	15	$1,875.00		$0.00		$0.00		$0.00		$0.00
DALLAS	**CURB AND GUTTER**	LF	$39.72	200	$7,944.00	200	$7,944.00	150	$5,958.00		$0.00		$0.00		$0.00		$0.00		$0.00
DALLAS	**DRAINAGE INLETS (MODIFY)**	EA	$3,518.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00
DALLAS	**RCP 18"**	LF	$58.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00
TXDOT	**PED RAMPS**	EA	$2,182.75		$0.00		$0.00		$0.00	6	$13,096.50	2	$4,365.50	1	$2,182.75		$0.00	4	$8,731.00
TXDOT	**MEDIAN CUT (5')**	LF	$36.15		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00
TXDOT	**MEDIAN CUT (10' PATH)**	LF	$72.30		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00
DALLAS	**DRIVEWAY (RESIDENTIAL)**	EA	$3,972.22		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00
DALLAS	**DRIVEWAY (COMMERCIAL)**	EA	$8,444.44		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00
N/A	**UTILITY POLE RELOCATED**	EA	$22,000.00		$0.00		$0.00		$0.00	1	$22,000.00		$0.00		$0.00		$0.00		$0.00
DALLAS	**MANHOLE ADJUSTMENT**	EA	$572.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00
DALLAS	**TREE RELOCATIONS**	EA	$2,768.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00
DALLAS	**TREE REMOVALS**	EA	$886.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00
N/A	**RAILROAD CROSSING**	EA	$120,000.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00
DALLAS	**TRAFFIC SIGNS RELOCATED**	EA	$223.00	2	$446.00	2	$446.00	1	$223.00	5	$1,115.00	6	$1,338.00		$0.00		$0.00	1	$223.00
TXDOT	**TRAFFIC SIGNS NEW**	EA	$650.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00
DALLAS	**PAVEMENT MARKINGS (CROSSWALK)**	LF	$9.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00
DALLAS	**PAVEMENT MARKINGS (STOP BAR)**	LF	$8.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00
N/A	**PAVEMENT MARKINGS (TRIANGLES)**	EA	$60.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00
TXDOT	**UTILITY BOX RELOCATION**	EA	$729.33	2	$1,458.66	2	$1,458.66	1	$729.33		$0.00		$0.00		$0.00		$0.00		$0.00
DALLAS	**MEDIAN ISLAND (SEE SHEET[S] THAT FOLLOW FOR MORE INFO)**	EA	SEE OTHER SHEET		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00
DALLAS	**LIGHT POLE RELOCATION**	EA	$4,758.00		$0.00		$0.00	1	$4,758.00	1	$4,758.00		$0.00		$0.00		$0.00		$0.00
DALLAS	**FENCE (REMOVE AND REPLACE)**	LF	$53.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00
DALLAS	**FIRE HYDRANT RELOCATED**	EA	$3,640.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00
DALLAS	**PARKING STOP**	EA	$97.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00
N/A	**PED GENERAL LIGHTING (NOT FOR CROSSWALK)**	EA	$21,000.00	1	$21,000.00	1	$21,000.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00
N/A	**PED CROSSWALK LIGHTING (#1) - 2 LANE UNDIVIDED**	EA	$26,435.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00
N/A	**PED CROSSWALK LIGHTING (#1) - 3 LANE UNDIVIDED**	EA	$27,182.50		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00
N/A	**PED CROSSWALK LIGHTING (#1) - 4 LANE UNDIVIDED**	EA	$40,407.50		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00
N/A	**PED CROSSWALK LIGHTING (#1) - 4 LANE DIVIDED**	EA	$41,183.75		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00
N/A	**PED CROSSWALK LIGHTING (#1) - 6 LANE UNDIVIDED**	EA	$41,839.25		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00
N/A	**PED CROSSWALK LIGHTING (#1) - 6 LANE DIVIDED**	EA	$42,615.50		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00
N/A	**RRFB (#7) - 3 LANES W/O MEDIAN**	EA	$24,000		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00
N/A	**RRFB (#7) - 1 SOLAR SIGN & PUSH BUTTON IN MEDIAN**	EA	$36,000		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00
N/A	**RRFB (#7) - 2 SOLAR SIGNS & PUSHBUTTON IN MEDIAN**	EA	$48,000		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00
N/A	**PED HYBRID BEACON (#9) - 3 LANE UNDIVIDED**	EA	$150,000		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00
N/A	**PED HYBRID BEACON (#9) - 4 LANE DIVIDED**	EA	$175,000		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00
N/A	**PED HYBRID BEACON (#9) - 6 LANE DIVIDED**	EA	$200,000		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00
N/A	**APS & COUNTDOWN PED SIGNAL (#10) - 1 CW**	EA	$9,500		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00
N/A	**APS & COUNTDOWN PED SIGNAL (#10) - 2 CW**	EA	$15,500		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00
N/A	**APS & COUNTDOWN PED SIGNAL (#10) - 3 CW**	EA	$21,500		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00
N/A	**APS & COUNTDOWN PED SIGNAL (#10) - 4 CW**	EA	$27,500		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00
N/A	**PED TRAFFIC SIGNAL (#11) - 3 LANE UNDIVIDED**	EA	$150,000		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00
N/A	**PED TRAFFIC SIGNAL (#11) - 4 LANE DIVIDED**	EA	$175,000		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00
N/A	**PED TRAFFIC SIGNAL (#11) - 6 LANE DIVIDED**	EA	$210,000		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00

CONSTRUCTION COST (WITHOUT SIGNALS)	TOTAL	$30,148.66	$20,173.66	$17,443.33	$92,569.50	$30,378.50	$3,932.75	$4,550.00	$31,004.00
CONSTRUCTION COST	TOTAL	$51,148.66	$41,173.66	$17,443.33	$92,569.50	$30,378.50	$3,932.75	$4,550.00	$31,004.00
ENGINEERING DESIGN	10%	$5,114.87	$4,117.37	$1,744.33	$9,256.95	$3,037.85	$393.28	$455.00	$3,100.40
GENERAL LANDSCAPING	4%	$1,205.95	$806.95	$697.73	$3,702.78	$1,215.14	$157.31	$182.00	$1,240.16
SWPPP	2%	$602.97	$403.47	$348.87	$1,851.39	$607.57	$78.66	$91.00	$620.08
TRAFFIC CONTROL	3%	$904.46	$605.21	$523.30	$2,777.09	$911.36	$117.98	$136.50	$930.12
MOBILIZATION	4%	$1,314.48	$879.57	$760.53	$4,036.03	$1,324.50	$171.47	$198.38	$1,351.77
FEDERAL CONTINGENCY	2%	$1,205.83	$959.72	$430.36	$2,283.87	$749.50	$97.03	$112.26	$764.93
OPCC	TOTAL	$61,500.00	$49,000.00	$22,000.00	$116,500.00	$38,300.00	$5,000.00	$5,800.00	$39,100.00
AVERAGE COST PER LF OF SIDEWALK		$212.07 PER LF	$166.10 PER LF	$133.33 PER LF	$106.39 PER LF	$54.33 PER LF	$100.00 PER LF	$44.62 PER LF	$62.06 PER LF
GRAND TOTAL FOR GROUP 1C	$1,950,700.00								

Opinion of Probable Construction Cost

CityLine Bush Station

Improvement Code Legend: **ID:** 1A-PR-SW-01
1A ← Station Number
PR ← Station Abbreviation
SW ← Sidewalk (or CW=Crosswalk, VW=Veloweb, RP=Sidewalk Repair, GR=Gap to Remain)
01 ← Improvement Number (matches 1 on Map)

OPCC 1C				1C-CB-SW-050		1C-CB-SW-051		1C-CB-SW-052		1C-CB-SW-054		1C-CB-SW-060		1C-CB-SW-061		1C-CB-SW-042		1C-CB-SW-044	
ENTITY	ITEM	UNIT	COST	QUANTITY	COST	QUANTITY	COST	QUANTITY	COST	QUANTITY	COST	QUANTITY	COST	QUANTITY	COST	QUANTITY	COST	QUANTITY	COST
DALLAS	**SIDEWALK (5')**	LF	$35.00	770	$26,950.00	825	$28,875.00	550	$19,250.00	1440	$50,400.00	70	$2,450.00	65	$2,275.00	45	$1,575.00	$100.00	$3,500.00
DALLAS	**SIDEWALK (10' PATH)**	LF	$70.00		$0.00		$0.00		$0.00		$0.00	60	$4,200.00		$0.00		$0.00		$0.00
DALLAS	**REMOVE SIDEWALK**	LF	$20.00		$0.00		$0.00	10	$200.00		$0.00		$0.00		$0.00		$0.00		$0.00
DALLAS	**RETAINING WALL (1')**	LF	$20.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00
DALLAS	**RETAINING WALL (2')**	LF	$40.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00
DALLAS	**RETAINING WALL (3')**	LF	$75.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00
DALLAS	**RETAINING WALL (4')**	LF	$100.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00
DALLAS	**RETAINING WALL (5')**	LF	$125.00		$0.00		$0.00	150	$18,750.00		$0.00		$0.00		$0.00		$0.00		$0.00
DALLAS	**CURB AND GUTTER**	LF	$39.72		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00
DALLAS	**DRAINAGE INLETS (MODIFY)**	EA	$3,518.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00
DALLAS	**RCP 18"**	LF	$58.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00
TXDOT	**PED RAMPS**	EA	$2,182.75	2	$4,365.50	5	$10,913.75		$0.00	5	$10,913.75		$0.00	2	$4,365.50	1	$2,182.75		$0.00
TXDOT	**MEDIAN CUT (5')**	LF	$36.15		$0.00	6	$216.90		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00
TXDOT	**MEDIAN CUT (10' PATH)**	LF	$72.30		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00
DALLAS	**DRIVEWAY (RESIDENTIAL)**	EA	$3,972.22		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00
DALLAS	**DRIVEWAY (COMMERCIAL)**	EA	$8,444.44		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00
N/A	**UTILITY POLE RELOCATED**	EA	$22,000.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00
DALLAS	**MANHOLE ADJUSTMENT**	EA	$572.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00
DALLAS	**TREE RELOCATIONS**	EA	$2,768.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00
DALLAS	**TREE REMOVALS**	EA	$886.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00
N/A	**RAILROAD CROSSING**	EA	$120,000.00		$0.00	1	$120,000.00		$0.00		$0.00	1	$120,000.00		$0.00		$0.00		$0.00
DALLAS	**TRAFFIC SIGNS RELOCATED**	EA	$223.00	2	$446.00		$0.00		$0.00	3	$669.00	3	$669.00		$0.00		$0.00		$0.00
TXDOT	**TRAFFIC SIGNS NEW**	EA	$650.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00
DALLAS	**PAVEMENT MARKINGS (CROSSWALK)**	LF	$9.00		$0.00		$0.00		$0.00	50	$450.00		$0.00		$0.00		$0.00		$0.00
DALLAS	**PAVEMENT MARKINGS (STOP BAR)**	LF	$8.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00
N/A	**PAVEMENT MARKINGS (TRIANGLES)**	EA	$60.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00
TXDOT	**UTILITY BOX RELOCATION**	EA	$729.33		$0.00		$0.00		$0.00		$0.00	2	$1,458.66	1	$729.33		$0.00		$0.00
DALLAS	**MEDIAN ISLAND (SEE SHEET[S] THAT FOLLOW FOR MORE INFO)**	EA	SEE OTHER SHEET		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00
DALLAS	**LIGHT POLE RELOCATION**	EA	$4,758.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00
DALLAS	**FENCE (REMOVE AND REPLACE)**	LF	$53.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00
DALLAS	**FIRE HYDRANT RELOCATED**	EA	$3,640.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00
DALLAS	**PARKING STOP**	EA	$97.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00
N/A	**PED GENERAL LIGHTING (NOT FOR CROSSWALK)**	EA	$21,000.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00
N/A	**PED CROSSWALK LIGHTING (#1) - 2 LANE UNDIVIDED**	EA	$26,435.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00
N/A	**PED CROSSWALK LIGHTING (#1) - 3 LANE UNDIVIDED**	EA	$27,182.50		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00
N/A	**PED CROSSWALK LIGHTING (#1) - 4 LANE UNDIVIDED**	EA	$40,407.50		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00
N/A	**PED CROSSWALK LIGHTING (#1) - 4 LANE DIVIDED**	EA	$41,183.75		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00
N/A	**PED CROSSWALK LIGHTING (#1) - 6 LANE UNDIVIDED**	EA	$41,839.25		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00
N/A	**PED CROSSWALK LIGHTING (#1) - 6 LANE DIVIDED**	EA	$42,615.50		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00
N/A	**RRFB (#7) - 3 LANES W/O MEDIAN**	EA	$24,000		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00
N/A	**RRFB (#7) - 1 SOLAR SIGN & PUSH BUTTON IN MEDIAN**	EA	$36,000		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00
N/A	**RRFB (#7) - 2 SOLAR SIGNS & PUSHBUTTON IN MEDIAN**	EA	$48,000		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00
N/A	**PED HYBRID BEACON (#9) - 3 LANE UNDIVIDED**	EA	$150,000		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00
N/A	**PED HYBRID BEACON (#9) - 4 LANE DIVIDED**	EA	$175,000		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00
N/A	**PED HYBRID BEACON (#9) - 6 LANE DIVIDED**	EA	$200,000		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00
N/A	**APS & COUNTDOWN PED SIGNAL (#10) - 1 CW**	EA	$9,500		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00
N/A	**APS & COUNTDOWN PED SIGNAL (#10) - 2 CW**	EA	$15,500		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00
N/A	**APS & COUNTDOWN PED SIGNAL (#10) - 3 CW**	EA	$21,500		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00
N/A	**APS & COUNTDOWN PED SIGNAL (#10) - 4 CW**	EA	$27,500		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00
N/A	**PED TRAFFIC SIGNAL (#11) - 3 LANE UNDIVIDED**	EA	$150,000		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00
N/A	**PED TRAFFIC SIGNAL (#11) - 4 LANE DIVIDED**	EA	$175,000		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00
N/A	**PED TRAFFIC SIGNAL (#11) - 6 LANE DIVIDED**	EA	$210,000		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00

