

QUIVIRA ROAD

CORRIDOR STUDY

Lenexa, KS



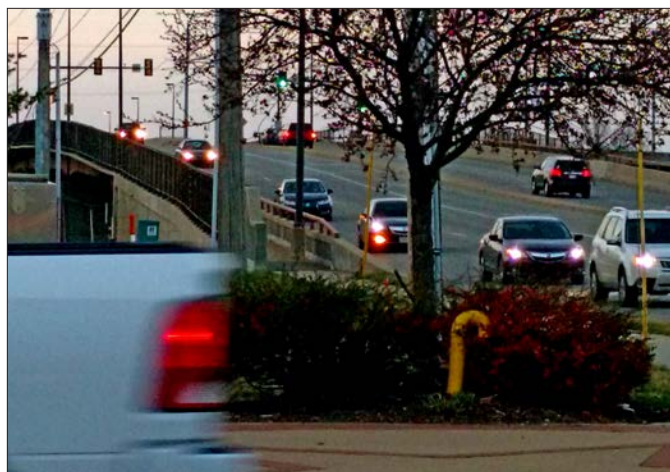
“Very pleased with the bicycle and pedestrian recommendations. I think the shared use paths, especially on Quivira and 87th will make this very accessible to everyone.”

- Public Meeting Participant

“Would love to see the old shopping centers redevelop with new destinations and more landscaping and sidewalks.”

- Public Meeting Participant

Caption



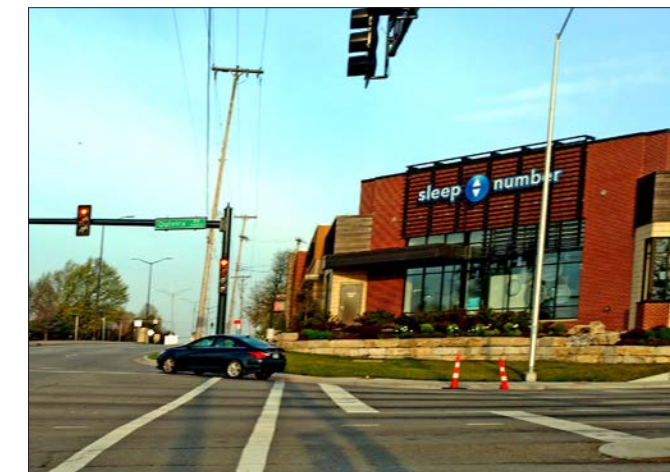
Quivira Road viaduct across Interstate 35



Existing sidewalks along Quivira Road between 97th & 99th Streets



Waterside residences along Quivira Road



Existing Quivira Road pedestrian crossing at 95th Street

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Looking south at the Intersection of Quivira Road and 87th Street Parkway



Quivira Road Corridor Study Public Meeting #2 on September 21, 2017

Section 1.0 INTRODUCTION & BACKGROUND

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PLANNING PROCESS

The purpose of this Quivira Road Corridor Plan is to analyze the relationship between land use and transportation along the roadway and to make recommendations regarding appropriate land uses, transportation improvements, and placemaking opportunities. This study builds upon the redevelopment activity that is occurring at the interchange of I-35 and 95th Street with the nearly \$300 million investment through the Johnson County Gateway Interchange Project Improvements and adjacent private redevelopment activity consisting of three new hotels.

In addition, several redevelopment projects in both the Cities of Lenexa and Overland Park on the northwest and northeast corners of Quivira Road and 95th Street and spot redevelopment along the entire corridor have already occurred, and other private property owners along the corridor have also expressed interest in redeveloping their properties. The City worked with the Mid-America Regional Council (MARC) to proactively analyze the corridor and establish a vision for improvements built around input from the community and stakeholders. The recommendations in this document represent their vision for the places and transportation networks along the Quivira Road corridor.

Key priorities identified by the City of Lenexa during this planning process include:

- Identification of appropriate land uses and multi-modal opportunities;
- Identification of transportation and access needs that foster redevelopment; and
- Investigation of walking and bicycling opportunities within the corridor.

The planning process included a close working relationship with City staff to take advantage of their knowledge of the corridor, and an intense engagement effort consisting of public input and stakeholder input. An advisory committee was also formed to help guide the outcomes of the process.

Previous planning projects within the study area and along the corridor were examined and used as a foundation to begin the process. Project goals were established to lay out the vision framework. The goals were drafted with the advisory committee and then shared with the public for input. Over a nine month term, through the process of engagement, analysis, and vision this corridor study plan was developed.

ESTABLISHED PROJECT GOALS

- We want the corridor to be a **major reinvestment opportunity that is positioned for long-term financial prosperity.** (*Economic Development & Market Strategies & Tactics*)
- We want the corridor to be **accessible for multiple modes of transportation and walkable, workable, and livable for all.** (*Redevelopment & Transportation Strategies & Tactics*)
- We want the corridor to be **unique, attractive, and branded to support the distinct character of its place.** (*Placemaking & Character Strategies & Tactics*)



