

2018

MIDTOWN
Complete Streets

IMPLEMENTATION PLAN

OCTOBER 2018





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INTRODUCTION & BACKGROUND





The Pioneers of Westport: Alexander Majors, John Calvin McCoy, and Jim Bridger

PLANNING PROCESS

The purpose of the Midtown Complete Streets Plan is to analyze the transportation network to identify modifications that can increase the safety, liveability, multimodal access, and economic development potential of the Midtown area. This comprehensive planning effort was undertaken by the City of Kansas City and the Mid-America Regional Council to determine street layouts that serve the needs and desires of the community. Significant efforts have been made in the Midtown area to provide a walkable, liveable, and transit-friendly environment. But a desire exists by the residents to further improve the area, attract new residents and businesses, and improve the quality of life.

This planning process began with studying past plans conducted in the area. The Midtown area of Kansas City has been extensively studied in the past from the Broadway Streetscape Plan first undertaken in the 1980s, to the Kansas City FOCUS (Forging Our Comprehensive Urban Strategy) Plan that was adopted in 1997, and further through to the Westport Plan that is being developed concurrent to this plan. Special attention was paid to these past and current planning efforts to respect the hard work and input already given by Kansas City staff and the public and as a guide for this planning document.

In addition to the past planning efforts, an effort was made to engage as many members of the public and business community as possible to gain input on current issues and needs and desires for the future. This outreach was conducted in the form of a large advisory committee, individual stakeholder group outreach, two public meetings, and two online surveys. Throughout this process, over 250 people were engaged in person and over 1200 people were engaged through online surveys.

From this outreach a vision of the corridors was forged, and a set of goals was established. Through continued work with the stakeholders, a series of alternate improvements were created. These alternates were narrowed down to a few improvement options. These improvement options were vetted through engineering analysis for their impacts to the community from the perspective of traffic, safety, parking, and cost implications.

The public was then asked to indicate their preferred alternate. This outreach led to a series of recommendations are presented with this report including benefit to cost analyses for these improvements. While there are portions of the stakeholder population that do not support the recommended improvements with this study, a consensus was reached on the recommended improvements.



PSP PROGRAM GOALS

The Mid-America Regional Council's (MARC) Planning for Sustainable Places (PSP) Program provides local governments with financial support to advance detailed local planning and project development activities in support of Creating Sustainable Places, Transportation Outlook 2040's Activity Centers and Corridor framework, and the MARC adopted policy statement on regional land use direction. The Midtown Complete Streets Plan is one of the chosen projects for funding through this program.

- Support the development and implementation of local activity center plans consistent with Creating Sustainable Places principles, identified regional activity centers, and the land use policy direction outlined in Transportation Outlook 2040.
- Support localized public engagement and community consensus building.
- Support the identification and conceptualization of land use strategies, transportation projects, and related sustainable development initiatives that help to realize and advance the objectives identified in the Creating Sustainable Places initiative, Transportation Outlook 2040, and the MARC Board's adopted policy statement on regional land use direction.
- Support the conceptualization, development, and implementation of Creating Sustainable Places projects.



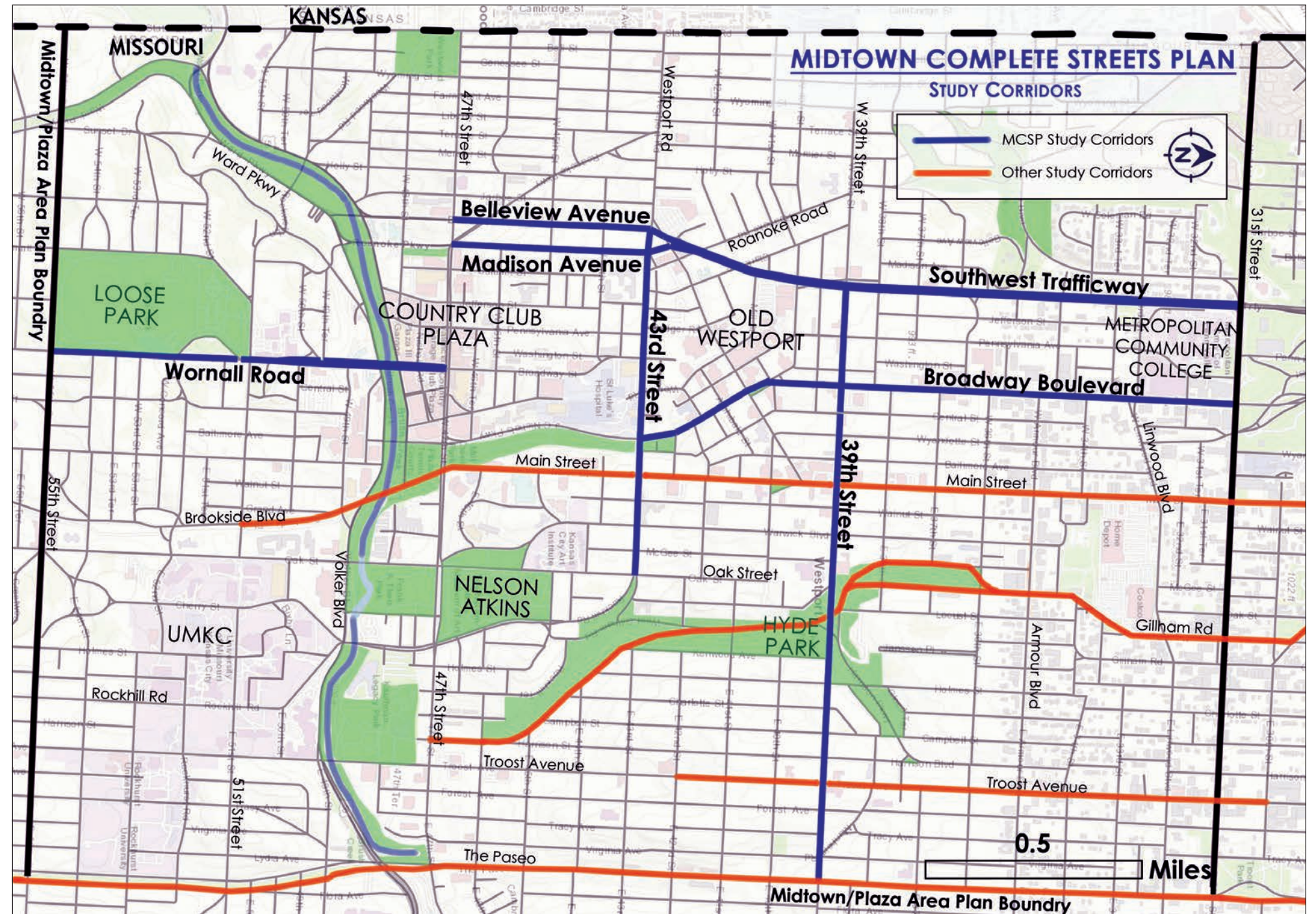
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STATED PROJECT GOALS

With the original funding application, it was stated that the focus of this planning study was to create a Sustainable Places Plan that addresses the following key priorities for the City of Kansas City, MO:

- Conceptualize and implement a multi-modal complete street for all road users along the Selected Corridors (as shown to the right)
- Equitably engage local stakeholders throughout the conceptualization and planning efforts.
- Support and bolster ongoing efforts to enhance corridors within Midtown as a thriving commercial, multi-modal corridors.

Through the Midtown/Plaza area plan, the City of Kansas City identified multiple multi lane corridors which could potentially be re-purposed with “road diets” and add on street bicycle facilities. This project will expand on that area plan. The City of Kansas City Council, with the passage of Ordinance 140982 in December of 2014, directed the City Manager to conduct a high-level road diet analysis of existing undivided four or more lane streets to determine the suitability of converting one or more of these streets into reduced lane streets via a restriping and/or resurfacing program. This project expands on that initiative in greater detail to look at specific corridors in the Midtown/Plaza area for feasibility and public engagement to develop a road diet plan.



Map of the Study Area

STUDY AREA

The map above shows the study area for the Midtown Complete Streets Plan. The corridors indicated in blue are study corridors for this plan. These include 39th Street, 43rd Street, Broadway Boulevard, Southwest Trafficway, and Wornall Road all within the Midtown planning boundary. The corridors shown in orange represent other corridors that are currently being studied through other planning processes. These include Main Street, Gillham Road, Troost Avenue, and the Paseo. These corridors in orange were considered with this project but not studied in detail. Corridors that are currently being studied through other planning processes. These include Main Street, Gillham Road, Troost Avenue, and the Paseo. These corridors in orange were considered with this project but not studied in detail.

PAST PLANNING EFFORT REVIEW

The Midtown area has been one of the major study areas in many of the City's development plans, implementation plans, area plans, and other documents. Many of these plans make recommendations relating to improvements and developments of more walkable and bicycle friendly communities. The main focus in all the plans and reports is to expand and improve existing mobility options to better connect residents and visitors to various parts of the area by creating a healthy and sustainable environment. Plans reviewed during this process include:

1. FOCUS - The City's Comprehensive Plan
2. Complete Streets Ordinance
3. Midtown / Plaza Area Plan
4. Westport Plan
5. KCMO Walkability Plan
6. KC Major Streets Plan
7. Transit-Oriented Development Policy
8. Smart Moves 3.0
9. Broadway Streetscape Plan

A high level overview of these planning document follows on this page and the next. A few key excerpts from the plans include:

FOCUS Comprehensive Plan:

"The intent of FOCUS is to increase the ease of, and broaden the options for, moving about the city, and to create logical extensions of the existing transportation network. [...] People will use modes of transportation besides the automobile if the other modes provide reasonable alternatives."

Walkability Plan:

"FOCUS became a major turning point in how important a connected multimodal community is to Kansas City. Public input, workshops, and community meetings indicated loud and clear that preserving and improving the pedestrian quality of life is critical to the long-term goals and vision for Kansas City."

Midtown/Plaza Area Plan:

Transportation Goal: "Provide integrated modes of transportation (transit, bicycle, pedestrian, automobile, etc.) to get people from one place to another within and throughout the plan area."

Transportation Action: Create a transportation system that increases connections between area neighborhoods and activity centers, reduces barriers, provides efficient overall circulation and promotes a cohesive community and orderly development.



FOCUS - THE CITY'S COMPREHENSIVE PLAN

(Forging Our Comprehensive Urban Strategy) was adopted in 1997. This plan set many of the strategic principles and priorities that have led to Kansas City's success and established a foundation for citywide planning that continues today. Of the many critical areas addressed in the plan, mobility options for the city was a high priority focus.

The plan stated its vision as:

"The intent of FOCUS is to increase the ease of, and broaden the options for, moving about the city, and to create logical extensions of the existing transportation network. Many people will walk if there is a direct, continuous, safe, pleasant and secure pedestrian route for doing so. People will ride bicycles if they can do so safely. People use public transportation if it is convenient and pleasant and there are pedestrian connections between the transit and destination. People will use modes of transportation besides the automobile if the other modes provide reasonable alternatives. Moving about the city requires attention to, and integration of, many different ways of moving from place to place – called multimodal transportation."

Most recently, the Code of Ordinances amended by enacting a new Article II titled Complete Streets, which states the requirement and need of the development of complete streets for all users. In brief, this policy aims to develop a safe, reliable, efficient, integrated and connected multimodal transportation system that will promote access, mobility and health of the City and ensure that the safety and convenience of transportation users is accommodated.

Many other targeted planning studies have been completed since this integrated multimodal transportation vision was adopted. This section summarizes the most relevant and impactful planning documents related to the principles and policies of major streets in the city. There are several strategies and recommendations proposed in these documents to enhance safe multimodal connectivity in these neighborhoods.

MIDTOWN / PLAZA AREA PLAN

Area plans are prepared to recommend strategies which helps the community to realize its long term vision and provide a comprehensive framework to guide city and public decisions on various important aspects of the community. These area plans are guided by a range of various planning documents which provide broad policies for entire city like FOCUS Kansas City plan, Bike KC Plan, Trails KC Plan, Kansas City Walkability Plan and others. Midtown/Plaza area plan is one of the 18 area plans of Kansas City, Missouri prepared for the Midtown/Plaza area geographically bordered by 31st street on the north, 55th street on the south, state line on the west and Paseo Boulevard on the east, approved in January, 2016. This area plan integrates the previous planning and updated strategies and recommendations from numerous plans which provided a framework to guide the Midtown/Plaza planning process.

VISION

This area plan is organized in a hierarchy of policies, starting with Plan's Vision statement, broad and high level policy, which is: "The Midtown/Plaza Area is a vibrant urban community where neighborhoods, businesses and institutions reinforce one another. The character and identity of the area creates a special sense of community that attracts lifelong residents, as the area evolves, respect is given to its historic development pattern and the safe, connected, diverse and sustainable environment is enhanced."

GOALS

This Vision is further refined by Goals. The goal related to transportation is: Provide integrated modes of transportation (transit, bicycle, pedestrian, automobile, etc.) to get people from one place to another within and throughout the area plan.

GUIDING PRINCIPLES

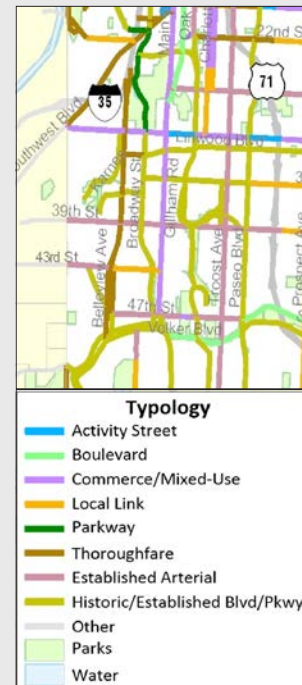
The Goals are further refined by Guiding principles which support the Vision statement and Goals of the plan and are specific to each aspect of the community. The Guiding principles related to the transportation aspect of the community include:

- Improve overall transportation system connectivity.
- Provide an environment where people want to walk.
- Provide safe, convenient routes for bicyclists.
- Make sure all have access to transit and understand how to use the system.
- Ensure that cars can conveniently move within and through the area.

COMPLETE STREETS ORDINANCE

Kansas City adopted a complete streets ordinance in December of 2017 that governs all new road construction and road reconstruction projects. This ordinance mandates that all new road construction or reconstruction of roads adhere to several specific design criteria and accommodate all modes of transportation. The ordinance also states that these improvements should be prioritized in low and moderate income neighborhoods. The intent of the Complete Streets Ordinance (Ordinance Number 170949) is that:

The City shall develop a safe, reliable, efficient, integrated, and connected multimodal transportation system that will promote access, mobility, and health for all users and will ensure that the safety and convenience of all users of the transportation system are accommodated, including pedestrians, wheelchair users, bicyclists, public transportation users, motorists, and people of all ages and abilities. Additionally, the City shall incorporate green infrastructure, innovative stormwater management, street trees, and appropriate lighting in transportation projects. All City owned streets, bridges, traffic signals, and similar transportation facilities will include sidewalks with appropriate pedestrian accommodations, and the City's bicycle master plan and walkability plan shall be implemented during new or reconstruction of transportation facilities within the City limits.



KC MAJOR STREETS PLAN

The Major Street Plan is an important contributor to the City's long term success and is designed to recognize the role of the transportation network in supporting economic and social activity which is essential to the health and vitality of a city and community. The City's first official Major Street Plan was adopted in 1972 but first of its kind dates back to as early as 1911. The plan primarily addresses the new ways of capacity needs of the City's major streets, context-reflective and multimodal street designs. The Plan has a much broader scope than just providing roads for automobile travel and is integral to the economic and cultural development of the City. The current version of the plan identifies two general classes of roads, 1. Arterials and 2. Parkways and Boulevards within the City limits, both considered as major streets.



SMART MOVES 3.0

The Smart Moves Plan was initiated in 2002 with a 20-year plan designed to increase transit service in the region with the Vision statement as "Smart Moves imagines a Kansas City region with viable mobility solutions for empowered residents, successful businesses and vibrant communities." This plan will be used to guide the development of new projects and initiatives that seek to increase the number of jobs accessible by transit and mobility services, increase ridership of transit and use of other mobility options, increase development/redevelopment along high-capacity corridors and near mobility hubs, increase availability of customer information and resources through technology, increase funding for transit and mobility services, and decrease greenhouse gas emissions and other transportation-related pollutants.



KCMO WALKABILITY PLAN

The Kansas City Walkability Plan came into existence in the year 2003 to address a wide range of pedestrian issues in the city. There was a growing pedestrian safety concern and with multimodal planning efforts through ISTEA 1991, cities and municipalities began pedestrian research and planning which led to dedicated plans for pedestrians and walking like Walkability Plan. This plan identifies where pedestrian demand existed, determine the current pedestrian system, recommended pedestrian improvements, established priorities for public investment in the pedestrian network and changes recommended for current codes, ordinances, standards and policies. The plan includes a systematic method for measurement of the quality of the pedestrian system, specific recommendations for improvements, and prioritization for improvements.



TRANSIT-ORIENTED DEVELOPMENT POLICY

With the implementation of the new multi-modal transportation services like MAX bus rapid transit routes and the downtown streetcar in KCMO, there is a great potential for additional future investments to ensure and support the success of transit with public improvements and development along transit corridors, adequate housing choices, connections and mobility options."

TOD policies are applicable to both existing transit infrastructure and in areas of anticipated transit system development. These broad citywide TOD policies provide a comprehensive set of guidelines that can be applied at the local level in a way that is sensitive to area context in terms of location, scale, type and character of city development. Knowing transit can connect places and people, expand opportunity, improve livability and revitalize communities, it is important to consider the potential of transit investment that could address a wide range of community aspects including land use, transit integration, design guidance for public infrastructure and private development. Social and cultural goals, economic goals, and environmental goals provide and guide the policy's recommendations.



BROADWAY STREETScape PLAN

The Broadway Streetscape plan dates back to the 1980s and construction is currently being finished on it. The plan focused on improving the walkability, parking, and landscaping/streetscaping on Broadway Boulevard. The improvements include pedestrian amenity/landscaping zones between the parking and the sidewalk, curb bump-outs at select intersections, and decorative crosswalks throughout the corridor. The final phase of the Broadway streetscaping will be finished in 2019.



BACKGROUND ON COMPLETE STREETS

Streets are a vital part of livable, attractive communities. Everyone, regardless of age, ability, income, race, or ethnicity, ought to have safe, comfortable, and convenient access to community destinations and public places—whether walking, driving, bicycling, or taking public transportation. But too many of our streets are designed only for speeding cars or creeping traffic jams.

A Complete Streets approach integrates people and place in the planning, design, construction, operation, and maintenance of our transportation networks. This helps to ensure streets are safe for people of all ages and abilities, balance the needs of different modes, and support local land uses, economies, cultures, and natural environments.

The National Complete Streets Coalition, which launched this movement in 2004, promotes the development and implementation of Complete Streets policies and professional practices. To date, over 1140 agencies at the local, regional, and state levels have adopted Complete Streets policies, totaling over 1200 policies nationwide.

Learn more at www.smartgrowthamerica.org/completestreets.

Complete Streets Stimulate the Local Economy

Making it easier for residents and visitors to take transit, walk, or bike to their destinations can help stimulate the local economy. People living in Dallas, TX save an average of \$9,026 annually by switching from driving to taking transit, and those in Cleveland, OH save an average of \$9,576. The total savings from biking, walking, or taking transit instead of driving can really add up across a city, ranging from \$2.3 billion in Chicago to an astounding \$19 billion a year in New York City. This “green dividend” means that residents can spend that money in other ways, such as housing, restaurants, and entertainment, that keep money circulating in the local economy.

And it's not just big cities that see these impacts: in Wisconsin, economic benefits from public transit alone are \$730 million. Providing the infrastructure for people to get to work by walking, biking or taking transit can provide a boost to the economy in other ways, too: traffic congestion costs businesses in the San Francisco Bay Area over \$2 billion a year due to time employees spent stuck in traffic, and the total cost of congestion in the Los Angeles region tops \$1.1 billion each year. A Complete Streets approach has the power to recapture some of that cost.

Local businesses see many benefits in improving access to people traveling by foot or bicycle. When a bike lane was added along Valencia Street in San Francisco's Mission district, nearby businesses saw sales increase by 60 percent, which merchants attributed to increased pedestrian and bicycle activity. Similarly, a study in Toronto showed that nearly three-quarters of merchants along Bloor Street expected that better bicycle and pedestrian facilities would improve business.

Implementing Complete Streets policies can have economic benefits even before the projects are finished. Road improvement projects that include bike and pedestrian facilities create more jobs during construction than those that are only designed for vehicles, per dollar spent. Adding or improving transit facilities is good for jobs, too. During the recent economic downturn, each stimulus dollar invested in a public transportation project created twice as many jobs as one spent on a highway project.

Better bicycle infrastructure can create jobs directly, too. Cycling adds over \$556 million and 3,400 jobs to Wisconsin's economy through increased tourism, bicycle manufacturing, sales and repair, bike tours, and other activities. Similarly, there's a \$90 million benefit to the city's economy from Portland, Oregon's bicycling industry, and the state of Colorado reaps a benefit of over \$1 billion each year from bicycle manufacturing, retail, and tourism.



Complete Streets spur private investment

The investment that communities make in implementing Complete Streets policies can stimulate far greater private investment, especially in retail districts and downtowns where pedestrians and cyclists feel unwelcome. In Washington, D.C., design improvements along a three-quarter mile corridor in Barracks Row, including new patterned sidewalks and traffic signals, helped attract 40 new businesses and nearly 200 new jobs, along with increases in sales and foot traffic. Lancaster, California added pedestrian safety features as part of a downtown revitalization effort, including a pedestrian-only plaza, wider sidewalks, landscaping and traffic calming.

The project spurred \$125 million in private investment, a 26% increase in sales tax revenue, and 800 new jobs, after a public investment of \$10.6 million. And in Mountain View, California, the addition of space for sidewalk cafes and a redesign of the street for pedestrians were followed by private investment of \$150 million, including residential, retail and offices, resulting in a vibrant downtown destination.

“The total savings from biking, walking, or taking transit instead of driving can really add up across a city, ranging from \$2.3 billion in Chicago to an astounding \$19 billion a year in New York City.”



Complete Streets raise property values

Complete Streets policies lead to networks of streets that are safe and accessible for people on foot or riding bikes, which in turn raises property values. In a survey of 15 real estate markets from Jacksonville, Florida to Stockton, California a one-point increase in the walkability of a neighborhood as measured by WalkScore.com increased home values by \$700 to \$3,000. For neighborhoods in the Washington, D.C. region, becoming one step more walkable on a five-point scale can add \$9 per square foot to retail rents and nearly \$82 per square foot to home values. This increase is amplified when walkable neighborhoods are near each other, demonstrating the value of networks of Complete Streets connected throughout a community.

The preference for walkable neighborhoods is likely to increase in coming decades, too, as today's young college graduates flock to downtowns and close-in suburbs. The population of college educated 25 to 34 year olds in these walkable neighborhoods has increased by 26% in the last decade, creating a workforce that can further add to economic growth in these communities.

It's not just sidewalks: bike paths add value to neighboring properties as well. One North Carolina neighborhood saw property values rise \$5,000 due to a nearby bikeway, while research showed that bike paths in Delaware could be expected to add \$8,800 to neighboring home values. Even design elements like street trees can raise property values. Having trees on the street in front of homes in Portland, Oregon added more than \$7,000 to selling prices.