CONSTRUCTION COST (WITHOUT SIGNALS)	TOTAL	$31,761.50	$160,005.65	$38,200.00	$62,432.75	$128,777.66	$7,369.83	$3,757.75	$3,500.00
CONSTRUCTION COST	TOTAL	$31,761.50	$160,005.65	$38,200.00	$62,432.75	$128,777.66	$7,369.83	$3,757.75	$3,500.00
ENGINEERING DESIGN	10%	$3,176.15	$16,000.57	$3,820.00	$6,243.28	$12,877.77	$736.98	$375.78	$350.00
GENERAL LANDSCAPING	4%	$1,270.46	$6,400.23	$1,528.00	$2,497.31	$5,151.11	$294.79	$150.31	$140.00
SWPPP	2%	$635.23	$3,200.11	$764.00	$1,248.66	$2,575.55	$147.40	$75.16	$70.00
TRAFFIC CONTROL	3%	$952.85	$4,800.17	$1,146.00	$1,872.98	$3,863.33	$221.09	$112.73	$105.00
MOBILIZATION	4%	$1,384.80	$6,976.25	$1,665.52	$2,722.07	$5,614.71	$321.32	$163.84	$152.60
FEDERAL CONTINGENCY	2%	$783.62	$3,947.66	$942.47	$1,540.34	$3,177.20	$181.83	$92.71	$86.35
OPCC	TOTAL	$40,000.00	$201,400.00	$48,100.00	$78,600.00	$162,100.00	$9,300.00	$4,800.00	$4,500.00
AVERAGE COST PER LF OF SIDEWALK		$51.95 PER LF	$244.12 PER LF	$87.45 PER LF	$54.58 PER LF	$1246.92 PER LF	$143.08 PER LF	$106.67 PER LF	$45.00 PER LF
GRAND TOTAL FOR GROUP 1C	$1,950,700.00								

Opinion of Probable Construction Cost

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1A ← Station Number
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SW ← Sidewalk (or CW=Crosswalk, VW=Veloweb, RP=Sidewalk Repair, GR=Gap to Remain)
01 ← Improvement Number (matches 1 on Map)

OPCC 1C				1C-CB-SW-056		1C-CB-SW-071		1C-CB-CW-031		1C-CB-CW-039		1C-CB-CW-049		1C-CB-CW-051		1C-CB-CW-059		1C-CB-CW-061	
ENTITY	ITEM	UNIT	COST	QUANTITY	COST	QUANTITY	COST	QUANTITY	COST	QUANTITY	COST	QUANTITY	COST	QUANTITY	COST	QUANTITY	COST	QUANTITY	COST
DALLAS	**SIDEWALK (5')**	LF	$35.00	360	$12,600.00	120	$4,200.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00
DALLAS	**SIDEWALK (10' PATH)**	LF	$70.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00
DALLAS	**REMOVE SIDEWALK**	LF	$20.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00
DALLAS	**RETAINING WALL (1')**	LF	$20.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00
DALLAS	**RETAINING WALL (2')**	LF	$40.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00
DALLAS	**RETAINING WALL (3')**	LF	$75.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00
DALLAS	**RETAINING WALL (4')**	LF	$100.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00
DALLAS	**RETAINING WALL (5')**	LF	$125.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00
DALLAS	**CURB AND GUTTER**	LF	$39.72	200	$7,944.00		$0.00	130	$5,163.60		$0.00		$0.00		$0.00		$0.00		$0.00
DALLAS	**DRAINAGE INLETS (MODIFY)**	EA	$3,518.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00
DALLAS	**RCP 18"**	LF	$58.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00
TXDOT	**PED RAMPS**	EA	$2,182.75	3	$6,548.25		$0.00	2	$4,365.50	2	$4,365.50		$0.00		$0.00		$0.00		$0.00
TXDOT	**MEDIAN CUT (5')**	LF	$36.15		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00
TXDOT	**MEDIAN CUT (10' PATH)**	LF	$72.30		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00
DALLAS	**DRIVEWAY (RESIDENTIAL)**	EA	$3,972.22		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00
DALLAS	**DRIVEWAY (COMMERCIAL)**	EA	$8,444.44		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00
N/A	**UTILITY POLE RELOCATED**	EA	$22,000.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00
DALLAS	**MANHOLE ADJUSTMENT**	EA	$572.00		$0.00		$0.00		$0.00	3	$1,716.00		$0.00		$0.00		$0.00		$0.00
DALLAS	**TREE RELOCATIONS**	EA	$2,768.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00
DALLAS	**TREE REMOVALS**	EA	$886.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00
N/A	**RAILROAD CROSSING**	EA	$120,000.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00
DALLAS	**TRAFFIC SIGNS RELOCATED**	EA	$223.00	5	$1,115.00	3	$669.00		$0.00		$0.00	1	$223.00	3	$669.00	3	$669.00	1	$223.00
TXDOT	**TRAFFIC SIGNS NEW**	EA	$650.00		$0.00		$0.00	4	$2,600.00	4	$2,600.00	4	$2,600.00	4	$2,600.00	4	$2,600.00	2	$1,300.00
DALLAS	**PAVEMENT MARKINGS (CROSSWALK)**	LF	$9.00	100	$900.00		$0.00	100	$900.00	480	$4,320.00	100	$900.00		$0.00	230	$2,070.00	30	$270.00
DALLAS	**PAVEMENT MARKINGS (STOP BAR)**	LF	$8.00		$0.00		$0.00		$0.00	48	$384.00	48	$384.00		$0.00		$0.00		$0.00
N/A	**PAVEMENT MARKINGS (TRIANGLES)**	EA	$60.00		$0.00		$0.00	16	$960.00		$0.00		$0.00		$0.00	12	$720.00	5	$300.00
TXDOT	**UTILITY BOX RELOCATION**	EA	$729.33	3	$2,187.99		$0.00	1	$729.33	2	$1,458.66		$0.00	1	$729.33	1	$729.33	1	$729.33
DALLAS	**MEDIAN ISLAND (SEE SHEET[S] THAT FOLLOW FOR MORE INFO)**	EA	SEE OTHER SHEET		$0.00		$0.00	1	$8,602.40		$0.00		$0.00		$0.00		$0.00		$0.00
DALLAS	**LIGHT POLE RELOCATION**	EA	$4,758.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00
DALLAS	**FENCE (REMOVE AND REPLACE)**	LF	$53.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00
DALLAS	**FIRE HYDRANT RELOCATED**	EA	$3,640.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00
DALLAS	**PARKING STOP**	EA	$97.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00
N/A	**PED GENERAL LIGHTING (NOT FOR CROSSWALK)**	EA	$21,000.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00
N/A	**PED CROSSWALK LIGHTING (#1) - 2 LANE UNDIVIDED**	EA	$26,435.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00
N/A	**PED CROSSWALK LIGHTING (#1) - 3 LANE UNDIVIDED**	EA	$27,182.50		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00
N/A	**PED CROSSWALK LIGHTING (#1) - 4 LANE UNDIVIDED**	EA	$40,407.50		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00
N/A	**PED CROSSWALK LIGHTING (#1) - 4 LANE DIVIDED**	EA	$41,183.75		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00
N/A	**PED CROSSWALK LIGHTING (#1) - 6 LANE UNDIVIDED**	EA	$41,839.25		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00
N/A	**PED CROSSWALK LIGHTING (#1) - 6 LANE DIVIDED**	EA	$42,615.50		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00
N/A	**RRFB (#7) - 3 LANES W/O MEDIAN**	EA	$24,000		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00
N/A	**RRFB (#7) - 1 SOLAR SIGN & PUSH BUTTON IN MEDIAN**	EA	$36,000		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00
N/A	**RRFB (#7) - 2 SOLAR SIGNS & PUSHBUTTON IN MEDIAN**	EA	$48,000		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00
N/A	**PED HYBRID BEACON (#9) - 3 LANE UNDIVIDED**	EA	$150,000		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00	1	$150,000.00		$0.00
N/A	**PED HYBRID BEACON (#9) - 4 LANE DIVIDED**	EA	$175,000		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00
N/A	**PED HYBRID BEACON (#9) - 6 LANE DIVIDED**	EA	$200,000		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00
N/A	**APS & COUNTDOWN PED SIGNAL (#10) - 1 CW**	EA	$9,500		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00
N/A	**APS & COUNTDOWN PED SIGNAL (#10) - 2 CW**	EA	$15,500		$0.00		$0.00		$0.00	1	$15,500.00		$0.00		$0.00		$0.00		$0.00
N/A	**APS & COUNTDOWN PED SIGNAL (#10) - 3 CW**	EA	$21,500		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00
N/A	**APS & COUNTDOWN PED SIGNAL (#10) - 4 CW**	EA	$27,500		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00
N/A	**PED TRAFFIC SIGNAL (#11) - 3 LANE UNDIVIDED**	EA	$150,000		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00
N/A	**PED TRAFFIC SIGNAL (#11) - 4 LANE DIVIDED**	EA	$175,000		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00
N/A	**PED TRAFFIC SIGNAL (#11) - 6 LANE DIVIDED**	EA	$210,000		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00
	CONSTRUCTION COST (WITHOUT SIGNALS)	TOTAL			$31,295.24		$4,869.00		$23,320.83		$14,844.16		$4,107.00		$3,998.33		$6,788.33		$2,822.33
	CONSTRUCTION COST	TOTAL			$31,295.24		$4,869.00		$23,320.83		$30,344.16		$4,107.00		$3,998.33		$156,788.33		$2,822.33
	ENGINEERING DESIGN	10%			$3,129.52		$486.90		$2,332.08		$3,034.42		$410.70		$399.83		$15,678.83		$282.23
	GENERAL LANDSCAPING	4%			$1,251.81		$194.76		$932.83		$593.77		$164.28		$159.93		$271.53		$112.89
	SWPPP	2%			$625.90		$97.38		$466.42		$296.88		$82.14		$79.97		$135.77		$56.45
	TRAFFIC CONTROL	3%			$938.86		$146.07		$699.62		$445.32		$123.21		$119.95		$203.65		$84.67
	MOBILIZATION	4%			$1,364.47		$212.29		$1,016.79		$647.21		$179.07		$174.33		$295.97		$123.05
	FEDERAL CONTINGENCY	2%			$772.12		$120.13		$575.37		$707.24		$101.33		$98.65		$3,467.48		$69.63
	OPCC	TOTAL			$39,400.00		$6,200.00		$29,400.00		$36,100.00		$5,200.00		$5,100.00		$176,900.00		$3,600.00
	AVERAGE COST PER LF OF SIDEWALK				$109.44 PER LF		$51.67 PER LF		#DIV/0!		#DIV/0!		#DIV/0!		#DIV/0!		#DIV/0!		#DIV/0!
	GRAND TOTAL FOR GROUP 1C	$1,950,700.00																	