Quivira Road corridor study area map

THE STUDY AREA

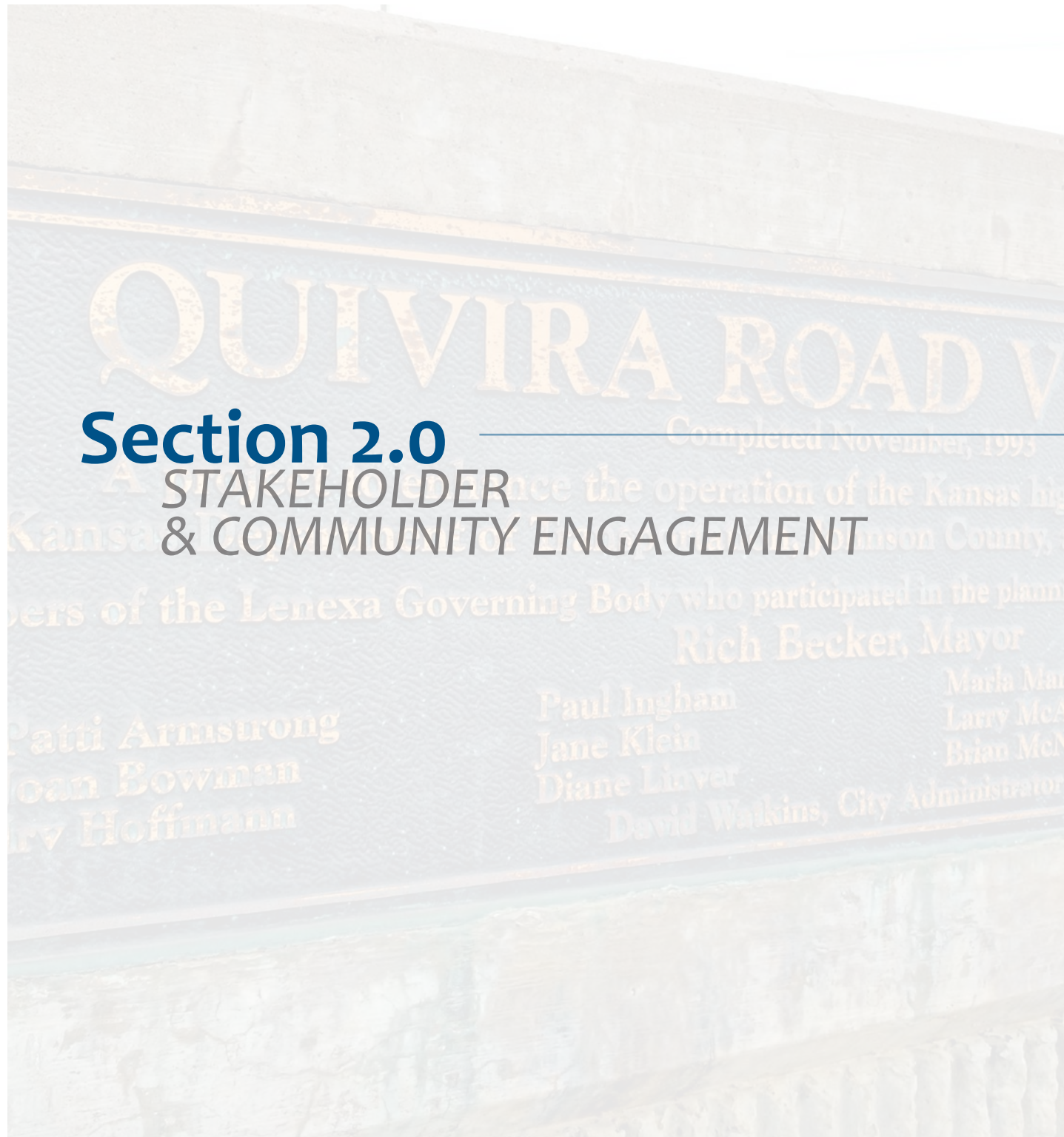
The study area included looking at the transportation network and development patterns along Quivira Road from 79th to 99th, approximately 2.5 miles in length, and one-half mile on either side. This corridor connects residential neighborhoods, shopping areas, business parks, and schools. It has a great roadway network connecting most of the area, however a major barrier exists where Interstate I-35 bisects the corridor. The study area has approximately 5,200 residents in this area and 3.6 million square feet of retail.



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 Quivira Road Corridor Study is one of the projects chosen for funding through this program.

PSP Program Objectives include:

- 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.



Advisory committee meeting work session

ADVISORY COMMITTEE INPUT / WORK-SESSIONS

The Quivira Road Corridor Study kicked off in the summer of 2017 with an advisory committee and team of consultants working together to develop a plan to promote reinvestment, maintain, strengthen and expand multi-modal transportation opportunities, and enhance the character of the area along Quivira Road from 79th to 99th Streets.

The City's proactive approach to gathering input on redevelopment ideas, identification of places people want to see along the corridor, and what expectations people have for connecting users to the sites helped create the framework for the study area. This will help developers understand the types of development and specific components of development people would like to see along the corridor

The overall process included three interactive public meetings, five advisory committee meetings, over six focus group discussions, one city work session, and a council briefing session. This robust engagement truly helped shape the ideas and recommendations presented in this document.

The advisory committee was formed to ensure representation from a wide cross-section of property owners, the business community, and city staff. These individuals became the champions and voices of the project in the community. Advisory committee members included:

- Lou Serrone, Lenexa City Council
- Blake Schreck, Lenexa Chamber of Commerce
- Don Horine, Lenexa Planning Commissioner
- Magi Tilton, City of Lenexa Community Development Department
- Beccy Yocham, City of Lenexa Community Development Department
- Charlie Love, City of Lenexa Municipal Services Department
- Dave Dalecky, City of Lenexa Community Development Department
- Steve Schooley, City of Lenexa Community Development Department
- Marc Hansen, MARC
- Shawn Strate, KCATA
- Joan Leavens, Shawnee Mission School District
- James Buffington, resident
- Linda Kahn, resident
- Leslie Karr, City of Overland Park
- Ty Nagle, City of Overland Park
- Casey Donahoo, Block LLC
- Quintin Knight, Legacy Development

PUBLIC & COMMUNITY INPUT / WORK-SESSIONS

The community-driven process incorporated three public workshops to gain insight into what improvements those who live, work, shop and travel along the Quivira Road corridor want to see. The first meeting focused on proposed project goals and understanding the current challenges facing the corridor. The second meeting allowed attendees to provide input on proposed sidewalk and bike linkages, enhancements to transit service, and ways to beautify and brand the corridor. The third public meeting provided the opportunity for attendees to see the refinements made to the vision for the corridor. It also showcased the redevelopment potentials the economists and market assessment shows may be feasible in this area. The third public meeting also showcased the short and long term recommendations for the study area.

WORKING CLOSELY WITH THE CITY OF LENEXA

City of Lenexa staff worked collaboratively with the consulting team throughout the project. The city provided guidance on procedures, future goals, and outreach. After some concepts and ideas were developed based on input from the first public meeting, the city staff sat down for an intensive work session. This work session focused on fatal flaws, visionary ideas, and feasibility of concepts. Representatives from the city included city administration, community development, municipal services, police, and parks & recreation. The outcome of this meeting was a more feasible connected network for all users and discussions on possibilities for the future. After the second and third public meetings, the city staff ensured the final product aligned with the larger city vision, comprehensive plan, and UDC (zoning regulations).

SUMMARY OF PUBLIC MEETING #1

Public Meeting #1 was interactive in that it had a variety of different boards and stations for meeting attendees to visit and provide feedback on existing issues and conditions, ideas and opportunities for improvement, and to provide general feedback. The meeting included two formal presentations and a comment card to gather input on initial thoughts of the study area. A survey was also included on the city website to gather feedback from individuals who could not attend the meeting. Input from both the meeting and the survey helped form the concepts shared in the next public meeting.