Even with higher housing prices, walkable neighborhoods are good for working families. People living in communities that give them the option to walk, bike or take transit to their destinations often pay less in total housing and transportation costs than those who live in areas with lower housing prices that are more auto-dependent. When coupled with programs to maintain access to affordable housing, families of all incomes can realize the economic benefits of Complete Streets.

Incomplete streets put people at risk

Streets without safe places to walk, cross, catch a bus, or bicycle put people at risk. Over 5,000 pedestrians and bicyclists died on U.S. roads in 2008, and more than 120,000 were injured. Pedestrian crashes are more than twice as likely to occur in places without sidewalks; streets with sidewalks on both sides have the fewest crashes. While the absolute numbers of bicyclists and pedestrians killed has been in decline for the decade, experts attribute this in part to a decline in the total number of people bicycling and walking. Of pedestrians killed in 2007 and 2008, more than 50 percent died on arterial roadways, typically designed to be wide and fast. Roads like these are built to move cars and too often do not have meet the needs of pedestrian or bicyclist safety. More than 40 percent of pedestrian fatalities occurred where no crosswalk was available.

A recent study comparing the United States with Germany and the Netherlands, where Complete Streets are common, found that when compared per kilometer traveled, bicyclist and pedestrian death rates are two to six times higher in the United States. Complete Streets therefore improve safety indirectly, by encouraging non-motorized travel and increasing the number of people bicycling and walking. According to an international study, as the number and portion of people bicycling and walking increases, deaths and injuries decline. This is known as the safety in numbers hypothesis: more people walking and biking reduce the risk per trip.

Complete Streets help reduce crashes

Complete Streets reduce crashes through comprehensive safety improvements. A Federal Highway Administration review of the effectiveness of a wide variety of measures to improve pedestrian safety found that simply painting crosswalks on wide high-speed roads does not reduce pedestrian crashes. But measures that design the street with pedestrians in mind – sidewalks, raised medians, better bus stop placement, traffic-calming measures, and treatments for disabled travelers – all improve pedestrian safety. Some features, such as medians, improve safety for all users: they enable pedestrians to cross busy roads in two stages, and reduce left turning motorist crashes to zero, a type of crash that also endangers bicyclists.

One study found that designing for pedestrian travel by installing raised medians and redesigning intersections and sidewalks reduced pedestrian risk by 28 percent. Speed reduction has a dramatic impact on pedestrian fatalities. 80 percent of pedestrians struck by a car going 40 mph will die; at 30 mph the likelihood of death is 40 percent. At 20 mph, the fatality rate drops to just 5 percent. Roadway design and engineering approaches commonly found in Complete Streets create long-lasting speed reduction. Such methods include enlarging sidewalks, installing medians, and adding bike lanes. All road users – motorists, pedestrians and bicyclists – benefit from slower speeds.



Select Excerpts Active Transportation & Real Estate: The Next Frontier

- **Fifty percent of US residents say that walkability is a top priority** of a high priority when considering where to live, according to the Urban Land Institute's America in 2015 report.
- Values of properties within a block of Indianapolis's Cultural Trail **rose 148% over 6 years**.
- Property values along Dallas's Katy Trail have **climbed nearly 80% since it opened in 2006**.
- A street upgrade in Salt Lake City that removed 30% of on-street parking but improved crosswalks and sidewalks and added protected bike lanes found that retail sales **increased 8.8% (more than citywide increase of 7%) in the first six months** of the following year.
- Retail vacancies in Dunedin, FL **declined by more than 50% after opening** of the Pinellas Trail.
- Properties within 1/4 mile of the Radnor Trail, part of Philadelphia's Circuit regional trail network, were **valued on average \$69,000 higher** than other area properties.
- Minneapolis's Midtown Greenway has catalyzed more than \$750 million worth of new residential development. Property values along the corridor have **increased by over 90 percent in 10 years**.
- A 2009 nationwide study by CEOs for Cities, a cross-sector organization that develops ideas to make US cities more economically successful, found that "houses located in areas with above-average walkability or big ability are **worth up to \$34,000 more than similar houses with average walkability levels.**"
- Active transportation infrastructure can catalyze real estate development. Trails, bike lanes, and bicycle-sharing systems can improve pedestrian and bicyclist access to employment centers, recreational destinations, and public transit facilities, thereby enhancing the attractiveness of developments along active transportation corridors. In some cases, former industrial districts and towns outside **urban cores have benefited from active transportation infrastructure due to improved walking and cycling connectivity**.
- Investments in trails, bike lanes, and bicycle-sharing systems have high levels of return on investment. Regions and cities have found that **relatively small investments in active transportation can have outsized economic returns** due to improved health and environmental outcomes and reduced negative externalities, such as automobile traffic congestion and poor air quality.
- There is evidence of a **correlation between access to active transportation facilities and increased property values**. In a number of markets, both urban and suburban, studies have found that direct access to trails, bike-sharing systems, and bike lanes can have a positive impact on property values.

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2 EXISTING CONDITIONS REVIEW

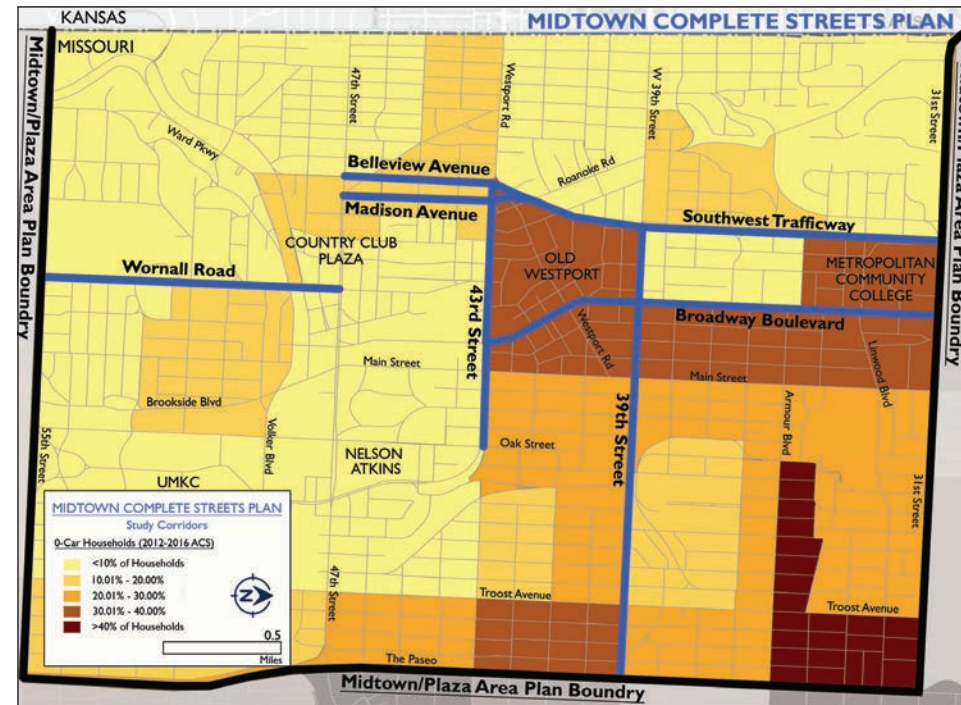
DEMOGRAPHICS

A review of the Midtown area demographics was undertaken to get a full picture of the users of the Midtown streets. Four key demographic traits were mapped because of their importance to multimodal access needs and economic development. These maps are included in the plan to the right on this page. The four traits mapped were zero car households (top left map), minority population (bottom left), seniors (65 and above) (bottom right), and employment density.

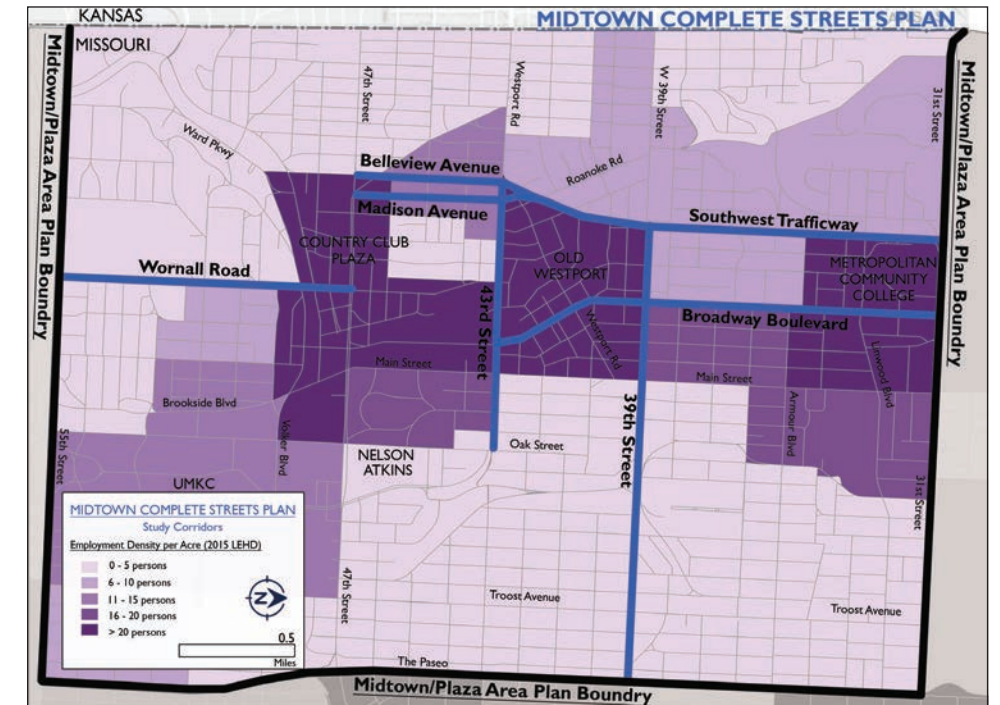
The first three categories represent groups of people who typically rely more heavily on multimodal transportation modes for mobility, especially for transit use and walking. These are areas where multimodal trips are likely to originate in the area. The employment density map represents the locations where people work and where businesses are located. These are locations where people are most likely attempting to access by all modes of transportation.

The locations where the multimodal trips are likely to originate are primarily clustered around the perimeter of the area and especially in the northeast quadrant of the area. The likely destinations are clustered down the central corridor of Broadway, in Westport, and at the Country Club Plaza. This indicates that Broadway and 39th Street likely act as key activity streets for multimodal trips, both containing destinations along them and acting as key network links to connect the multimodal users to the destinations. The maps also indicate that Southwest Trafficway likely acts as a major barrier to people living west of the road to access employment and shopping opportunities along Broadway and at Westport and the Country Club Plaza.

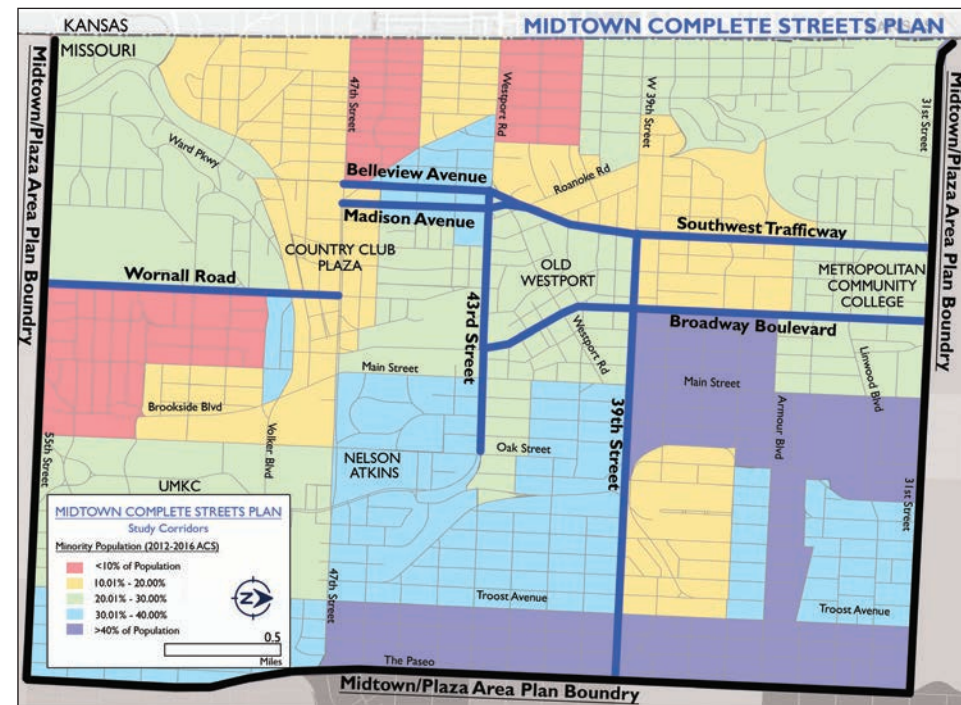
DEMOGRAPHIC MAPS OF THE STUDY AREA



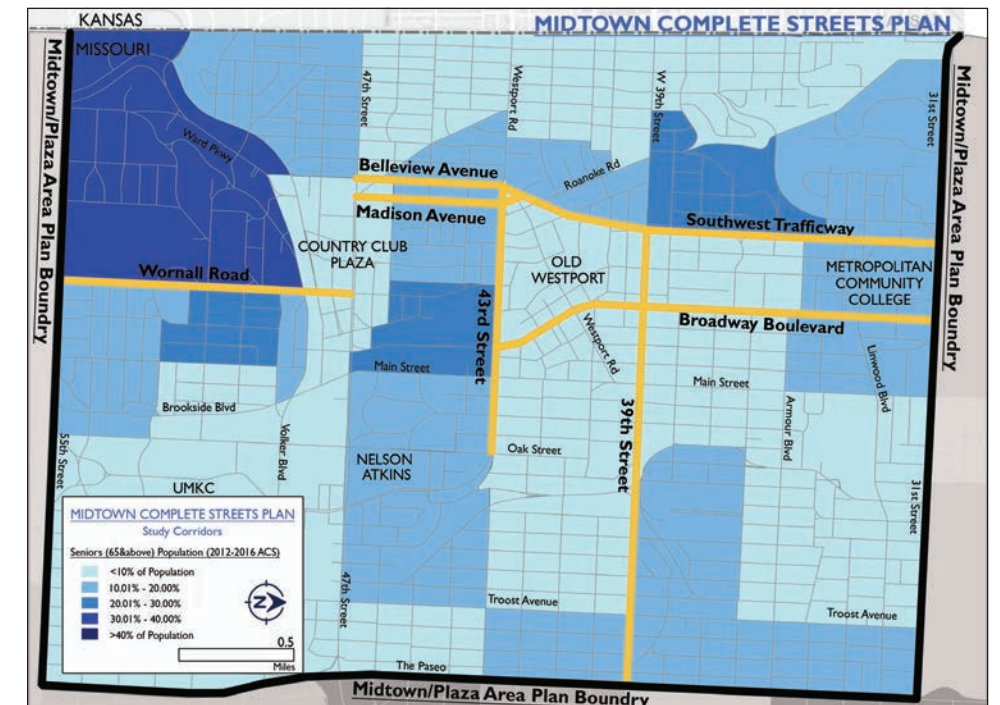
Map of Zero Car Households



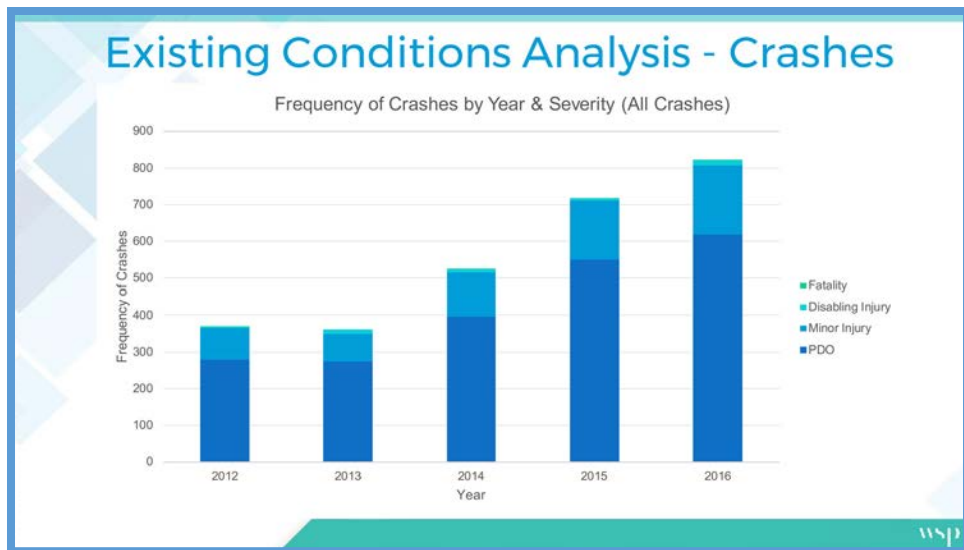
Map of Employment Density



Map of Minority Population



Map of Aging Population



Frequency of Crashes by Year and Severity

Midtown Corridor	Fatal	Disabling Injury	Minor Injury	Property Damage	Total Crashes
SOUTHWEST TRAFFICWAY	1	3	132	513	649
BELLEVIEW AVE	1	3	28	143	175
MADISON AVE	-	1	25	111	137
BROADWAY BLVD	1	17	209	613	840
39TH STREET	-	19	222	601	842
43RD STREET	1	7	76	261	345
WORNALL RD	1	2	18	90	111
Grand Total	5	52	710	2,332	3,099

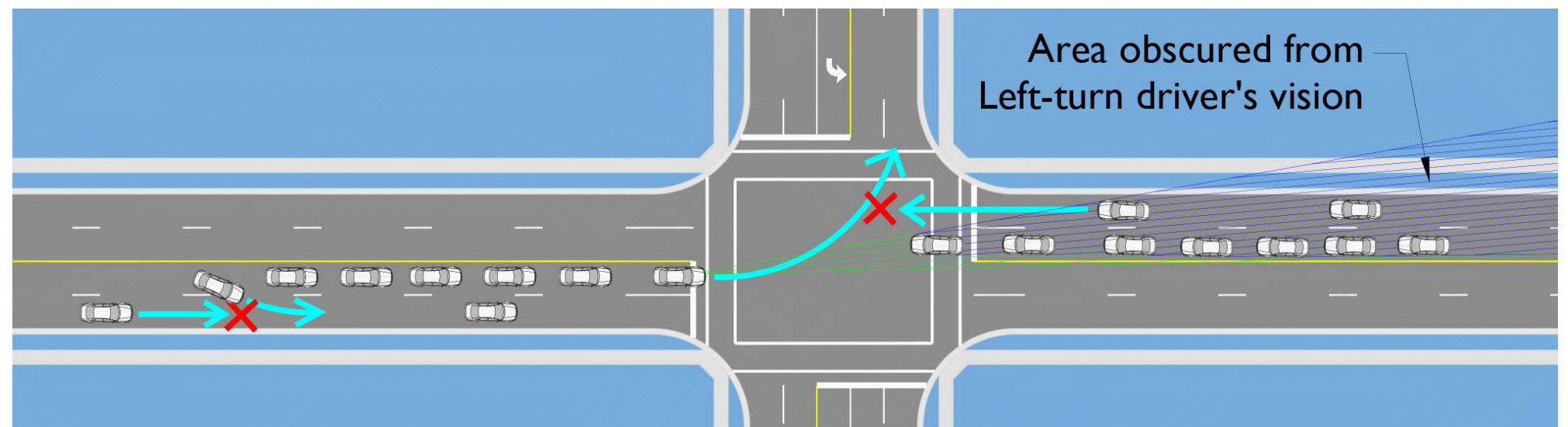
All Crashes by Corridor

Midtown Corridor	Fatal	Disabling Injury	Minor Injury	Property Damage
SOUTHWEST TRAFFICWAY	1	2	7	1
BELLEVIEW AVE	-	-	1	1
MADISON AVE	-	-	2	-
BROADWAY BLVD	-	7	35	6
39TH STREET	-	6	30	3
43RD STREET	-	-	7	1
WORNALL RD	-	1	4	2
Grand Total	1	16	86	14

Bike and Pedestrian Crashes by Corridor

Crash Type	Crash Costs
Angle Side Impact	\$32,944,560
Rear End	\$16,878,179
Bicycle and Pedestrians	\$14,656,357
Fixed Object	\$9,482,767
Head On	\$5,292,002
Other	\$12,600,504
Total	\$91,854,369

Crash Cost by Type



CRASH ANALYSIS

Safety is a key factor of any complete streets analysis and was noted time and again as an important consideration in the Midtown area. One of the key goals is to provide safe facilities for all ages and abilities of street users with any mode of transportation. To assess the areas where safety is a key, a comprehensive analysis of car, pedestrian, and bicycle crash data was conducted. Crash data was obtained from the Mid-America Regional Council for the most recent five year period (2012 – 2017). The crash records originate from police reports at crash scenes and are collected and entered into a georeferenced database by the Missouri Department of Transportation and the Mid-America Regional Council. This crash data contains myriad information including crash type, time, date, crash type, severity, location, and more information.

Crash data was obtained for only the study corridors. Despite of the relatively short length of roadway contained in this plan, there was a very high number of crashes. In the five year period of crash data, there were over 3000 vehicle crashes on these corridors. Within the 3099 crashes, five crashes resulted in deaths, 52 resulted in disabling injuries, and 710 resulted in less severe injuries. Bicycle and pedestrian crashes represent a much smaller overall number of crashes, accounting for less than 4% of the total crashes. However, the bicycle and pedestrian crashes account for a much larger percentage of the disabling injuries and fatalities, accounting for nearly 30% of the deaths and disabilities. When a cyclist or pedestrian is hit, the result is typically much more devastating than when a vehicle hits another vehicle or a fixed object on the side of the roadway. Also concerning is the crash trend on the Midtown streets. The bar graph to the left shows the number of crashes per year over the five year period. 2013 represented the fewest number of crashes, with 360 crashes. In 2016, there were 821 crashes. This represents a 228% increase in crashes over these 4 years.

