

KANSAS CITY STREETCAR MAIN STREET EXTENSION

Land Use Report



Submitted by the KC Streetcar Partnership

City of Kansas City, Missouri

Kansas City Streetcar Authority

Kansas City Area Transportation Authority

August 23, 2019

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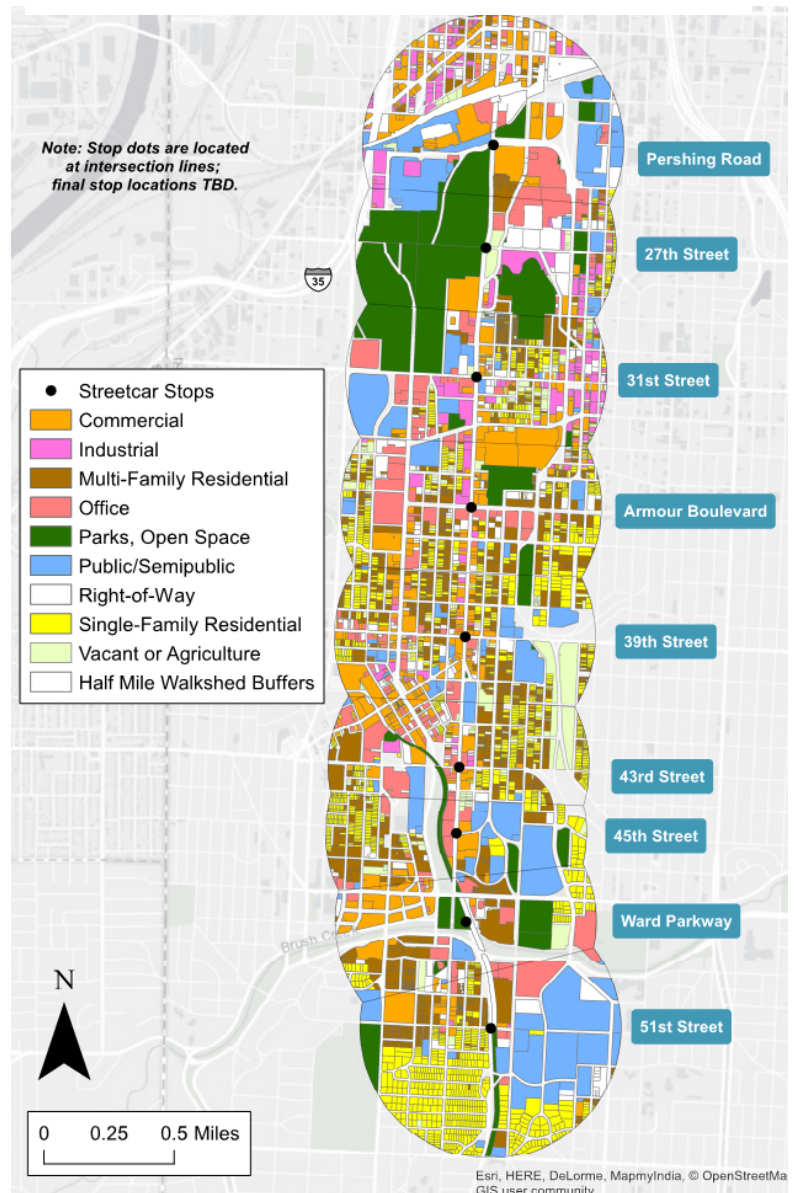
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APPENDIX A: Population, Housing, and Employment Calculation Sheets

1.0 Introduction

The Kansas City Downtown Streetcar starter line went into service on May 6, 2016. The 2.2-mile line has provided more than 4.9 million trips since that opening day (over twice the original projections). Due to overwhelming support and enthusiastic public interest in extending the streetcar route, a three-pronged partnership – the City of Kansas City, Missouri (City), the Kansas City Area Transportation Authority (KCATA), and the Kansas City Streetcar Authority (KCSA) – is currently developing Federal Transit Administration (FTA) Section 5309 Capital Investment Grant Program – New Starts Project justification materials and data in support of extending the streetcar approximately 3.6 miles south from its current terminus. The proposed alignment would continue south along Main Street, ending at the Country Club Plaza/University of Missouri – Kansas City (Plaza/UMKC) area. The project would connect the City’s two largest activity centers and would greatly extend and increase the community benefits already being seen from the Downtown Streetcar starter line. This expansion of the streetcar in the Main Street corridor was identified and extensively studied in the NextRail KC study completed in 2013, and is included in the region’s adopted long-range transportation plan, Transportation Outlook 2040.

Figure 1. Existing Land Use Map



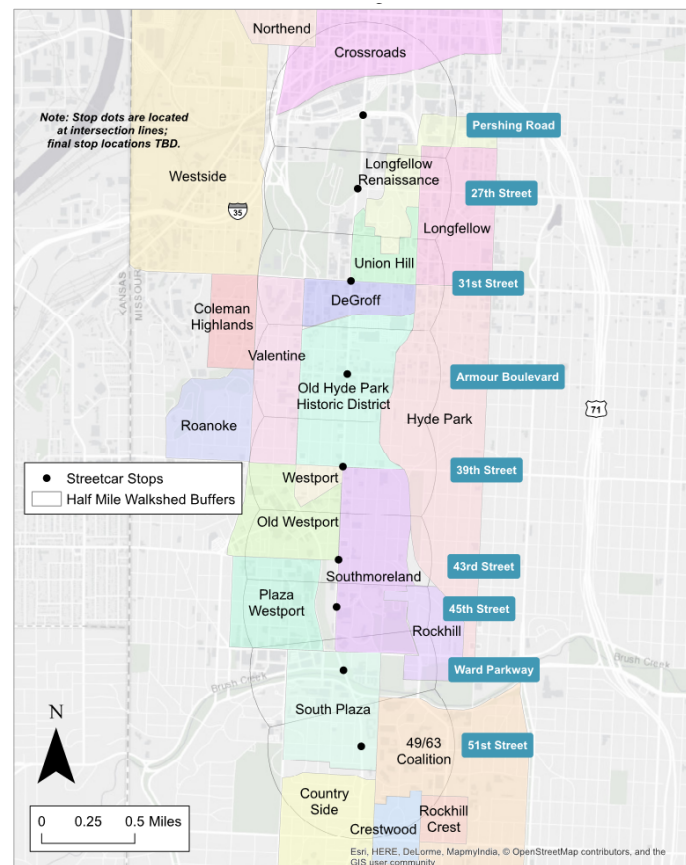
As mentioned, in 2012 and 2013, the City, in coordination with KCATA, the Mid-America Regional Council (MARC), and Jackson County, initiated a \$1.9 million planning study called NextRail KC to evaluate the potential impacts, feasibility, and cost of streetcar expansions in eight designated corridors. Through a phased process that included public/stakeholder engagement, systems overview, route screening, and detailed route analysis, the Main Street corridor streetcar extension, along with two others, was selected by the City Council for endorsement. The Main Street corridor is a key component of the overall regional system and would connect major activity centers, while serving a key redevelopment corridor.

The 3.5-mile-long Streetcar extension route has nine planned stations, including Union Station, 27th Street Station, 31st Street Station, Armour Boulevard Station, 39th Street Station, 43rd Street Station, 45th Street Station, Plaza Station, and UMKC Station. The corridor touches five residential neighborhoods, two mixed-use neighborhoods, one museum district, and one educational district.