Opinion of Probable Construction Cost

CityLine Bush Station

Improvement Code Legend: **ID:** 1A-PR-SW-01

1A ← Station Number
PR ← Station Abbreviation
SW ← Sidewalk (or CW=Crosswalk, VW=Veloweb, RP=Sidewalk Repair, GR=Gap to Remain)
01 ← Improvement Number (matches 1 on Map)

OPCC 1C				1C-CB-CW-042		1C-CB-CW-043	
ENTITY	ITEM	UNIT	COST	QUANTITY	COST	QUANTITY	COST
DALLAS	**SIDEWALK (5')**	LF	$35.00		$0.00		$0.00
DALLAS	**SIDEWALK (10' PATH)**	LF	$70.00		$0.00		$0.00
DALLAS	**REMOVE SIDEWALK**	LF	$20.00		$0.00		$0.00
DALLAS	**RETAINING WALL (1')**	LF	$20.00		$0.00		$0.00
DALLAS	**RETAINING WALL (2')**	LF	$40.00		$0.00		$0.00
DALLAS	**RETAINING WALL (3')**	LF	$75.00		$0.00		$0.00
DALLAS	**RETAINING WALL (4')**	LF	$100.00		$0.00		$0.00
DALLAS	**RETAINING WALL (5')**	LF	$125.00		$0.00		$0.00
DALLAS	**CURB AND GUTTER**	LF	$39.72		$0.00		$0.00
DALLAS	**DRAINAGE INLETS (MODIFY)**	EA	$3,518.00		$0.00		$0.00
DALLAS	**RCP 18"**	LF	$58.00		$0.00		$0.00
TXDOT	**PED RAMPS**	EA	$2,182.75		$0.00		$0.00
TXDOT	**MEDIAN CUT (5')**	LF	$36.15		$0.00		$0.00
TXDOT	**MEDIAN CUT (10' PATH)**	LF	$72.30		$0.00		$0.00
DALLAS	**DRIVEWAY (RESIDENTIAL)**	EA	$3,972.22		$0.00		$0.00
DALLAS	**DRIVEWAY (COMMERCIAL)**	EA	$8,444.44		$0.00		$0.00
N/A	**UTILITY POLE RELOCATED**	EA	$22,000.00		$0.00		$0.00
DALLAS	**MANHOLE ADJUSTMENT**	EA	$572.00	1	$572.00		$0.00
DALLAS	**TREE RELOCATIONS**	EA	$2,768.00		$0.00		$0.00
DALLAS	**TREE REMOVALS**	EA	$886.00		$0.00		$0.00
N/A	**RAILROAD CROSSING**	EA	$120,000.00		$0.00		$0.00
DALLAS	**TRAFFIC SIGNS RELOCATED**	EA	$223.00	2	$446.00	2	$446.00
TXDOT	**TRAFFIC SIGNS NEW**	EA	$650.00	4	$2,600.00	4	$2,600.00
DALLAS	**PAVEMENT MARKINGS (CROSSWALK)**	LF	$9.00	80	$720.00	80	$720.00
DALLAS	**PAVEMENT MARKINGS (STOP BAR)**	LF	$8.00		$0.00		$0.00
N/A	**PAVEMENT MARKINGS (TRIANGLES)**	EA	$60.00	12	$720.00	12	$720.00
TXDOT	**UTILITY BOX RELOCATION**	EA	$729.33	2	$1,458.66	2	$1,458.66
DALLAS	**MEDIAN ISLAND (SEE SHEET[S] THAT FOLLOW FOR MORE INFO)**	EA	SEE OTHER SHEET		$0.00		$0.00
DALLAS	**LIGHT POLE RELOCATION**	EA	$4,758.00		$0.00		$0.00
DALLAS	**FENCE (REMOVE AND REPLACE)**	LF	$53.00		$0.00		$0.00
DALLAS	**FIRE HYDRANT RELOCATED**	EA	$3,640.00		$0.00		$0.00
DALLAS	**PARKING STOP**	EA	$97.00		$0.00		$0.00
N/A	**PED GENERAL LIGHTING (NOT FOR CROSSWALK)**	EA	$21,000.00		$0.00		$0.00
N/A	**PED CROSSWALK LIGHTING (#1) - 2 LANE UNDIVIDED**	EA	$26,435.00		$0.00		$0.00
N/A	**PED CROSSWALK LIGHTING (#1) - 3 LANE UNDIVIDED**	EA	$27,182.50		$0.00		$0.00
N/A	**PED CROSSWALK LIGHTING (#1) - 4 LANE UNDIVIDED**	EA	$40,407.50		$0.00		$0.00
N/A	**PED CROSSWALK LIGHTING (#1) - 4 LANE DIVIDED**	EA	$41,183.75		$0.00		$0.00
N/A	**PED CROSSWALK LIGHTING (#1) - 6 LANE UNDIVIDED**	EA	$41,839.25		$0.00		$0.00
N/A	**PED CROSSWALK LIGHTING (#1) - 6 LANE DIVIDED**	EA	$42,615.50		$0.00		$0.00
N/A	**RRFB (#7) - 3 LANES W/O MEDIAN**	EA	$24,000		$0.00		$0.00
N/A	**RRFB (#7) - 1 SOLAR SIGN & PUSH BUTTON IN MEDIAN**	EA	$36,000		$0.00		$0.00
N/A	**RRFB (#7) - 2 SOLAR SIGNS & PUSHBUTTON IN MEDIAN**	EA	$48,000		$0.00		$0.00
N/A	**PED HYBRID BEACON (#9) - 3 LANE UNDIVIDED**	EA	$150,000	0.5	$75,000.00	0.5	$75,000.00
N/A	**PED HYBRID BEACON (#9) - 4 LANE DIVIDED**	EA	$175,000		$0.00		$0.00
N/A	**PED HYBRID BEACON (#9) - 6 LANE DIVIDED**	EA	$200,000		$0.00		$0.00
N/A	**APS & COUNTDOWN PED SIGNAL (#10) - 1 CW**	EA	$9,500		$0.00		$0.00
N/A	**APS & COUNTDOWN PED SIGNAL (#10) - 2 CW**	EA	$15,500		$0.00		$0.00
N/A	**APS & COUNTDOWN PED SIGNAL (#10) - 3 CW**	EA	$21,500		$0.00		$0.00
N/A	**APS & COUNTDOWN PED SIGNAL (#10) - 4 CW**	EA	$27,500		$0.00		$0.00
N/A	**PED TRAFFIC SIGNAL (#11) - 3 LANE UNDIVIDED**	EA	$150,000		$0.00		$0.00
N/A	**PED TRAFFIC SIGNAL (#11) - 4 LANE DIVIDED**	EA	$175,000		$0.00		$0.00
N/A	**PED TRAFFIC SIGNAL (#11) - 6 LANE DIVIDED**	EA	$210,000		$0.00		$0.00

CONSTRUCTION COST (WITHOUT SIGNALS)	TOTAL	$6,516.66	$5,944.66
CONSTRUCTION COST	TOTAL	$81,516.66	$80,944.66
ENGINEERING DESIGN	10%	$8,151.67	$8,094.47
GENERAL LANDSCAPING	4%	$260.67	$237.79
SWPPP	2%	$130.33	$118.89
TRAFFIC CONTROL	3%	$195.50	$178.34
MOBILIZATION	4%	$284.13	$259.19
FEDERAL CONTINGENCY	2%	$1,810.78	$1,796.67
OPCC	TOTAL	$92,400.00	$91,700.00
AVERAGE COST PER LF OF SIDEWALK		#DIV/0!	#DIV/0!
GRAND TOTAL FOR GROUP 1C	$1,950,700.00		

Median Island Detailed Estimate - LOCATION 1C-CB-CW-31

Assumptions

along Executive Drive, heading west from Crawford
assume 45 foot long
tear drop shape - will estimate as 2 triangles
asume max width at Crawford as 10 foot wide

	ITEM NO	ITEM UNIT	QTY	UNIT COST	TOTAL
remove existing conc pavement (will equal median area plus couple of feet for curb and gutter)	0104 6001	SF	560	$0.49	$274.40
add mediian refuge conc pvmt	356	SF	450	$6.00	$2,700.00
add conc curb across median refuge	407	LF	20	$32.00	$640.00
conc C & G along Executive	407	LF	110	$32.00	$3,520.00
add striping west of tear drop directing traffic around median refuge	0666 6035	LF	200	$0.84	$168.00
add signs for median - assume 2 and then one on median	0636 & 0646	EACH	2	$650.00	$1,300.00
					$8,602.40

area of median - assume 2 triangles
0.5 x 45 x 10 x 2 = 450 sf

area of removal
add 45 lf x 2 sides plus 20 feet for median nose to median area
= 450 + [(45 x 2) + 20] = 560 SF

Opinion of Probable Construction Cost

Galatyn Park Station

Improvement Code Legend: ID: 1A-PR-SW-01
1A ← Station Number
PR ← Station Abbreviation
SW ← Sidewalk (or CW=Crosswalk, VW=Veloweb, RP=Sidewalk Repair, GR=Gap to Remain)
01 ← Improvement Number (matches 1 on Map)