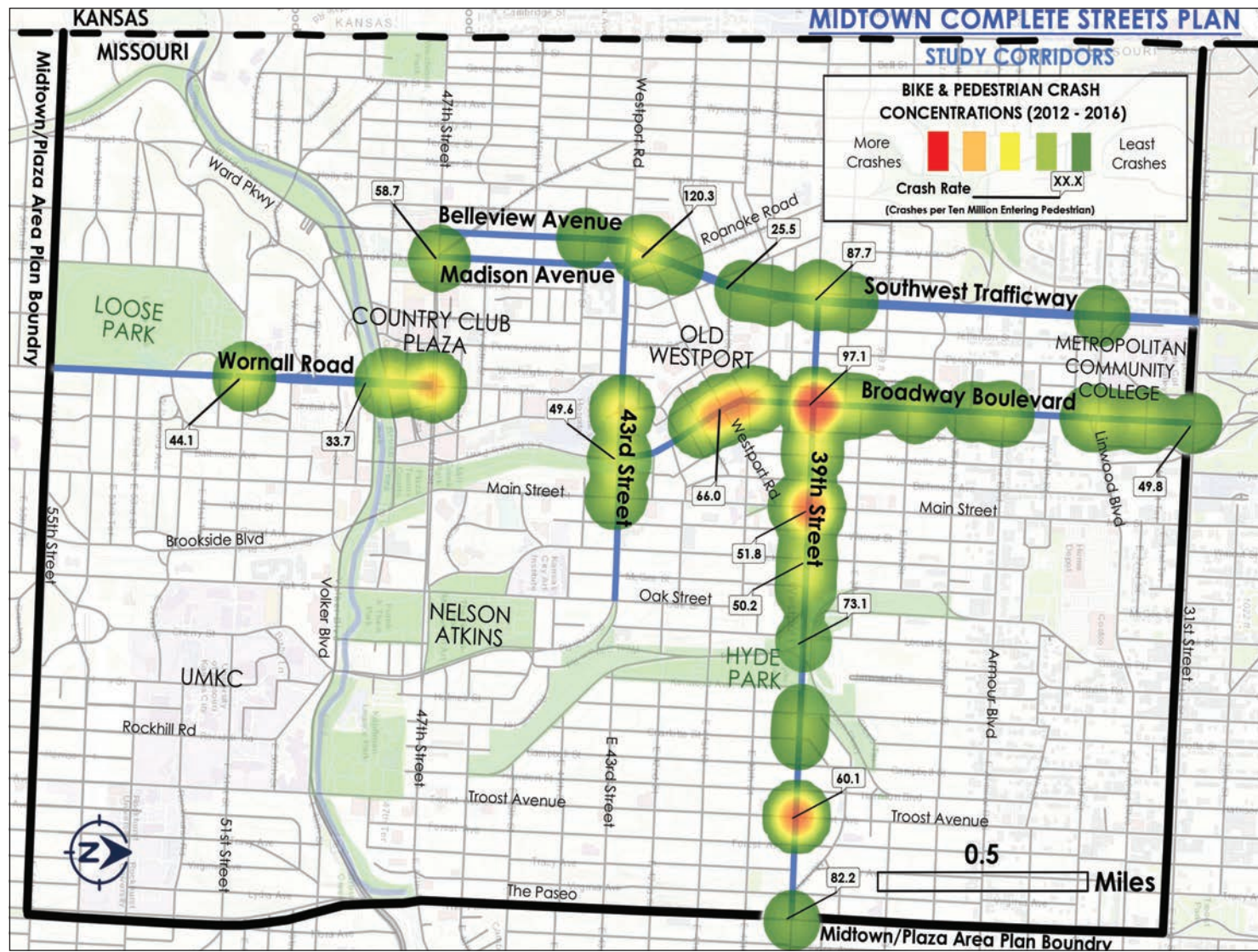
4-LANE ROADWAY ISSUES

A major contributing factor to the crashes is the physical layout of the streets in Midtown. This is particularly drastic along the 39th Street corridor, where the street has 4-lanes and no turn lanes. This roadway configuration leads to an elevated crash rate due to two factors. Because the left lane (the inner lane) acts as a de-facto left-turn lane, drivers often will swerve out of this lane to avoid turning vehicles ahead of them. This leads to rear-end and sideswipe crashes. Additionally, an elevated level of right-angle (“t-bone”) crashes occur because a driver’s view of the outer lane in the opposite direction is obscured by cars opposing in the inner lane. Drivers turning left are often blind to cars approaching at high speed in the outer lane.

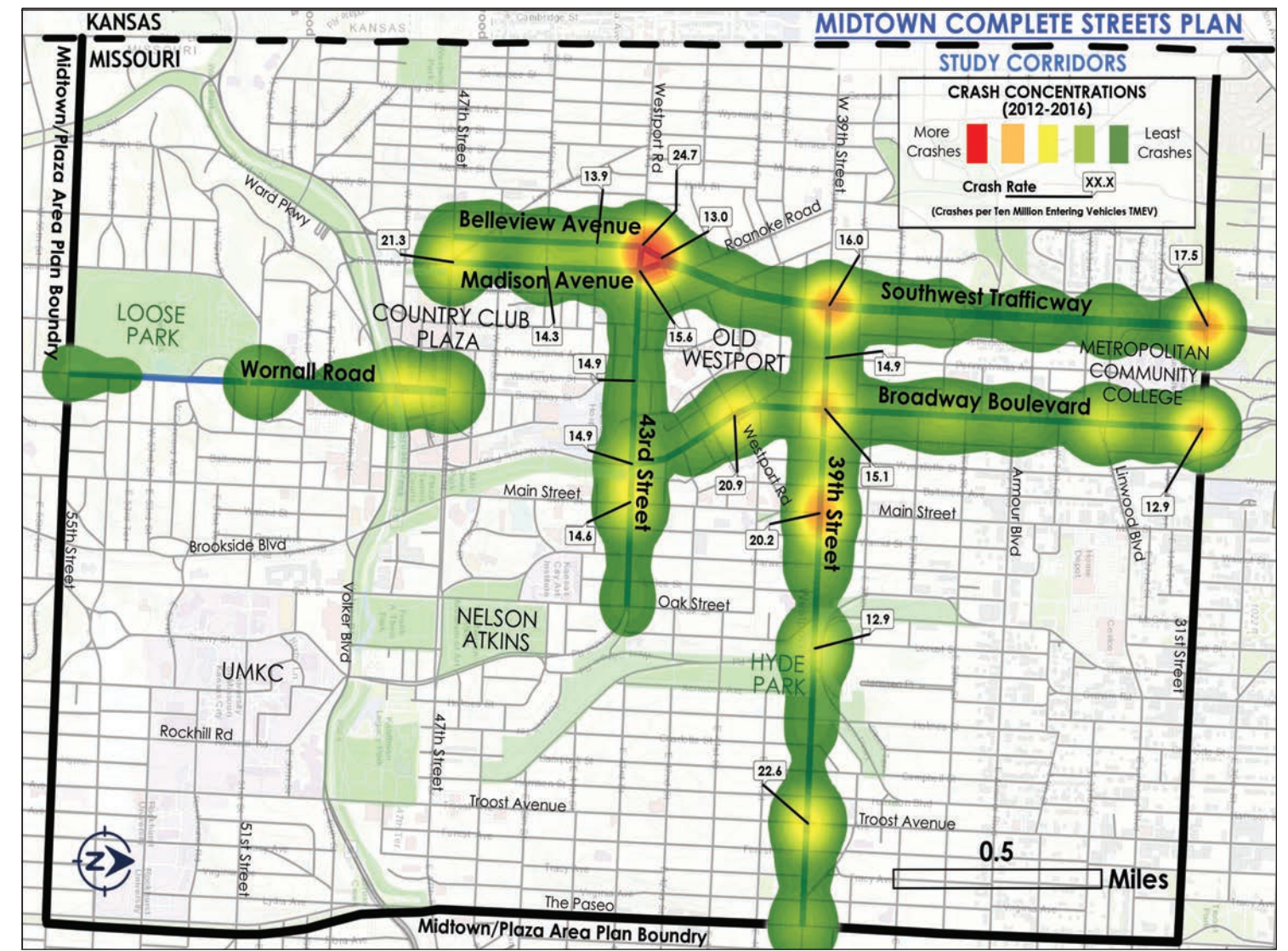
By utilizing the published cost of crashes from the Missouri Department of Transportation, a crash to society resulting from these crashes can be calculated. This crash cost includes costs borne by residents, businesses, and visitors to the area due to property damage, medical bills, lost productivity, insurance, emotional distress, and more. It was found that crashes on the study corridors resulted in over \$90 million in cost to society in this five year period. An in depth crash analysis for this plan is included in the Appendix.

As a result of car crashes, on average, every year on the study corridors:

- 1 person dies
- 10 people are permanently disabled
- 140 people are injured



Map of Bicycle and Pedestrian Crash Concentrations



Map of Vehicular Crash Concentrations

The crashes along the study corridors was mapped as heat maps, showing the crash hot spots. In the map above and to the right, all crashes are mapped, including vehicle, bicycle, and pedestrian crashes. In the map above and to the left, only the bicycle and pedestrian crashes are mapped.

In addition to the crash frequency mapped, the crash rates were calculated. A crash rate is calculated by comparing the number of crashes (the frequency), and the amount of traffic through the intersection. This gives an “apples to apples” comparison, so that high traffic volume and high crash frequency intersections can be effectively compared to low traffic volume and low crash frequency intersections.

The crash rates are noted in callout boxes for intersections considered “high crash” intersections. These have rates far above the average crash rate for a typical intersection. This crash rate was calculated for both vehicle crash

rates and for bicycle & pedestrian crashes. The bicycle and pedestrian crashes include only bicycle & pedestrian crashes and only bicycle and pedestrian volumes.

8 of the top 10 crash rate intersections for pedestrians are situated on either 39th Street or Broadway, and 5 of the top 10 crash rate intersections for vehicle crashes are situated on 39th Street or Broadway. When comparing bicycle/pedestrian crash rates to vehicle crash rates, it can be noticed that they are significantly higher. A pedestrian or cyclist is 1.8 times more likely to be hit passing through the study corridors than a driver.

“A pedestrian or cyclist is 1.8 times more likely to be hit by a car passing through the study intersections than a driver.”



Screenshot of Synchro Model

DRIVING ANALYSIS

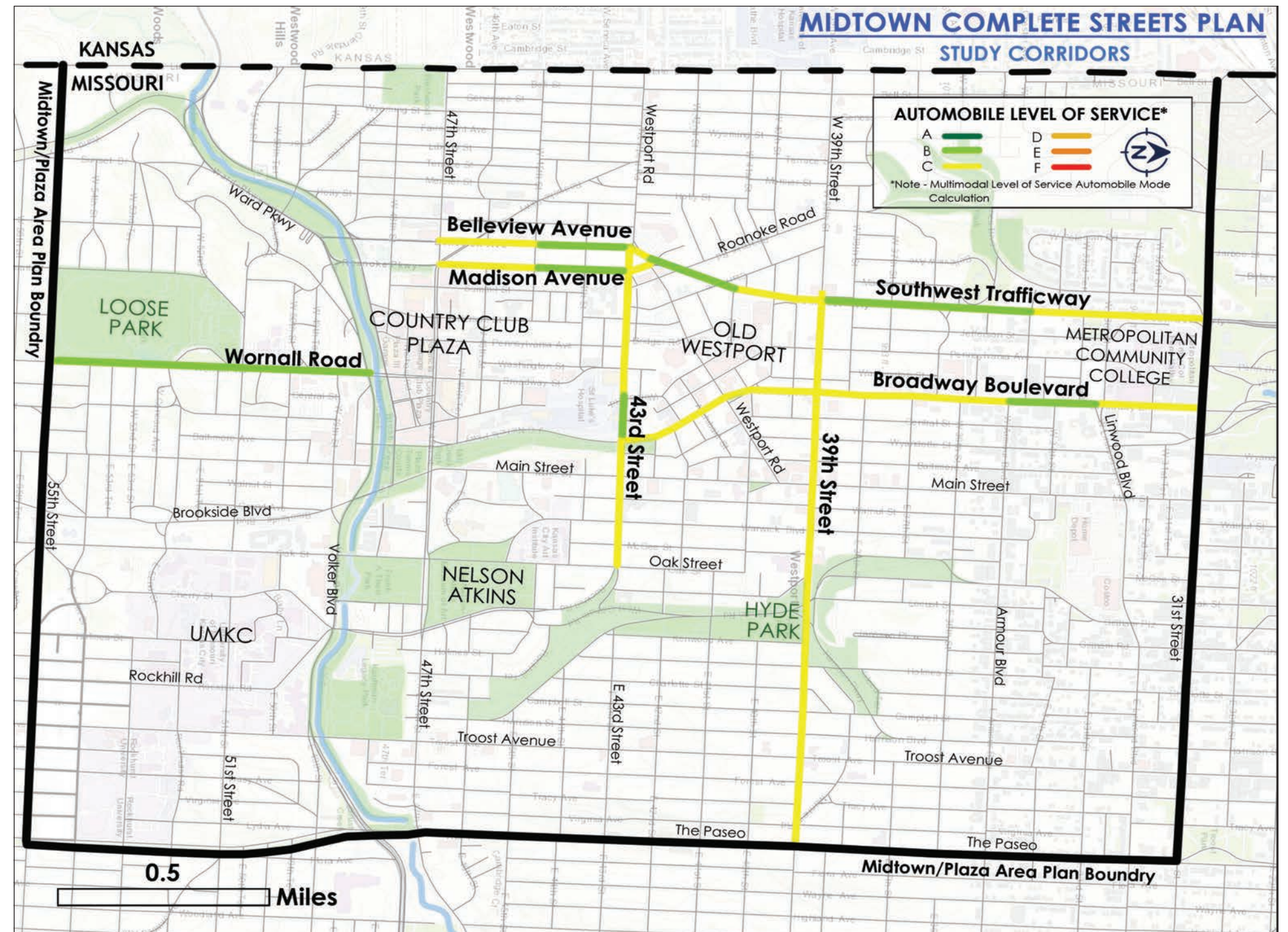
Driving conditions in the Midtown area is very important to the visitors to the area. If visitors cannot access the area by car, it may adversely affect businesses. In order to determine the existing driving conditions in the area, a comprehensive traffic analysis was conducted. This analysis included a networked traffic model of all of the arterial and collector streets in the study area. A screenshot of this model can be seen above.

The model was based on existing lane configurations, existing traffic signal timings, and recent traffic counts provided by Operation Green Light and the Kansas City, Missouri Traffic Management Center staff. They Synchro and SimTraffic software packages were used to quantify traffic operations. An in-depth reporting of this traffic analysis work is included in the Appendix of this plan.

As part of this corridor study, the Multimodal Level of Service (MMLOS) for the major roads in the corridor was calculated for drivers. The calculations for MMLOS are based on the perception of drivers of what the quality of the experience is, rather than just an amount of seconds of delay per intersection.

For drivers, the calculation depends most heavily on number of stops that a driver will typically make on a given street segment. This is the factor that is most closely tied to how good drivers perceive their driving experience to be. Several other factors are included in the equation but play a more minor role including presence of a divided median and left turn lanes, presence of trees along the street, and pavement quality. The MMLOS is shown mapped to the right.

All streets have an MMLOS of C or B and indicate few issues with driving in the area today



Map of Multi-Modal Level of Service (MMLOS) for Vehicles



LTS 1 - 100% of Cyclists
(Image Source: IndyCog)



LTS 2 - 70% of Cyclists
(Image Source: People for Bikes)



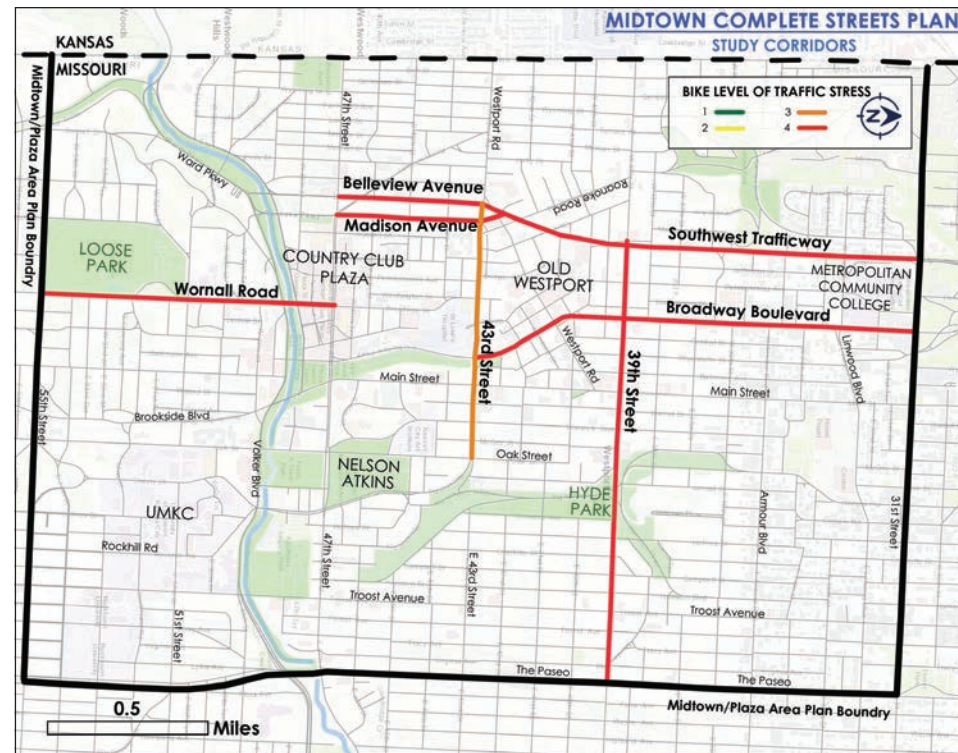
LTS 3 - 10% of Cyclists



LTS 4 - 1% of Cyclists

BIKE LEVEL OF TRAFFIC STRESS

The pictures above represent typical users and facilities for the different bicycles Levels of Traffic Stress (LTS). The top left image shows an LTS of 1, the top right shows LTS 2, the bottom left shows LTS 3, and the bottom right LTS 4. The lowest LTS of 1 relates to a facility likely to be used by all cyclists, even young children under 10 years of age. These are typically very low volume, low speed facilities, or facilities that are separated from motor vehicle traffic. The highest LTS of 4 relates to a facility that only very skilled cyclists will ride on. The cyclists willing to ride on an LTS 4 facility typically only represent about 1% of the total number of cyclists in an area.



Map of Bike Level of Traffic Stress

BIKING ANALYSIS

Biking was indicated in the past planning efforts as an important mode of transportation for the Midtown area. A quantitative analysis of biking was made to determine what the level of traffic stress is in the area. The Bicycle Level of Traffic Stress (LTS) was used to determine the level of biking skill needed to utilize the roadways in the study area and by reflection the number of cyclists the area roadways serve. Bike LTS is a quantitative measurement that relates the features of a roadway to the type of cyclists that are likely to utilize that facility. The types of cyclists are grouped by their skill level which relates to the amount of traffic stress they are willing to tolerate on a facility.

The LTS is based on whether there are biking or parking facilities on the street, the speed limit of the section, and the number of lanes per direction on the particular street segment. The lowest LTS of 1 relates to a facility likely to be used by all cyclists, even young children under 10 years of age. These are typically very low volume, low speed facilities, or facilities that are separated from motor vehicle traffic. The highest LTS of 4 relates to a facility that only very skilled cyclists will ride on. The cyclists willing to ride on an LTS 4 facility typically only represent about 1% of the total number of cyclists in an area.

The bike LTS for the study corridors is shown above. All study corridors have an LTS of 3 or 4, indicating that fewer than 10% of cyclists are skilled or confident enough to ride on these streets.

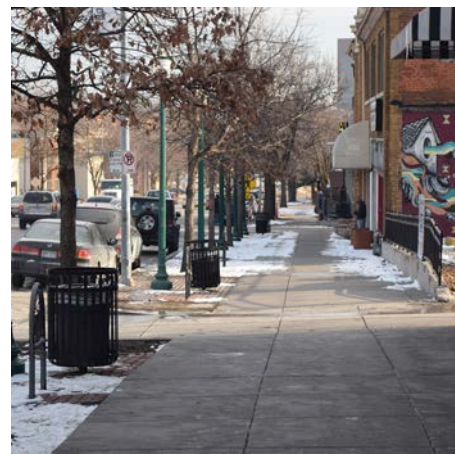


BikeKC Planned Facilities

BIKEKC PLANNED FACILITIES

The City Planning & Development Department's Long Range Planning and Preservation staff is currently working to rewrite the Bike KC plan along with multiple city departments, partner organizations and community members. The rewrite is in response to the 2016 Bike KC Performance Audit released by the City Auditor's Office in December, 2016. The purpose of this planning process is to establish a clear vision for bicycling in Kansas City, set specific goals and strategies, prioritize projects or project areas for the future, and to address funding and programmatic elements.

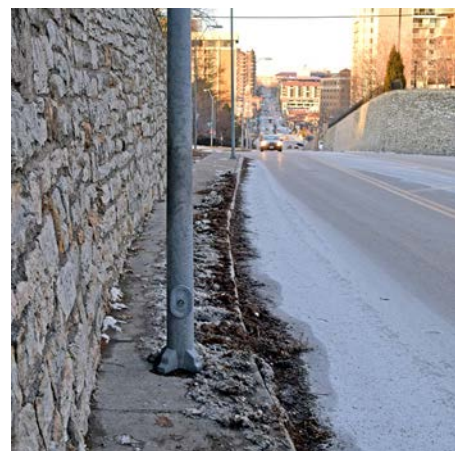
The map above shows the proposed bicycle network included in the draft Bike KC plan. Of the five corridors, Southwest Trafficway and Wornall Road are not included on the bike network. 43rd Street is indicated as a bicycle boulevard facility. 39th Street and Broadway Boulevard are slated for "major protected" facilities—indicating these streets are planned to have a separated or protected bike lane.



Pedestrian LOS B (Broadway Boulevard)



Pedestrian LOS C (Southwest Trafficway)



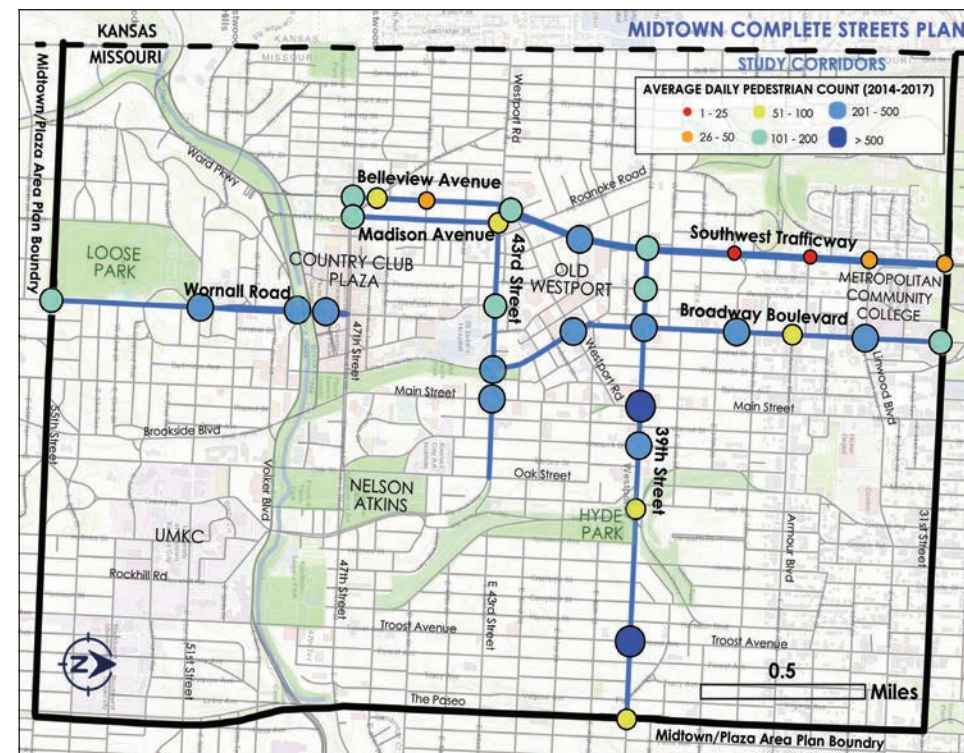
Pedestrian LOS D (Wornall Road)



Pedestrian LOS E (43rd Street)

PEDESTRIAN MULTI-MODAL LEVEL OF SERVICE

The pictures above represent typical facilities for the different Multimodal Levels of Service (MMLOS) for pedestrians in the study area. The top left image shows an MMLOS of B on Broadway Boulevard, the top right shows MMLOS C on Southwest Trafficway, the bottom left shows MMLOS D on Wornall Road, and the bottom right MMLOS E on 43rd Street.