This document is a report on Land Use condition along the Main Street corridor submitted as part of the project justification rating materials package in fulfillment of the requirements specified by Template 2 of the New Starts Project Justification rating process. The intent is to provide FTA and its affiliates with project

information and materials needed on existing land use conditions and station area development character. The preparation of this report included a review of existing land use conditions, such as population and employment density, station area development, station area development character, and station pedestrian facilities along the Main Street corridor. Analyses were conducted from both quantitative and qualitative perspectives

Figure 2. Adjacent Neighborhoods along the Main Street Corridor



2.0 Existing Corridor and Station Area Development

The extension route will serve an existing population of 20,991 individuals, 11,850 housing units, and 58,177 employees within a ½ mile radius of the stations. The proposed streetcar extension will directly touch five distinct residential neighborhoods, and at least four other neighborhoods are within a ½ mile of the proposed line. Both ends of the proposed route touch significant civic amenities – Union Station and Crown Center on the north end, the Country Club Plaza and UMKC on the south end. The route will serve businesses of all sizes, the Metropolitan Community College, St. Luke’s Hospital, several performing arts venues, and some key service organizations oriented to those with disabilities.

Figure 2 illustrates existing land uses within the study area.

- **Union Station/Pershing Blvd. (intersection of Main Street and Pershing Boulevard):** The Union Station area serves a broad mix of uses: cultural, commercial, residential, institutional, and parkland. Attractions include the Liberty Memorial and the National World War I Museum, the mixed-use Crown Center development, two parks, office buildings, and the Hospital Hill medical district.
- **27th Street:** The proposed 27th Street station is surrounded by a variety of attractions: Penn Valley Park, Union Cemetery, historic neighborhoods including Union Hill and Longfellow, the Legoland Discovery Center, Kaleidoscope, the Hallmark Center, Coterie, Federal Reserve Bank of Kansas, and the Money Museum.
- **31st Street:** The proposed station at 31st Street is surrounded by the walkable and well-established Union Hill and Broadway Gillham neighborhoods that are attractive to New Urbanists, and contain supporting retail, hotels, and dining establishments. Near the station there are also a variety of youth oriented institutions including the YMCA and schools for children with special developmental and medical needs.
- **Armour Boulevard:** The Armour Boulevard corridor contains a large number of renovated apartment buildings, and a fair amount of single-family housing. New mixed-use development, a large bank, and restaurants are also located near this station.
- **39th Street:** The proposed station at 39th Street is located amidst a plethora of visual and performing arts venues along with social development programs. Several retail stores are located here as well, including a drug store, banks and tax support services, and restaurants and coffee shops. This station is also within walking distance of the eclectic Westport neighborhood, comprised of residential development (historic and new), entertainment venues, restaurants, bars, and fashion boutiques.

- **43rd Street:** This station would serve the Southmoreland neighborhood, which currently has high transit ridership and is a prime reinvestment location. The station would also serve a number of commercial establishments including coffee shops, finance businesses, and small boutique spaces, as well as the historic Mill Creek Park and Vietnam Veterans War Memorial. Adjacent to the park is the nationally recognized St. Luke's Hospital and supporting hotels.
- **45th Street:** This station would also serve the Southmoreland neighborhood, several office towers, and hotels, the Kansas City Art Institute, and the Nelson Atkins Museum of Art and the Kemper Museum of Contemporary Art. This station would also serve the Mill Creek Park.
- **Plaza Station:** (Intersection of Main Street and Ward Parkway North). This proposed station is surrounded with trip generators such as a 14-square-block shopping and dining district, the 10-court Plaza Tennis Center, multi-family apartment/condominium towers, office towers, and park and open spaces including Mill Creek Park and the Brush Creek Trail. Other destinations near the proposed station include a public library and Community Christian Church, originally designed by Frank Lloyd Wright.
- **UMKC:** (Intersection of Brookside Boulevard and 51st Street). This proposed station would primarily serve UMKC, which has over 16,000 students. The station will also benefit students of Rockhurst University, just east of UMKC. Also in the station area are student apartments, single family residences, neighborhood retail, a large grocer, and the Trolley Track Trail.

The extension will connect the City's two largest activity centers, (Union Station and Crown Center on the north end and the Country Club Plaza and UMKC on the south end) and would greatly increase and extend the community benefits already being seen from the Downtown Streetcar starter line (population density and employment density along the corridor shown in Figures 3 and 4).