OPCC 2A				2A-GP-SW-32		2A-GP-SW-60		2A-GP-SW-76		2A-GP-SW-79		2A-GP-SW-33		2A-GP-RP-36		2A-GP-SW-42	
ENTITY	ITEM	UNIT	COST	QUANTITY	COST	QUANTITY	COST	QUANTITY	COST	QUANTITY	COST	QUANTITY	COST	QUANTITY	COST	QUANTITY	COST
DALLAS	SIDEWALK (5')	LF	$35.00	100	$3,500.00	150	$5,250.00	350	$12,250.00	45	$1,575.00	80	$2,800.00	10	$350.00		$0.00
TXDOT	SIDEWALK (6') ON BRIDGE ABUTMENT/DECK	LF	$660.00		$0.00		$0.00		$0.00		$0.00	540	$356,400.00		$0.00		$0.00
DALLAS	SIDEWALK (10' PATH)	LF	$70.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00
DALLAS	REMOVE SIDEWALK	LF	$20.00		$0.00		$0.00		$0.00		$0.00		$0.00	10	$200.00		$0.00
DALLAS	RETAINING WALL (1')	LF	$20.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00
DALLAS	RETAINING WALL (2')	LF	$40.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00
DALLAS	RETAINING WALL (3')	LF	$75.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00
DALLAS	RETAINING WALL (4')	LF	$100.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00
DALLAS	RETAINING WALL (5')	LF	$125.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00
DALLAS	CURB AND GUTTER	LF	$39.72		$0.00		$0.00		$0.00		$0.00	540	$21,448.80		$0.00		$0.00
DALLAS	DRAINAGE INLETS (MODIFY)	EA	$7,036.00		$0.00		$0.00		$0.00		$0.00	4	$28,144.00		$0.00		$0.00
DALLAS	RCP 18"	LF	$58.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00
TXDOT	PED RAMPS	EA	$2,182.75	1	$2,182.75		$0.00	1	$2,182.75		$0.00		$0.00		$0.00	8	$17,462.00
TXDOT	MEDIAN CUT (5')	LF	$36.15		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00
TXDOT	MEDIAN CUT (10' PATH)	LF	$72.30		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00
DALLAS	DRIVEWAY (RESIDENTIAL)	EA	$3,972.22		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00
DALLAS	DRIVEWAY (COMMERCIAL)	EA	$8,444.44		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00
N/A	UTILITY POLE RELOCATED	EA	$22,000.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00
DALLAS	MANHOLE ADJUSTMENT	EA	$572.00		$0.00		$0.00		$0.00	1	$572.00		$0.00		$0.00		$0.00
DALLAS	TREE RELOCATIONS	EA	$2,768.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00
DALLAS	TREE REMOVALS	EA	$886.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00
N/A	RAILROAD CROSSING	EA	$120,000.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00
DALLAS	TRAFFIC SIGNS RELOCATED	EA	$223.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00
TXDOT	TRAFFIC SIGNS NEW	EA	$650.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00	8	$5,200.00
DALLAS	PAVEMENT MARKINGS (CROSSWALK)	LF	$9.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00	120	$1,080.00
DALLAS	PAVEMENT MARKINGS (STOP BAR)	LF	$8.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00	50	$400.00
N/A	PAVEMENT MARKINGS (TRIANGLES)	EA	$60.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00
N/A	MEDIAN ISLAND/OTHER ITEMS	EA	SEE OTHER SHEET		$0.00		$0.00		$0.00		$0.00	1	$7,498.64		$0.00	1	$529,558.66
TXDOT	UTILITY BOX RELOCATION	EA	$729.33		$0.00		$0.00		$0.00	2	$1,458.66		$0.00		$0.00		$0.00
DALLAS	LIGHT POLE RELOCATION	EA	$4,758.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00
DALLAS	FENCE (REMOVE AND REPLACE)	LF	$53.00	10	$530.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00
DALLAS	FIRE HYDRANT RELOCATED	EA	$3,640.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00
DALLAS	PARKING STOP	EA	$97.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00
N/A	PED CROSSWALK LIGHTING (#1) - 2 LANE UNDIVIDED	EA	$26,435.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00
N/A	PED CROSSWALK LIGHTING (#1) - 3 LANE UNDIVIDED	EA	$27,182.50		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00
N/A	PED CROSSWALK LIGHTING (#1) - 4 LANE UNDIVIDED	EA	$40,407.50		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00
N/A	PED CROSSWALK LIGHTING (#1) - 4 LANE DIVIDED	EA	$41,183.75		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00
N/A	PED CROSSWALK LIGHTING (#1) - 6 LANE UNDIVIDED	EA	$41,839.25		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00
N/A	PED CROSSWALK LIGHTING (#1) - 6 LANE DIVIDED	EA	$42,615.50		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00
N/A	RRFB (#7) - 3 LANES W/O MEDIAN	EA	$24,000		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00
N/A	RRFB (#7) - 1 SOLAR SIGN & PUSH BUTTON IN MEDIAN	EA	$36,000		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00
N/A	RRFB (#7) - 2 SOLAR SIGNS & PUSHBUTTON IN MEDIAN	EA	$48,000		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00
N/A	PED HYBRID BEACON (#9) - 3 LANE UNDIVIDED	EA	$150,000		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00
N/A	PED HYBRID BEACON (#9) - 4 LANE DIVIDED	EA	$175,000		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00
N/A	PED HYBRID BEACON (#9) - 6 LANE DIVIDED	EA	$200,000		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00
N/A	APS & COUNTDOWN PED SIGNAL (#10) - 1 CW	EA	$9,500		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00
N/A	APS & COUNTDOWN PED SIGNAL (#10) - 2 CW	EA	$15,500		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00
N/A	APS & COUNTDOWN PED SIGNAL (#10) - 3 CW	EA	$21,500		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00
N/A	APS & COUNTDOWN PED SIGNAL (#10) - 4 CW	EA	$27,500		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00
N/A	PED TRAFFIC SIGNAL (#11) - 3 LANE UNDIVIDED	EA	$150,000		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00	9	$1,350,000.00
N/A	PED TRAFFIC SIGNAL (#11) - 4 LANE DIVIDED	EA	$175,000		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00
N/A	PED TRAFFIC SIGNAL (#11) - 6 LANE DIVIDED	EA	$210,000		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00
	CONSTRUCTION COST (WITHOUT SIGNALS)	TOTAL			$6,212.75		$5,250.00		$14,432.75		$3,605.66		$416,291.44		$550.00		$553,700.66
	CONSTRUCTION COST	TOTAL			$6,212.75		$5,250.00		$14,432.75		$3,605.66		$416,291.44		$550.00		$1,903,700.66
	ENGINEERING DESIGN	10%			$621.28		$525.00		$1,443.28		$360.57		$41,629.14		$55.00		$190,370.07
	GENERAL LANDSCAPING	4%			$248.51		$210.00		$577.31		$144.23		$16,651.66		$22.00		$22,148.03
	SWPPP	2%			$124.26		$105.00		$288.66		$72.11		$8,325.83		$11.00		$11,074.01
	TRAFFIC CONTROL	3%			$186.38		$157.50		$432.98		$108.17		$12,488.74		$16.50		$16,611.02
	MOBILIZATION	4%			$270.88		$228.90		$629.27		$157.21		$18,150.31		$23.98		$24,141.35
	FEDERAL CONTINGENCY	2%			$153.28		$129.53		$356.08		$88.96		$10,270.74		$13.57		$43,360.90
	OPCC	TOTAL			$7,900.00		$6,700.00		$18,200.00		$4,600.00		$523,900.00		$700.00		$2,211,500.00
	AVERAGE COST PER LF OF SIDEWALK				$79.00 PER LF		$44.67 PER LF		$52.00 PER LF		$102.22 PER LF		N/A		$70.00 PER LF		N/A
	GRAND TOTAL FOR GROUP 2A	$3,550,700.00		Min Cost/LF	$44.67 PER LF												
				Max Cost/LF	$102.22 PER LF												

Opinion of Probable Construction Cost

Galatyn Park Station

Improvement Code Legend: ID: 1A-PR-SW-01
1A ← Station Number
PR ← Station Abbreviation
SW ← Sidewalk (or CW=Crosswalk, VW=Veloweb, RP=Sidewalk Repair, GR=Gap to Remain)
01 ← Improvement Number (matches 1 on Map)

OPCC 2A				2A-GP-SW-61		2A-GP-CW-26		2A-GP-CW-27		2A-GP-CW-55		2A-GP-CW-56		2A-GP-CW-68		2A-GP-CW-78	
ENTITY	ITEM	UNIT	COST	QUANTITY	COST	QUANTITY	COST	QUANTITY	COST	QUANTITY	COST	QUANTITY	COST	QUANTITY	COST	QUANTITY	COST
DALLAS	SIDEWALK (5')	LF	$35.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00
TXDOT	SIDEWALK (6') ON BRIDGE ABUTMENT/DECK	LF	$660.00	760	$501,600.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00
DALLAS	SIDEWALK (10' PATH)	LF	$70.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00
DALLAS	REMOVE SIDEWALK	LF	$20.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00
DALLAS	RETAINING WALL (1')	LF	$20.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00
DALLAS	RETAINING WALL (2')	LF	$40.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00
DALLAS	RETAINING WALL (3')	LF	$75.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00
DALLAS	RETAINING WALL (4')	LF	$100.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00
DALLAS	RETAINING WALL (5')	LF	$125.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00
DALLAS	CURB AND GUTTER	LF	$39.72		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00
DALLAS	DRAINAGE INLETS (MODIFY)	EA	$7,036.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00
DALLAS	RCP 18"	LF	$58.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00
TXDOT	PED RAMPS	EA	$2,182.75		$0.00	1	$2,182.75		$0.00		$0.00		$0.00		$0.00		$0.00
TXDOT	MEDIAN CUT (5')	LF	$36.15		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00
TXDOT	MEDIAN CUT (10' PATH)	LF	$72.30		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00
DALLAS	DRIVEWAY (RESIDENTIAL)	EA	$3,972.22		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00
DALLAS	DRIVEWAY (COMMERCIAL)	EA	$8,444.44		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00
N/A	UTILITY POLE RELOCATED	EA	$22,000.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00
DALLAS	MANHOLE ADJUSTMENT	EA	$572.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00
DALLAS	TREE RELOCATIONS	EA	$2,768.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00
DALLAS	TREE REMOVALS	EA	$886.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00
N/A	RAILROAD CROSSING	EA	$120,000.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00
DALLAS	TRAFFIC SIGNS RELOCATED	EA	$223.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00
TXDOT	TRAFFIC SIGNS NEW	EA	$650.00		$0.00	1	$650.00	1	$650.00	4	$2,600.00	4	$2,600.00	6	$3,900.00	4	$2,600.00
DALLAS	PAVEMENT MARKINGS (CROSSWALK)	LF	$9.00		$0.00	90	$810.00	90	$810.00	135	$1,215.00	150	$1,350.00	140	$1,260.00	100	$900.00
DALLAS	PAVEMENT MARKINGS (STOP BAR)	LF	$8.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00
N/A	PAVEMENT MARKINGS (TRIANGLES)	EA	$60.00		$0.00		$0.00		$0.00		$0.00	9	$540.00	12	$720.00		$0.00
N/A	MEDIAN ISLAND/OTHER ITEMS	EA	SEE OTHER SHEET	1	$4,843.80	1	$16,214.60	1	$16,214.60		$0.00		$0.00		$0.00		$0.00
TXDOT	UTILITY BOX RELOCATION	EA	$729.33		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00
DALLAS	LIGHT POLE RELOCATION	EA	$4,758.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00
DALLAS	FENCE (REMOVE AND REPLACE)	LF	$53.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00
DALLAS	FIRE HYDRANT RELOCATED	EA	$3,640.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00
DALLAS	PARKING STOP	EA	$97.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00
N/A	PED CROSSWALK LIGHTING (#1) - 2 LANE UNDIVIDED	EA	$26,435.00		$0.00	0.5	$13,217.50	0.5	$13,217.50		$0.00		$0.00		$0.00		$0.00
N/A	PED CROSSWALK LIGHTING (#1) - 3 LANE UNDIVIDED	EA	$27,182.50		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00
N/A	PED CROSSWALK LIGHTING (#1) - 4 LANE UNDIVIDED	EA	$40,407.50		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00
N/A	PED CROSSWALK LIGHTING (#1) - 4 LANE DIVIDED	EA	$41,183.75		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00
N/A	PED CROSSWALK LIGHTING (#1) - 6 LANE UNDIVIDED	EA	$41,839.25		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00
N/A	PED CROSSWALK LIGHTING (#1) - 6 LANE DIVIDED	EA	$42,615.50		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00
N/A	RRFB (#7) - 3 LANES W/O MEDIAN	EA	$24,000		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00
N/A	RRFB (#7) - 1 SOLAR SIGN & PUSH BUTTON IN MEDIAN	EA	$36,000		$0.00		$0.00		$0.00		$0.00		$0.00	1	$36,000.00		$0.00
N/A	RRFB (#7) - 2 SOLAR SIGNS & PUSHBUTTON IN MEDIAN	EA	$48,000		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00
N/A	PED HYBRID BEACON (#9) - 3 LANE UNDIVIDED	EA	$150,000		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00
N/A	PED HYBRID BEACON (#9) - 4 LANE DIVIDED	EA	$175,000		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00
N/A	PED HYBRID BEACON (#9) - 6 LANE DIVIDED	EA	$200,000		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00
N/A	APS & COUNTDOWN PED SIGNAL (#10) - 1 CW	EA	$9,500		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00
N/A	APS & COUNTDOWN PED SIGNAL (#10) - 2 CW	EA	$15,500		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00
N/A	APS & COUNTDOWN PED SIGNAL (#10) - 3 CW	EA	$21,500		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00
N/A	APS & COUNTDOWN PED SIGNAL (#10) - 4 CW	EA	$27,500		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00
N/A	PED TRAFFIC SIGNAL (#11) - 3 LANE UNDIVIDED	EA	$150,000		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00
N/A	PED TRAFFIC SIGNAL (#11) - 4 LANE DIVIDED	EA	$175,000		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00
N/A	PED TRAFFIC SIGNAL (#11) - 6 LANE DIVIDED	EA	$210,000		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00
	CONSTRUCTION COST (WITHOUT SIGNALS)	TOTAL			$506,443.80		$19,857.35		$17,674.60		$3,815.00		$4,490.00		$5,880.00		$3,500.00
	CONSTRUCTION COST	TOTAL			$506,443.80		$33,074.85		$30,892.10		$3,815.00		$4,490.00		$41,880.00		$3,500.00
	ENGINEERING DESIGN	10%			$50,644.38		$3,307.49		$3,089.21		$381.50		$449.00		$4,188.00		$350.00
	GENERAL LANDSCAPING	4%			$20,257.75		$794.29		$706.98		$152.60		$179.60		$235.20		$140.00
	SWPPP	2%			$10,128.88		$397.15		$353.49		$76.30		$89.80		$117.60		$70.00
	TRAFFIC CONTROL	3%			$15,193.31		$595.72		$530.24		$114.45		$134.70		$176.40		$105.00
	MOBILIZATION	4%			$22,080.95		$865.78		$770.61		$166.33		$195.76		$256.37		$152.60
	FEDERAL CONTINGENCY	2%			$12,494.98		$780.71		$726.85		$94.12		$110.78		$937.07		$86.35
	OPCC	TOTAL			$637,300.00		$39,900.00		$37,100.00		$4,900.00		$5,700.00		$47,800.00		$4,500.00
	AVERAGE COST PER LF OF SIDEWALK				N/A		#DIV/0!		#DIV/0!		#DIV/0!		#DIV/0!		#DIV/0!		#DIV/0!
	GRAND TOTAL FOR GROUP 2A	$3,550,700.00															