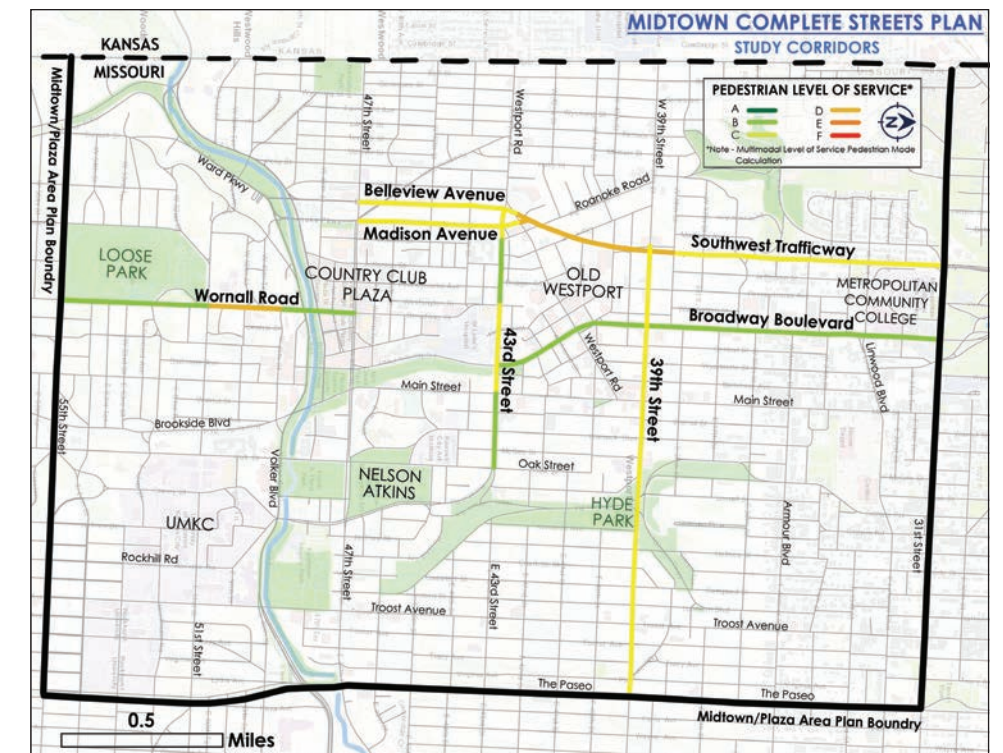
Map of Bike Level of Traffic Stress

WALKING ANALYSIS

Midtown Kansas City has the highest volume of pedestrian traffic in Kansas City outside of the downtown central business district. City staff has collected pedestrian volumes at the intersections mapped above left. At many of the intersections in Midtown, the pedestrian volume makes up a substantial percentage of total traffic volume. The highest pedestrian volumes in the area are along 39th Street and Broadway.

The past planning efforts including the FOCUS Plan, Walkability Plan, and Midtown Plaza Area Plan all indicate that a high quality pedestrian network is critical to the health of the city. To determine what the current state of the pedestrian experience is along the study corridors, two primary methods of calculation were employed.

The first is the Multimodal Level of Service (MMLOS) methodology for pedestrians. The calculations for MMLOS are based on the perception of pedestrians of what the quality of the experience is. The pedestrian calculation is based on the width of the sidewalk, protection from the elements, protection and distance from moving cars, and vehicle traffic volumes.



Map of Pedestrian Level of Service

PEDESTRIAN LEVEL OF SERVICE

The second methodology is the Walkability Level of Service analysis methodology as outlined in the Kansas City Walkability Plan. This methodology focuses on the quality of pedestrian crossings across streets and considers items including number of lanes crossed, presence of crosswalks, ADA accessible curb ramps, and more. The MMLOS is shown mapped to the right, and the Walkability LOS calculations are detailed on the following page.

Pedestrian MMLOS is generally good in the study area, but some low quality gaps exist in the network, particularly along 39th Street, Southwest Trafficway, and Wornall Road.



Intersection of Main & 47th Street



Country Club Plaza Skyline

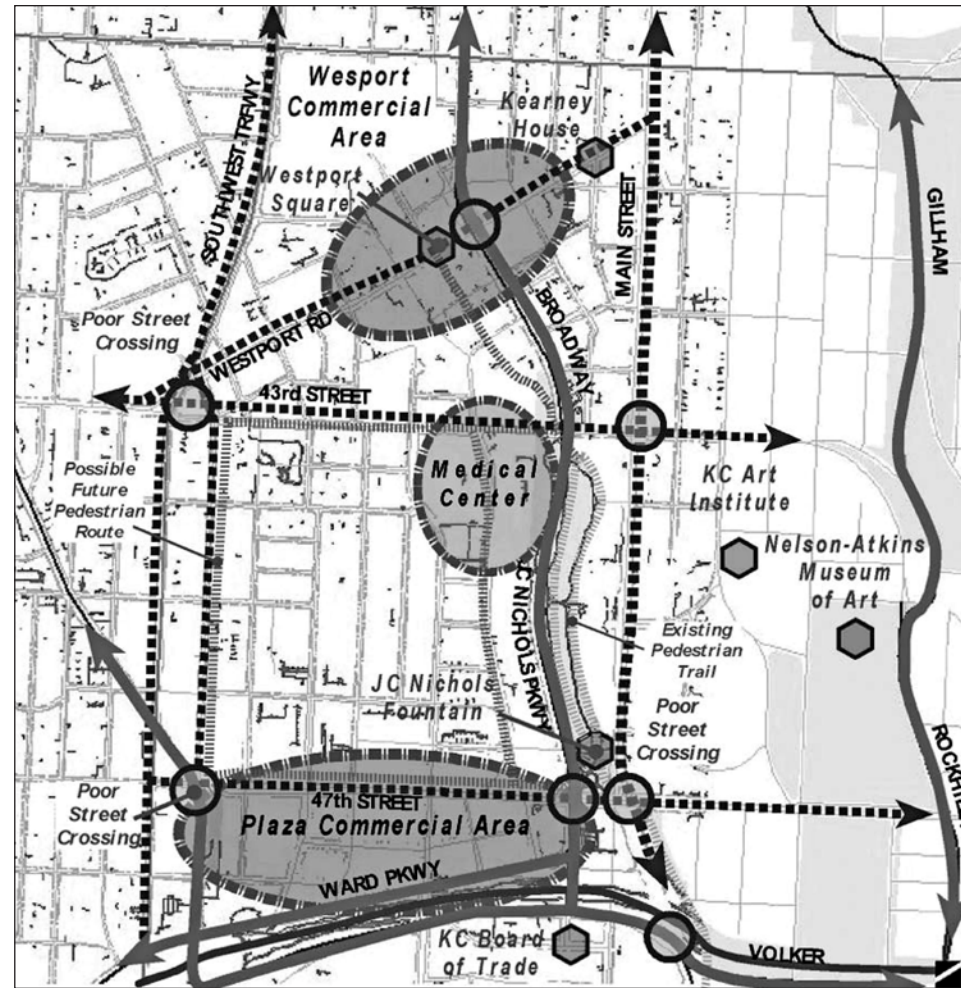
WALKABILITY PLAN IMPROVEMENTS

The Kansas City Walkability Plan was adopted by City Council in 2003. This plan details improvement recommendations for designated pedestrian areas in Kansas City. The Westport/Plaza area is one of the designated pedestrian areas. The plan recommends that all pedestrian crossings in this area on average have a Walkability LOS of C, but it is proposed that they be improved to a Walkability LOS of A according to the plan's methodology.

The Plaza/Westport area is arguably Kansas City's most well known pedestrian oriented area. The amount of landscaping, public and private amenities, and infrastructure is unsurpassed by any other area in the city. Still, improvements can be made to create pedestrian connections to adjacent neighborhoods and within the study area that promote safety, quality aesthetics, walkability, and minimize the existing road divisions. Pedestrian refuges, updated crosswalks, and traffic calming techniques can be used to better connect the adjacent neighborhoods. Additional landscaping, widened walkways, sidewalk maintenance, and better connection between area parks and activity centers would promote additional pedestrian traffic throughout the entire study area.

Priority for improvements in the Westport / Plaza and vicinity relate to:

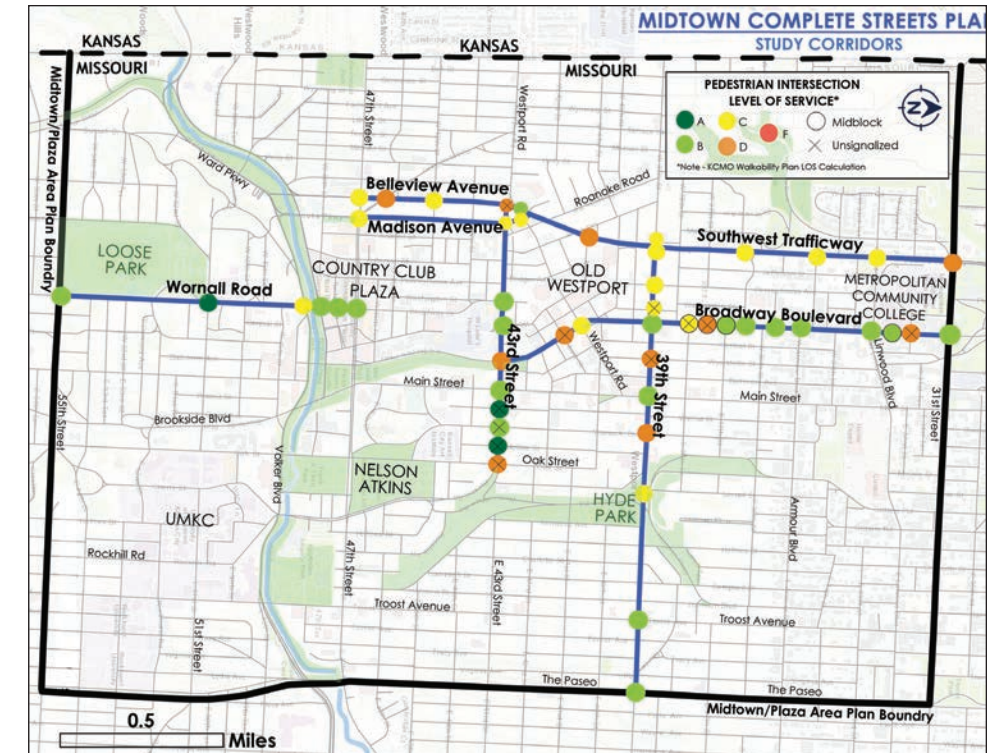
- Better connect Plaza area to cultural, educational, and residential areas located east and south and west of the Main Street and 47th Street intersection.
- Improve street crossings along Broadway/J.C. Nichols at Westport Road, 43rd Street, and 47th Street.
- Improve sidewalks, streetscape, and lighting along 43rd Street corridor.
- Improve street crossing along Southwest Trafficway at 47th Street, 45th Street, and 43rd Street.
- Minimize 43rd Street divide by creating a "St. Luke's Pedestrian Zone" at Wornall Road/43rd Street intersection.



Map of Plaza / Westport Area from KC Walkability Plan

WALKABILITY PLAN IMPROVEMENTS

The Kansas City Walkability Plan was adopted by City Council in 2003. This plan details improvement recommendations for designated pedestrian areas in Kansas City. The Westport/Plaza area is one of the designated pedestrian areas. The plan recommends that all pedestrian crossings in this area on average have a Walkability LOS of C, but it is proposed that they be improved to a Walkability LOS of A according to the plan's methodology.



Map of Pedestrian Level of Service

PEDESTRIAN INTERSECTION LEVEL OF SERVICE

The map above shows the calculated Walkability LOS for the study intersections. Many intersections along Broadway, 43rd Street, and Wornall Road maintain an LOS of A or B. 39th Street and Southwest Trafficway have the poorest Walkability LOS scores, with the majority of the intersections along these corridors having LOS scores of C or D. The Walkability Plan notes that the area intersections should have Walkability LOS scores of A.

It can also be seen that several segments of roadway on Broadway and 39th Street have long distances without any pedestrian crossings. This is true on 39th Street between Main Street and Troost Avenue and on Broadway between 39th Street and 43rd Street.

The area on Broadway between 39th Street and 43rd Street runs through the Heart of Westport. This is one of the most walkable parts of the city, and splits the Westport business district in half. It is important to note that over this 1/2 mile stretch of road, only two low quality pedestrian crossings exist. This area also has a high frequency and rate of pedestrian crashes, as noted in the crash analysis of this report. This indicates that there is a high demand for pedestrian crossings of the street and few safe opportunities to cross.



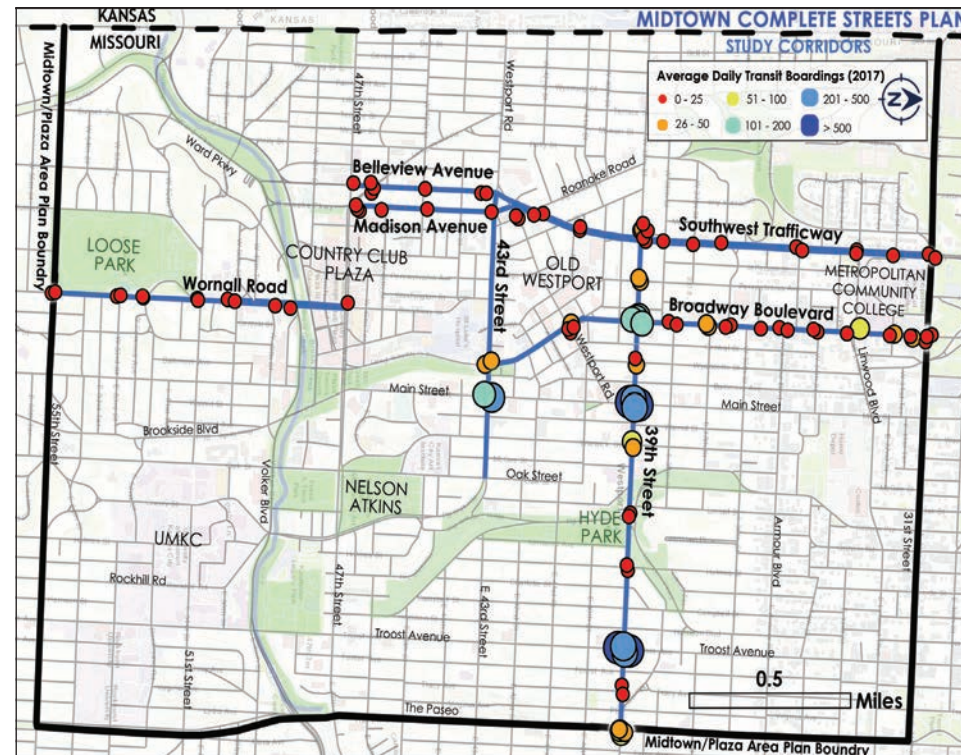
Bad Transit Facilities



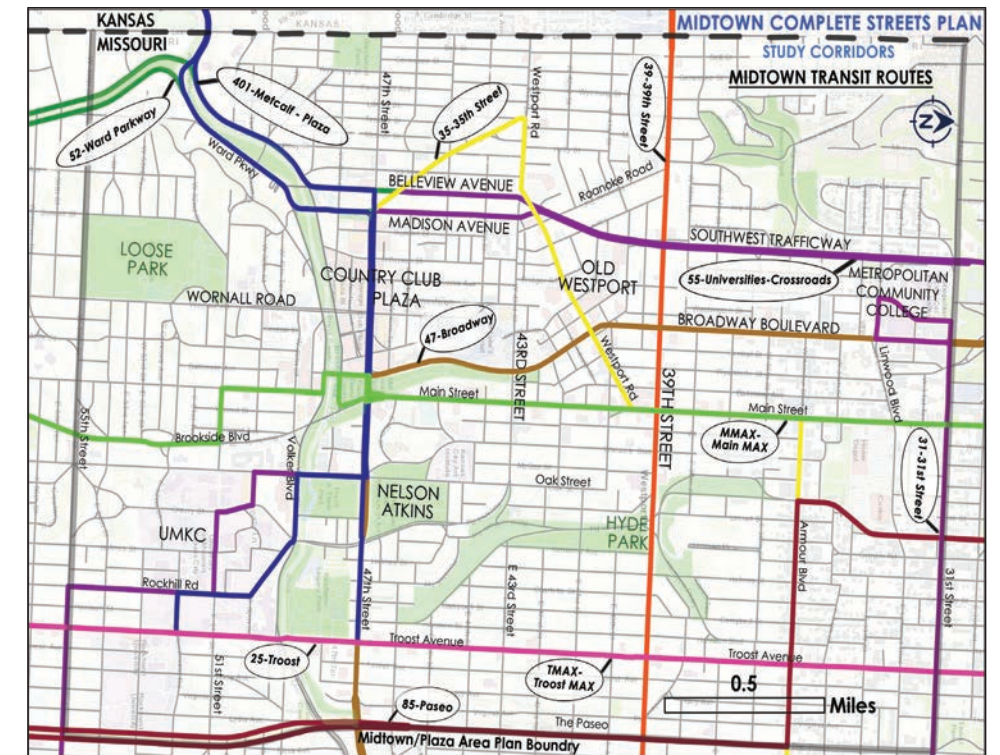
Average Transit Facilities



Good Transit Facilities



Map of Average Daily Transit Boardings



Map of Existing Transit Routes

TRANSIT ANALYSIS

Transit use is very important to the Midtown area. 39th Street has the highest transit user in the city. The map above shows the transit boardings per day. This data was provided by the Kansas City Area Transportation Authority (RideKC).

A map of the current transit corridors though the area is also shown above and to the right. Wornall Road and 43rd Street do not currently have transit lines on them. One route exists today on Southwest Trafficway (Route 55), Broadway Boulevard (Route 47), and on 39th Street (Route 39). Route 47 on Broadway Boulevard currently all week long, arriving every 30 minutes during peak hours and every 45 minutes or 60 minutes during off-peak hours. Route 39 on 39th Street currently runs all week, arriving every 15 minutes during peak hours and every 20 minutes to 60 minutes during off-peak hours. Route 55 on Southwest Trafficway runs on weekdays only and arrives every 60 minutes.

Other notable transit facilities through the study area include the MainMAX bus line on Main Street and the TroostMAX bus line on Troost Ave. The preliminary planning for the extension of the KC Streetcar from Union Station to UMKC along Main Street is also currently underway.

The current state of transit facilities in the area varies widely. The pictures to the left show a variety of transit stops in the area. They vary from very poor, lacking even basic ADA accessibility as shown above to very good, including shelters, benches, trash cans, and transit rider information kiosks.

39th Street has particular issues with transit access. Although 39th Street has a very high volume of riders, and would typically warrant high quality transit rider facilities, the sidewalk area is too narrow to provide these facilities. Because of this, transit users can often be seen crowding the sidewalk area, trying to find any place possible to wait. These crowds of transit users impede pedestrian flow on the streets, and pedestrians often times end up walking in the street to navigate around the crowds.

39th Street also poses specific operation issues for the KCATA bus drivers. The very narrow lanes and poor pavement quality lead to very difficult driving conditions. The utility pole placement directly adjacent to the narrow lanes also often leads to bus mirrors being hit and damaged as the bus drives.

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3 COMMUNITY OUTREACH & ENGAGEMENT



Advisory Committee Meeting #1



Advisory Committee Meeting #3

ADVISORY COMMITTEE

This planning effort had a very comprehensive advisory committee membership. The committee consisted of all members of the Midtown/Plaza Area Plan Implementation Committee, plus representatives from other major business owners, neighborhoods association representatives, and advocacy groups.

The committee met five times throughout the duration of the project, and two online surveys were made exclusively to the advisory committee members. The meetings had between 17 and 31 attendees at each meeting. The online engagements garnered 12 and 16 responses. Excellent feedback was received from the committee that helped to shape the course of the project and hone the myriad improvement options down to a few preferred alternates for public feedback. Committee members listed in alphabetical order:

- Allan Hallquist | Hyde Park Neighborhood Assoc
- Amanda McGee | 39th Street CID
- Aryn Roth | Westwood Park Homes Assoc
- Bill Moseman | American Century
- Bob Simmons | UMKC
- Carol Thrane | Front Porch Alliance
- Curt Crespino | UMKC
- David Disney | JE Dunn
- Diane Burnette | Maincor/Broadway CID
- Eddie Tapper | KC Design Build
- Eric Bushner | JB Nutter
- Erik Heitman | BNIM
- Gerald F Williams | KCMO Planning

- Greg Allen | Allen Financial Corp
- Greg Flisram | EDC KC
- Jeff Harms | Coleman Highlands Neighborhood Assoc
- Jeff Martin | KCMO Public Works
- Jim Wanser | 4th District PIAC rep
- Karen Christiansen | Nelson-Atkins
- Kim Kimbrough | Westport Regional Business League/Westport CID
- Kurt Schoeb | KC Life
- Larry Jacob | Dover Strategy Group
- Laura Burkhalter | Southmoreland Neighborhood Assoc
- Laura Snow | KCAI
- Les Cline | Teachers Landscape
- Marshal Milller | Miller Co.
- Marta Hogerty | South Plaza Neighborhood Assoc
- Mary Jo Draper | Valentine Neighborhood Assoc
- Matt Hanson | Saint Lukes
- Matt Nugent | Gould Evans
- Meredith Keeler | Taubman - Country Club Partners LLC
- Peter Cassel | MAC Apartments
- Roxana Shaffe | Multiple Advocacy Groups
- Sally Schwenk | SSA Preservation
- Scot Stockton | Old Hyde Park Neighborhood Assoc
- Shawn Strate | KCATA
- Sheryl Windsor | Heart of Westport Neighborhood Assoc
- Susan Kysela | Volker Neighborhood Assoc
- Terry Rodeghier | Countryside Homes Association
- Tom McGee | Van Trust Real Estate
- Vicki Noteis | Collins Noteis Architects
- Will Petrie | West Plaza Neighborhood Assoc



This word cloud shows the words that the advisory committee members used to describe the study corridors today. The larger words were used more frequently by the committee members.

ADVISORY COMMITTEE VISIONING EXERCISE

As part of the initial phases of the project, the Advisory Committee was tasked to develop a vision for the project. An exercise was completed to help shape this vision. The committee members were asked to describe the project corridors with words as they see them today and as they would like to see them in the future. From this, word clouds were created. The word cloud above shows the words most commonly used (higher frequency words are larger) to describe the corridors today. The word cloud describing the future vision of the corridor is included in Vision & Goals chapter.

This visioning exercise also asked members to give specific feedback on each of the corridors. Several of the comments from the committee members are included on the following page. These comments embodied the general feeling about the corridors both today, and what they could be in the future. A full listing of the comments provided by the committee are included in the Appendix of this plan.