Presentation at Public Meeting #1

SUMMARY OF PUBLIC MEETING #2

Public Meeting #2 provided attendees the opportunity to see how their input and thoughts guided the development of a concept to improve multi-modal transportation in the study area. The meeting also consisted of a voting station for attendees to pick three 'placemaking' components they would like to see implemented in the study area. The comment card and online surveys asked questions related to the specific types of places users would like to see along this corridor to help provide guidance towards future redevelopment. 54 total surveys were taken online with additional comment cards and feedback shared.



Work-Session at Public Meeting #2

SUMMARY OF PUBLIC MEETING #3

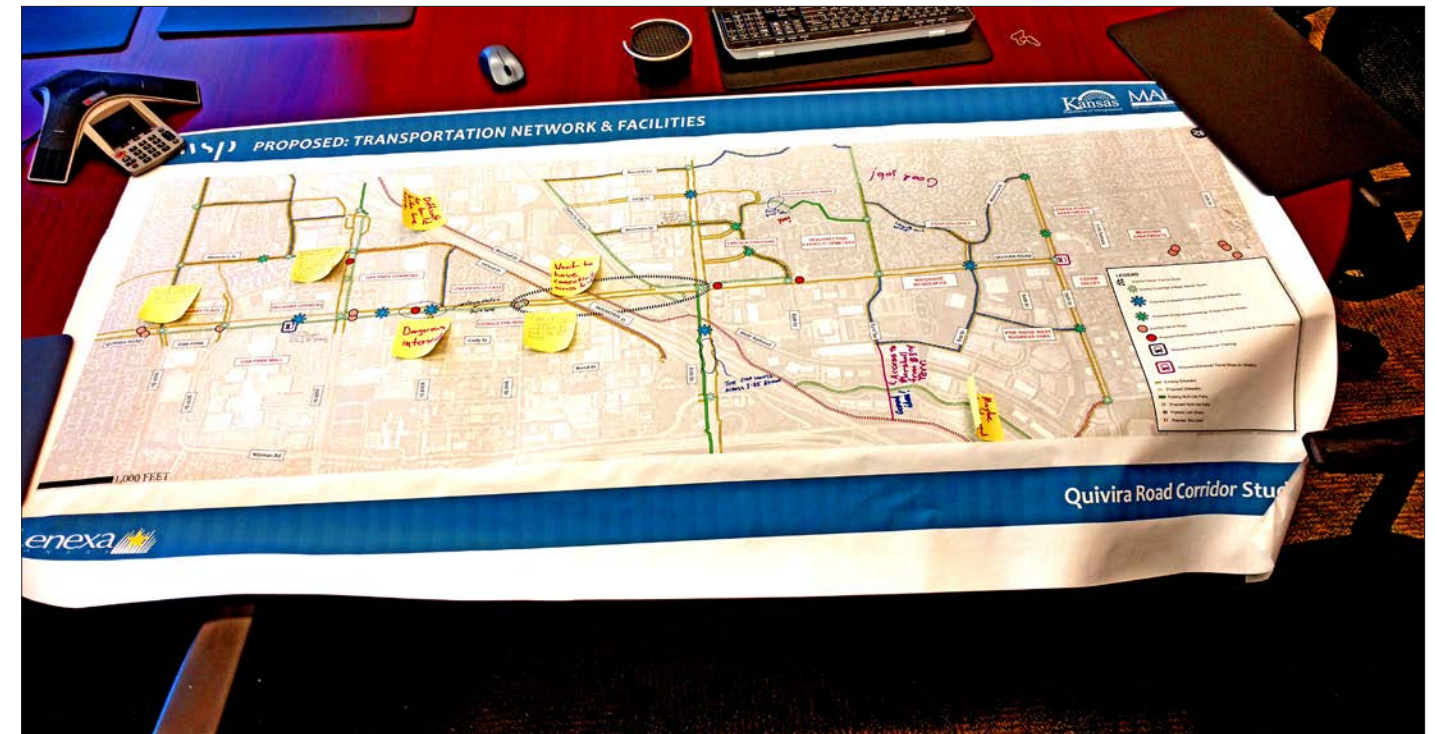
Public Meeting #3 was the opportunity to showcase the final concepts and recommendations for the study area. Participants voted on a visual preference survey to identify what types of placemaking and character components should be included to achieve a unique, attractive and branded corridor. Discussions on the final concept helped bring consensus to the next steps section. Approximately twenty surveys and comment cards were returned showing support for the final recommendations and plan.



Workboard from Public Meeting #3

Please place your dots on the rows you would MOST like to see along Quivira Road									
Bike Racks	●								
Fountains	●	●	●	●	●	●	●	●	●
Intersection Treatments	●	●	●	●	●	●	●	●	●
Landscaped Medians	●	●	●	●	●	●	●	●	●
Monument Signage									
Painted Crosswalks	●	●	●	●	●	●	●	●	●
Pedestrian Benches	●	●	●						
Pedestrian Scale Sidewalk Lights	●	●	●	●	●	●	●	●	●
Pocket Parks	●	●	●	●	●	●	●	●	●
Public Art	●	●	●	●	●				
Raigardens	●	●	●	●					
Recycling Cans	●								
Transit Benches	●	●	●	●	●	●	●	●	●
Trash Cans	●	●	●						
Trees	●	●	●	●	●	●	●	●	●
Uniform Decorative Banners on Street Lights	●								
Uniform Street Lighting	●	●	●	●	●	●	●	●	●
Uniform Street Signage	●								
Wayfinding Signage for Bikers and Walkers	●	●	●						

Public survey on placemaking and beautification



Workboard used to gather input at work session

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DATA GATHERING / VOTING

The public meetings and online surveys were used to gather input from attendees and the users and residents of the study area. It was important to the City and Advisory Committee that recommendations relating to the three goals were developed with input from the public. Some questions were asked with open ended responses, while other questions were developed for respondents to vote on something.

The public voted that they wanted unique restaurants, local stores, and a grocery store along the corridor. They also identified that they like the development pattern/concept of lifestyle centers/mixed use if it included some of these elements. The public also voted on the placemaking components and ranked street trees and lighting as the top priorities, followed by pocket parks, landscaped medians, benches, painted crosswalks, and fountains.