Median Island Detailed Estimate - LOCATION 2A-GP-CW-26

Assumptions

along Palisades Blvd at S Gate Dr
assume 60 foot long
tear drop shape - will estimate as 2 triangles
asume max width at S Gate Dr as 10 foot wide

	ITEM NO	ITEM UNIT	QTY	UNIT COST	TOTAL
remove existing conc pavement (will equal median area plus couple of feet for curb and gutter	0104 6001	SF	740	$0.49	$362.60
add mediian refuge conc pvmt	356	SF	600	$6.00	$3,600.00
add conc curb across median refuge	407	LF	20	$32.00	$640.00
conc C & G along Palisades Blvd	407	LF	220	$32.00	$7,040.00
add striping west of tear drop directing traffic around median refuge					
and also reducing EB traffic to one lane each way. Also along median both sides/edges	0666 6035	LF	800	$0.84	$672.00
add signs for median - assume 2 for PED Crossing,					
plus 1 on each end of median directing traffic around would be 6 total	0636 & 0646	EACH	6	$650.00	$3,900.00
					$16,214.60

area of median - assume 2 triangles
0.5 x 60 x 10 x 2 = 600 sf
area of removal
add 60 lf x 2 sides plus 20 feet for median nose to median area
= 600 + [(60 x 2) + 20] = 740 SF

Median Island Detailed Estimate - LOCATION 2A-GP-CW-27

Assumptions

along Palisades Blvd at S Gate Dr
assume 60 foot long
tear drop shape - will estimate as 2 triangles
asume max width at S Gate Dr as 10 foot wide

	ITEM NO	ITEM UNIT	QTY	UNIT COST	TOTAL
remove existing conc pavement (will equal median area plus couple of feet for curb and gutter	0104 6001	SF	740	$0.49	$362.60
add mediian refuge conc pvmt	356	SF	600	$6.00	$3,600.00
add conc curb across median refuge	407	LF	20	$32.00	$640.00
conc C & G along Palisades Blvd	407	LF	220	$32.00	$7,040.00
add striping west of tear drop directing traffic around median refuge					
and also reducing EB traffic to one lane each way. Also along median both sides/edges	0666 6035	LF	800	$0.84	$672.00
add signs for median - assume 2 for PED Crossing,					
plus 1 on each end of median directing traffic around would be 6 total	0636 & 0646	EACH	6	$650.00	$3,900.00
					$16,214.60

area of median - assume 2 triangles
0.5 x 60 x 10 x 2 = 600 sf
area of removal
add 60 lf x 2 sides plus 20 feet for median nose to median area
= 600 + [(60 x 2) + 20] = 740 SF

Median Island Detailed Estimate - LOCATION 2A-GP-SW-33

Assumptions

Sidewalk along north side of Galatyn Parkway
Sidewalk and drainage inlet modification accounted for on main spreadsheet tab
Median island work for DDI accounted for under 2A-GP-SW-42

	ITEM NO	ITEM UNIT	QTY	UNIT COST	TOTAL
Eliminate existing pavement markings (4")	6776001	LF	1500	$0.39	$585.00
Eliminate existing pavement markings (12")	6776005	LF	304	$1.51	$459.04
New double yellow markings (4") - 290 ft x 2	6686043	LF	580	$5.06	$2,934.80
Remove pavement marking arrows	6776008	EA	6	$53.30	$319.80
Pavement marking arrows	6686122	EA	4	$800.00	$3,200.00
					$7,498.64

length of 6" pavement marking removal
200 left turn solid white + 620 double yellow + 230/4 skip white = 1497.5 round to 1500
length of 12" pavement marking removal for diagonal lines
16 x 19 = 304 ft

Median Island Detailed Estimate - LOCATION 2A-GP-SW-33

Assumptions

Road diet with Diverging Diamond Interchange (DDI) - sidewalk in median

ITEM NO	ITEM UNIT	QTY	UNIT COST	TOTAL
XXX	SF	4740	$110.00	$521,400.00
6776001	LF	200	$0.39	$78.00
6776008	EA	5	$53.30	$266.50
6686122	EA	8	$800.00	$6,400.00
6776007	LF	44	$3.39	$149.16
6686043	LF	250	$5.06	$1,265.00
				$529,558.66

Median & splitter island construction for crossovers on bridge abutment/deck (see below)
Eliminate existing pavement markings (4")
Remove pavement marking arrows
Pavement marking arrows
Eliminate existing pavement markings (24")
New double yellow markings (4")

area of islands - assume each approach splitter island approximated by 200' x 14' diamond
0.5 x 200 x 14 = 1400 sf x 2 islands = 2800 sf total
Assume median island approximated by 130' x 16' diamond
0.5 x 130 x 16 = 1040 sf
Assume 2 crossover islands per instersection, each approximated by 30' x 15' diamonds
0.5 x 30 x 15 = 225 sf x 4 islands = 900 sf total

LOCATION 2A-GP-SW-61

Assumptions

Sidewalk along north side of Galatyn Parkway

Median island work for DDI accounted for under 2A-GP-SW-42

	ITEM NO	ITEM UNIT	QTY	UNIT COST	TOTAL
New single white marking (edge line) (4")	6686043	LF	620	$5.06	$3,137.20
Remove pavement marking arrows	6776008	EA	2	$53.30	$106.60
Pavement marking arrows	6686122	EA	2	$800.00	$1,600.00
					$4,843.80

length of 6" pavement marking removal

200 left turn solid white + 620 double yellow + 230/4 skip white = 1497.5 round to 1500

length of 12" pavement marking removal for diagonal lines

16 x 19 = 304 ft

Opinion of Probable Construction Cost

Arapaho Center Station

Improvement Code Legend: ID: 1A-PR-SW-01
1A ← Station Number
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SW ← Sidewalk (or CW=Crosswalk, VW=Veloweb, RP=Sidewalk Repair, GR=Gap to Remain)
01 ← Improvement Number (matches 1 on Map)

OPCC 2B				2B-AC-VW-V02		2B-AC-SW-03		2B-AC-RP-06		2B-AC-SW-14		2B-AC-RP-22		2B-AC-RP-33	
ENTITY	**ITEM**	**UNIT**	**COST**	**QUANTITY**	**COST**	**QUANTITY**	**COST**	**QUANTITY**	**COST**	**QUANTITY**	**COST**	**QUANTITY**	**COST**	**QUANTITY**	**COST**
DALLAS	**SIDEWALK (5')**	LF	$35.00	120	$4,200.00	610	$21,350.00	25	$875.00	35	$1,225.00	15	$525.00	50	$1,750.00
DALLAS	**SIDEWALK (10' PATH)**	LF	$70.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00
DALLAS	**REMOVE SIDEWALK**	LF	$20.00		$0.00		$0.00		$0.00		$0.00	15	$300.00	50	$1,000.00
DALLAS	**RETAINING WALL (1')**	LF	$20.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00
DALLAS	**RETAINING WALL (2')**	LF	$40.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00
DALLAS	**RETAINING WALL (3')**	LF	$75.00	120	$9,000.00		$0.00		$0.00		$0.00		$0.00		$0.00
DALLAS	**RETAINING WALL (4')**	LF	$100.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00
DALLAS	**RETAINING WALL (5')**	LF	$125.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00
DALLAS	**CURB AND GUTTER**	LF	$39.72		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00
DALLAS	**DRAINAGE INLETS (MODIFY)**	EA	$3,518.00		$0.00		$0.00	1	$3,518.00	1	$3,518.00		$0.00		$0.00
TXDOT	**RAIL (HANDRAIL TY E)**	LF	$140.00	120	$16,800.00		$0.00		$0.00		$0.00		$0.00		$0.00
TXDOT	**PED RAMPS**	EA	$2,182.75		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00
TXDOT	**MEDIAN CUT (5')**	LF	$36.15		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00
TXDOT	**MEDIAN CUT (10' PATH)**	LF	$72.30		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00
DALLAS	**DRIVEWAY (RESIDENTIAL)**	EA	$3,972.22		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00
DALLAS	**DRIVEWAY (COMMERCIAL)**	EA	$8,444.44		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00
N/A	**UTILITY POLE RELOCATED**	EA	$22,000.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00
DALLAS	**MANHOLE ADJUSTMENT**	EA	$572.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00
DALLAS	**TREE RELOCATIONS**	EA	$2,768.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00
DALLAS	**TREE REMOVALS**	EA	$886.00		$0.00	1	$886.00		$0.00		$0.00		$0.00		$0.00
N/A	**RAILROAD CROSSING**	EA	$120,000.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00
DALLAS	**TRAFFIC SIGNS RELOCATED**	EA	$223.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00
TXDOT	**TRAFFIC SIGNS NEW**	EA	$650.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00
DALLAS	**PAVEMENT MARKINGS (CROSSWALK)**	LF	$9.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00
DALLAS	**PAVEMENT MARKINGS (STOP BAR)**	LF	$8.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00
N/A	**PAVEMENT MARKINGS (TRIANGLES)**	EA	$60.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00
N/A	**MEDIAN ISLAND/OTHER IMPROVEMENTS**	EA	SEE OTHER SHEET		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00
TXDOT	**UTILITY BOX RELOCATION**	EA	$729.33		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00
DALLAS	**LIGHT POLE RELOCATION**	EA	$4,758.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00
DALLAS	**FENCE (REMOVE AND REPLACE)**	LF	$53.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00
DALLAS	**FIRE HYDRANT RELOCATED**	EA	$3,640.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00
TXDOT	**GUARDRAIL END TREATMENT (MOVE & RESET)**	EA	$1,369.00	1	$1,369.00		$0.00		$0.00		$0.00		$0.00		$0.00
N/A	**RRFB (#7) - 3 LANES W/O MEDIAN**	EA	$24,000		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00
N/A	**RRFB (#7) - 1 SOLAR SIGN & PUSH BUTTON IN MEDIAN**	EA	$36,000		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00
N/A	**RRFB (#7) - 2 SOLAR SIGNS & PUSHBUTTON IN MEDIAN**	EA	$48,000		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00
N/A	**PED HYBRID BEACON (#9) - 3 LANE UNDIVIDED**	EA	$150,000		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00
N/A	**PED HYBRID BEACON (#9) - 4 LANE DIVIDED**	EA	$175,000		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00
N/A	**PED HYBRID BEACON (#9) - 6 LANE DIVIDED**	EA	$200,000		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00
N/A	**APS & COUNTDOWN PED SIGNAL (#10) - 1 CW**	EA	$9,500		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00
N/A	**APS & COUNTDOWN PED SIGNAL (#10) - 2 CW**	EA	$15,500		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00
N/A	**APS & COUNTDOWN PED SIGNAL (#10) - 3 CW**	EA	$21,500		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00
N/A	**APS & COUNTDOWN PED SIGNAL (#10) - 4 CW**	EA	$27,500		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00
N/A	**PED TRAFFIC SIGNAL (#11) - 3 LANE UNDIVIDED**	EA	$150,000		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00
N/A	**PED TRAFFIC SIGNAL (#11) - 4 LANE DIVIDED**	EA	$175,000		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00
N/A	**PED TRAFFIC SIGNAL (#11) - 6 LANE DIVIDED**	EA	$210,000		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00