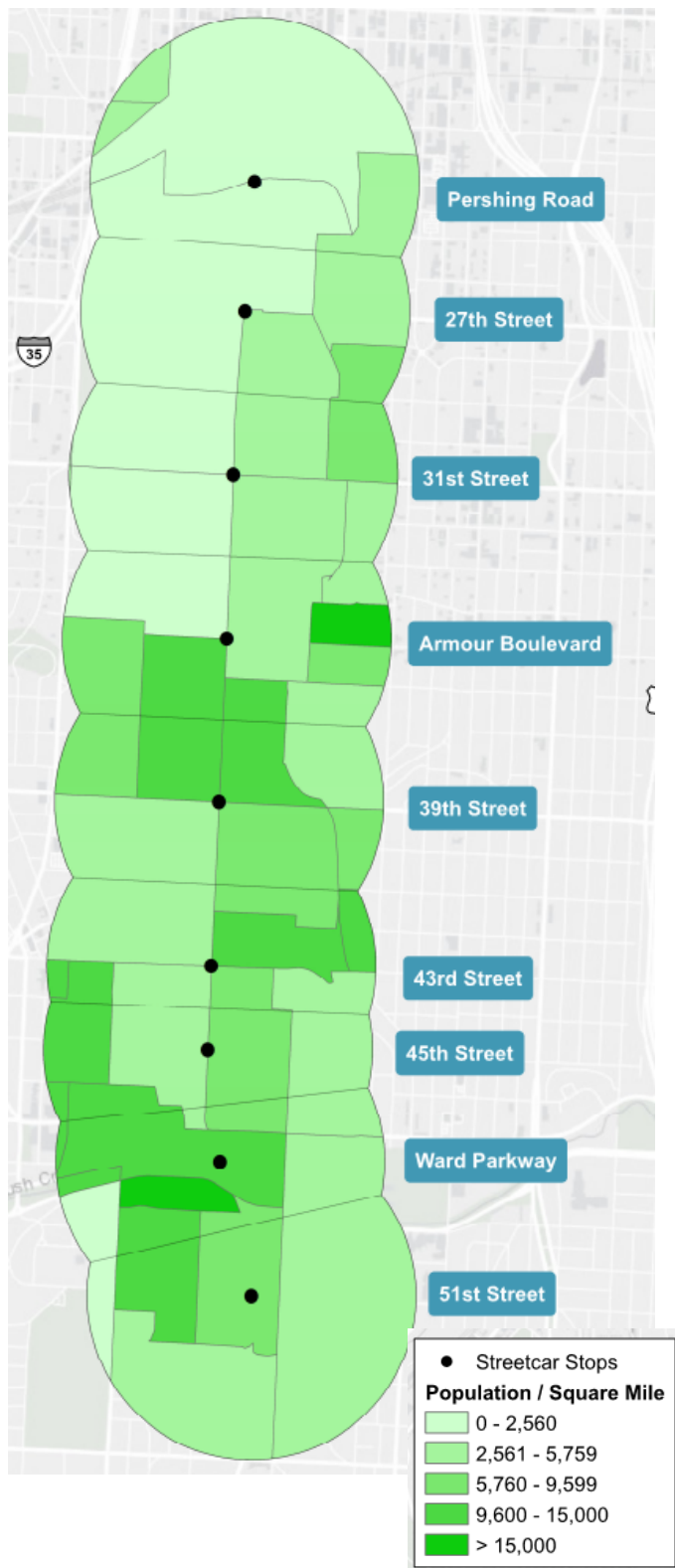


Figure 3. Population Density Map

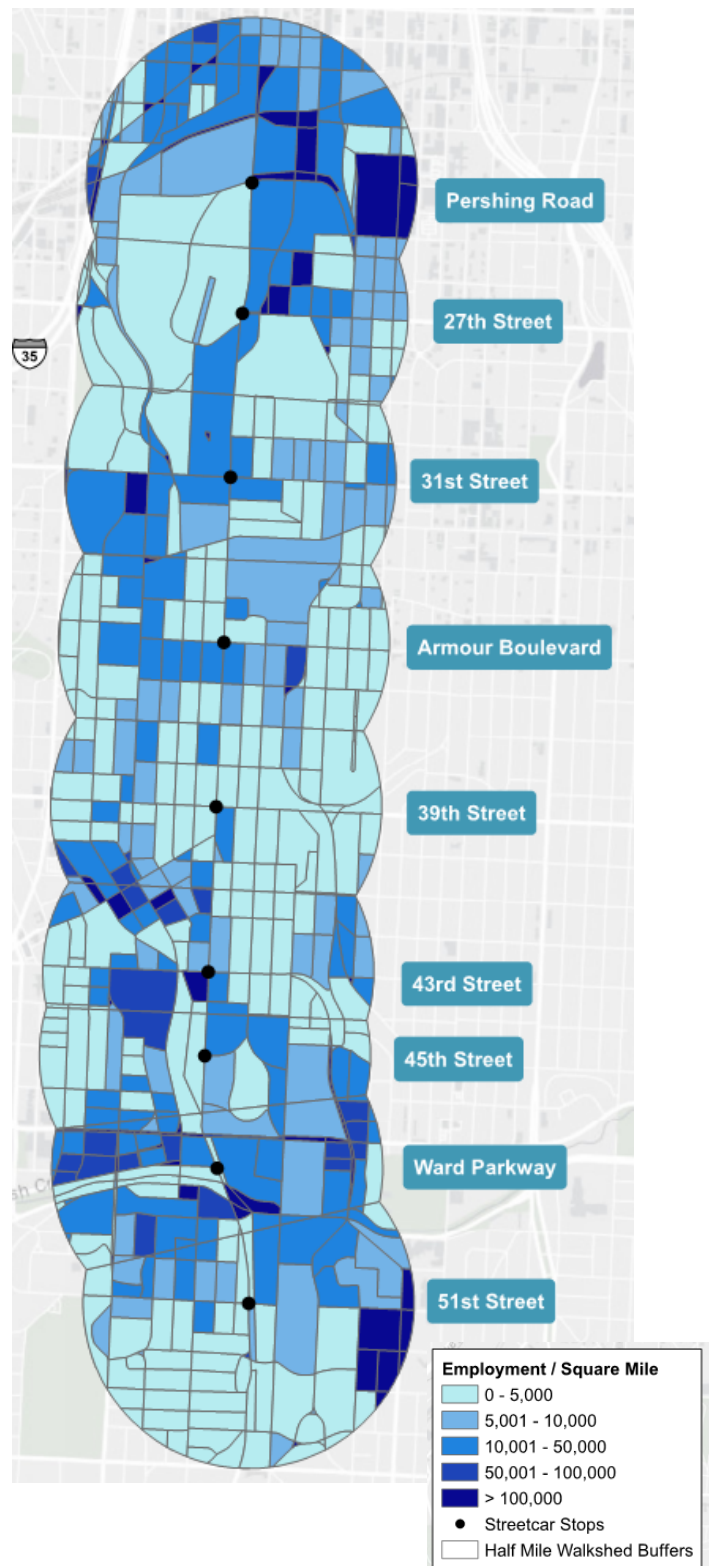


Figure 4. Employment Density Map

Table 1. Population, Housing, and Employment by Station

Stations (1/2 mile station area)	Union Station/ Pershing Blvd.	27 th Street	31 st Street	Armour Blvd.	39 th Street	43 rd Street	45 th Street	Plaza	UMKC	Starter Line
Population	623	573	987	1,910	1,919	1,465	1,212	2,010	1,106	8,526
Housing (unit)	1,042	1,028	1,633	3,251	3,494	2,593	1,951	3,211	2,789	6,140
Employment	19,791	2,047	4,477	3,307	2,633	6,195	2,347	8,342	3,769	51,521

Source: U.S. Census, 2010; U.S. Census LEHD, 2015

Note: See calculation tables in Appendix A

By connecting to the Downtown streetcar line, the extension will provide access to the downtown Loop, which is the civic, cultural, and employment center of the City, has an employment size of 49,336 people and is considered one of the high trip generators along the corridor. The major trip generators on 11th and 12th street within the Downtown Loop include:

- **Government District:** Includes the Richard Bolling Federal Building, the United States Department of Transportation Regional Headquarters, the Charles Evans Whittaker United States Courthouse, Missouri State Office Building, Kansas City, Missouri City Hall, and Jackson County Courthouse;
- **Sprint Center:** A multi-use indoor arena in the Downtown Loop that attracted 5.6 million visitors in the five years after it opened in 2007;
- **Power & Light District:** A nine-block district offering dining, entertainment, and shopping, located near the Sprint Center; and
- **Convention District:** Includes Municipal Auditorium, numerous hotels, the Bartle Hall Convention Center with 388,800 square feet of convention space, and the \$400 million Kauffman Center for the Performing Arts.

3.0 Existing Corridor and Station Area Development Character

Running along a largely commercial street, the proposed Main Street streetcar extension will be a natural addition to the economic growth concept of the starter line, bookended by Union Station on the north side and the Plaza/UMKC on the south side. On either side moving away from Main Street, the corridor is a mixture of urban single-family and multi-family residential with a few key commercial cross-streets. This project supports transit along the extension corridor and encourages a transit-supportive, pedestrian-oriented, mixed-use development framework that assists with the implementation of infill development, reuse of existing building, and mixed-use development, and uses transit as a mean to improve livability, reduce vehicle trips, and lower greenhouse gas emissions. Figure 5 identifies primary corridor activity centers that future streetcar station stops will serve.



Figure 3. Corridor Activities Center

- Union Station:** The Union Station/Crown Center area is a culturally iconic region of Downtown Kansas City that also marks the transition to Midtown. The station area serves a broad mix of uses including retail, cultural attractions, and residential buildings, and a portion of the area consists of a modern urban setting with office towers, medical centers, and open spaces. Modern urban structures often include architectural features that contribute to the corridor’s traditional design aesthetic. The mixed-use vibrant urban context extends into the Crossroads, which was traditionally an industrial-oriented area, but now is an eclectic district mixing residential uses with art galleries, small businesses, and restaurants. There are

Union Station/Pershing Blvd. (1/2/ mile station area)	
Population	623
Housing (unit)	1,042
Employment	19,791

two parks, the 176-acre Penn Valley Park and the 5-acre Washington Square Park, which provide green space and natural elements to this area.