What type of Development Would you Like to see?	% of Respondents	# of Responses
Unique Restaurants	70%	38
Local Stores	65%	35
Lifestyle Center / Mixed Use	63%	34
Grocery Stores	44%	24
Senior Housing	13%	7
Multi-Family	13%	7
Other	9%	5
Big-Box / Chain Stores	2%	1
Total Respondents to Survey		54

Public survey on development types

SAMPLE SURVEY QUESTION

What people liked about the proposed recommendations:

- Multi-use paths/trails
- Safe and convenient biking and walking
- Expanded sidewalks and pedestrian crossings
- Connectivity to developments, neighborhoods and places
- Enhanced transit facilities
- Maintaining the street capacity for cars
- Input on development types

SAMPLE SURVEY QUESTION

What people wanted changed in the study area:

- Better connectivity for all modes and users
- Enhanced sidewalks and pedestrian crossings
- Better biking facilities
- Enhanced transit stops
- More local/unique restaurants
- Development & redevelopment similar to the lifestyle centers as destinations
- A sense of place along the corridor

Section 3.0

REVIEW OF QUIVIRA ROAD



87th Street & Quivira intersection provides a high level of service for a high volume of automobiles

SUMMARY OF THE EXISTING CONDITIONS

INTRODUCTION TO QUIVIRA ROAD

The Quivira Road Corridor study area focuses on an approximately 2.5-mile strip of Quivira Road from 79th Street to 99th Street, including the area located within ½ mile surrounding the corridor. The existing conditions summary identifies the existing barriers, concerns, and issues along the roadway, compiles data pertaining to the existing transportation infrastructure and outlines future plans for improvements.

The summary also evaluates current retail usage and vacancies, market analysis and spending trends, demographics, and social and lifestyle trends. This existing conditions analysis is the solid basis for this plan to then identify opportunities and strategies to enhance multi-modal opportunities, prepare for private strategic reinvestment in our developments, and what elements will help make the study area more inviting and provide an overall better experience.

Transportation Barriers and Constraints

The roadways existing in the study area have been constructed and maintained to provide a high quality of service to automobiles. However, these roads have limited functionality for other users. The backbone of the roadway system in the study area are the major arterial roads of Quivira Road, 95th Street, and 87th Street. These are the only roads throughout the study area that are continuous and not cut off by I-35 and the BNSF Railroad line.

These three streets carry a very high volume of traffic, have high speed limits, and a high number of vehicular travel lanes. Because these streets are continuous for long distances and follow the grid system, they are the most convenient and direct roads to traverse the study area. These roads also provide access to major destinations in the area along with access to I-35 and US Highway 69.

QUIVIRA ROAD Corridor Study



New development on Quivira Road between 81st Street and 83rd Street



Entrance to Oak Park Commons on Quivira Road

Aside from the barriers created by the highways and railroad, the minor roads loosely follow the east-west/north-south grid system, and do not always provide easy east-west and north-south access through the area like the major arterial streets.

10 These minor streets have lower volumes and lower speeds than the three major streets. As such they are better suited for bicycle and pedestrian users. However, because these roads are not typically continuous for long distances, they are less convenient for traversing the study area and do not always provide direct access to the major destinations.

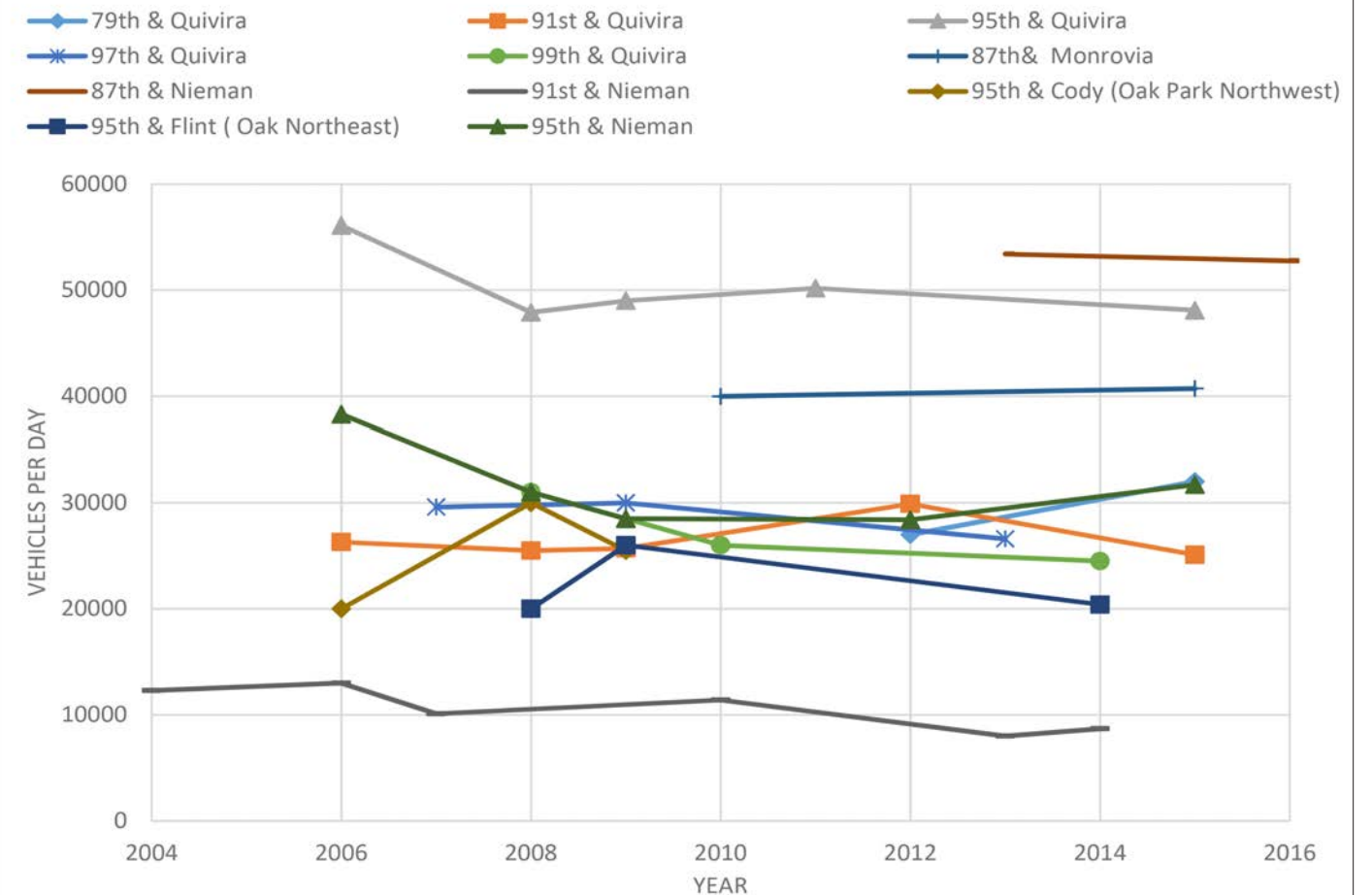
Development Barriers and Constraints

Infill development and the redevelopment of sites with active uses pose multiple challenges that can be framed as potential barriers to development. These barriers are not new or unique to Lenexa and they are frequently overcome when cities take a proactive approach to implementing a long-term vision for a district. Specific barriers and constraints on new development and redevelopment are shown in the gray box to the right.