CONSTRUCTION COST (WITHOUT SIGNALS)	TOTAL	$31,369.00	$22,236.00	$4,393.00	$4,743.00	$825.00	$2,750.00
CONSTRUCTION COST	TOTAL	$31,369.00	$22,236.00	$4,393.00	$4,743.00	$825.00	$2,750.00
ENGINEERING DESIGN	10%	$3,136.90	$2,223.60	$439.30	$474.30	$82.50	$275.00
GENERAL LANDSCAPING	4%	$1,254.76	$889.44	$175.72	$189.72	$33.00	$110.00
SWPPP	2%	$627.38	$444.72	$87.86	$94.86	$16.50	$55.00
TRAFFIC CONTROL	3%	$941.07	$667.08	$131.79	$142.29	$24.75	$82.50
MOBILIZATION	4%	$1,367.69	$969.49	$191.53	$206.79	$35.97	$119.90
FEDERAL CONTINGENCY	2%	$773.94	$548.61	$108.38	$117.02	$20.35	$67.85
OPCC	TOTAL	$39,500.00	$28,000.00	$5,600.00	$6,000.00	$1,100.00	$3,500.00
AVERAGE COST PER LF OF SIDEWALK		$329.17 PER LF	$45.90 PER LF	$224.00 PER LF	$171.43 PER LF	$73.33 PER LF	$70.00 PER LF
GRAND TOTAL FOR GROUP 2B	$481,600.00						

Opinion of Probable Construction Cost

Arapaho Center Station

Improvement Code Legend: **ID:** 1A-PR-SW-01
1A ← Station Number
PR ← Station Abbreviation
SW ← Sidewalk (or CW=Crosswalk, VW=Veloweb, RP=Sidewalk Repair, GR=Gap to Remain)
01 ← Improvement Number (matches 1 on Map)

OPCC 2B				2B-AC-RP-34		2B-AC-RP-41		2B-AC-RP-23		2B-AC-RP-24		2B-AC-RP-35		2B-AC-SW-36	
ENTITY	**ITEM**	**UNIT**	**COST**	**QUANTITY**	**COST**	**QUANTITY**	**COST**	**QUANTITY**	**COST**	**QUANTITY**	**COST**	**QUANTITY**	**COST**	**QUANTITY**	**COST**
DALLAS	**SIDEWALK (5')**	LF	$35.00	65	$2,275.00	95	$3,325.00	285	$9,975.00	15	$525.00	45	$1,575.00	540	$18,900.00
DALLAS	**SIDEWALK (10' PATH)**	LF	$70.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00
DALLAS	**REMOVE SIDEWALK**	LF	$20.00	65	$1,300.00	95	$1,900.00	285	$5,700.00	15	$300.00	45	$900.00		$0.00
DALLAS	**RETAINING WALL (1')**	LF	$20.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00
DALLAS	**RETAINING WALL (2')**	LF	$40.00		$0.00		$0.00		$0.00		$0.00		$0.00	150	$6,000.00
DALLAS	**RETAINING WALL (3')**	LF	$75.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00
DALLAS	**RETAINING WALL (4')**	LF	$100.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00
DALLAS	**RETAINING WALL (5')**	LF	$125.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00
DALLAS	**CURB AND GUTTER**	LF	$39.72		$0.00		$0.00	285	$11,320.20	15	$595.80		$0.00	540	$21,448.80
DALLAS	**DRAINAGE INLETS (MODIFY)**	EA	$3,518.00		$0.00	1	$3,518.00		$0.00		$0.00		$0.00	1	$3,518.00
TXDOT	**RAIL (HANDRAIL TY E)**	LF	$140.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00
TXDOT	**PED RAMPS**	EA	$2,182.75		$0.00		$0.00		$0.00		$0.00		$0.00	6	$13,096.50
TXDOT	**MEDIAN CUT (5')**	LF	$36.15		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00
TXDOT	**MEDIAN CUT (10' PATH)**	LF	$72.30		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00
DALLAS	**DRIVEWAY (RESIDENTIAL)**	EA	$3,972.22		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00
DALLAS	**DRIVEWAY (COMMERCIAL)**	EA	$8,444.44		$0.00		$0.00		$0.00		$0.00		$0.00	3	$25,333.32
N/A	**UTILITY POLE RELOCATED**	EA	$22,000.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00
DALLAS	**MANHOLE ADJUSTMENT**	EA	$572.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00
DALLAS	**TREE RELOCATIONS**	EA	$2,768.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00
DALLAS	**TREE REMOVALS**	EA	$886.00		$0.00		$0.00		$0.00		$0.00		$0.00	2	$1,772.00
N/A	**RAILROAD CROSSING**	EA	$120,000.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00
DALLAS	**TRAFFIC SIGNS RELOCATED**	EA	$223.00		$0.00		$0.00		$0.00		$0.00		$0.00	3	$669.00
TXDOT	**TRAFFIC SIGNS NEW**	EA	$650.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00
DALLAS	**PAVEMENT MARKINGS (CROSSWALK)**	LF	$9.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00
DALLAS	**PAVEMENT MARKINGS (STOP BAR)**	LF	$8.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00
N/A	**PAVEMENT MARKINGS (TRIANGLES)**	EA	$60.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00
N/A	**MEDIAN ISLAND/OTHER IMPROVEMENTS**	EA	SEE OTHER SHEET		$0.00		$0.00		$0.00		$0.00				$0.00
TXDOT	**UTILITY BOX RELOCATION**	EA	$729.33		$0.00		$0.00		$0.00		$0.00		$0.00	3	$2,187.99
DALLAS	**LIGHT POLE RELOCATION**	EA	$4,758.00		$0.00		$0.00		$0.00		$0.00		$0.00	1	$4,758.00
DALLAS	**FENCE (REMOVE AND REPLACE)**	LF	$53.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00
DALLAS	**FIRE HYDRANT RELOCATED**	EA	$3,640.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00
TXDOT	**GUARDRAIL END TREATMENT (MOVE & RESET)**	EA	$1,369.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00
N/A	**RRFB (#7) - 3 LANES W/O MEDIAN**	EA	$24,000		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00
N/A	**RRFB (#7) - 1 SOLAR SIGN & PUSH BUTTON IN MEDIAN**	EA	$36,000		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00
N/A	**RRFB (#7) - 2 SOLAR SIGNS & PUSHBUTTON IN MEDIAN**	EA	$48,000		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00
N/A	**PED HYBRID BEACON (#9) - 3 LANE UNDIVIDED**	EA	$150,000		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00
N/A	**PED HYBRID BEACON (#9) - 4 LANE DIVIDED**	EA	$175,000		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00
N/A	**PED HYBRID BEACON (#9) - 6 LANE DIVIDED**	EA	$200,000		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00
N/A	**APS & COUNTDOWN PED SIGNAL (#10) - 1 CW**	EA	$9,500		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00
N/A	**APS & COUNTDOWN PED SIGNAL (#10) - 2 CW**	EA	$15,500		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00
N/A	**APS & COUNTDOWN PED SIGNAL (#10) - 3 CW**	EA	$21,500		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00
N/A	**APS & COUNTDOWN PED SIGNAL (#10) - 4 CW**	EA	$27,500		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00
N/A	**PED TRAFFIC SIGNAL (#11) - 3 LANE UNDIVIDED**	EA	$150,000		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00
N/A	**PED TRAFFIC SIGNAL (#11) - 4 LANE DIVIDED**	EA	$175,000		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00
N/A	**PED TRAFFIC SIGNAL (#11) - 6 LANE DIVIDED**	EA	$210,000		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00

CONSTRUCTION COST (WITHOUT SIGNALS)	TOTAL	$3,575.00	$8,743.00	$26,995.20	$1,420.80	$2,475.00	$97,683.61
CONSTRUCTION COST	TOTAL	$3,575.00	$8,743.00	$26,995.20	$1,420.80	$2,475.00	$97,683.61
ENGINEERING DESIGN	10%	$357.50	$874.30	$2,699.52	$142.08	$247.50	$9,768.36
GENERAL LANDSCAPING	4%	$143.00	$349.72	$1,079.81	$56.83	$99.00	$3,907.34
SWPPP	2%	$71.50	$174.86	$539.90	$28.42	$49.50	$1,953.67
TRAFFIC CONTROL	3%	$107.25	$262.29	$809.86	$42.62	$74.25	$2,930.51
MOBILIZATION	4%	$155.87	$381.19	$1,176.99	$61.95	$107.91	$4,259.01
FEDERAL CONTINGENCY	2%	$88.20	$215.71	$666.03	$35.05	$61.06	$2,410.05
OPCC	TOTAL	$4,500.00	$11,100.00	$34,000.00	$1,800.00	$3,200.00	$123,000.00
AVERAGE COST PER LF OF SIDEWALK		$69.23 PER LF	$116.84 PER LF	$119.30 PER LF	$120.00 PER LF	$71.11 PER LF	#DIV/0!
GRAND TOTAL FOR GROUP 2B	$481,600.00						

Opinion of Probable Construction Cost

Arapaho Center Station

Improvement Code Legend: **ID:** 1A-PR-SW-01
1A ← Station Number
PR ← Station Abbreviation
SW ← Sidewalk (or CW=Crosswalk, VW=Veloweb, RP=Sidewalk Repair, GR=Gap to Remain)
01 ← Improvement Number (matches 1 on Map)