**ADVISORY COMMITTEE
COMMENTS BY CORRIDOR**

39TH STREET

- Hard to overstate how bad this street is, divides midtown neighborhoods, makes crossing on foot very difficult.
- This is a major street that deserves to be a showcase of positive improvement that makes its use positive for drivers and pedestrians.
- Sidewalks are narrow, frequently obstructed by utility poles, and terrifyingly close to aggressive, speeding traffic.

43RD STREET

- Safety of pedestrian crossings is a primary concern, as is the need to easily disburse traffic going to and from the Hospital.
- 43rd Street is a tale of two different streets for pedestrians. East of main is perhaps one of most walkable midtown streets. However, West of Main is the complete opposite.

BROADWAY BOULEVARD

- Broadway should look and feel the greatest of Kansas City's Boulevards. This north-south connector should be a buzz with pedestrians, runners, bicyclists and drivers focused on local attractions.
- Historic main street that should reflect history and beauty of Kansas City.

SOUTHWEST TRAFFICWAY

- Thousands each day rely on it for easy access to the businesses and commercial centers in the area. Losing the ability to quickly move cars along the corridor would be a major loss.
- Improvements should be made to facilitate east/west vehicular and pedestrian traffic.
- Make it easier to make a left turn - Mill St. can't be the only place to make a left in Midtown.

WORNALL ROAD

- Wornall could be an excellent alternative to the Trolley Track Trail for those looking for a more useful, direct route between midtown / brookside / waldo, but it needs better crosswalks and would benefit from some bike lanes.

**STAKEHOLDER
ORGANIZATION OUTREACH**

A number of specific stakeholder organizations were engaged with this plan to determine specialized needs of these groups. The groups engaged were primarily business associations and Kansas City MO departments. The groups engaged included the Westport Regional Business League, the Broadway Westport Council, the Broadway Area Community Improvement District, the Kansas City Public Works Department, and the Kansas City Parks and Recreation Department.

These stakeholder groups were engaged because they have relatively fewer individuals than the residents of the area, so their needs could go unheard in the larger conversation. The business community was particularly engaged because of the economic importance of the Westport and Midtown area.

At each of the stakeholder meetings, a presentation was given to the group about the project to brief the members not familiar with it. Afterwards, a discussion was had to determine specific needs or desires of these groups. The feedback received from the groups is included to the right on this page.

WESTPORT REGIONAL BUSINESS LEAGUE

This Westport Regional Business League's primary concern is with safety, parking, multimodal access, and the attractiveness of the pedestrian environment. The area on Broadway between Westport Road and 40th Street is a focus for the group. This area is a key pedestrian connection from the east and west parts of Westport but does not have safe or convenient pedestrian crossings. It was noted in the meeting that the draft recommendations with this plan aligned well with the draft recommendations of the Westport Plan, which is being developed concurrently. The group is generally receptive to the recommendations in the plan.

BROADWAY WESTPORT COUNCIL

This Broadway Westport Council's primary concerns are safety, vehicle operations/congestion, parking, adherence to the Broadway Streetscape Plan, pedestrian access, and the potential future impacts to Broadway by the KC Streetcar extension on Main Street. They would like to provide a high quality pedestrian environment on Broadway, do not support reducing vehicle lanes on Broadway, and want to maintain parking at the current levels provided. The group is generally not receptive to the recommendations in the plan.

BROADWAY AREA CID

The Broadway Area CID's primary concerns are safety, parking, transit access, and the attractiveness of the pedestrian environment. The group is particularly concerned with the safety and access issues in the 40th Street & Broadway Boulevard area and along 39th Street. The group is generally receptive to the recommendations in the plan.

KCMO PARKS & RECREATION DEPARTMENT

The Parks Departments' primary concern is safety, multimodal accesses, aesthetics, and adherence to the Parks and Boulevard System standards. Of the streets in this study, the Parks Department maintains jurisdiction over Broadway Boulevard, and a number of streets that intersect the study corridors. The Parks Department is generally receptive to the recommendations in the plan including restricting vehicle access between Southwest Trafficway and Karnes Boulevard, and making changes to Broadway Boulevard.

KCMO PUBLIC WORKS DEPARTMENT

The Public Works Departments primary concerns are safety, walkability, bikeability, and vehicle operations/congestion. The staff suggested that the project be constructed with a phased approach, with improvements be implemented on 39th Street, 43rd Street, Southwest Trafficway, and Wornall Road as Phase 1, and improvements on Broadway Boulevard in a future Phase 2. They noted the importance of continued stakeholder outreach through further implementation phases of the project. They also noted the importance of the details in design implementation and want to utilize the best practices when implementing anything from the plan.



Public Meeting Photograph



Public Meeting Photograph



Public Meeting Photograph



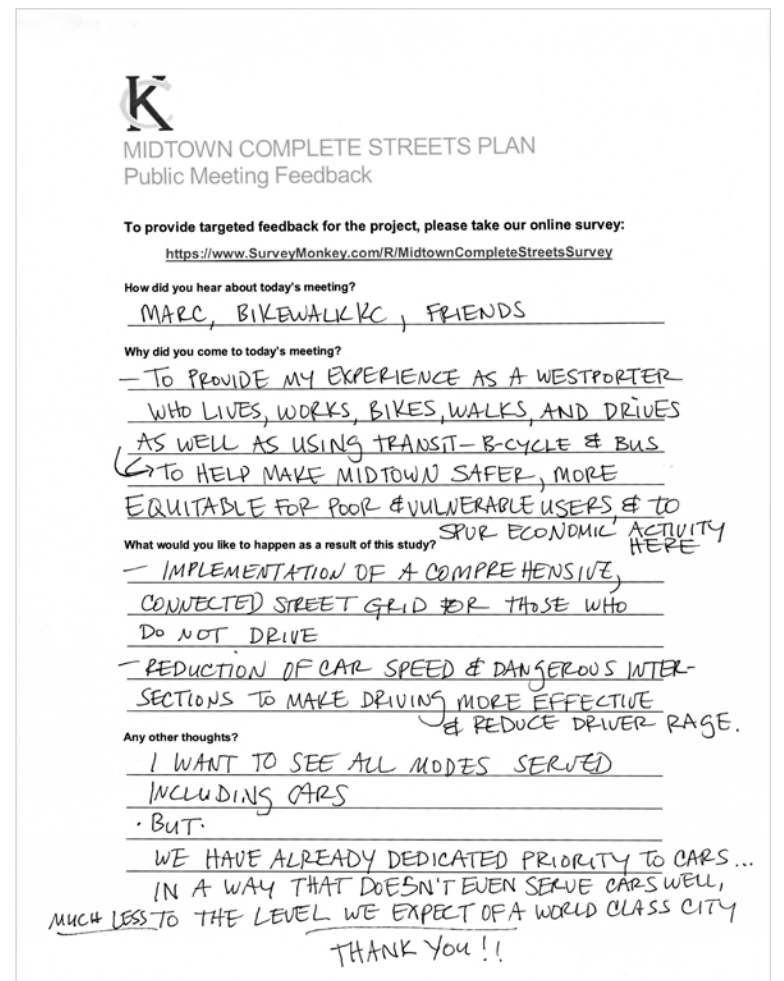
Example of Dot Exercise Map

PUBLIC WORKSHOP #1

The first public workshop for the project was held on April 17, 2018 at the Westport Presbyterian Church. The workshop was attended by 113 people and a large volume of feedback was obtained. At the meeting, the existing conditions of the study corridors was presented in the form of boards on easels. In addition to the boards, a presentation was given to the group covering the same information.

Comment cards were provided for the attendees and maps were provided for feedback. Participants were encouraged to identify areas where they had issues and what their vision was for the future. Between the comment cards and the maps, over 350 individual comments were received and categorized from the attendees. All of the comment cards and maps are included in the Appendix of this plan.

Another engagement strategy at the workshop was a dot exercise to identify issues based on the different modes of transportation. Workshop participants were given four colors of sticky dots corresponding to four modes of transportation—driving, walking, biking, and public transit. They were asked to stick the dots on the maps wherever it was most difficult to utilize that mode of transportation. The results of this exercise were then mapped to create heat maps of problematic hot spots for each mode of transportation. Those maps are displayed on the next page.



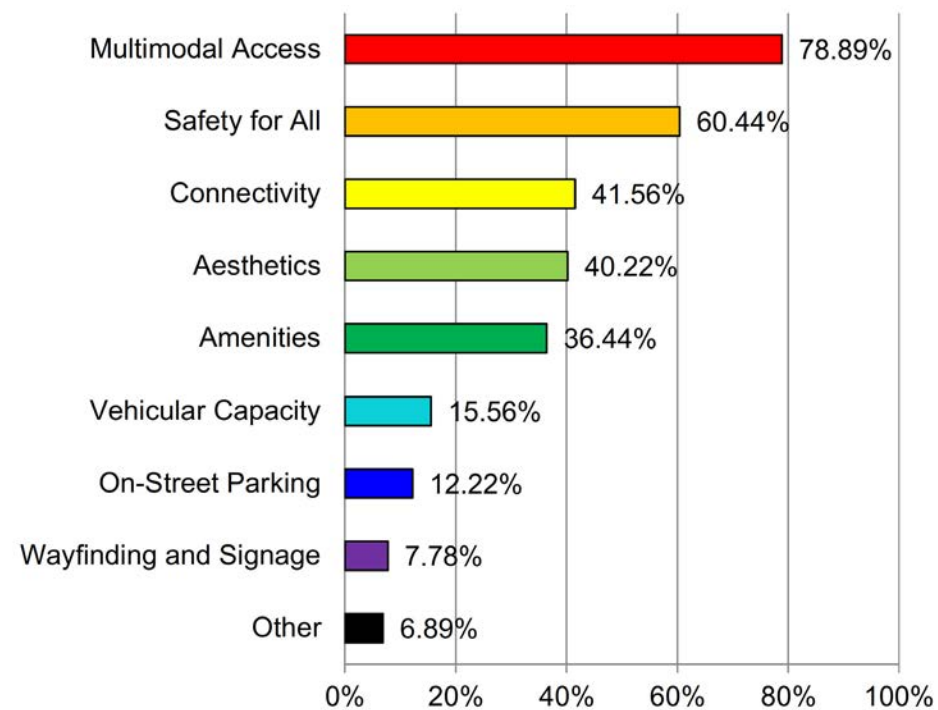
Sample Comment Card

SUMMARY RESULTS OVERVIEW

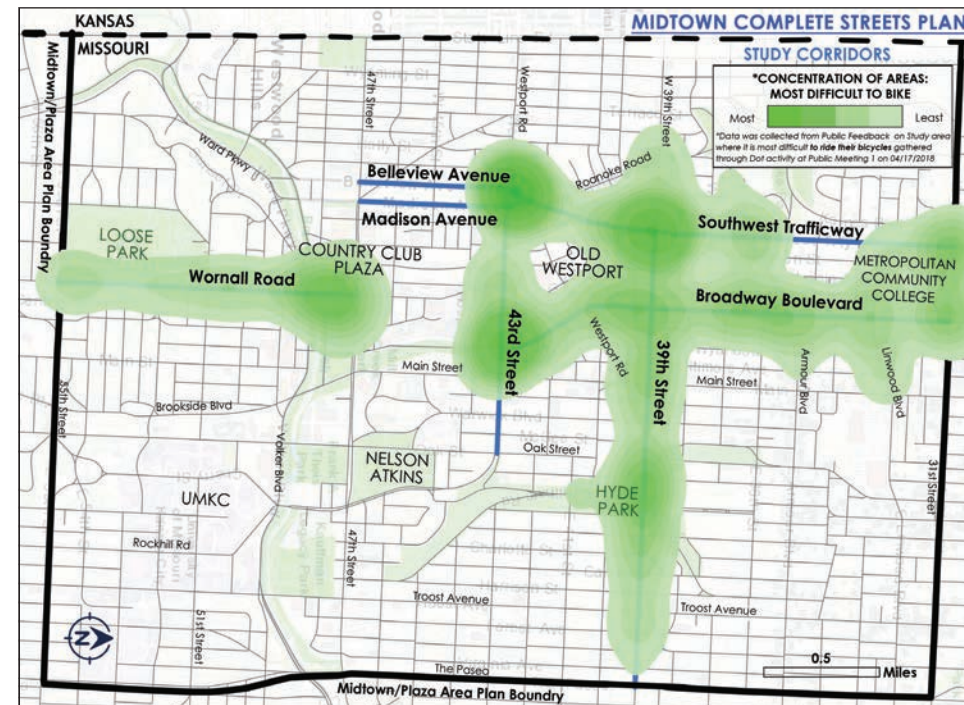
An online survey was given to capture feedback from those who weren't able to attend the public workshop. This survey garnered nearly 450 responses. Questions were asked to determine specific needs and desires for the study corridors for each mode of transportation from the community. Through this engagement, over 2,600 individual comments were received. The full survey results are included in the Appendix of this plan.

The priorities of the public were determined from this engagement. These public gave input on which characteristic of the roadways had the highest priority (e.g., safety, aesthetics, access), and which locations had the highest priority for improvement. The graphs below show some of the highlights from this engagement.

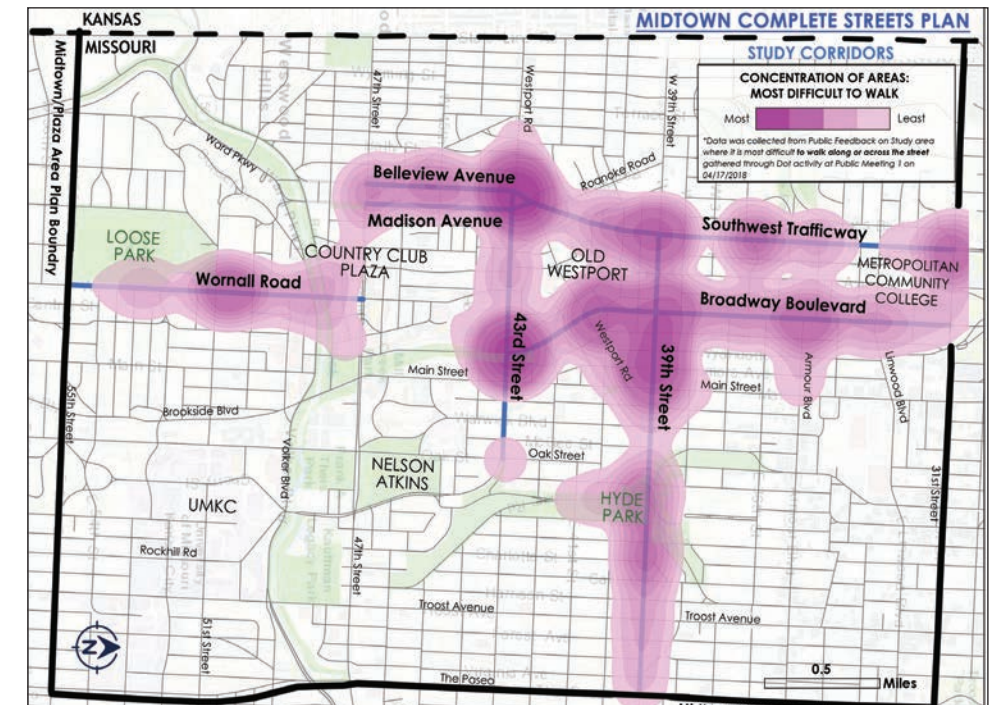
Respondents were asked to identify which of the following they believe are the top three things to consider during the study of the selected Midtown Corridors. The chart below shows the top priorities identified by the survey respondents.



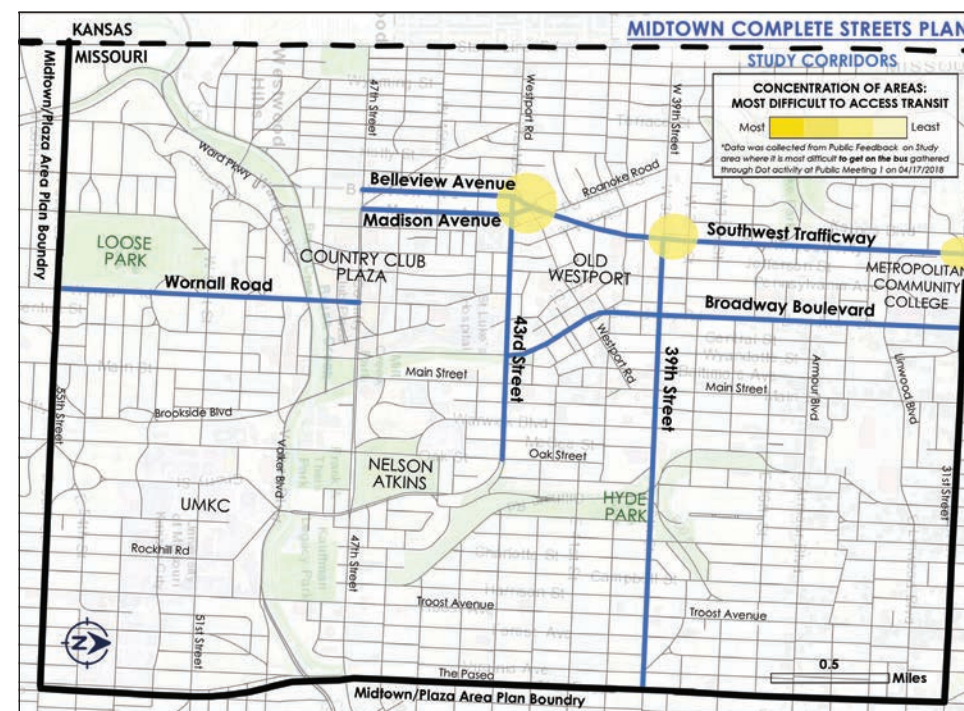
DOT EXERCISE MAP OF CHALLENGING SPOTS BY TRANSPORTATION NODE



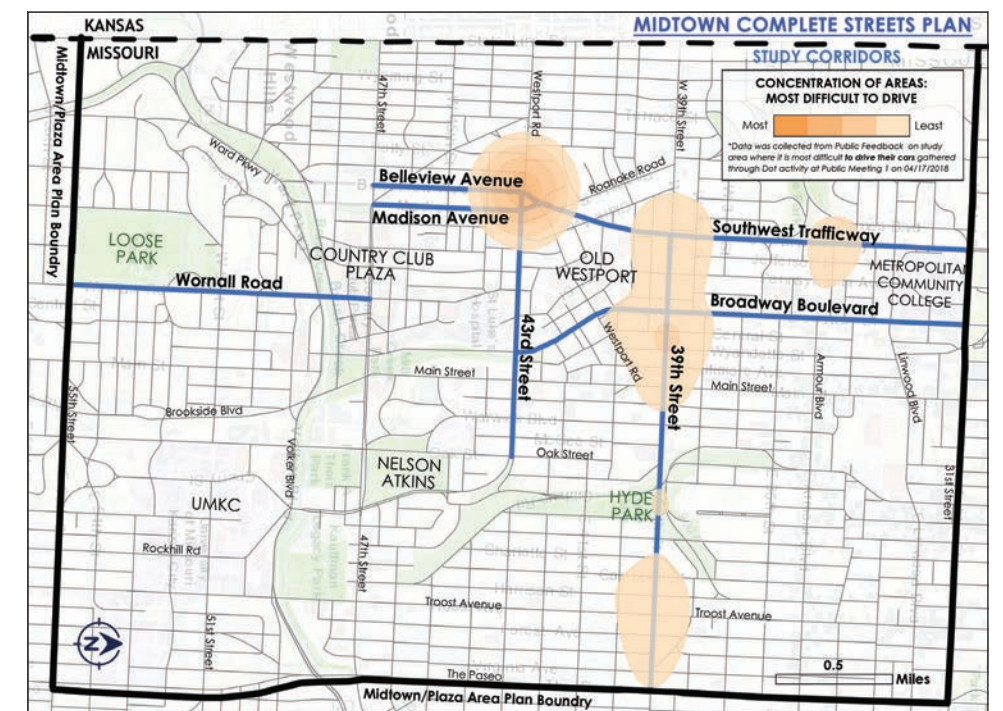
Map of Biking User Activity Concentration



Map of Pedestrian User Activity Concentration



Map of Transit User Activity Concentration



Map of Vehicle User Activity Concentration



Public Meeting Photograph

PUBLIC WORKSHOP #2

The second public workshop was held on August 21, 2018 at St. Paul's Episcopal Church. Over 105 people attended the workshop. Of those that attended, 27 had also attended the first public workshop, and 78 were new attendees from the public. At this meeting, the existing conditions boards from the first public workshop were displayed once again for those members of the public who hadn't seen them, and an overview presentation was given.

After working closely with the advisory committee, several preferred alternates had been developed for the five study corridors. These alternatives were presented to the public at this workshop. Because of the extensive work vetting many options, some of the corridors had already been narrowed down to one preferred alternate (39th Street, 43rd Street, and Southwest Trafficway). Two of the corridors, Broadway Boulevard and Wornall Road, had multiple preferred alternates.

For each of the preferred alternates, a matrix was created showing the impacts of the improvement alternates. Six primary metrics were used to describe these corridors. These metrics included:

- Quality of Walking
- Quality of Biking
- Quality of Transit Access
- Cost of Improvements
- Travel Time Increase or Decrease for Motorists
- Safety Implications (number of crashes & cost saved by society)

OPTIONS	IMPROVEMENT DESCRIPTION (PLEASE VOTE FOR YOUR FAVORITE ABOVE)	TRAVEL MODE			COST	DRIVING TRAVEL TIME INCREASE		CRASH REDUCTION		
		WALKING	BIKING	TRANSIT		NB/EB	SB/WB	SERIOUS INJURY (CRASHES) REDUCED FOR 20 YEARS	MINOR INJURY (CRASHES) REDUCED FOR 20 YEARS	CRASHCOST SAVINGS (FOR 20 YEARS)
NO CHANGE	NO CHANGE TO THE ROADWAY	🚶🚶🚶	🚲🚲	🚌🚌	\$\$\$	-	-	-	-	\$0
OPTION 1	Reduce driving lanes from 5 to 3, maintain parking, add a protected bike lane, add and improve pedestrian crossings, and update traffic signal operations	🚶🚶🚶	🚲🚲	🚌🚌	\$\$\$	+1MINUTE 7 SECONDS	-14 SECONDS	24	411	\$62.3 M
OPTION 2	Reduce driving lanes from 5 to 3, maintain parking, expand sidewalk landscaping/amenity zone, add and improve pedestrian crossings, and update traffic signal operations	🚶🚶🚶	🚲🚲	🚌🚌	\$\$\$	+1MINUTE 7 SECONDS	-14 SECONDS	6	178	\$30.1 M
OPTION 3	Reduce driving lanes from 5 to 3, maintain parking, add a separated bicycle path, expand sidewalk landscaping/amenity zone, add and improve pedestrian crossings, and update traffic signal operations	🚶🚶🚶	🚲🚲	🚌🚌	\$\$\$	+1MINUTE 7 SECONDS	-14 SECONDS	24	411	\$62.3 M

Broadway Boulevard Sample Voting Board

SUMMARY OF VOTING EXERCISE

The public was asked to rank which of the preferred alternates was most appropriate for the individual corridors. Additionally, the public was given the option to indicate that no change to the roadway was the best path forward. Meeting attendees were given five sticky dots to vote once on each of the five corridors.

In addition to the public workshop, a second online survey was created to give members of the public a chance to weigh in on the preferred alternates if they weren't able to attend the meeting. Over 1,200 people responded to this survey. The dot exercise at the workshop matched the trends of the online survey almost identically, which gave confidence that the two engagement strategies had similar levels of understanding and engagement by the public.