- Acquisition costs will be relatively high for the properties defined as development opportunities. As illustrated, high acquisition costs significantly impact the economic feasibility of a redevelopment project.
- Broadway Plaza and Oak Park Commons both have multiple owners and multiple parcels. This could impact the feasibility of assembling a complete site, as well as drive up the cost of acquisition if a certain owner demands a premium.
- Lifestyle center development is not compatible with the current zoning designation for the identified development opportunity sites. Specifically, building setback, maximum height, and parking requirements make such development infeasible. Residential uses are generally not permitted in the existing zoning districts for the development sites.
- There may be other sites in competitive locations that are more straightforward to develop in this corridor.

Development Barriers and Constraints

HISTORIC AVERAGE DAILY TRAFFIC



Historic average daily traffic Volumes for Quivira Road (source: Johnson County AIMS <https://maps.jocogov.org/ims/> and the City of Overland Park <https://map.opkansas.org/map-viewer/default.aspx#theme=Traffic%20Counts>)

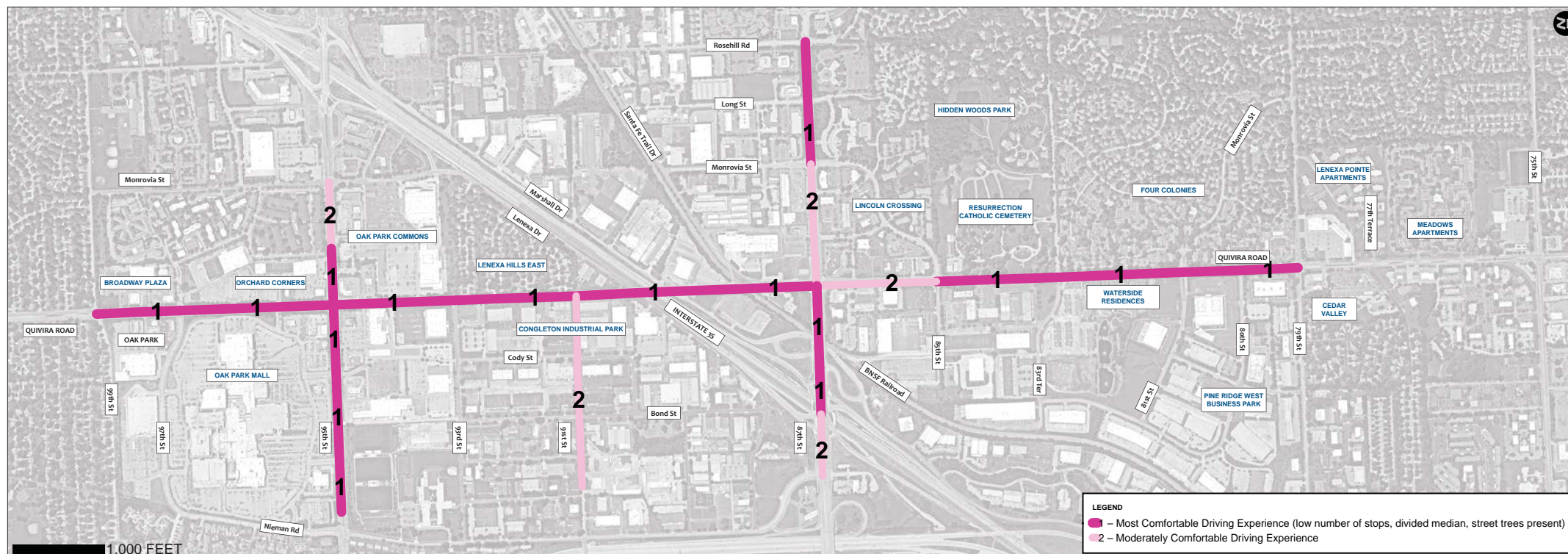
TRAVELING BY CAR

The City of Lenexa has invested a significant amount of money to maintain a good level of service and safe roadway environment for automobiles. This investment has paid off and is reflected by the efficient and safe operations on the area roadways, especially Quivira Road, 95th Street, and 87th Street.

Traffic Volumes

The figure above shows the historical traffic volumes for many of the area intersections. The motor vehicle traffic volumes in the area have either declined or remained level for nearly all the intersections in the corridor area over the past 10 years.

As part of this study, the Mid-America Regional Council's Long Range Travel Demand Model was also consulted. This model takes into account



Multi-modal quality level of service for Quivira Road (source: calculated using Synchro model using Operation Green Light's model and Google Earth for characteristics to calculate QLOS)

Street & Segment	Automotive Multimodal LOS	
	Northbound	Southbound
Quivira Road		
From 79th Street to 81st Street	B	B
From 81st Street to 83rd Street	B	B
From 83rd Street to 85th Street	B	B
From 85th Street to 87th Street	C	B
From 87th Street to Santa Fe Drive	B	C
From Santa Fe Drive to 91st Street	B	B
From 91st Street to 93rd Street	B	B
From 93rd Street to 95th Street	B	B
From 95th Street to 97th Street	B	B
From 97th Street to 99th Street	B	B
Quivira Road Average	B	B
87th Street	Eastbound	Westbound
From Rosehill to Monrovia	B	C
From Monrovia to Quivira	B	B
From Quivira to Marshall	B	C
From Marshall to I-35 Ramps	C	B
From I-35 Ramps to Nieman	C	B
87th Street Average	B	B
95th Street	Eastbound	Westbound
From Monrovia to Oak Park Commons	B	B
From Oak Park Commons to Quivira	B	C
From Quivira to Cody	B	B
From Cody to Flint	B	B
From Flint to Nieman	C	B
95th Street Average	B	B

Automotive Quality Level of Service on Quivira Road (source: Synchro model)

demographic, land use, economic trends, and other factors to predict future traffic volumes. For the study area, the MARC model predicts a decline in traffic from 2010 to 2020 (which has been observed through 2015), and a very slight increase in traffic from 2020 to 2040. This growth is predicted to be around 0.3% more traffic on the area roads per year. Although some localized areas are seeing slight increases in traffic, such as the area around the Waterside apartment complex development, the general trend is declining or steady traffic volumes. Even when localized redevelopment occurs in the area, the general decline in traffic volumes will eventually offset any short-term increases in traffic.