OPCC 2B				2B-AC-CW-04		2B-AC-CW-05		2B-AC-CW-55	
ENTITY	ITEM	UNIT	COST	QUANTITY	COST	QUANTITY	COST	QUANTITY	COST
DALLAS	**SIDEWALK (5')**	LF	$35.00		$0.00		$0.00		$0.00
DALLAS	**SIDEWALK (10' PATH)**	LF	$70.00		$0.00		$0.00		$0.00
DALLAS	**REMOVE SIDEWALK**	LF	$20.00		$0.00		$0.00		$0.00
DALLAS	**RETAINING WALL (1')**	LF	$20.00		$0.00		$0.00		$0.00
DALLAS	**RETAINING WALL (2')**	LF	$40.00		$0.00		$0.00		$0.00
DALLAS	**RETAINING WALL (3')**	LF	$75.00		$0.00		$0.00		$0.00
DALLAS	**RETAINING WALL (4')**	LF	$100.00		$0.00		$0.00		$0.00
DALLAS	**RETAINING WALL (5')**	LF	$125.00		$0.00		$0.00		$0.00
DALLAS	**CURB AND GUTTER**	LF	$39.72		$0.00		$0.00		$0.00
DALLAS	**DRAINAGE INLETS (MODIFY)**	EA	$3,518.00		$0.00		$0.00		$0.00
TXDOT	**RAIL (HANDRAIL TY E)**	LF	$140.00		$0.00		$0.00		$0.00
TXDOT	**PED RAMPS**	EA	$2,182.75		$0.00		$0.00	2	$4,365.50
TXDOT	**MEDIAN CUT (5')**	LF	$36.15		$0.00		$0.00		$0.00
TXDOT	**MEDIAN CUT (10' PATH)**	LF	$72.30		$0.00		$0.00		$0.00
DALLAS	**DRIVEWAY (RESIDENTIAL)**	EA	$3,972.22		$0.00		$0.00		$0.00
DALLAS	**DRIVEWAY (COMMERCIAL)**	EA	$8,444.44		$0.00		$0.00		$0.00
N/A	**UTILITY POLE RELOCATED**	EA	$22,000.00		$0.00		$0.00		$0.00
DALLAS	**MANHOLE ADJUSTMENT**	EA	$572.00		$0.00		$0.00		$0.00
DALLAS	**TREE RELOCATIONS**	EA	$2,768.00		$0.00		$0.00		$0.00
DALLAS	**TREE REMOVALS**	EA	$886.00		$0.00		$0.00		$0.00
N/A	**RAILROAD CROSSING**	EA	$120,000.00		$0.00		$0.00		$0.00
DALLAS	**TRAFFIC SIGNS RELOCATED**	EA	$223.00		$0.00		$0.00		$0.00
TXDOT	**TRAFFIC SIGNS NEW**	EA	$650.00	2	$1,300.00	2	$1,300.00	8	$5,200.00
DALLAS	**PAVEMENT MARKINGS (CROSSWALK)**	LF	$9.00	35	$315.00	30	$270.00	65	$585.00
DALLAS	**PAVEMENT MARKINGS (STOP BAR)**	LF	$8.00		$0.00		$0.00		$0.00
N/A	**PAVEMENT MARKINGS (TRIANGLES)**	EA	$60.00	4	$240.00	4	$240.00	14	$840.00
N/A	**MEDIAN ISLAND/OTHER IMPROVEMENTS**	EA	SEE OTHER SHEET		$0.00		$0.00	1	$85,391.50
TXDOT	**UTILITY BOX RELOCATION**	EA	$729.33		$0.00		$0.00		$0.00
DALLAS	**LIGHT POLE RELOCATION**	EA	$4,758.00		$0.00		$0.00		$0.00
DALLAS	**FENCE (REMOVE AND REPLACE)**	LF	$53.00		$0.00		$0.00		$0.00
DALLAS	**FIRE HYDRANT RELOCATED**	EA	$3,640.00		$0.00		$0.00		$0.00
TXDOT	**GUARDRAIL END TREATMENT (MOVE & RESET)**	EA	$1,369.00		$0.00		$0.00		$0.00
N/A	**RRFB (#7) - 3 LANES W/O MEDIAN**	EA	$24,000	1	$24,000.00	1	$24,000.00		$0.00
N/A	**RRFB (#7) - 1 SOLAR SIGN & PUSH BUTTON IN MEDIAN**	EA	$36,000		$0.00		$0.00	1	$36,000.00
N/A	**RRFB (#7) - 2 SOLAR SIGNS & PUSHBUTTON IN MEDIAN**	EA	$48,000		$0.00		$0.00		$0.00
N/A	**PED HYBRID BEACON (#9) - 3 LANE UNDIVIDED**	EA	$150,000		$0.00		$0.00		$0.00
N/A	**PED HYBRID BEACON (#9) - 4 LANE DIVIDED**	EA	$175,000		$0.00		$0.00		$0.00
N/A	**PED HYBRID BEACON (#9) - 6 LANE DIVIDED**	EA	$200,000		$0.00		$0.00		$0.00
N/A	**APS & COUNTDOWN PED SIGNAL (#10) - 1 CW**	EA	$9,500		$0.00		$0.00		$0.00
N/A	**APS & COUNTDOWN PED SIGNAL (#10) - 2 CW**	EA	$15,500		$0.00		$0.00		$0.00
N/A	**APS & COUNTDOWN PED SIGNAL (#10) - 3 CW**	EA	$21,500		$0.00		$0.00		$0.00
N/A	**APS & COUNTDOWN PED SIGNAL (#10) - 4 CW**	EA	$27,500		$0.00		$0.00		$0.00
N/A	**PED TRAFFIC SIGNAL (#11) - 3 LANE UNDIVIDED**	EA	$150,000		$0.00		$0.00		$0.00
N/A	**PED TRAFFIC SIGNAL (#11) - 4 LANE DIVIDED**	EA	$175,000		$0.00		$0.00		$0.00
N/A	**PED TRAFFIC SIGNAL (#11) - 6 LANE DIVIDED**	EA	$210,000		$0.00		$0.00		$0.00

CONSTRUCTION COST (WITHOUT SIGNALS)	TOTAL	$1,855.00	$1,810.00	$96,382.00
CONSTRUCTION COST	TOTAL	$25,855.00	$25,810.00	$132,382.00
ENGINEERING DESIGN	10%	$2,585.50	$2,581.00	$13,238.20
GENERAL LANDSCAPING	4%	$74.20	$72.40	$3,855.28
SWPPP	2%	$37.10	$36.20	$1,927.64
TRAFFIC CONTROL	3%	$55.65	$54.30	$2,891.46
MOBILIZATION	4%	$80.88	$78.92	$4,202.26
FEDERAL CONTINGENCY	2%	$573.77	$572.66	$3,169.94
OPCC	TOTAL	$29,300.00	$29,300.00	$161,700.00
AVERAGE COST PER LF OF SIDEWALK		#DIV/0!	#DIV/0!	#DIV/0!
GRAND TOTAL FOR GROUP 2B	$481,600.00			

Median Island Detailed Estimate - LOCATION 2B-AC-CW-55

ASSUMPTIONS

Assume 3 median islands that will be 8 ft wide and total 700 ft long so the leading end is visible from both ends of S-curve
add median nose signs each end as well as road narrows signs NB and SB - 8 total
add striping around new island and on both approaches to median

	ITEM NO	ITEM UNIT	QTY	UNIT COST	TOTAL
rem ex conc rdwy pvmt plus couple (4) ft for new C & G	0104 6001	SF	8450	$0.49	$4,140.50
add refuge conc rdwy pvmt	454	SF	100	$6.33	$633.00
conc refuge med pvmt	356	SF	5500	$6.00	$33,000.00
add C & G across refuge	407	LF	20	$32.00	$640.00
add C & G along median edges	407	LF	1430	$32.00	$45,760.00
add striping along new median	0666 6035	LF	1450	$0.84	$1,218.00
					$85,391.50

remove conc rdwy pvmt
- 8 ft wide + 4 ft C & G = 12 ft wide
- 700 ft long + 4 ft C & G = 704 LF
- total rem 704 x 12 = 8448 SF

conc rdwy refuge pvmt
- 10 x 10 = 100 SF

conc refuge med pvmt
- take total width req'd minus refuge rdwy pvmt
- (700 x 8) - 100 = 5500 SF

C & G across refuge med
- 10 x 2 = 20 LF

C & G along median
- take total length plus end minus refuge width times each side
- (700 + 8*3 -10) x 2
- 714 x 2 = 1428 LF

striping around median go thru refuge leaveout
- 700 + 700 + 8*6 = 1448 LF

Opinion of Probable Construction Cost

Spring Valley Station

Improvement Code Legend: ID: 1A-PR-SW-01
1A ← Station Number
PR ← Station Abbreviation
SW ← Sidewalk (or CW=Crosswalk, VW=Veloweb, RP=Sidewalk Repair, GR=Gap to Remain)
01 ← Improvement Number (matches 1 on Map)

OPCC 2C				2C-SV-SW-05		2C-SV-RP-19		2C-SV-SW-26		2C-SV-RP-46		2C-SV-SW-03		2C-SV-RP-10		2C-SV-SW-11		2C-SV-CW-16	
ENTITY	ITEM	UNIT	COST	QUANTITY	COST	QUANTITY	COST	QUANTITY	COST	QUANTITY	COST	QUANTITY	COST	QUANTITY	COST	QUANTITY	COST	QUANTITY	COST
DALLAS	SIDEWALK (5')	LF	$35.00	70	$2,450.00	70	$2,450.00	350	$12,250.00	15	$525.00	120	$4,200.00	65	$2,275.00	990	$34,650.00		$0.00
DALLAS	SIDEWALK (10' PATH)	LF	$70.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00
DALLAS	REMOVE SIDEWALK	LF	$20.00		$0.00	70	$1,400.00		$0.00	15	$300.00		$0.00	65	$1,300.00		$0.00		$0.00
DALLAS	RETAINING WALL (1')	LF	$20.00		$0.00		$0.00	175	$3,500.00	30	$600.00		$0.00		$0.00	200	$4,000.00		$0.00
DALLAS	RETAINING WALL (2')	LF	$40.00		$0.00	70	$2,800.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00
DALLAS	RETAINING WALL (3')	LF	$75.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00
DALLAS	RETAINING WALL (4')	LF	$100.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00
DALLAS	RETAINING WALL (5')	LF	$125.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00
DALLAS	CURB AND GUTTER	LF	$39.72		$0.00		$0.00		$0.00		$0.00	120	$4,766.40		$0.00	250	$9,930.00		$0.00
DALLAS	DRAINAGE INLETS (MODIFY)	EA	$3,518.00		$0.00	1	$3,518.00		$0.00	1	$3,518.00		$0.00		$0.00		$0.00		$0.00
DALLAS	RCP 18"	LF	$58.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00
TXDOT	PED RAMPS	EA	$2,182.75	2	$4,365.50		$0.00	2	$4,365.50		$0.00	7	$15,279.25		$0.00	15	$32,741.25	2	$4,365.50
TXDOT	MEDIAN CUT (5')	LF	$36.15		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00
TXDOT	MEDIAN CUT (10' PATH)	LF	$72.30		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00
DALLAS	DRIVEWAY (RESIDENTIAL)	EA	$3,972.22		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00
DALLAS	DRIVEWAY (COMMERCIAL)	EA	$8,444.44	1	$8,444.44		$0.00		$0.00		$0.00	4	$33,777.76		$0.00	8	$67,555.52		$0.00
N/A	UTILITY POLE RELOCATED	EA	$22,000.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00
DALLAS	MANHOLE ADJUSTMENT	EA	$572.00		$0.00		$0.00	4	$2,288.00		$0.00		$0.00		$0.00		$0.00		$0.00
DALLAS	TREE RELOCATIONS	EA	$2,768.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00
DALLAS	TREE REMOVALS	EA	$886.00		$0.00		$0.00	5	$4,430.00		$0.00		$0.00		$0.00	2	$1,772.00		$0.00
N/A	RAILROAD CROSSING	EA	$120,000.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00
DALLAS	TRAFFIC SIGNS RELOCATED	EA	$223.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00	5	$1,115.00		$0.00
TXDOT	TRAFFIC SIGNS NEW	EA	$650.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00	4	$2,600.00
DALLAS	PAVEMENT MARKINGS (CROSSWALK)	LF	$9.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00	60	$540.00
DALLAS	PAVEMENT MARKINGS (STOP BAR)	LF	$8.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00
N/A	PAVEMENT MARKINGS (TRIANGLES)	EA	$60.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00
N/A	MEDIAN ISLAND	EA	SEE OTHER SHEET		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00
TXDOT	UTILITY BOX RELOCATION	EA	$729.33		$0.00		$0.00	1	$729.33		$0.00		$0.00		$0.00	3	$2,187.99		$0.00
DALLAS	LIGHT POLE RELOCATION	EA	$4,758.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00	3	$14,274.00		$0.00
DALLAS	FENCE (REMOVE AND REPLACE)	LF	$53.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00
DALLAS	FIRE HYDRANT RELOCATED	EA	$3,640.00		$0.00		$0.00	1	$3,640.00		$0.00		$0.00		$0.00	3	$10,920.00		$0.00
DALLAS	PARKING STOP	EA	$97.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00
N/A	PED CROSSWALK LIGHTING (#1) - 2 LANE UNDIVIDED	EA	$26,435.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00
N/A	PED CROSSWALK LIGHTING (#1) - 3 LANE UNDIVIDED	EA	$27,182.50		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00	1	$27,182.50
N/A	PED CROSSWALK LIGHTING (#1) - 4 LANE UNDIVIDED	EA	$40,407.50		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00
N/A	PED CROSSWALK LIGHTING (#1) - 4 LANE DIVIDED	EA	$41,183.75		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00
N/A	PED CROSSWALK LIGHTING (#1) - 6 LANE UNDIVIDED	EA	$41,839.25		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00
N/A	PED CROSSWALK LIGHTING (#1) - 6 LANE DIVIDED	EA	$42,615.50		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00
N/A	RRFB (#7) - 3 LANES W/O MEDIAN	EA	$24,000		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00
N/A	RRFB (#7) - 1 SOLAR SIGN & PUSH BUTTON IN MEDIAN	EA	$36,000		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00
N/A	RRFB (#7) - 2 SOLAR SIGNS & PUSHBUTTON IN MEDIAN	EA	$48,000		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00
N/A	PED HYBRID BEACON (#9) - 3 LANE UNDIVIDED	EA	$150,000		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00
N/A	PED HYBRID BEACON (#9) - 4 LANE DIVIDED	EA	$175,000		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00
N/A	PED HYBRID BEACON (#9) - 6 LANE DIVIDED	EA	$200,000		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00
N/A	APS & COUNTDOWN PED SIGNAL (#10) - 1 CW	EA	$9,500		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00
N/A	APS & COUNTDOWN PED SIGNAL (#10) - 2 CW	EA	$15,500		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00
N/A	APS & COUNTDOWN PED SIGNAL (#10) - 3 CW	EA	$21,500		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00
N/A	APS & COUNTDOWN PED SIGNAL (#10) - 4 CW	EA	$27,500		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00
N/A	PED TRAFFIC SIGNAL (#11) - 3 LANE UNDIVIDED	EA	$150,000		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00
N/A	PED TRAFFIC SIGNAL (#11) - 4 LANE DIVIDED	EA	$175,000		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00
N/A	PED TRAFFIC SIGNAL (#11) - 6 LANE DIVIDED	EA	$210,000		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00
	CONSTRUCTION COST (WITHOUT SIGNALS)	TOTAL			$15,259.94		$10,168.00		$31,202.83		$4,943.00		$58,023.41		$3,575.00		$179,145.76		$7,505.50
	CONSTRUCTION COST	TOTAL			$15,259.94		$10,168.00		$31,202.83		$4,943.00		$58,023.41		$3,575.00		$179,145.76		$34,688.00
	ENGINEERING DESIGN	10%			$1,525.99		$1,016.80		$3,120.28		$494.30		$5,802.34		$357.50		$17,914.58		$3,468.80
	GENERAL LANDSCAPING	4%			$610.40		$406.72		$1,248.11		$197.72		$2,320.94		$143.00		$7,165.83		$300.22
	SWPPP	2%			$305.20		$203.36		$624.06		$98.86		$1,160.47		$71.50		$3,582.92		$150.11
	TRAFFIC CONTROL	3%			$457.80		$305.04		$936.08		$148.29		$1,740.70		$107.25		$5,374.37		$225.17
	MOBILIZATION	4%			$665.33		$443.32		$1,360.44		$215.51		$2,529.82		$155.87		$7,810.76		$327.24
	FEDERAL CONTINGENCY	2%			$376.49		$250.86		$769.84		$121.95		$1,431.55		$88.20		$4,419.88		$783.19
	OPCC	TOTAL			$19,300.00		$12,800.00		$39,300.00		$6,300.00		$73,100.00		$4,500.00		$225,500.00		$40,000.00
	AVERAGE COST PER LF OF SIDEWALK				$275.71 PER LF		$182.86 PER LF		$112.29 PER LF		$420.00 PER LF		$609.17 PER LF		$69.23 PER LF		$227.78 PER LF		
	GRAND TOTAL FOR GROUP 2C	$528,600.00																	