Figure 4. Union Station Area Photos

- 27th Street:** Surrounded by attractions for all interests, the 27th Street station has the potential to become a prime Kansas City destination that is rich in cultural, educational, historic, and artistic content. Nearby is the National World War I Museum and Memorial, the premier WWI museum in the world that attracts over 500,000 visitors each year and is located immediately west of the potential station. Across Main Street from the WWI memorial and Penn Valley Park is Union Cemetery, Missouri’s oldest public cemetery and the resting place of Civil War soldiers and the area’s earliest settlers. Adjacent to the cemetery are two of the City’s oldest neighborhoods, Union Hill and Longfellow, originally settled in the mid 1800’s, that have become popular historic urban areas and have had a recent influx of redevelopment. East of the station are Legoland Discovery Center, Kaleidoscope, the Hallmark Center, and Coterie Theatre – all family-oriented entertainment, cultural, and artistic attractions. Adjacent to these activities is the newly built Crown Center development, which provides lodging, dining, and entertainment, creating a critical mass of recreation and education.

27 th Street (1/2 mile station area)	
Population	573
Housing (unit)	1,028
Employment	2,047



Figure 5. 27th Street Station Area Photos

- 31st Street:** The station at 31st Street will be located on the south side of the Union Hill neighborhood and forms the northern edge of the Broadway Gillham Neighborhood, a historic, walkable community of pre-war homes becoming more attractive for New Urbanists. Building setbacks are minimal, often fronted by sidewalks. Small blocks help create a walkable and livable neighborhood. The station would serve neighborhood retail and dining establishments in this revitalized setting. The area is also has a high degree of transit dependence as it serves organizations oriented to those with disabilities including The Children’s Center Campus, a collection of public service institutions comprised of a YMCA, Ability KC, and the Children’s Center for the Visually Impaired. Ability KC is a non-profit organization that provides rehabilitation and therapy services for disabled children and adults. One block away is the Children’s Mercy Clinics, which are dedicated to treating children of all ages for a wide range of medical needs.

31 st Street (1/2 mile station area)	
Population	987
Housing (unit)	1,633
Employment	4,477



Figure 6. 31st Street Station Area Photos

- Armour Boulevard:** The Armour corridor itself is home to a large number of apartment buildings, many of which are the result of redevelopment and renovation over the past decade. These buildings have expanded the number of apartments in the Armour area from 250 to over 1500. The area continues to grow and has started to bring in modern mixed-use development. The station area also includes a fair amount of single-family housing (several distinct neighborhoods), the aforementioned Midtown Marketplace, and the Foreign Language Academy.

Armour Boulevard (1/2 mile station area)	
Population	1,910
Housing (unit)	3,251
Employment	3,307



Figure 7. Armour Boulevard Station Area Photos

- 39th Street:** Serving as a prime destination for the performing arts crowd, the 39th Street station area is the home to Madrid Theater, Metropolitan Ensemble Theatre, and Unicorn Theatre. In addition, the Westport entertainment district and the Kansas City Young Audiences School that teaches performing and visual arts to over 100,000 children each year are located within walking distance to the proposed station. Small blocks, minimal building setbacks, and sidewalks encourage a walkable environment and make these destinations accessible. In addition, the station would also serve organizations within the vicinity that are oriented to those with disabilities, such as The Whole Person which provides training and resources for the disabled community.

39 th Street (1/2 mile station area)	
Population	1,919
Housing (unit)	3,494
Employment	2,633

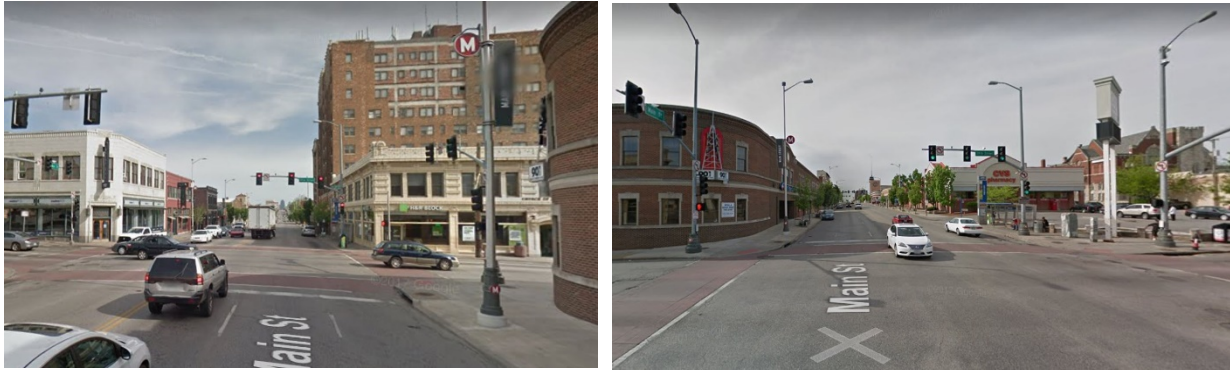


Figure 8. 39th Street Station Area Photos

- **43rd Street:** The 43rd Street station area continues to transform into a modern, urbanized,
- hospital-oriented neighborhood with a mix of open space, hotels, medical centers, and residential housing. St. Luke's Hospital, recognized as one of the best in the country, sits in the station area, with over 600 doctors practicing over 60 specialties. The hospital also serves as an engine of economic development for the community bringing hotels, retail, and residential buildings into the area. The Southmoreland neighborhood in the area has become a target for residential reinvestment, and hotels such as Embassy Suites and Best Western, located near the station, serve the hospital.

43 rd Street (1/2 mile station area)	
Population	1,465
Housing (unit)	2,593
Employment	6,195

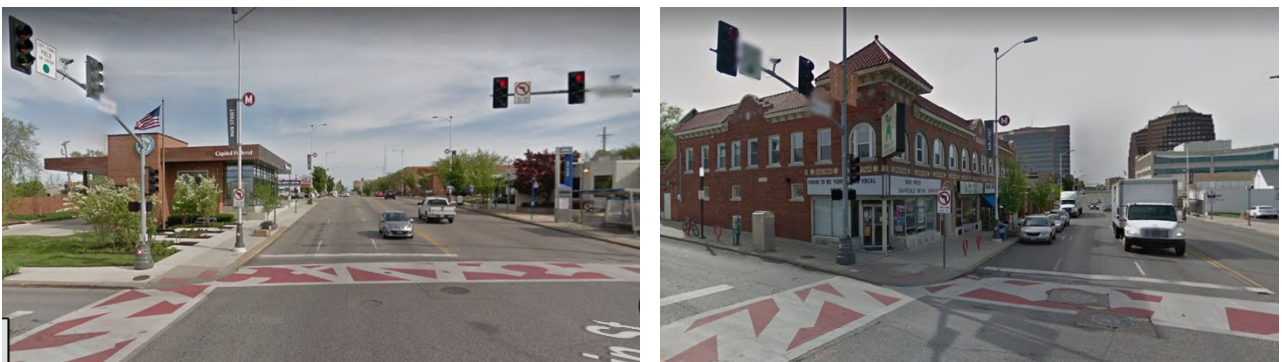


Figure 9. 43rd Street Station Area Photos

- 45th Street:** Located within the same Southmoreland neighborhood as the 43rd Street station and adjacent to Mill Creek Park, this potential station will serve a mix of cultural attractions, museums, office buildings, and hotels. It will provide access to the culture draws of the community, including the Kemper Museum of Contemporary Art, the Kansas City Art Institute, and the Nelson-Atkins Museum of Art, all near the aptly named Southmoreland Park. The modern design of the office towers and museums, wide roadways, building setbacks, and other urban structures give the area a contemporary aesthetic.