Historically, traffic volumes have predictably increased year over year since automobiles became widespread in America. However, this is not the case in the corridor study area for a few reasons. The land around the study area has been fully developed for decades. There are very few open sites where additional retail, office, manufacturing, or residential uses can be developed. With the completion of the Waterside

apartment complex, virtually all the developable land in the area will be fully developed. In addition to the fully developed nature of the area, the traffic to the commercial retail sites has been steadily declining. Traffic to the major retail destinations in the 95th Street and Quivira Road peaked in the mid-2000's. Prior to the Great Recession and prior to the explosion of online retailers, the retail area saw much more traffic than it does today. It is likely because of these factors that traffic volumes are not increasing like in many other areas.

Quality Levels of Service

As part of this corridor study, the quality level of service (QLOS) for the major roads in the corridor was calculated. The Multi-modal Level of Service Analysis (QLOS) for Urban Streets methodology was used to determine the QLOS the corridor provides to motor vehicles. QLOS is a nationally recognized best practice methodology to quantify the quality of service for all modes of transportation, especially for motor vehicles and pedestrians.

The calculations for QLOS are based on the perception of drivers and pedestrians of what the quality of the experience is, rather than just an amount of delay or congestion. 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 pedestrian calculation is based on the width of the sidewalk, protection from the elements, and protection and distance from moving cars. QLOS breaks traffic engineering calculations down to a human dimension. While the tool is quantitative, the results represent the perception of quality of the driving experience as measured through real drivers studied, rather than an arbitrary level of quality as measured by seconds of delay. Condi-

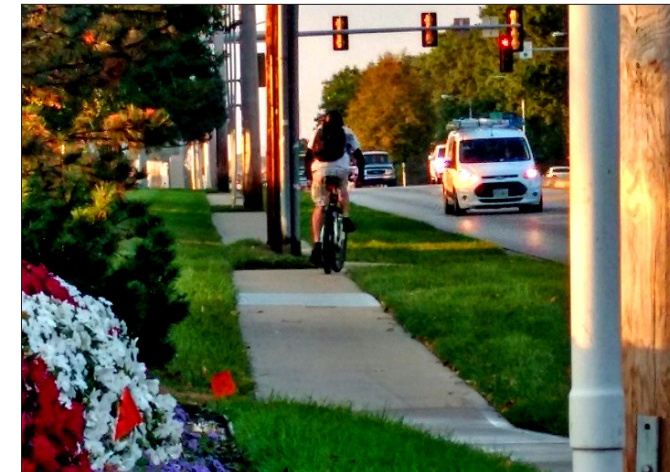
tions are summarized and ranked on a rating scale from A through F so that multi-modal corridors can be compared.

The QLOS tool measures a variety of factors that relate to whether a driver perceives driving along a certain corridor as a pleasant or unpleasant driving experience. QLOS A represents the most pleasant driving experience and QLOS F represents the least pleasant driving experience. The QLOS equation for automobiles is closer to QLOS A when the number of times a vehicle stops is minimized, where separated medians are provided, where left-turn lanes are present, where many trees are placed along the roadway, and where pavement quality is good.

When any of these factors are reduced, they result in a lowered QLOS. The existing configuration of Quivira Road, 95th Street, and 87th Street provide a very high QLOS today. The table above relates the QLOS score for each roadway segment and the average score for each roadway. All three of the roadways studied maintained a QLOS of B.



High number of full access driveways on Quivira north of 95th Street



Cyclist riding on sidewalks where pedestrians also traverse is uncomfortable and risky

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Access Management

The concept of access management involves reducing the number of intersections and driveways along a roadway. High speed, high volume roads with a high density of driveways and intersections tend to have more crashes than similar facilities with a lower density of driveways. By incorporating access management policies, driveways are consolidated, eliminated, or converted to limited-access driveways such as a “right-in/right-out” driveway where it is not possible to turn left into or out of the driveway.

The three major arterial roads in the study area of Quivira Road, 95th Street, and 87th Street typically have good access management. Few full-access driveways into private developments exist (except along Quivira north of 95th Street), and U-turns are allowed at the “right-in/right-out” driveways to accommodate an effective left-turn movement into or out of these driveways. To “turn left” out of a driveway, a motorist can turn right, and then make a U-turn at the first intersection where a U-turn is allowed.

Conversely, to make a “left-turn” into a driveway, the motorist can continue to the next intersection after the driveway, make a U-turn, and then turn right into the driveway. Full access intersections are typically only provided at public street intersections and major

driveways throughout most of the study area. In other areas, driveways are “right-in/right-out” and access is consolidated and cross-access easements are utilized to minimize the number of driveways present

Two exceptions to this general policy of access management are on Quivira Road between 95th Street and 91st Street and on 95th Street between the signal at the Oak Park Commons entrance and Quivira Road. On the stretch of Quivira mentioned, there are eight unsignalized access driveways within a 1/4 mile. This is compared to Quivira from 99th Street to 95th Street which has only three unsignalized access driveways within 1/2 mile. On the stretch of 95th Street mentioned, there are eight unsignalized right-in/right-out driveways within 1/8 mile. This is compared to 95th Street from Quivira to Nieman which has the same number of unsignalized access driveways within 1/2 mile instead of 1/8 mile

TRAVELING BY BICYCLE

Traveling by bicycle in the study area is challenging for all cyclists. Typically, only very skilled and fearless cyclists would ride on the major streets of Quivira Road, 95th Street, or 87th Street. Because the major streets provide access to most of the major area des-

tinations, it is desirable to ride on them. However, cyclists tend to ride only on the minor streets, through parking lots, or on the sidewalks of major streets. These areas of travel are problematic for cyclists. As mentioned previously, none of the minor streets fully traverse the study area due to I-35, Highway 69, and the BNSF railroad line. This makes it difficult to effectively traverse the area on the minor streets—forcing cyclists onto the major streets where they would prefer not to ride. When riding along the major streets cyclists tend to utilize the sidewalks. Sidewalks are typically more dangerous and uncomfortable for cyclist than riding on the street.

It is perceived that riding on the streets is unsafe due to the high traffic volumes, high speeds, and general lack of willingness to share the road between drivers and cyclists. While it is true that riding on the street can be dangerous, it is actually more unsafe to ride on the sidewalks than on the streets. Most collisions between cars and bicycles happen at intersections, especially between bikes riding on sidewalks and cars turning left or right off the major street. Riding on the sidewalk is undesirable because of bicycle-pedestrian conflicts as well. These conflicts lower the quality of the traveling experience and increase the risk of injury for both cyclists and pedestrians. Additionally,

sidewalks in the study area are not designed for comfortable or easy bicycle travel, leading to a poor riding experience for cyclists.