Opinion of Probable Construction Cost

Spring Valley Station

Improvement Code Legend: ID: 1A-PR-SW-01

1A ← Station Number
PR ← Station Abbreviation
SW ← Sidewalk (or CW=Crosswalk, VW=Veloweb, RP=Sidewalk Repair, GR=Gap to Remain)
01 ← Improvement Number (matches 1 on Map)

OPCC 2C				2C-SV-CW-17		2C-SV-CW-38	
ENTITY	ITEM	UNIT	COST	QUANTITY	COST	QUANTITY	COST
DALLAS	**SIDEWALK (5')**	LF	$35.00		$0.00		$0.00
DALLAS	**SIDEWALK (10' PATH)**	LF	$70.00		$0.00		$0.00
DALLAS	**REMOVE SIDEWALK**	LF	$20.00		$0.00		$0.00
DALLAS	**RETAINING WALL (1')**	LF	$20.00		$0.00		$0.00
DALLAS	**RETAINING WALL (2')**	LF	$40.00		$0.00		$0.00
DALLAS	**RETAINING WALL (3')**	LF	$75.00		$0.00		$0.00
DALLAS	**RETAINING WALL (4')**	LF	$100.00		$0.00		$0.00
DALLAS	**RETAINING WALL (5')**	LF	$125.00		$0.00		$0.00
DALLAS	**CURB AND GUTTER**	LF	$39.72		$0.00		$0.00
DALLAS	**DRAINAGE INLETS (MODIFY)**	EA	$3,518.00		$0.00		$0.00
DALLAS	**RCP 18"**	LF	$58.00		$0.00		$0.00
TXDOT	**PED RAMPS**	EA	$2,182.75		$0.00	2	$4,365.50
TXDOT	**MEDIAN CUT (5')**	LF	$36.15		$0.00	10	$361.50
TXDOT	**MEDIAN CUT (10' PATH)**	LF	$72.30		$0.00		$0.00
DALLAS	**DRIVEWAY (RESIDENTIAL)**	EA	$3,972.22		$0.00		$0.00
DALLAS	**DRIVEWAY (COMMERCIAL)**	EA	$8,444.44		$0.00		$0.00
N/A	**UTILITY POLE RELOCATED**	EA	$22,000.00		$0.00		$0.00
DALLAS	**MANHOLE ADJUSTMENT**	EA	$572.00		$0.00		$0.00
DALLAS	**TREE RELOCATIONS**	EA	$2,768.00		$0.00		$0.00
DALLAS	**TREE REMOVALS**	EA	$886.00		$0.00		$0.00
N/A	**RAILROAD CROSSING**	EA	$120,000.00		$0.00		$0.00
DALLAS	**TRAFFIC SIGNS RELOCATED**	EA	$223.00		$0.00		$0.00
TXDOT	**TRAFFIC SIGNS NEW**	EA	$650.00	2	$1,300.00	4	$2,600.00
DALLAS	**PAVEMENT MARKINGS (CROSSWALK)**	LF	$9.00	55	$495.00	85	$765.00
DALLAS	**PAVEMENT MARKINGS (STOP BAR)**	LF	$8.00		$0.00		$0.00
N/A	**PAVEMENT MARKINGS (TRIANGLES)**	EA	$60.00	8	$480.00	16	$960.00
N/A	**MEDIAN ISLAND**	EA	SEE OTHER SHEET	1	$10,053.40		$0.00
TXDOT	**UTILITY BOX RELOCATION**	EA	$729.33		$0.00		$0.00
DALLAS	**LIGHT POLE RELOCATION**	EA	$4,758.00		$0.00		$0.00
DALLAS	**FENCE (REMOVE AND REPLACE)**	LF	$53.00		$0.00		$0.00
DALLAS	**FIRE HYDRANT RELOCATED**	EA	$3,640.00		$0.00		$0.00
DALLAS	**PARKING STOP**	EA	$97.00		$0.00		$0.00
N/A	**PED CROSSWALK LIGHTING (#1) - 2 LANE UNDIVIDED**	EA	$26,435.00		$0.00		$0.00
N/A	**PED CROSSWALK LIGHTING (#1) - 3 LANE UNDIVIDED**	EA	$27,182.50		$0.00		$0.00
N/A	**PED CROSSWALK LIGHTING (#1) - 4 LANE UNDIVIDED**	EA	$40,407.50		$0.00		$0.00
N/A	**PED CROSSWALK LIGHTING (#1) - 4 LANE DIVIDED**	EA	$41,183.75		$0.00		$0.00
N/A	**PED CROSSWALK LIGHTING (#1) - 6 LANE UNDIVIDED**	EA	$41,839.25		$0.00		$0.00
N/A	**PED CROSSWALK LIGHTING (#1) - 6 LANE DIVIDED**	EA	$42,615.50		$0.00		$0.00
N/A	**RRFB (#7) - 3 LANES W/O MEDIAN**	EA	$24,000		$0.00		$0.00
N/A	**RRFB (#7) - 1 SOLAR SIGN & PUSH BUTTON IN MEDIAN**	EA	$36,000	1	$36,000.00	1	$36,000.00
N/A	**RRFB (#7) - 2 SOLAR SIGNS & PUSHBUTTON IN MEDIAN**	EA	$48,000		$0.00		$0.00
N/A	**PED HYBRID BEACON (#9) - 3 LANE UNDIVIDED**	EA	$150,000		$0.00		$0.00
N/A	**PED HYBRID BEACON (#9) - 4 LANE DIVIDED**	EA	$175,000		$0.00		$0.00
N/A	**PED HYBRID BEACON (#9) - 6 LANE DIVIDED**	EA	$200,000		$0.00		$0.00
N/A	**APS & COUNTDOWN PED SIGNAL (#10) - 1 CW**	EA	$9,500		$0.00		$0.00
N/A	**APS & COUNTDOWN PED SIGNAL (#10) - 2 CW**	EA	$15,500		$0.00		$0.00
N/A	**APS & COUNTDOWN PED SIGNAL (#10) - 3 CW**	EA	$21,500		$0.00		$0.00
N/A	**APS & COUNTDOWN PED SIGNAL (#10) - 4 CW**	EA	$27,500		$0.00		$0.00
N/A	**PED TRAFFIC SIGNAL (#11) - 3 LANE UNDIVIDED**	EA	$150,000		$0.00		$0.00
N/A	**PED TRAFFIC SIGNAL (#11) - 4 LANE DIVIDED**	EA	$175,000		$0.00		$0.00
N/A	**PED TRAFFIC SIGNAL (#11) - 6 LANE DIVIDED**	EA	$210,000		$0.00		$0.00

CONSTRUCTION COST (WITHOUT SIGNALS)	TOTAL	$12,328.40	$9,052.00
CONSTRUCTION COST	TOTAL	$48,328.40	$45,052.00
ENGINEERING DESIGN	10%	$4,832.84	$4,505.20
GENERAL LANDSCAPING	4%	$493.14	$362.08
SWPPP	2%	$246.57	$181.04
TRAFFIC CONTROL	3%	$369.85	$271.56
MOBILIZATION	4%	$537.52	$394.67
FEDERAL CONTINGENCY	2%	$1,096.17	$1,015.33
OPCC	TOTAL	$56,000.00	$51,800.00
AVERAGE COST PER LF OF SIDEWALK			
GRAND TOTAL FOR GROUP 2C	$528,600.00		

Median Island Detailed Estimate - LOCATION 2C-SV-CW-17

Assumptions

is across Lingco Dr at DART Park & Ride Crosswalk
assume 45 foot long
tear drop shape on both sides - estimate as 2 triangles
assume max width is 10 foot

	ITEM NO	ITEM UNIT	QTY	UNIT COST	TOTAL
remove ex conc pavement (will equal new median area plus couple feet for C & G construction)	0104 6001	SF	560	$0.49	$274.40
add median refuge island median pavment	356	SF	450	$6.00	$2,700.00
add conc roadway pavement thru refuge island space	454	SF	100	$6.33	$633.00
add conc curb across median refuge island	407	LF	20	$32.00	$640.00
add C & C along Lingco Dr across median refuge length	407	LF	110	$32.00	$3,520.00
add striping on SB Lingco Dr directing traffic to one lane each direction	0666 6035	LF	200	$0.84	$168.00
add striping north of tear drop to direct traffic around island approach	0666 6035	LF	200	$0.84	$168.00
add signs - north 1 on median, 2 advance signs to merge	0636 & 0646	EACH	3	$650.00	$1,950.00
					$10,053.40

area of median - assume 2 triangles
0.5 x 45 x 10 x 2 = 450 sf
area of removal
add 45 lf x 2 sides plus 20 feet for median nose to median area
= 450 + [(45 x 2) + 20] = 560 SF
conc rdway pvmt at median refuge assume 10 ft wide x 10 ft long = 100 SF