45 th Street (1/2 mile station area)	
Population	1,212
Housing (unit)	1,951
Employment	2,347

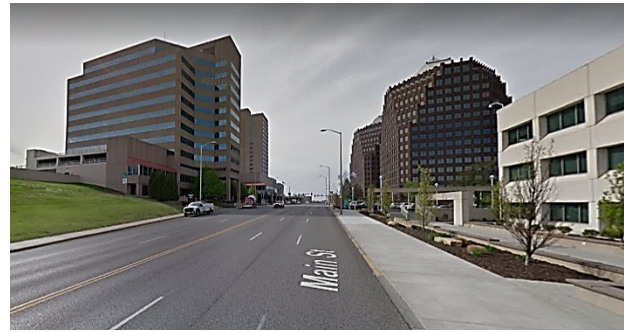


Figure 10. 45th Street Station Area Photos

- Plaza Station** (Intersection of Main Street and Ward Parkway North): Similar to the Union Station area, Plaza Station will serve a broad mix of uses including retail plazas, open space, residential buildings, and recreational and sport centers. Major trip generators near the station include Country Club Plaza, a 14-square-block shopping and dining district, and the Kansas City Public Library Plaza Branch. Also associated with Country Club Plaza is the Plaza Tennis Center with 10 courts for hosting professional, college, and recreational tournaments. In addition, a portion of the area is linked to the interconnected park system along Bush Creek which transitions this part of the area into livable multi-family homes bounded by green belts and open spaces.

Plaza (1/2 mile station area)	
Population	2,010
Housing (unit)	3,211
Employment	8,342



Figure 11. Plaza Station Area Photos

- UMKC Station** (Intersection of Brookside Boulevard and 51st Street): The UMKC Station area is home to the UMKC campus and Rockhurst College campus, serving 18,000 students in total. Student apartments occupy the northeast corner of the intersection as well as a brand new grocery store. To the west of the intersection is the South Plaza neighborhood composed of single family homes along the blocks lining Brookside Boulevard. To the northwest of the residential area is the South Plaza commercial center: a mix of neighborhood retail, apartments, and single family homes.

UMKC (1/2 mile station area)	
Population	1,106
Housing (unit)	2,789
Employment	3,769



Figure 12. UMKC Station Area Photos

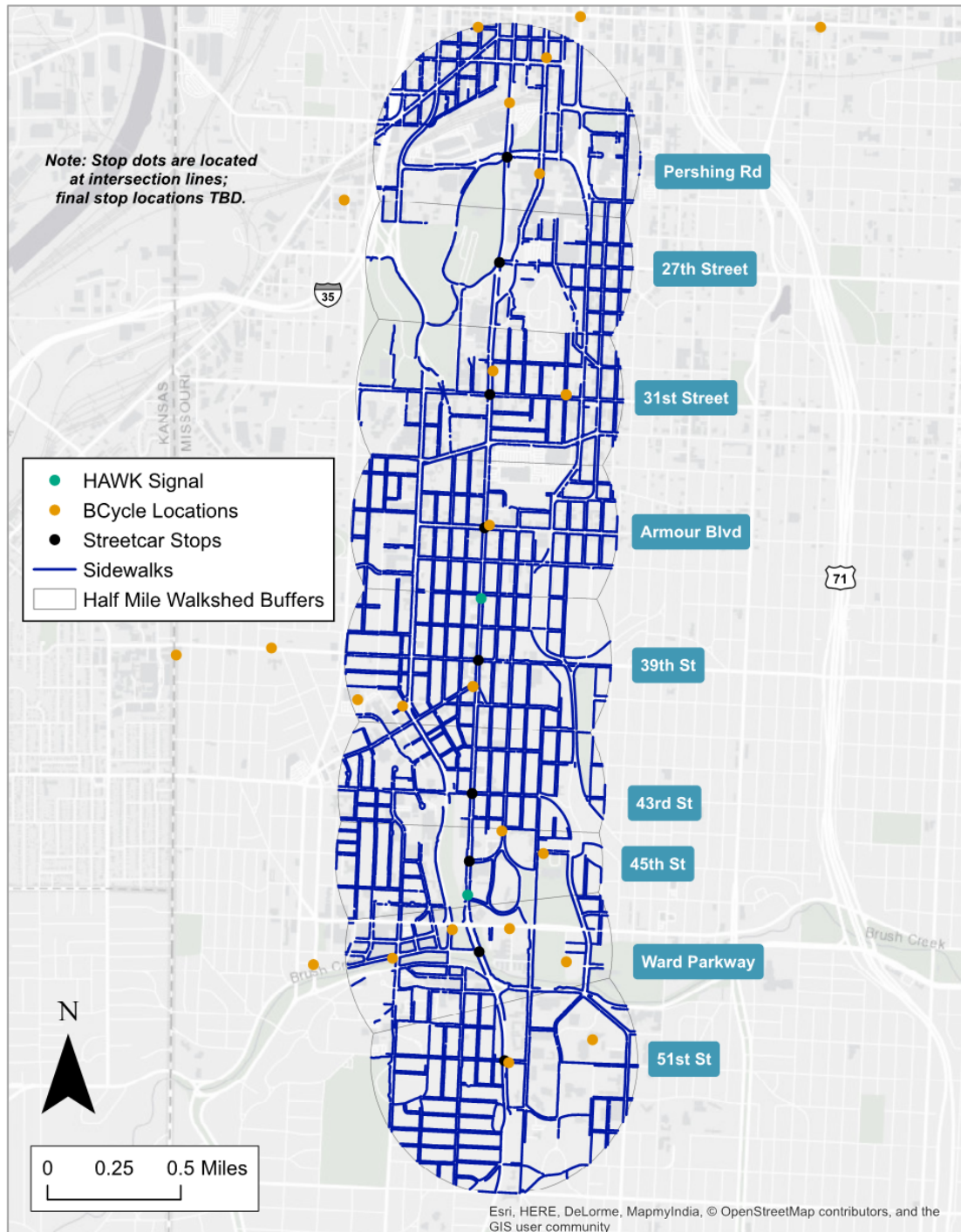
4.0 Existing Station Area Pedestrian Facilities, Including Access for Persons with Disabilities

The corridor and station areas generally serve pedestrians facilities well. Most of the corridor encompasses sidewalks on both sides of Main Street and crosswalks at major intersections. The Main Street streetscape project was completed in 2012 and covers 1.25 miles along the proposed streetcar extension, from 34th Street to 44th Street. The primary goal of the \$5.5 million project was walkability and it included pedestrian-scale lights spaced approximately every 40 feet, ADA improvements at intersections, extensive sidewalk/curb repair, bike racks, benches, lean rails, dozens of new tree wells, neighborhood monumentation, identity branding on street lights, and a new pedestrian plaza not far from the proposed 39th Street streetcar stop. Northern extensions of the streetscape are currently under development.