Large lot commercial retail, industrial, and multi-family residential developments further limit the ability of cyclists to traverse the area because the large lots break up the street grid. Cyclists can utilize the parking lots to get through the area on a more direct route, but they must wind their way through the parking lots thereby putting themselves at risk. In the parking lots, many parking maneuvers are being made and cyclists are often hit by drivers backing out of parking stalls since the drivers cannot easily see the cyclist in the parking lot aisle.

Most of the large retail, manufacturing, and office areas do not have direct connections to the residential areas around them due to land use regulation and residents’ desires to be buffered from to the non-residential uses. Without direct connections to the minor streets, cyclists must use the major streets to access many of the area’s destinations.

Bicycle Level of Traffic Stress

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



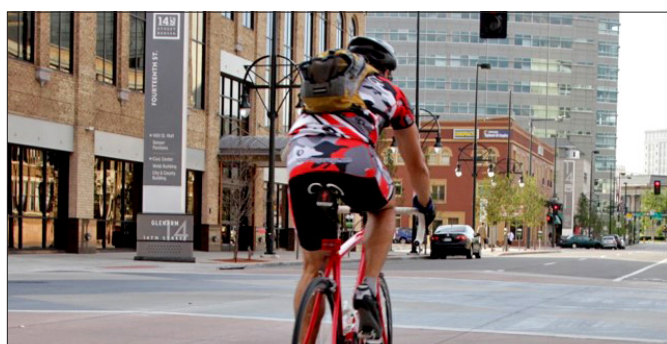
LTS 1: Everyone Feels Comfortable



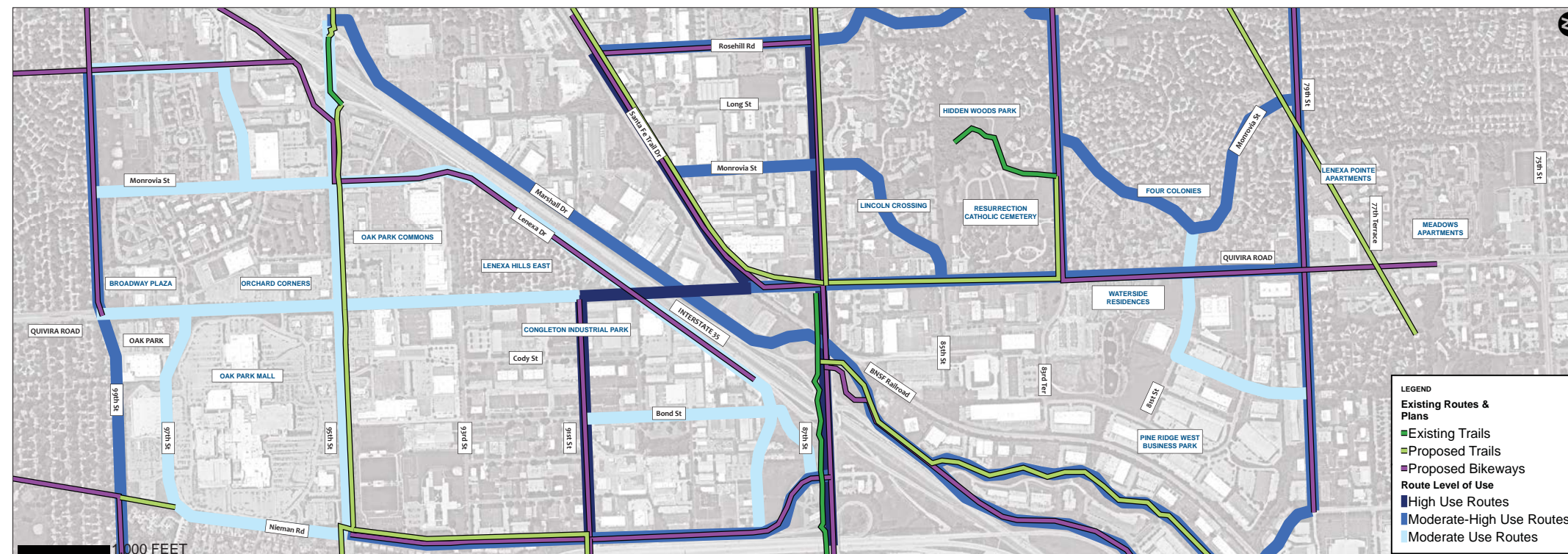
LTS 2: Adults Feel Comfortable



LTS 3: "Enthusied and Confident"



LTS 4: Only "Strong and Fearless"



Existing and planned bicycle routes and priorities for Quivira Road and surroundings (data collected from existing Parks and Recreation Master Plan, Lenexa Comprehensive Plan, Metro Parks Plan, etc and field observations)

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.

Cycling Routes

As part of this corridor study, an analysis was made as to where cyclists were traveling through the area currently. Data was gathered from the Strava fitness application, which is used by many cyclists to track their rides. Strava aggregates and publishes the data to show where popular cycling routes are.

Focus groups were also held with the cycling community to determine what roads cyclists were riding on and where they were traveling to. Generally, cyclists who are riding in the study area are doing so for utilitarian purposes. They are riding to get to work, shopping destinations, schools, churches, or

entertainment. The cyclists are typically not riding for recreation. The only exception to this is on Marshall Drive. This road is utilized on the weekends for group rides when the traffic on the road and on adjacent I-35 is lower; there is less noise from traffic on weekends, making for a more pleasant bike ride. Marshall Drive is also utilized as an extension to the Turkey Creek Trail which begins just north of 75th Street west of I-35.

The most highly traveled route in the area is the combination of Santa Fe Trail Drive, the Quivira Viaduct, and 91st Street. This is the only east-west route through the study area where a cyclist does not have to navigate a highway interchange. The second most highly traveled route is 87th Street. While this route does require cyclists to navigate the interchange at I-35 and Highway 69, it provides a much more direct route through the area than that mentioned above. Other highly traveled routes include Quivira north of

87th Street, 83rd Street, 79th Street, Monrovia, Rosehill, Nieman, and Lenexa Drive south of 87th Street.

Few cyclists currently ride in the area around the 95th Street & Quivira Road intersection, but many cyclists expressed a desire to safely and conveniently ride in this area. This is especially true now that it is possible to cross I-35 by foot or bike on 95th Street. Prior to the interchange reconstruction, there were no sidewalks or shoulders on 95th Street that could be used for walking or biking.