In addition to the question on which alternate was preferred by the online survey respondent, two additional questions were asked of each corridor. These questions were designed to determine whether the public felt the trade-offs of travel time for motorists and investment of tax dollars was an acceptable tradeoff for the benefits gained by the preferred alternates. The following five pages of this plan detail the alternates presented at the public workshop and online, and what the results of the public engagement were for these alternates. Full results from the sticky dot exercise and the online survey are included in the Appendix of this plan.

Wornall Road Voting Board

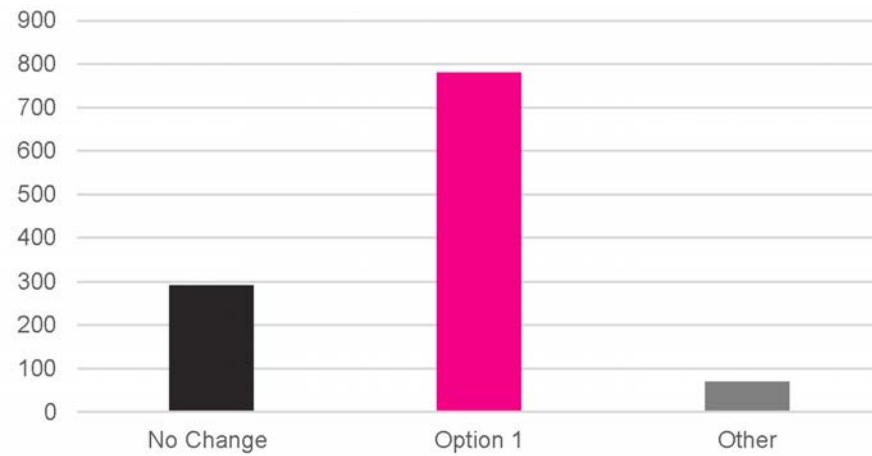
Southwest Trafficway Voting Board

43rd Street Voting Board

39th Street Voting Board

39TH STREET FEEDBACK

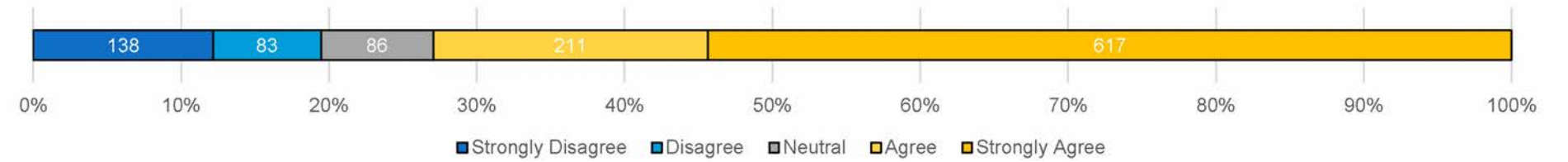
64% OF PARTICIPANTS PREFERRED OPTION 1



ONLINE SURVEY RESULTS

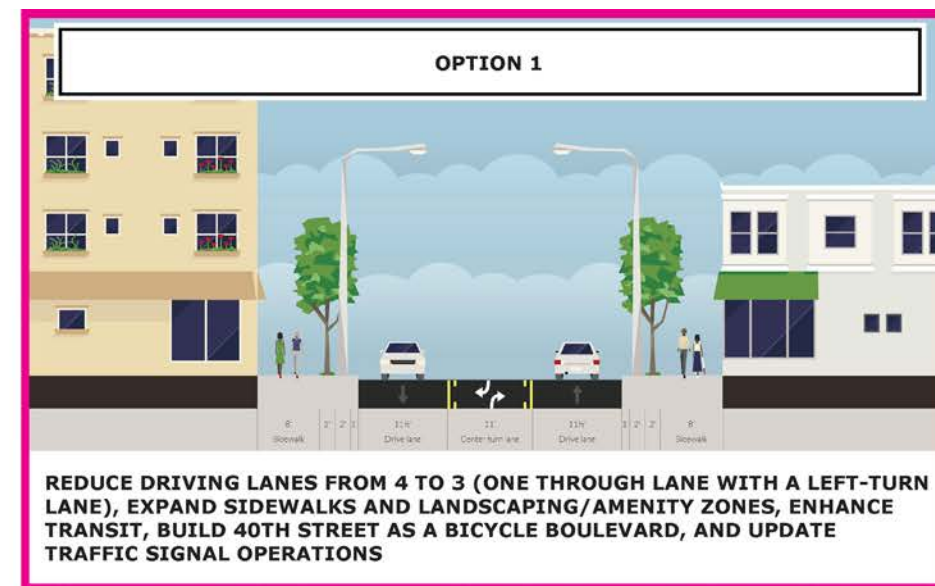
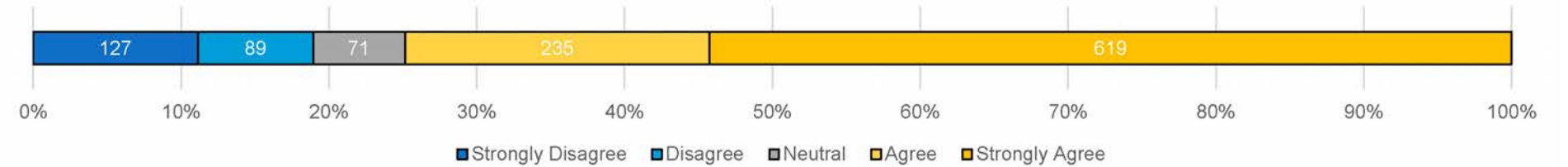
Do you agree or disagree with this statement: "Spending an additional 1 minute and 20 seconds in traffic driving on 39th Street from Southwest Trafficway to the Paseo is an acceptable trade-off if the street can be made safer and have better amenities for pedestrians and public transit riders."

72% AGREE OR STRONGLY AGREE



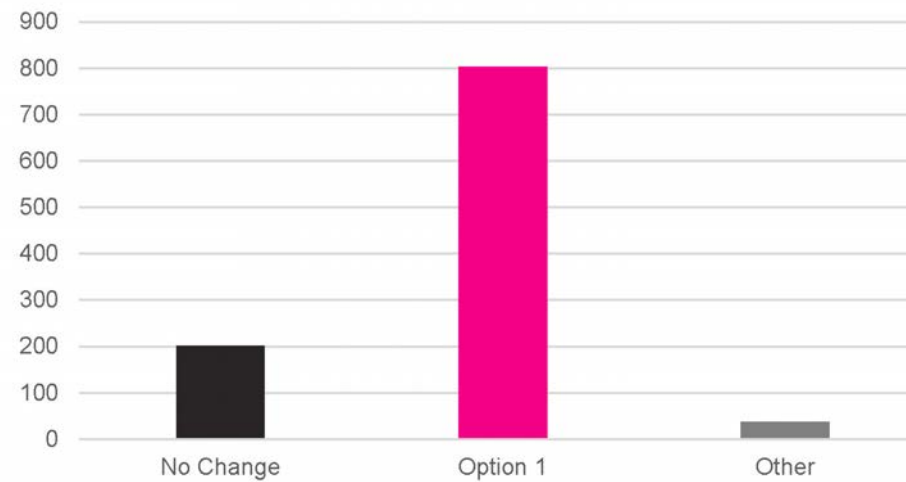
Do you agree or disagree with this statement: "Spending city money to make 39th Street safer and have better amenities for pedestrians, cyclists, and public transit riders is a good investment of my tax dollars."

74% AGREE OR STRONGLY AGREE



43RD STREET FEEDBACK

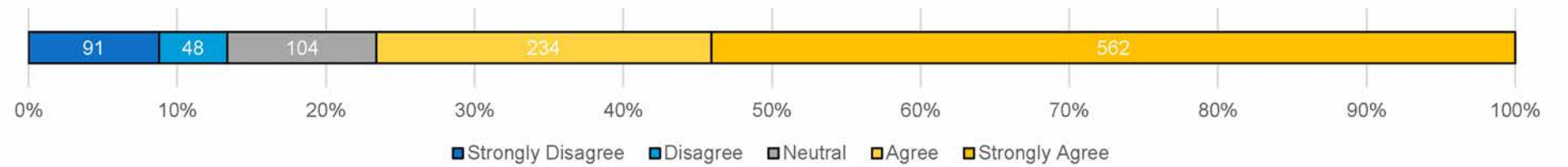
77% OF PARTICIPANTS PREFERRED OPTION 1



ONLINE SURVEY RESULTS

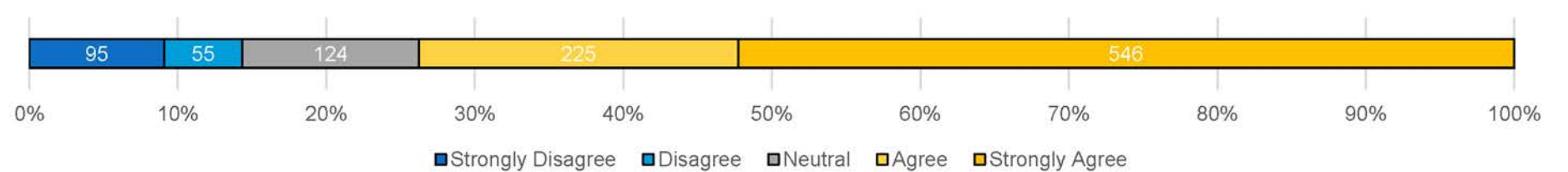
Do you agree or disagree with this statement: "Spending an additional 23 seconds in traffic driving on **43rd Street** from Southwest Trafficway to Oak Street is an acceptable trade-off if the street can be made safer and have better amenities for pedestrians."

75% AGREE OR STRONGLY AGREE



Do you agree or disagree with this statement: "Spending city money to make **43rd Street** safer and have better amenities for pedestrians, cyclists, and public transit riders is a good investment of my tax dollars."

73% AGREE OR STRONGLY AGREE

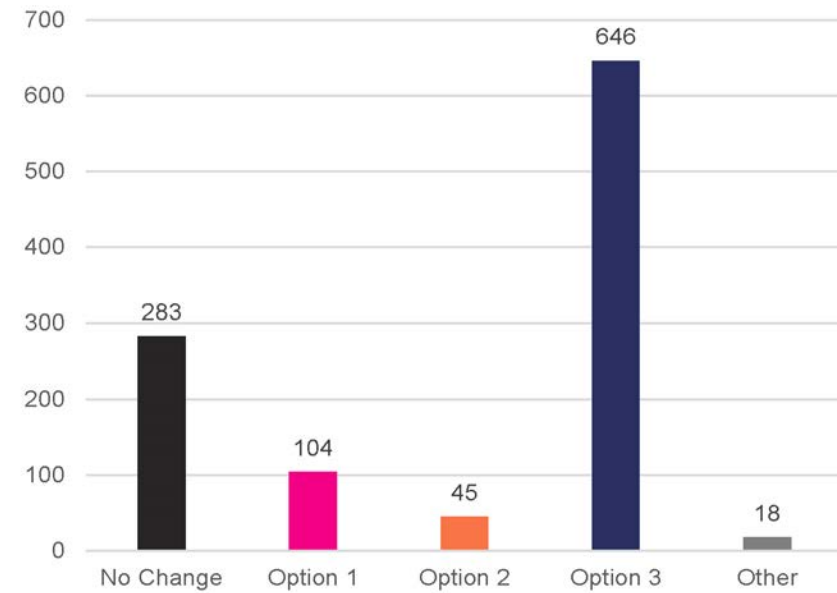


NO CHANGE TO THE ROADWAY

**OPTION 1
MAINTAIN EXISTING ROAD CONFIGURATION, ENHANCE PEDESTRIAN CROSSINGS AND UPDATE TRAFFIC SIGNAL OPERATIONS**

BROADWAY BOULEVARD FEEDBACK

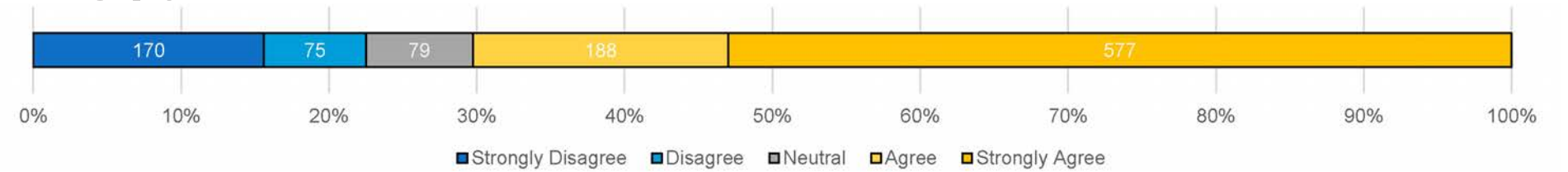
59% OF PARTICIPANTS PREFERRED OPTION 3



ONLINE SURVEY RESULTS

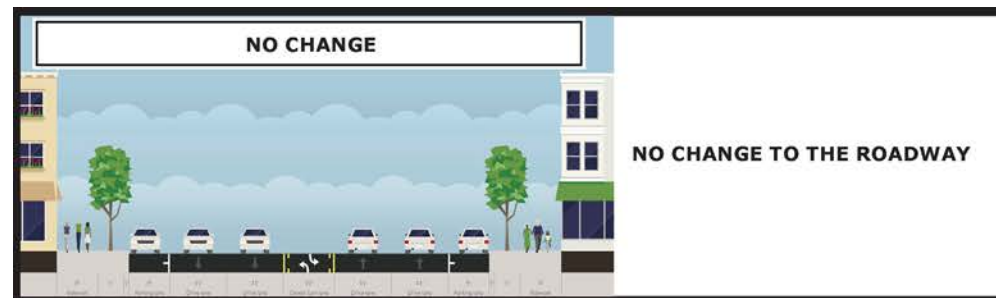
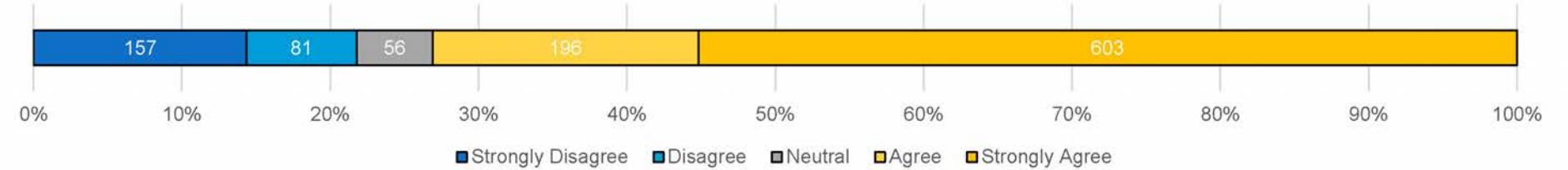
Do you agree or disagree with this statement: "Spending an additional 1 minute and 7 seconds in traffic driving on **Broadway Boulevard** from 43rd Street to 31st Street is an acceptable trade-off if the street can be made safer and have better amenities for pedestrians and public transit riders."

70% AGREE OR STRONGLY AGREE



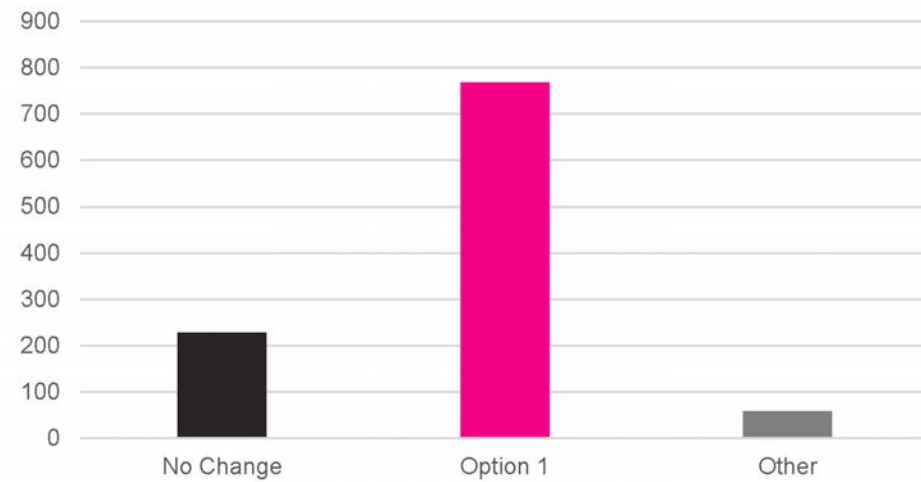
Do you agree or disagree with this statement: "Spending city money to make **Broadway Boulevard** safer and have better amenities for pedestrians, cyclists, and public transit riders is a good investment of my tax dollars."

73% AGREE OR STRONGLY AGREE



SOUTHWEST TRAFFICWAY FEEDBACK

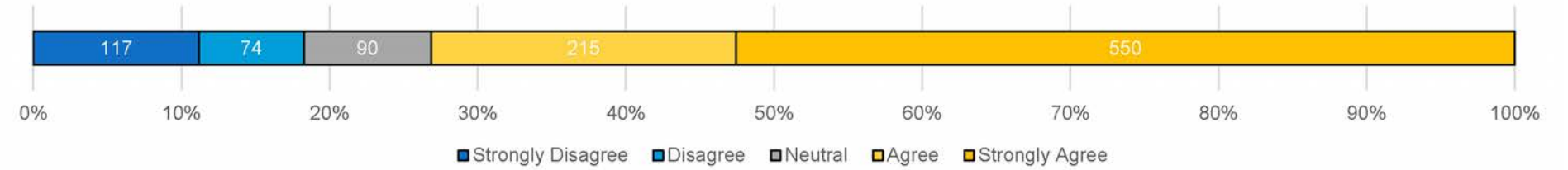
77% OF PARTICIPANTS PREFERRED OPTION 1



ONLINE SURVEY RESULTS

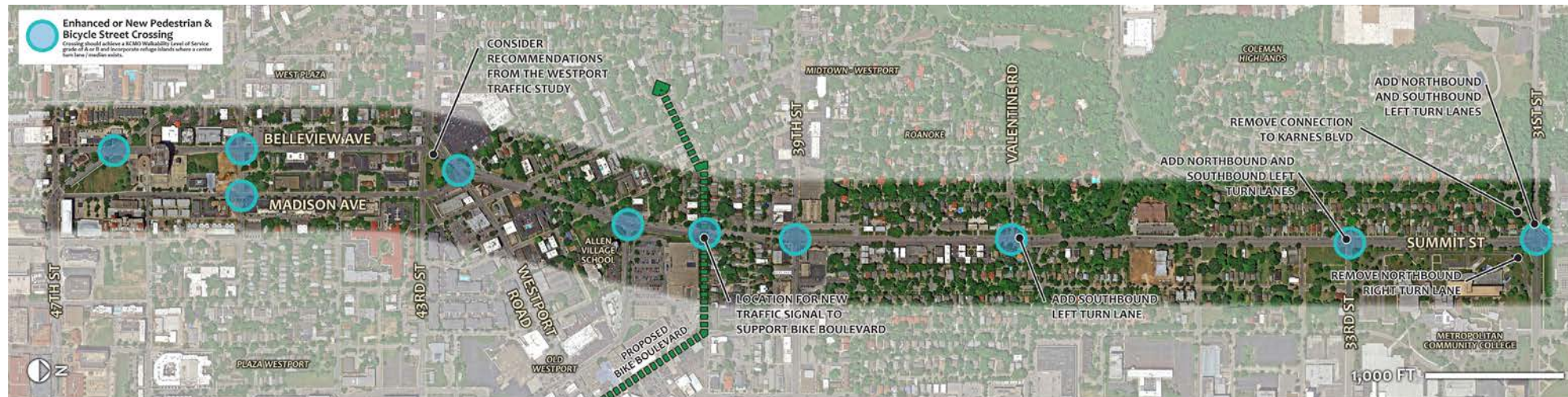
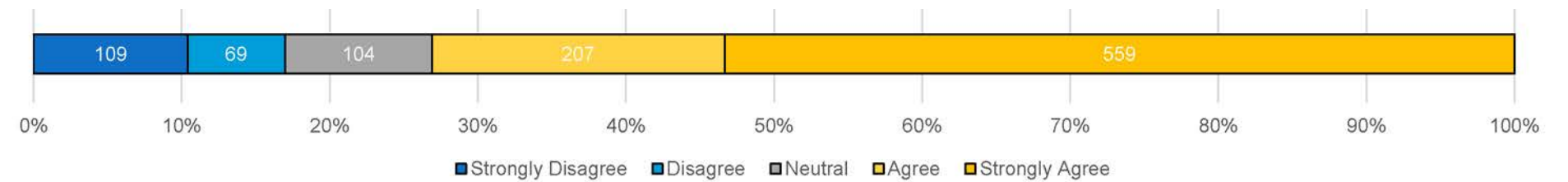
Do you agree or disagree with this statement: "Spending an additional 49 seconds in traffic driving on **Southwest Trafficway** from 47th Street to 31st Street is an acceptable trade-off if the street can be made safer and have better amenities for pedestrians."

73% AGREE OR STRONGLY AGREE



Do you agree or disagree with this statement: "Spending city money to make **Southwest Trafficway** safer and have better amenities for pedestrians, cyclists, and public transit riders is a good investment of my tax dollars."