The corridor includes two pedestrian-activated HAWK signals: one just south of 37th Street (adjacent to The Whole Person), and the other just north of 46th Street. Both of these signals have been installed in the last decade in response to pedestrian volume, access, and safety needs.

There are several civic and social service organizations located directly on Main Street dedicated to serving those with disabilities. They include The Whole Person (a Center for Independent Living dedicated to empowering people with disabilities), the Children's Center for the Visually Impaired (dedicated to preparing children with visual impairments to reach their highest potential in the sighted world), and Ability KC (providing comprehensive educational, vocational, and therapeutic services for children and adults with disabilities). The streetcar development team is maintaining close communication with these entities as the project is developed, and their input will help ensure the project's benefits are maximized for those with disabilities.

Figure 13. Corridor Sidewalk Map



- **Union Station:** Union Station and the surrounding area have been planned with a large focus on pedestrian movements. Sidewalks are located on both sides of Main Street and Pershing, along with crosswalks and walk signals both at the intersection and at a mid-block location just north of the intersection where the future northbound streetcar station would be located.

Adjacent to the Union Station area is Crown Center, a popular destination that houses restaurants, shops, an aquarium, and other entertainment. An elevated climate-controlled walkway called The Link offers pedestrians an additional option for walking between Union Station and Crown Center. Furthermore, with the addition of the Kansas City Streetcar station, a former vehicular turnaround area has recently been repurposed and improved to accommodate pedestrians utilizing the streetcar and bus stations, bike-share station, and area sidewalks.

- **27th Street:** This is the one area of the project where the sidewalk discontinues on Main Street, specifically the east side. The aforementioned upcoming streetscape project will eliminate these discontinuities. On the east side, this station is primed to serve as a southern pedestrian entrance to the Crown Center complex, which it connects to via Grand Avenue, a tree-lined boulevard with sidewalks on both sides. Sidewalks along Grand Avenue take pedestrians to Crown Center's large pedestrian Plaza, located in the heart of the Crown Center development. On the west side of 27th Street there are direct pedestrian connections to and through Penn Valley Park, leading to Liberty Memorial and the National World War I museum. Crown Center includes a bike-share station.
- **31st Street:** This intersection has not yet been upgraded by the planned streetscape project. Though it currently includes sidewalks on both sides of Main Street, as well as crosswalks with pedestrian signals, future improvements will include decorative crosswalks, street furniture (pedestrian-scale lighting, benches), pedestrian signals, and curb ramps at all corners. It should be noted that the 31st Street intersection serves as a major bus transfer location. The Buttonwood art space a block north of the intersection includes a bike-share station, as does the Union Hill B-Cycle office 5 block east on 31st Street. This station will likely serve as the primary streetcar access to Metropolitan Community College – Penn Valley campus (6,000 student), which is located a little over a quarter-mile from the intersection. It also serves as an access point to the southern portion of Penn Valley Park, including recreational amenities, a performing arts theater, and the renowned Pioneer Mother Memorial. This station is in close proximity to both the disability service organizations Children's Center for the Visually Impaired and Ability KC, both of which would see improved access for persons with disabilities as a result of the planned streetscape project.
- **Armour Boulevard:** This station area features a mix of mature and new (streetscape) trees, sidewalks, decorative crosswalks, pedestrian signals, push buttons, and curb ramps at all corners. Public street furniture including benches, pedestrian scale lighting, decorative trash cans, bus shelters, and a bike-share station are also located at this station area. These accommodations

help to create an environment favorable to bicycling, walking, and transit usage for longer distance trips.

- **39th Street:** This station will be two blocks from The Whole Person, a disability service organization. The area also serves as an important bus transfer location. Station area amenities currently include bus shelters, a mixture of mature and newer (streetscape) trees, pedestrian-scale lighting, lean rails, bicycle racks, a bike-share station, pedestrian signals, decorative crosswalks, and curb ramps at all corners. In addition the Whole Person, the station area serves pedestrians en route to the aforementioned Westport district and Murray Davis Park area.
- **43rd Street:** This station area is one block from St. Luke's Hospital and within the Westmoreland neighborhood, which supports high transit ridership today. Pedestrian amenities in this station area include artful decorative crosswalks, bus shelters, streetscape trees, pedestrian-scale lighting, bicycle racks, trashcans, and connections to the Mill Creek Park trail.
- **45th Street:** This station area currently features some landscape trees, sidewalks, crosswalks, pedestrian signals, push buttons, bus stops, and curb ramps at all corners. Of note at this station are plans for a Cultural District "Art Ribbon" connecting key art destinations on the east side of Main Street, including the Kemper Museum of Contemporary Art, the Kansas City Art Institute, and the Nelson-Atkins Museum of Art. Pedestrian access to the planned "Art Ribbon" will be located at 45th Street.
- **Plaza Station:** (Intersection of Main Street and Ward Parkway North): This station area is a high-volume traffic area that largely serves the Country Club Plaza. The Plaza includes nine parking garages with hundreds of parking spaces to accommodate the patrons of the 100 shops and 30 restaurants located there. Pedestrian amenities at the Plaza station area include sidewalks, crosswalks, pedestrian signals and push buttons, pedestrian refuge/waiting areas, and curb ramps. With the addition of the streetcar stop at this location, the roadway would be narrowed and station bump-outs would be installed to narrow the crossing exposure that pedestrians currently navigate at this station area.
- **UMKC Station:** This station area has one of the highest pedestrian counts in the corridor, serving the UMKC campus. The station area includes sidewalks, the very popular Trolley Track Trail, crosswalks, curb ramps, a bus shelter, and streetscape trees.

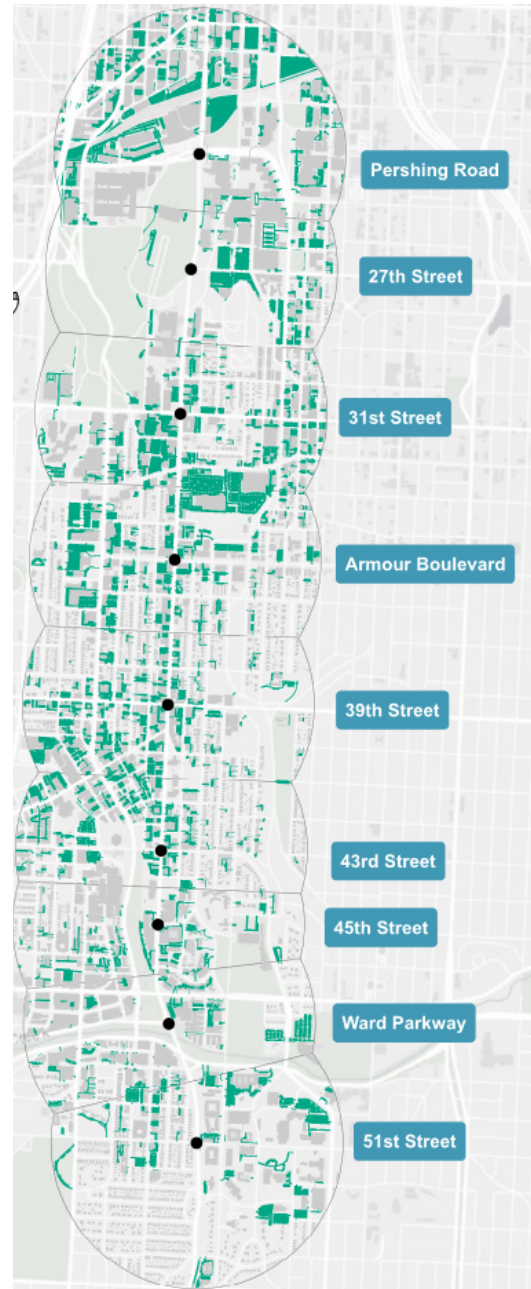
5.0 Existing Corridor and Station Area Parking Supply

The bulk of the corridor is served by on-street off-peak parking in the outside lanes that serve as exclusive Main MAX bus lanes during peak hours (northbound during the morning and southbound in the afternoon/evening). All on-street parking on the corridor is free, although time-restricted. Generally, the on-street parking is not highly utilized in many segments, and is viewed as an opportunity for those who wish to park for moderate periods of time while utilizing the streetcar. Existing parking supply in the CBD is 23,465, which is 0.48 spaces per employee. The average daily parking cost in the CBD is \$13.20.

The corridor is also home to a large number of surface parking lots (333 acres, approximately 29,630 off-street parking spaces within the station areas – using a rough corridor average of 88 spaces per acre), generally associated with adjacent businesses. This equates to approximately 0.002 parking spaces per square foot, or 0.51 spaces per employee. On-street parking is also available throughout many of the streets in the corridor, including space for roughly 550 automobiles on Main Street.

There are no publicly owned parking lots or structures within the corridor, with the exception of Union Station as described later. **It is these surface parking lots that the project partners, through economic development supported in no small part by the streetcar, expect to begin to disappear as density increases along the corridor.** This planned transformation is explicit in the City's policy direction as indicated by the Midtown-Plaza Area Plan, the Main Corridor Overlay, and the decision to extend the streetcar through the corridor.

Figure 14. Station-Area Land Devoted to Surface Parking



- **Union Station:** Union Station has proven a popular station-stop on the starter line, not only for its status as a Kansas City icon and activity center, but for the convenient public parking it provides. Union Station includes approximately 210 public surface parking spaces and approximately 1,300 structured public parking spaces. The daily parking cost at Union Station is \$15 for the surface lot and \$12 for the structure. Crown Center is also within the station area, and provides a great deal of structured parking that is open to the public, but is not publicly owned. Daily rates are \$18.
- **27th Street to 45th Street:** These station areas are largely served by on-street parking and surface lots as previously mentioned. At 45th Street, several office towers and a hotel offer structured parking, but this is largely for employees and customers, and is likely not suited for a park-and-ride approach.
- **Plaza (Intersection of Main Street and Ward Parkway North):** The Country Club Plaza includes nine free parking garages with a total capacity of at least 2,000 vehicles. These garages are for the use of Country Club Plaza retail patrons and business tenants and are not publicly owned. The district also includes a great deal of on-street parking. The Plaza Library has over 150 public parking spaces designated for library users.
- **UMKC (Intersection of Brookside Boulevard and 51st Street):** The Main Street Corridor transitions, south of Cleaver II Boulevard, to a configuration with no on-street parking provided. The new Brookside 51 / Whole Foods building includes surface and structured parking. UMKC's main parking structure has 250 metered spaces on one of the floors, a subset of which might provide a parking opportunity.

6.0 Existing Affordable Housing

Data on existing affordable housing units within the Project study area was obtained from the National Housing Preservation Database (NHPD).

Within a half-mile of each station, there are 553 affordable housing units. This accounts for 5% of the share of all housing units in station areas. Within Jackson County there are a total of 323,375 housing units, of which 12,721 housing units are identified as affordable housing units, accounting for 4% of all housing units. The ratio of the Proportion of Affordable Housing Units in All Counties to the Proportion of Affordable Housing Units in which Project Stations are Located is 1.19.

APPENDIX A: Population, Housing, and Employment Calculation Sheets

NEW STARTS LAND USE TEMPLATE (QUANTITATIVE DATA)				
PROJECT NAME:		Kansas City Streetcar Main Street Extension		
Population, Employment and Housing – Metropolitan Area, CBD, and Corridor				
Geographic Area Item		Current Year (2019)	Horizon (None)	Growth (%)
Metropolitan Area				
Total Population		2,159,159		---
Total Employment		1,099,800		---
Central Business District [see footnote 1]				
Total Employment		35,737		---
Employment – Percent of Metropolitan Area		3.2%	---	
CBD Land Area (sq. mi.)		1	---	
Employment Density (e.g., jobs per sq. mi.)		44,671.3	---	
Corridor				
Total Population		21,680		---
Total Employment		60,402		---
Population – Percent of Metropolitan Area		1%	---	
Employment – Percent of Metropolitan Area		5%	---	
Corridor Land Area (sq. mi.)		4.1	---	
Population Density (persons per sq. mi.)		5,313.7	---	
Employment Density (jobs per sq. mi.)		14,804.4	---	
Total - All Counties in which Project Stations are Located				
Housing Units - All Types		323,375		
Housing Units - Legally Binding Affordability Restricted		12,721		
Number of Counties		1		
Total - All Station Areas (1/2-mile radius) [See footnote 2]				
Housing Units - All Types		11,805		
Housing Units - Legally Binding Affordability Restricted		553		
Population		20,992	---	---
Employment at New Project Stations		52,896	---	---
Employment at Existing Stations Along the Line [see footnote 3]		51,521		
Land Area (square miles)		4.1	---	
Housing Unit Density (units per sq. mi.) - All Types		2,879.3		
Population Density (persons per sq. mi.)		5,120.0	---	
Employment Density (persons per sq. mi.)		12,901.5	---	
Station-Area Share of Legally Binding Affordability Restricted Housing Units		5%		
Share of Housing Units that are Legally Binding Affordability Restricted in the Corridor compared to Share in the Counties				
Proportion in All Station Areas		5%		
Proportion in All Counties in which Project Stations are Located		4%		
Ratio, Proportion in All Station Areas to Proportion in All Counties in which Project Stations are Located		1.19		
Housing Totals for Each County in which Project Stations are Located				
		Current Year		
County 1		County Name:	Jackson	
Housing Units - All Types [See footnote 4]		323,375		
Housing Units - Legally Binding Affordability Restricted		12,721		
County 2		County Name:		
Housing Units - All Types				
Housing Units - Legally Binding Affordability Restricted				
County 3		County Name:		
Housing Units - All Types				
Housing Units - Legally Binding Affordability Restricted				
County 4		County Name:		
Housing Units - All Types				
Housing Units - Legally Binding Affordability Restricted				
County 5		County Name:		
Housing Units - All Types				
Housing Units - Legally Binding Affordability Restricted				