73% AGREE OR STRONGLY AGREE

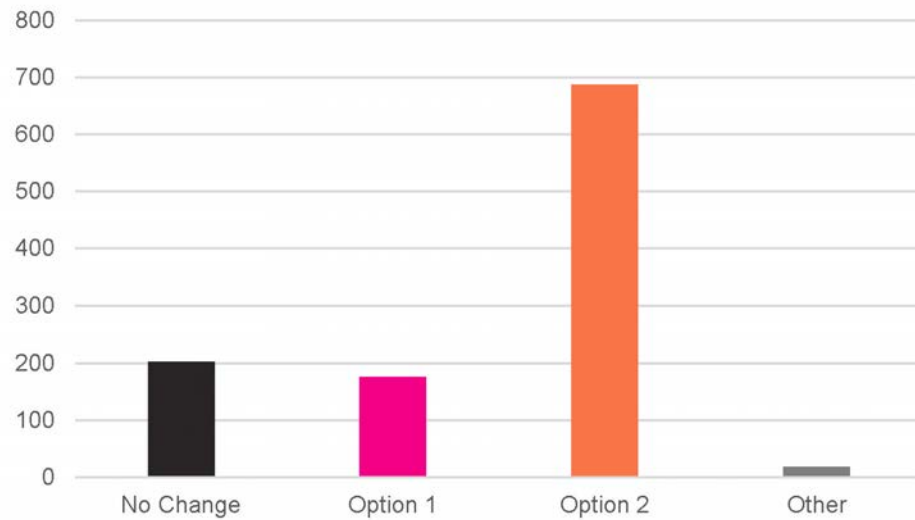


NO CHANGE TO ROADWAY

OPTION 1
 MAINTAIN EXISTING ROAD CONFIGURATION, ADD LEFT TURN LANES AT 31ST, 33RD, & VALENTINE, ENHANCE PEDESTRIAN CROSSINGS, UPDATE TRAFFIC SIGNAL OPERATIONS, ADD TRAFFIC SIGNAL AT 40TH STREET

WORNALL ROAD FEEDBACK

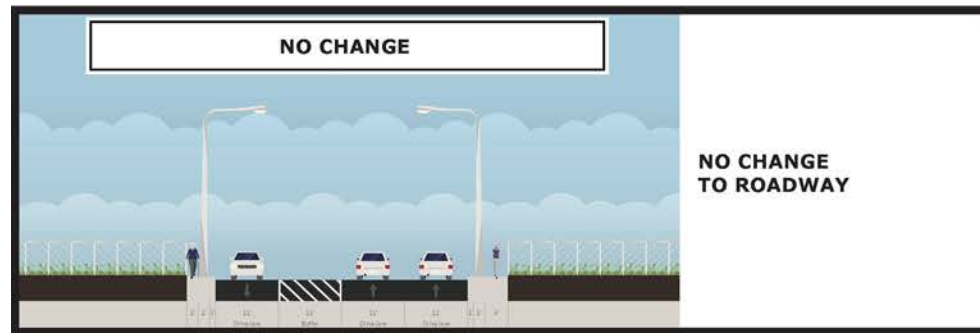
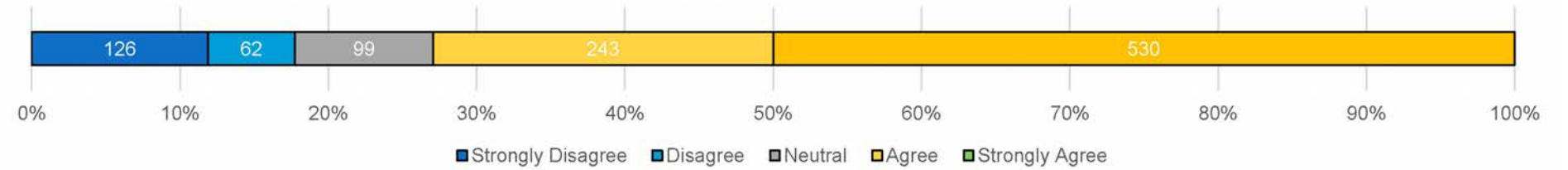
64% OF PARTICIPANTS PREFERRED OPTION 2



ONLINE SURVEY RESULTS

Do you agree or disagree with this statement: "Spending city money to make **Wornall Road** safer and have better amenities for pedestrians, cyclists, and public transit riders is a good investment of my tax dollars."

72% AGREE OR STRONGLY AGREE



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4 PROJECT VISION & GOALS



VISION & GOALS

A vision statement and set of goals was developed for this plan to guide the analysis and recommendation. It should also serve to guide decision making processes on these streets through the implementation of the project and in future planning projects along the corridors.

These statements were developed through engagement of the advisory committee and vetted by the public. The word cloud above was created through the visioning exercise as detailed in the Community Outreach and Engagement section of this plan. The word cloud above represents the words that the advisory committee used in this exercise to describe how they would like to describe these corridors in the future.

With the first online survey, 93% of the respondents said they agreed with the vision for the project.

VISION STATEMENT

“Midtown streets will enhance the area’s vibrant and diverse neighborhoods and districts by safely, equitably, and efficiently connecting all residents, businesses, and visitors through a welcoming, attractive, and unique public realm.”

GOALS

- **Enhance Midtown as a vibrant, established community → Get people from place to place within Midtown safely and conveniently.**
- **Enhance Midtown as a regional destination → Get people to and through Midtown safely and efficiently.**
- **Enhance Midtown streets as the public realm → Improve the experience and character of Midtown for residents, businesses, and visitors.**
- **Create context-sensitive designs for each street section to match the character of the neighborhood it is in.**

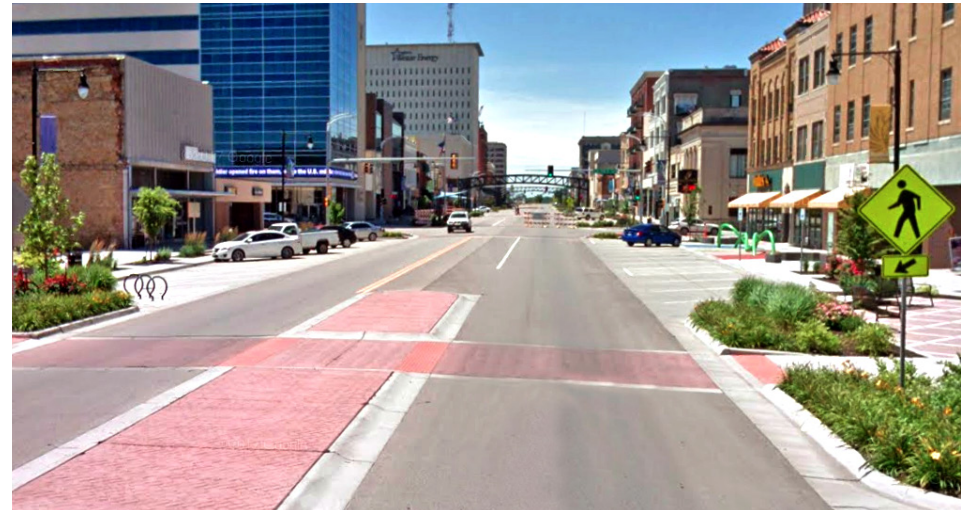
5

RECOMMENDED IMPROVEMENTS





Sample of Enhanced Intersection (Source Image: Google Earth)



Sample of Enhanced Pedestrian Crossing (Source Image: Google Earth)

UNIVERSAL RECOMMENDATIONS

Through the outreach to the public, several priorities became clear. The highest priority among all the stakeholders was safety for all users—especially safety for pedestrians and bicyclists. The next highest priorities were access for pedestrians, cyclists, and transit user, and a connected network for these users. Business owners and the public were also concerned with providing a high quality public space along the streets by providing amenity zones and high quality landscaping and hardscaping.

Because of these priorities, several universal recommendations have been made for these corridors, independent of the individual recommendations for each corridor. These recommendations should be applied across the board on these corridors and are also generally best practices throughout Kansas City at areas where high multimodal traffic volumes exist.

ENHANCED PEDESTRIAN CROSSINGS

Creating a pedestrian crossing by simply painting two lines on a street does not provide a high quality or safe pedestrian crossing. Providing enhanced pedestrian crossing, on the other hand, has been shown in the Highway Safety Manual to reduce pedestrian crashes by up to 69% and car crashes by up to 29% at pedestrian crossings. The enhanced crosswalks also increase the rate with which drivers will yield to pedestrians, making for a more efficient, pleasant, and safe pedestrian crossing.

Enhanced pedestrian crossings consist of a minimum of traffic signing and bold pavement marking plus a pedestrian refuge island, curb bump-outs, and/or a lighted flashing beacon. The safest pedestrian crossings occur where the pedestrian must cross only one lane of traffic at a time.

TRAFFIC SIGNAL COORDINATION & OPTIMIZATION

By providing communications between the traffic signals, and upgrading the traffic signal equipment, the signals can be more effectively optimized and coordinated. Effectively coordinated and optimized traffic signals can increase the capacity at an intersection and reduce the vehicle delay.

TRAFFIC SIGNAL UPGRADES FOR SAFETY AND MULTI-MODAL ACCESS

Along with traffic signal coordination and optimization, many parameters and pieces of equipment can be upgraded or modified to provide safer and more convenient access for non-motorized users at intersections. These include:

Leading Pedestrian Intervals

With this strategy, the pedestrian “walk” sign is activated a few seconds before the green light for vehicles. This gives pedestrians a few seconds to enter the intersection and be more visible to drivers turning right and left. The HSM indicates this can reduce pedestrian crashes by 58%.

Longer Cycle Lengths

Longer cycle lengths allow the traffic signal to provide adequate “walk” time for pedestrians to cross an intersection. This has been shown in the HSM to reduce pedestrian crashes by 50% and vehicle crashes by 45%.

Emergency Responder Preempts

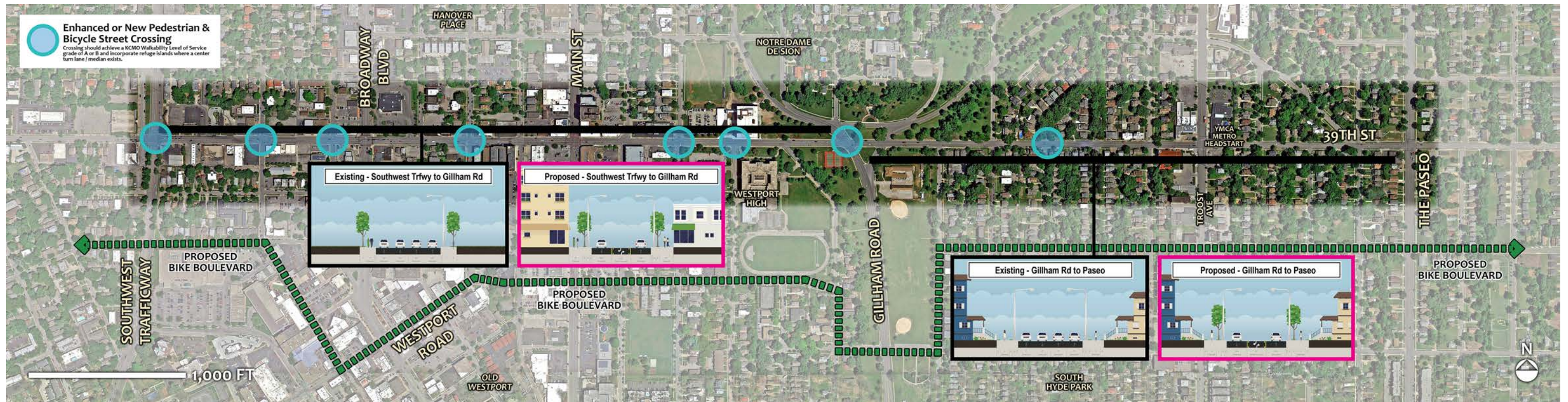
With upgraded equipment, traffic signals can be made to turn all indications red to stop all vehicles at an intersection except in the direction of travel of an emergency response vehicle. This can make it safer for emergency responders and decrease response times.

Minimum Green and Yellow Times for Cyclists

Bicyclists require more time to cross an intersection. Signals are typically timed with minimum times appropriate for cars, so cyclists are often still midway through an intersection when the light turns red. Lengthening the minimum green and yellow times can allow enough time for cyclists to clear an intersection and reduce the chance of being hit by a car.

Detection for Bikes and Pedestrians

By providing appropriate detection for cyclists and pedestrians at all intersections, the incidents of red light running by cyclists and pedestrians can be greatly reduced. Often cyclists or pedestrians cross intersections on a red light because the light never turns green for them due to a lack of detection.



Map of Proposed Improvements

39TH STREET IMPROVEMENTS

The improvements on 39th Street focus on safety and access for drivers, pedestrians, and transit users. With the limited right of way for 39th Street, it was not possible to effectively accommodate all modes of transportation. As a result, the highest priority modes of transit, walking, and driving were prioritized over cycling, and an alternate route was provided for cyclists.

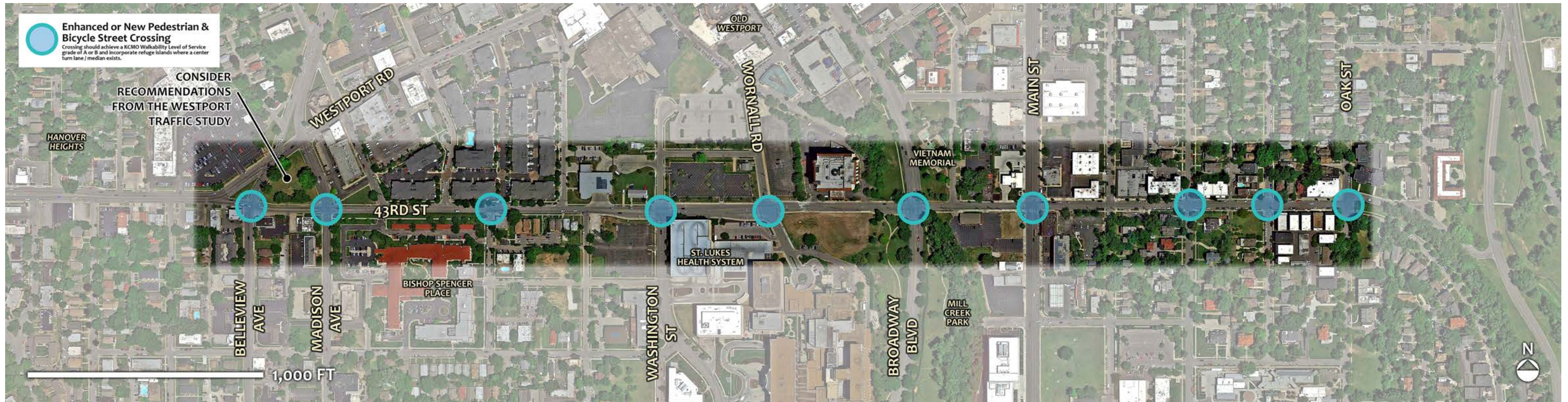
The proposed layout will create a much safer driving environment and provide left-turn possibilities with a new continuous left-turn lane. The space reclaimed by eliminating one lane of traffic will give space for a wider sidewalk, and a landscaped area separating the sidewalk and cars. This expanded pedestrian area will also provide enough space to construct high quality transit amenities like bus shelters, benches, trash cans, and other amenities.

Because cyclists could not be accommodated on 39th Street, an alternate bicycle boulevard path is proposed generally following 40th Street. The bicycle boulevard path provides a low-stress route for cyclists through the area and eases that travel through wayfinding signage, traffic calming, and enhanced crossings on major streets. A new traffic signal is proposed on Southwest Trafficway to aid in crossing that major thoroughfare.



OPTIONS	IMPROVEMENT DESCRIPTION	TRAVEL MODE			COST	TRAVEL TIME IMPACT		CRASH REDUCTION		
		WALKING	BIKING	TRANSIT		Eastbound	Westbound	SERIOUS INJURY (CRASHED REDUCED FOR 20 YEARS)	MINOR INJURY (CRASHED REDUCED FOR 20 YEARS)	CRASHCOST SAVINGS (FOR 20 YEARS)
EXISTING	NO CHANGE TO THE ROADWAY	👤👤👤	🚲🚲🚲	🚌🚌🚌	\$\$\$	-	-	-	-	\$0
PROPOSED	Reduce driving lanes from 4 to 3 (one through lane with a left-turn lane), expand sidewalks and landscaping/amenity zones, enhance transit, build 40th Street as a bicycle boulevard, and update traffic signal operations	👤👤👤	🚲🚲🚲	🚌🚌🚌	\$\$\$	-0 MINUTES 49 SECONDS	-0 MINUTES 7 SECONDS	30	377	\$50.1 M

Improvement Impact Matrix



Map of Proposed Improvements

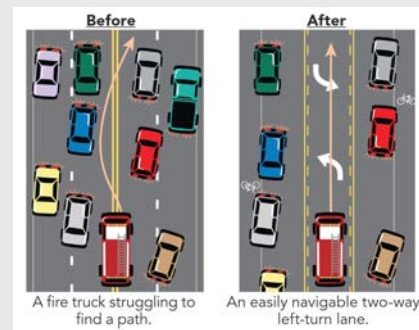
43RD STREET IMPROVEMENTS

43rd Street improvements focused on pedestrian safety and access. Because of the current configuration of the street (mostly 2-lanes and 3-lanes throughout), no change is proposed to the road cross section. Also, because of the presence of St. Luke's Hospital and Kansas City Fire Department Station 19 on 43rd Street, there was a need to maintain vehicle capacity to ensure emergency vehicle access.

However, 43rd Street is a major pedestrian street, especially for pedestrians crossing the street and walking between the Country Club Plaza and St. Luke's Hospital area and the Westport Area. Because of this, a focus was placed on enhancing the pedestrian crossings along the street. Enhanced pedestrian crossings are noted at most intersections and one mid-block location along the street.

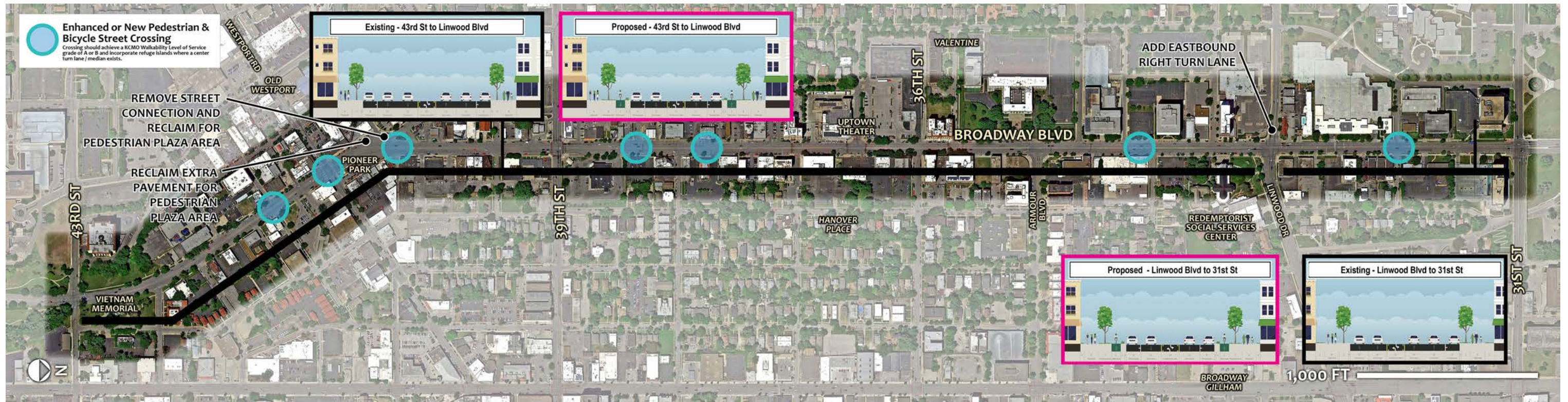
OPTIONS	IMPROVEMENT DESCRIPTION	TRAVEL MODE			COST	TRAVEL TIME IMPACT		CRASH REDUCTION		
		WALKING	BIKING	TRANSIT		Eastbound	Westbound	SERIOUS INJURY (CRASHED REDUCED FOR 20 YEARS)	MINOR INJURY (CRASHED REDUCED FOR 20 YEARS)	CRASHCOST SAVINGS (FOR 20 YEARS)
EXISTING	NO CHANGE TO THE ROADWAY				\$\$\$	-	-	-	-	\$0
PROPOSED	Maintain existing road configuration, enhance pedestrian crossings and update traffic signal operations				\$\$\$	-0 MINUTES 1 SECONDS	+0 MINUTES 25 SECONDS	5	60	\$7.9 M

Improvement Impact Matrix



EMERGENCY RESPONDER NEEDS

With the proposed street changes with this plan, concerns have been raised regarding emergency response times in the Midtown area. If this plan were implemented, overall emergency response time in the Midtown area may actually be improved. With the current configuration on 39th Street, the driving environment can be chaotic and dangerous for emergency responders when drivers in the left lane (inner lane) are uncertain where they should move to. The addition of a continuous left turn lane on 39th Street will give emergency responders a more predictable environment, with a clear path down the left-turn lane and drivers stopped on the right edge of the road. The continuous left turn lane on Broadway will remain and provide a similar benefit. Additionally, emergency vehicle preempts are proposed as one of the "Universal Recommendations," which will further enhance the safety and reduce the travel time of emergency responders. The drastic reduction in car crashes in the area as a result of the improvements would greatly limit the number of emergency responses in the area as well.



Map of Proposed Improvements

BROADWAY BOULEVARD IMPROVEMENTS

Based on feedback from the public, the primary focus on Broadway Boulevard in this plan is on safety and access for pedestrians, cyclists, and drivers. Two other important considerations were on maintaining on-street parking and further enhancing the public space with landscaping, streetscaping, and pedestrian amenities. The proposed layout will significantly improve the environment for pedestrians. With the reduction in vehicle lanes from five to three, the crossing distance across Broadway is significantly reduced and pedestrian crossing safety improved. The additional space reclaimed from the drive lane reduction will open up more space for landscaping and an expanded amenity zone.

In addition to enhancing the space for pedestrians, cyclists will be accommodated with a high quality separated bicycle lane. This bicycle lane will be at the same elevation as the sidewalk, behind the curb and separated from traffic. With the preliminary concept layout, there is a net loss of only 1 parking stall along the length of the study corridor. A net positive 15 parking stalls are created south of 39th Street, and a net loss of 16 parking stalls is generated north of 39th Street.



OPTIONS	IMPROVEMENT DESCRIPTION	TRAVEL MODE			COST	TRAVEL TIME IMPACT		CRASH REDUCTION		
		WALKING	BIKING	TRANSIT		Northbound	Southbound	SERIOUS INJURY (CRASHED REDUCED FOR 20 YEARS)	MINOR INJURY (CRASHED REDUCED FOR 20 YEARS)	CRASHCOST SAVINGS (FOR 20 YEARS)
EXISTING	NO CHANGE TO THE ROADWAY	🚶🚶🚶	🚲🚲🚲	🚌🚌🚌	\$\$\$	-	-	-	-	\$0
PROPOSED	Reduce driving lanes from 5 to 3, maintain parking, add a separated bicycle path, expand sidewalk landscaping/amenity zone, add and improve pedestrian crossings, and update traffic signal operations	🚶🚶🚶	🚲🚲🚲	🚌🚌🚌	\$\$\$	-0 MINUTES 45 SECONDS	+1 MINUTES 17 SECONDS	24	411	\$62.3 M

Improvement Impact Matrix



Existing Conditions Aerial Photograph

BROADWAY BOULEVARD & WESTPORT ROAD INTERSECTION IMPROVEMENTS

Based on feedback from the public, the Westport Regional Business League, and the Broadway Area CID members, a major focus was placed on the intersection of Westport Road & Broadway Boulevard and 40th Street & Broadway Boulevard. This area is a major pedestrian activity area at the heart of Westport and the Pioneer's Park is in the middle. It is a hub for businesses in Westport, a key gateway to the area, and an important location to provide on-street parking.

Despite this, the area has an uninviting and dangerous reputation. As noted in the existing conditions section, this area is a crash hot spot for bicycle, pedestrian, and vehicle crashes. Also noted in the existing pedestrian level of service analysis, this stretch of Broadway only has two low-quality pedestrian crossings over a 1/2 mile stretch. The area also has a very poorly utilized curb-side zone with little on-street parking available despite the wide public right-of-way available.

Because of this, special design consideration was given with this plan. The exhibit to the right shows a potential concept for this area. This concept would add 15 parking stalls to the on-street parking supply between 39th Street and 43rd Street. It would also provide high quality, safe pedestrian crossings at Archibald, Westport Road, and 40th Street. The reconfiguration of the roads also provides a large pedestrian plaza area on the west side of Broadway and an expanded area around the Pioneer's Park. These areas could be utilized for special events, sidewalk dining, landscaping, public art, and more.