NEW STARTS LAND USE TEMPLATE (QUANTITATIVE DATA) page 2

Housing, Population and Employment for Each Station Area That is Part of the Proposed Project			
	Current Year	Horizon	Growth (%)
Station Area 1 [See footnote 5] Station Name: Pershing Boulevard			
Housing Units - All Types	623		
Population	1,042		---
Employment	19,791		---
Land Area (square miles)	0.6	---	
Housing Unit Density (units per sq. mi.) - All Types	1,038		
Population Density (persons per sq. mi.)	1,737	---	
Employment Density (persons per sq. mi.)	32,985	---	
Station Area 2 Station Name: 27th Street			
Housing Units - All Types	573		
Population	1,028		---
Employment	2,047		---
Land Area (square miles)	0.4	---	
Housing Unit Density (units per sq. mi.) - All Types	1,333		
Population Density (persons per sq. mi.)	2,391	---	
Employment Density (persons per sq. mi.)	4,760	---	
Station Area 3 Station Name: 31st Street			
Housing Units - All Types	987		
Population	1,633		---
Employment	4,477		---
Land Area (square miles)	0.5	---	
Housing Unit Density (units per sq. mi.) - All Types	2,056		
Population Density (persons per sq. mi.)	3,402	---	
Employment Density (persons per sq. mi.)	9,327	---	
Station Area 4 Station Name: Armour Boulevard			
Housing Units - All Types	1,910		
Population	3,251		---
Employment	3,307		---
Land Area (square miles)	0.5	---	
Housing Unit Density (units per sq. mi.) - All Types	3,979		
Population Density (persons per sq. mi.)	6,773	---	
Employment Density (persons per sq. mi.)	6,889	---	
Station Area 5 Station Name: 39th Street			
Housing Units - All Types	1,919		
Population	3,494		---
Employment	2,633		---
Land Area (square miles)	0.5	---	
Housing Unit Density (units per sq. mi.) - All Types	3,998		
Population Density (persons per sq. mi.)	7,279	---	
Employment Density (persons per sq. mi.)	5,485	---	
Station Area 6 Station Name: 43rd Street			
Housing Units - All Types	1,465		
Population	2,593		---
Employment	6,195		---
Land Area (square miles)	0.4	---	
Housing Unit Density (units per sq. mi.) - All Types	3,959		
Population Density (persons per sq. mi.)	7,008	---	
Employment Density (persons per sq. mi.)	16,743	---	
Station Area 7 Station Name: 45th Street			
Housing Units - All Types	1,212		
Population	1,951		---
Employment	2,347		---
Land Area (square miles)	0.3	---	
Housing Unit Density (units per sq. mi.) - All Types	3,788		
Population Density (persons per sq. mi.)	6,097	---	
Employment Density (persons per sq. mi.)	7,333	---	

NEW STARTS LAND USE TEMPLATE (QUANTITATIVE DATA) page 3

	Current Year	Horizon	Growth (%)
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Station Area 8		Station Name:		Ward Parkway North (Plaza)	
Housing Units - All Types			2,010		
Population			3,211		---
Employment			8,342		---
Land Area (square miles)			0.4	---	
Housing Unit Density (units per sq. mi.) - All Types			5,432		
Population Density (persons per sq. mi.)			8,678	---	
Employment Density (persons per sq. mi.)			22,546	---	
Station Area 9		Station Name:		51st Street (UMKC)	
Housing Units - All Types			1,106		
Population			2,789		---

Employment	3,759	---	---
Land Area (square miles)	0.6	---	---
Housing Unit Density (units per sq. mi.) - All Types	1,940	---	---
Population Density (persons per sq. mi.)	4,893	---	---
Employment Density (persons per sq. mi.)	6,594	---	---
Station Area 10 Station Name:			
Housing Units - All Types			
Population			---
Employment			---
Land Area (square miles)		---	---
Housing Unit Density (units per sq. mi.) - All Types	0		
Population Density (persons per sq. mi.)	0	---	
Employment Density (persons per sq. mi.)	0	---	
Station Area 11 Station Name:			
Housing Units - All Types			
Population			---
Employment			---
Land Area (square miles)		---	---
Housing Unit Density (units per sq. mi.) - All Types	0		
Population Density (persons per sq. mi.)	0	---	
Employment Density (persons per sq. mi.)	0	---	
Station Area 12 Station Name:			
Housing Units - All Types			
Population			---
Employment			---
Land Area (square miles)		---	---
Housing Unit Density (units per sq. mi.) - All Types	0		
Population Density (persons per sq. mi.)	0	---	
Employment Density (persons per sq. mi.)	0	---	
Station Area 13 Station Name:			
Housing Units - All Types			
Population			---
Employment			---
Land Area (square miles)		---	---
Housing Unit Density (units per sq. mi.) - All Types	0		
Population Density (persons per sq. mi.)	0	---	
Employment Density (persons per sq. mi.)	0	---	
Station Area 14 Station Name:			
Housing Units - All Types			
Population			---
Employment			---
Land Area (square miles)		---	---
Housing Unit Density (units per sq. mi.) - All Types	0		
Population Density (persons per sq. mi.)	0	---	
Employment Density (persons per sq. mi.)	0	---	

NEW STARTS LAND USE TEMPLATE (QUANTITATIVE DATA) page 4			
	Current Year	Horizon	Growth (%)
Station Area 15 Station Name:			
Housing Units - All Types			
Population			---
Employment			---
Land Area (square miles)		---	---
Housing Unit Density (units per sq. mi.) - All Types	0		
Population Density (persons per sq. mi.)	0	---	
Employment Density (persons per sq. mi.)	0	---	
Station Area 16 Station Name:			
Housing Units - All Types			
Population			---
Employment			---
Land Area (square miles)		---	---
Housing Unit Density (units per sq. mi.) - All Types	0		
Population Density (persons per sq. mi.)	0	---	

Employment Density (persons per sq. mi.)	0	---	
Station Area 17			
Station Name:			
Housing Units - All Types			
Population			---
Employment			---
Land Area (square miles)		---	
Housing Unit Density (units per sq. mi.) - All Types	0		
Population Density (persons per sq. mi.)	0	---	
Employment Density (persons per sq. mi.)	0	---	
Station Area 18			
Station Name:			
Housing Units - All Types			
Population			---
Employment			---
Land Area (square miles)		---	
Housing Unit Density (units per sq. mi.) - All Types	0		
Population Density (persons per sq. mi.)	0	---	
Employment Density (persons per sq. mi.)	0	---	
Station Area 19			
Station Name:			
Housing Units - All Types			
Population			---
Employment			---
Land Area (square miles)		---	
Housing Unit Density (units per sq. mi.) - All Types	0		
Population Density (persons per sq. mi.)	0	---	
Employment Density (persons per sq. mi.)	0	---	
Station Area 20			
Station Name:			
Housing Units - All Types			
Population			---
Employment			---
Land Area (square miles)		---	
Housing Unit Density (units per sq. mi.) - All Types	0		
Population Density (persons per sq. mi.)	0	---	
Employment Density (persons per sq. mi.)	0	---	

[1] Optionally, employment for the largest activity center(s) served by the project may be reported.

[2] See Appendix A of the Reporting Instructions for a sample methodology for estimating station area population, households, and employment.

[3] This information should be entered only for projects that are extensions to existing lines. Provide the total employment served within a 1/2-mile radius of the existing stations along the entire line on which a no-transfer ride from the proposed project's stations can be reached. Do not include employment within a 1/2-mile radius of the new stations.

[4] Countywide housing unit totals are available from the U.S. Census Bureau's American Community Survey website

[5] Reporting of data by individual station area is required.