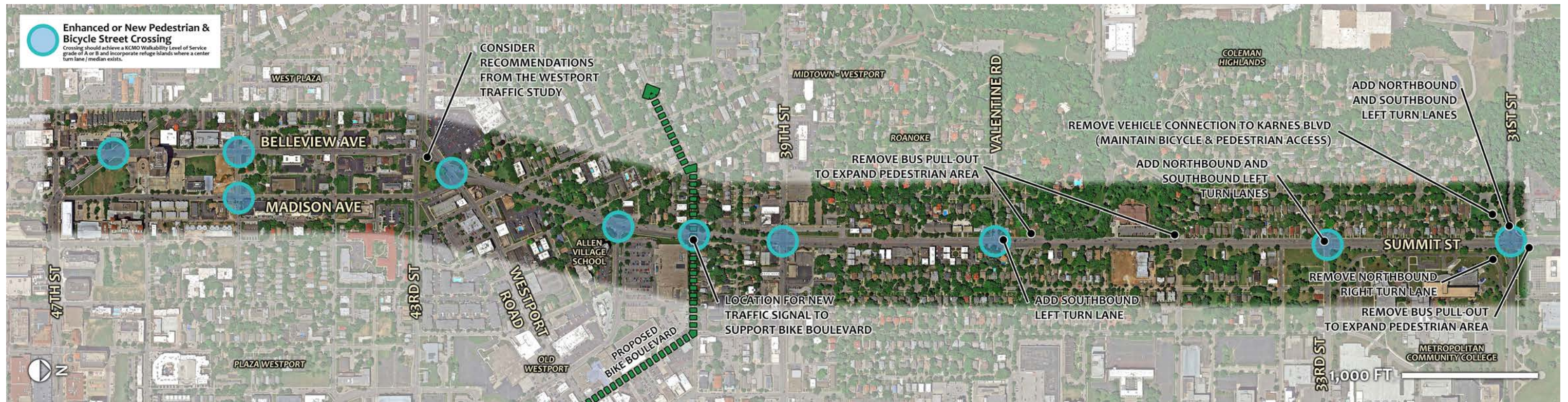
Plan Rendering of Proposed Improvements



Example of a Pedestrian Plaza (from the Pearl District)



Example of a Pedestrian Shared Street



Map of Proposed Improvements

SOUTHWEST TRAFFICWAY IMPROVEMENTS

Southwest Trafficway is a motor vehicle focused roadway and provides a large amount of capacity for driving through Midtown. To avoid pushing traffic onto other streets like Broadway Boulevard and Main Street, the advisory committee and stakeholders desired the vehicle capacity be maintained on Southwest Trafficway. Because of this, the recommendation from this study is to largely leave Southwest Trafficway as it is today. Improvements include adding left-turn opportunities, which was an important element to the neighborhoods in the area. This improvement should also alleviate some traffic congestion on Broadway Boulevard, since many people utilize Broadway Boulevard through Penn Valley Park coming off of I-35 southbound simply because there are no left turns allowed on Southwest Trafficway.

It was also expressed by the public that they did not see Southwest Trafficway as a street that should focus on bicycling and walking. However, the community did express a strong desire to enhance pedestrian and bicycle crossings across Southwest Trafficway, as the street represents a major barrier to active transportation. Recommendations are made to enhance pedestrian crossings of Southwest Trafficway and enhance some of the bus stops. A new traffic signal is also proposed at 40th Street to facilitate crossing of Southwest Trafficway by the proposed bicycle boulevard parallel to 39th Street.

OPTIONS	IMPROVEMENT DESCRIPTION	TRAVEL MODE			COST	TRAVEL TIME IMPACT (Note: travel time increases are primarily due to redistribution of traffic from Broadway to Southwest Trfwy with addition of left turn lanes)		CRASH REDUCTION		
		WALKING	BIKING	TRANSIT		Northbound	Southbound	SERIOUS INJURY (CRASHED REDUCED FOR 20 YEARS)	MINOR INJURY (CRASHED REDUCED FOR 20 YEARS)	CRASH COST SAVINGS (FOR 20 YEARS)
EXISTING	NO CHANGE TO THE ROADWAY				\$\$\$	-	-	-	-	\$0
PROPOSED	Maintain existing road configuration, add left turn lanes at 31st, 33rd, & Valentine, enhance pedestrian crossings, update traffic signal operations, add traffic signal at 40th Street				\$\$\$	+0 MINUTES 36 SECONDS	+0 MINUTES 24 SECONDS	4	142	\$16.9 M

Improvement Impact Matrix

FREIGHT DELIVERIES IN MIDTOWN

Many businesses along Broadway, 39th Street, and other streets in the area heavily rely on freight delivery on a daily basis. Concerns were expressed by the public that lane reductions on Broadway and 39th Street may inhibit freight deliveries. However, freight deliveries are common in areas like Midtown with three-lane streets (two through lanes and a continuous center left-turn lane). Currently, freight is delivered daily to the Country Club Plaza area and the Westport Area by utilizing the center turn lanes for loading and unloading. The addition of the continuous left-turn lane on 39th Street should make freight delivery easier on that street. If this method of freight delivery becomes problematic, other strategies exist to address freight delivery issues. Short term strategies include encouraging business owners and logistic companies to accept off-peak and overnight freight delivery and to provide short term loading zones at the curb side. The loading zones can be permanent dedicated loading zones or time limited loading zones where the space acts as on-street parking at peak parking demand hours and freight loading during off-peak parking demand hours. Long term strategies include requiring loading docks be installed with new construction, and construction of alleyways for freight delivery.

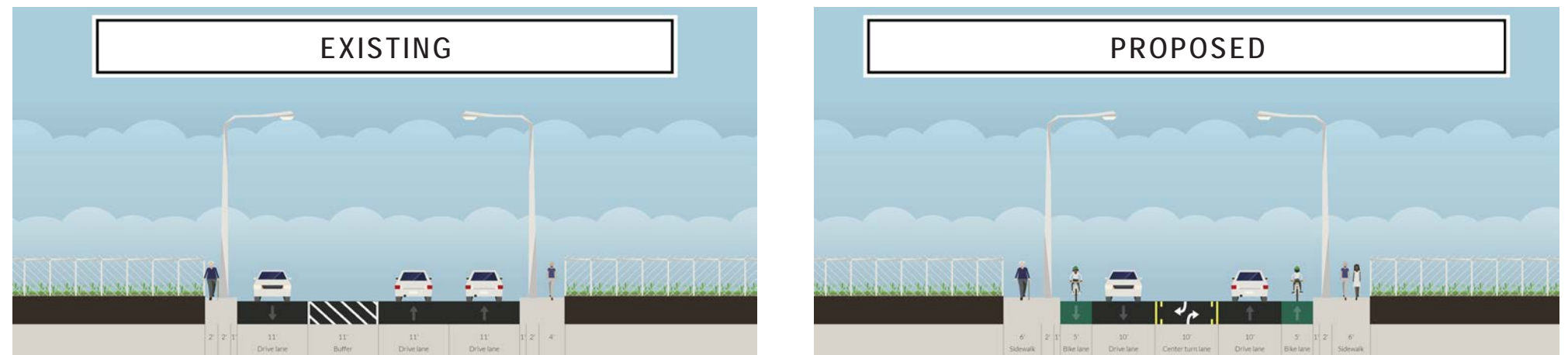


Map of Proposed Improvements

WORNALL ROAD IMPROVEMENTS

Wornall Road already has a reputation as being a great place to walk and bike. It also has very good traffic flow. However, the street has issues in two key areas. The first is the challenging walking and biking environment along the long hill between 49th Street and 51st Street, south of Brush Creek. On this section, no sidewalk exists on the east side of the road, and a very deficient sidewalk exists on the west side of the road. The second issue is that no high quality pedestrian crossings exist between 51st Street and 55th Street.

Recommendations have been made to add wide sidewalks and bicycle lanes on both sides of Wornall Road between Ward Parkway and 55th Street. Because of the limited street area in the section south of 55th Street, no recommendation was made to add bicycle lanes in this area. However, two locations are noted to add high quality, safe pedestrian crossings at 54th Street and 52nd Street. These improvements should turn a good multimodal street into a great multimodal street at a relatively low cost.

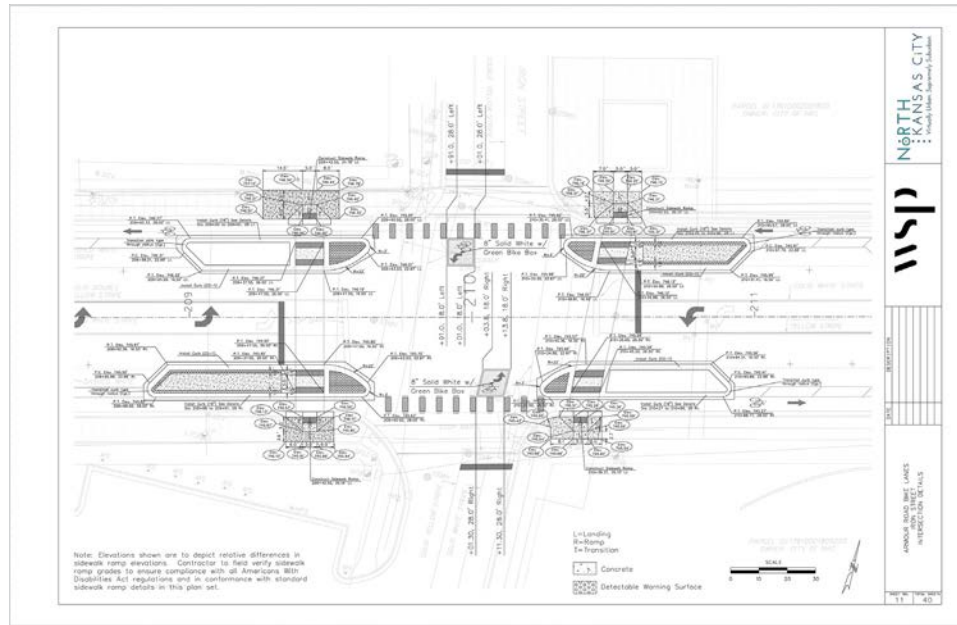


OPTIONS	IMPROVEMENT DESCRIPTION	TRAVEL MODE			COST	TRAVEL TIME IMPACT		CRASH REDUCTION		
		WALKING	BIKING	TRANSIT		Northbound	Southbound	SERIOUS INJURY (CRASHED REDUCED FOR 20 YEARS)	MINOR INJURY (CRASHED REDUCED FOR 20 YEARS)	CRASH COST SAVINGS (FOR 20 YEARS)
EXISTING	NO CHANGE TO THE ROADWAY	3	3	3	\$\$\$	-	-	-	-	\$0
PROPOSED	Reduce driving lanes from 4 to 3 (one through lane with a left-turn lane), add bike lanes, expand sidewalks	6	6	3	\$\$	-0 MINUTES 3 SECONDS	-0 MINUTES 9 SECONDS	6	31	\$5.9 M

Improvement Impact Matrix

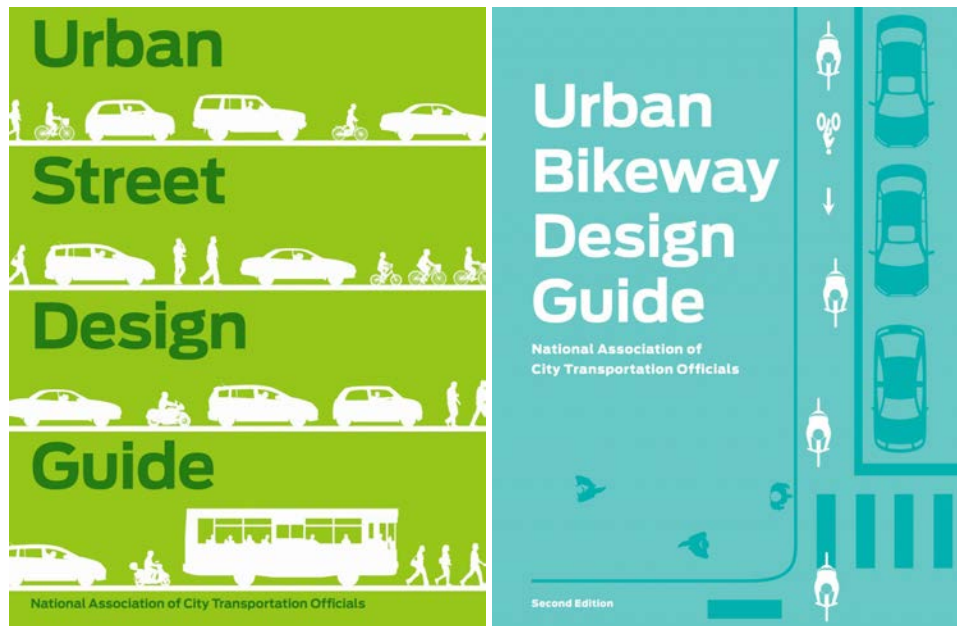


6 PROJECT IMPLEMENTATION PLAN



IMPLEMENTATION PLAN

The intention of this plan is to provide a roadmap to improving safety, multimodal access, and improve the quality of life in the Midtown area. The recommendations in this plan represent conceptual improvements that the public and area stakeholders have determined to be desirable and appropriate for the area. However, much more work remains to be done prior to the final construction of the concepts. This section details the next steps on design refinement, funding, and phasing priorities.



NACTO Design Guides

DESIGN REFINEMENT

This plan represents only the first step towards implementation of these recommendations. General recommendations have been proposed, but much more detailed design work and investigation is needed prior to implementation. This document can serve as a guide for the general specifications of future improvements. However, the public, along with City Staff, want to ensure that when implemented, the designs are built to the highest standards of safety and quality.

Many guides exist for today's practitioners to utilize. Standard engineering documents should be referenced for these projects, as with all street design projects. These include the American Association of State Highway Officials (AASHTO) A Policy on Geometric Design of Highways and Streets (the "Green Book"), the Manual on Uniform Traffic Control Devices (MUTCD), and the Americans with Disabilities Act Proposed Rights-of-Way Guidelines (PROWAG) requirements. Beyond those standard guides, the National Association of City Transportation Officials (NACTO) Urban Street Design Guide and Urban Bikeway Design Guide should be referenced for pedestrian and bicycle infrastructure. For the proposed separated bicycle lane on Broadway, the Massachusetts Department of Transportation (MassDOT) Separated Bike Lane Planning and Design Guide should be referenced. These guides all provide best practices to create the safest and highest quality multimodal streets.



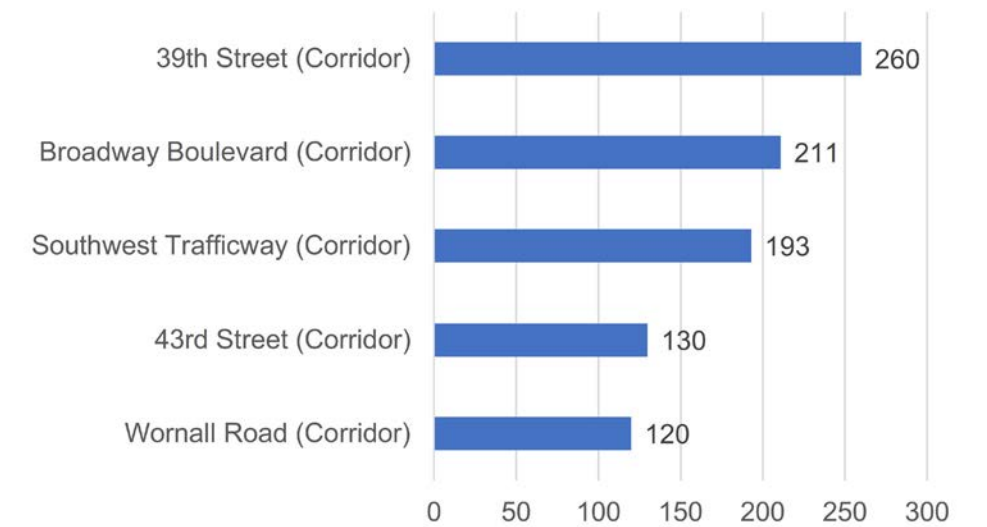
MassDOT Design Guide

PROJECT PHASING

The priorities in Midtown have been identified by the stakeholders through public workshops, the advisory committee, and online surveys. The chart below shows those priorities as noted in the first public workshop and online survey outreach. The advisory committee and other key stakeholders agreed with this project priority.

Because of concerns expressed over Broadway Boulevard by some of the stakeholders, a phased implementation approach should be utilized. In the near future, the KC Streetcar will be extended along Main Street, and other complete streets projects are proposed. There is some uncertainty around how these projects may affect Broadway Boulevard both from a traffic and economic development perspective. The improvements on Southwest Trafficway, in particular the addition of left turn lanes at 31st Street and 33rd Street (Linwood Boulevard) will also have an impact on the operation of Broadway Boulevard. Furthermore, it is undesirable to have Southwest Trafficway, Broadway Boulevard, and Main Street simultaneously under construction.

For these reasons, it is recommended that the improvements on Broadway Boulevard that street be implemented as a Phase 2 of implementation. Phase 1 of the implementation would consist of making improvements to 39th Street, 43rd Street, Southwest Trafficway, and Wornall Road, in the order of priority ranked by the stakeholders. Once these improvements have been implemented, the traffic operations, safety, and access should be reassessed on Broadway Boulevard to determine whether this plan's recommendations are still valid and feasible. Further outreach to the community should be conducted to reassess the needs and desires for Broadway Boulevard at that time.



Costs and Benefits of Implementation			
Corridor	Safety Crash Cost Savings (over 20 years)	Construction Cost	Benefit-to-Cost Ratio
39th Street	\$ 50,100,000	\$ 7,100,000	7.1
43rd Street	\$ 7,900,000	\$ 3,600,000	2.2
Broadway Blvd	\$ 62,300,000	\$ 8,000,000	7.8
Southwest Trfwy	\$ 16,800,000	\$ 7,700,000	2.2
Wornall Rd	\$ 3,300,000	\$ 2,100,000	1.6
Total	\$ 140,400,000	\$ 28,500,000	4.9

Table of Cost Benefits

COSTS, BENEFITS, AND FUNDING

Implementation of the recommendations in this plan are expected to be costly. However, the benefit realized by the investment is likely to far outweigh the cost investment. The chart below shows the expected costs to implement the recommendations on each corridor and the safety benefit anticipated as a result of these benefits. Considering the high benefit to cost ratio on these projects, and the multimodal nature of them, funding opportunities exist.

The Better Utilizing Investments to Leverage Development, or BUILD Grant program, provides a unique opportunity for applicants to invest in transportation projects. This program, previously known as Transportation Investment Generating Economic Recovery, or TIGER Grant program, allows the USDOT to directly reimburse local agencies for projects and funding authorization comes from the US Congress. The projects selected typically have a benefit to cost ratio of greater than 1.0, which this project would almost certainly have. The program also encourages multimodal access and safety improvements, which is one of the USDOT's Areas of Focus. The implementation of this project may provide a competitive project for grant funding application through the BUILD Grant program.

The Federal Highway Administration (FHWA) has assembled a comprehensive guide for federal funding programs on its website. The Pedestrian and Bicycle Funding Opportunities Guide shows grant and loan programs that could be applied for with different improvement types. Many of the improvements recommended in this plan are covered in this funding guide. An excerpt from this guide is shown on this page. Regardless of external funding availability, the stakeholders engaged with this project agreed that constructing the improvements in this plan were a good investment of city funds.

Key: \$ = Funds may be used for this activity (restrictions may apply). ~\$ = Eligible, but not competitive unless part of a larger project. \$* = See program-specific notes for restrictions.

Activity or Project Type	Pedestrian and Bicycle Funding Opportunities U.S. Department of Transportation Transit, Highway, and Safety Funds															
	BUILD	INFRA	TIFIA	FTA	ATI	CMAQ	HSIP	NHPP	STBG	TA	RTP	SRTS	PLAN	NHTSA 402	NHTSA 405	FLTTP
Pedestrian plans				\$					\$	\$		\$	\$			\$
Recreational trails	~\$	~\$	~\$						\$	\$	\$					\$
Road Diets (pedestrian and bicycle portions)	\$	~\$	\$				\$	\$	\$	\$						\$
Road Safety Assessment for pedestrians and bicyclists							\$		\$	\$			\$			\$
Safety education and awareness activities and programs to inform pedestrians, bicyclists, and motorists on ped/bike safety									\$SRTS	\$SRTS		\$	\$*	\$*	\$*	
Safety education positions									\$SRTS	\$SRTS		\$		\$*		
Safety enforcement (including police patrols)									\$SRTS	\$SRTS		\$		\$*	\$*	
Safety program technical assessment (for peds/bicyclists)									\$SRTS	\$SRTS		\$	\$*	\$		
Separated bicycle lanes	\$	~\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$				\$
Shared use paths / transportation trails	\$	~\$	\$	\$	\$	\$*	\$	\$	\$	\$	\$	\$				\$
Sidewalks (new or retrofit)	\$	~\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$				\$
Signs / signals / signal improvements	\$	~\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$				\$
Signed pedestrian or bicycle routes	\$	~\$	\$	\$	\$	\$		\$	\$	\$	\$	\$				\$
Spot improvement programs	\$	~\$	\$	\$			\$	\$	\$	\$	\$	\$				\$
Stormwater impacts related to pedestrian and bicycle projects	\$	~\$	\$	\$	\$		\$	\$	\$	\$	\$	\$				\$
Traffic calming	\$	~\$	\$	\$			\$	\$	\$	\$	\$	\$				\$
Trail bridges	\$	~\$	\$			\$*	\$	\$	\$	\$	\$	\$				\$
Trail construction and maintenance equipment									\$RTP	\$RTP	\$					
Trail/highway intersections	\$	~\$	\$			\$*	\$	\$	\$	\$	\$	\$				\$
Trailside and trailhead facilities (includes restrooms and water, but not general park amenities; see program guidance)	~\$*	~\$*	~\$*						\$*	\$*	\$*					\$
Training						\$	\$		\$	\$	\$	\$	\$*	\$*		
Training for law enforcement on ped/bicyclist safety laws									\$SRTS	\$SRTS		\$			\$*	
Tunnels / undercrossings for pedestrians and/or bicyclists	\$	~\$	\$	\$	\$	\$*	\$	\$	\$	\$	\$	\$				\$

Abbreviations

- ADA/504: Americans with Disabilities Act of 1990 / Section 504 of the Rehabilitation Act of 1973
- BUILD: Better Utilizing Investments to Leverage Development Transportation Discretionary Grants
- INFRA: Infrastructure for Rebuilding America Discretionary Grant Program
- TIFIA: Transportation Infrastructure Finance and Innovation Act (loans)
- FTA: Federal Transit Administration Capital Funds
- ATI: Associated Transit Improvement (1% set-aside of FTA)
- CMAQ: Congestion Mitigation and Air Quality Improvement Program
- HSIP: Highway Safety Improvement Program
- NHPP: National Highway Performance Program
- STBG: Surface Transportation Block Grant Program

- TA: Transportation Alternatives Set-Aside (formerly Transportation Alternatives Program)
- RTP: Recreational Trails Program
- SRTS: Safe Routes to School Program / Activities
- PLAN: Statewide Planning and Research (SPR) or Metropolitan Planning funds
- NHTSA 402: State and Community Highway Safety Grant Program
- NHTSA 405: National Priority Safety Programs (Nonmotorized safety)
- FLTTP: Federal Lands and Tribal Transportation Programs (Federal Lands Access Program, Federal Lands Transportation Program, Tribal Transportation Program, Nationally Significant Federal Lands and Tribal Projects)



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