The above graphic shows the existing routes and planned routes per the Parks and Recreation Master Plan, the MARC MetroGreen Plan, the MARC Regional Bikeway Plan and Overland Park's proposed facilities. It is overlaid with the Strava heatmap data to show usage in comparison to existing or planned facilities.



Even where high-quality sidewalks exist, there is often no high-quality pedestrian route from the sidewalk to the front door of adjacent businesses



Existing crossings are often poorly marked with long crossing times



Transfer center / park & ride at Oak Park Mall



No pedestrian crossing opportunities exist between 95th Street & 91st Street

TRAVELING BY FOOT

Sidewalks are the primary means of travel by foot in the study area. There are currently very few trails in the study area, and the few that exist are very short in length and do not fulfill a specific transportation need. Generally, sidewalks exist on one or both sides of the major streets and collector streets in the study area. Notable areas without sidewalks include the west side of Quivira Road from 97th Street to 95th Street and from Monrovia to 79th Street. Another notable location is the north side of 79th Street east of Quivira and the south side of 79th Street west of Quivira. Areas where industrial and office uses exist often lack sidewalks on both sides of the roads.

The sidewalks that do exist are of varying quality, with many providing a poor-quality walking experience. The sidewalks are often built directly adjacent to the road with no buffer room between the pedestrians and automobiles. Many of the sidewalks are also built to a narrow width of four or five feet across. Some more recently built sidewalks are built to a high standard that provides for a better quality of experience. High standards for sidewalks include width, buffer between vehicle lane, no obstructions in pathway, and shade provided by trees. Most sidewalks in the

area meet the guidelines set forth in the Americans with Disabilities Act to accommodate handicapped users.

Connections to Destinations

While many of the area streets have sidewalks, few of those sidewalks are directly, safely, or conveniently connected to the adjacent land uses. For pedestrians to access the front door of most businesses, they are required to walk on automobile driveways and through parking lots or traverse stairs, ramps, or circuitous pathways.

Street Crossings

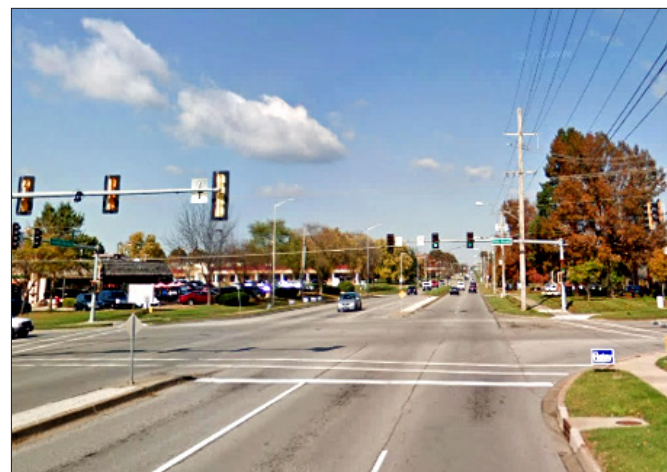
In addition to being able to walk along a street, the ability to cross a street is essential for convenient pedestrian use. The major streets of Quivira Road, 95th Street, and 87th Street pose major barriers to walking due to their wide cross-sections, high traffic volumes, and high speeds. It is unsafe for a pedestrian to cross these streets without using crossings specifically designed to accommodate pedestrians. The locations that a pedestrian can safely cross these barrier roads are at traffic signals. Most of the traffic signals in the study area include pedestrian crossing

accommodations for both the minor street and major street. The average distance between crossings in the study area is approximately 1/4 mile. The longest distance between crossings are found on Quivira Road, where several stretches of road have no crossing opportunity for over 1/2 mile. Crossing distances over 1/4 mile between crossings can substantially increase the amount of time and distance walked for what could potentially be short trips. This discourages children from walking to school, people from walking to restaurants over the lunch hour, or people walking between shops to access multiple destinations without having to drive between closely spaced destinations.

Having a sidewalk on only one side of the street can also be a major hindrance to pedestrians. If the beginning and end of a pedestrian's trip is on the side of the street without a sidewalk, that pedestrian must cross the street twice—once at the beginning and once at the end—if they wish to walk on the sidewalk. This can be particularly problematic for the disabled and elderly, since it is often impossible or unsafe for these users to walk on non-paved areas adjacent to roads.

TRAVELING BY TRANSIT

Transit service is provided by the Kansas City Transportation Authority's (KCATA) RideKC Bus Service within the study area. Funding for transit service comes from a mill levy for public transportation in Johnson County. Today there are three routes operating in the Quivira Corridor; Route 402 – Johnson Quivira and Route 475 – Quivira / 75th Street; and Route 495 – 95th Street that provide connections between Johnson County and Kansas City, Kansas and Kansas City, Missouri. The figures on this page show each route's alignment with the Quivira Road study area highlighted.



Existing JO stop / facilities at Quivira Road and 79th Street

These three routes operate on weekdays only and primarily in the AM and PM peak periods, with a 'flex' or on-demand service in the midday. In May 2017, the average daily ridership of Route 402 was 85 trips and Route 475 had 138 average daily trips. At the time of this study, Route 495 had just begun service and ridership information was not available.

KCATA collected boarding and alighting data for each stop in conjunction with this corridor study. Most stops have few boardings and alightings currently outside of the Oak Park Transfer Center but all stop locations do have transit activity at them. Generally, the majority of transit use is centered around the Oak Park Mall park and ride, with approximately 60 to 65 boardings and alightings daily. Other routes tend to have relatively low boardings and alightings daily, on the order of 1 to 5 daily and generally statistically insignificant.

In this segment of Quivira Road there are currently five northbound bus stops and four southbound stops. A multiple bus route transfer station and park and ride facility is located along the outer ring road of the Oak Park Mall near the intersection of Niemen Road and 96th Street. The Oak Park facility has a shelter to protect waiting passengers from the ele-

ments, provides route and schedule information and has good accommodations for those with mobility challenges.

Bus stops on Quivira are very basic, marked with a blue RideKC stop sign at bus stops only. According to KCATA these signs will soon be upgraded to reflect the new RideKC regional transit brand. No bus stops along Quivira have any passenger amenities such as benches, shelters, trash receptacles, or schedule information. In many cases these stops do not conform to the requirements of the Americans with Disabilities Act (ADA). Six of the eleven transit stops in the Quivira study area do not connect the adjacent sidewalk to the back of the curb, leaving a strip of grass between the sidewalk and loading area for a transit vehicle. These gaps make boarding especially difficult for transit users in wheelchairs or with mobility issues.

Bus stop spacing along the corridor is unusually long. Typical transit stop spacing may range from 1/4 mile to 1/2 mile. The average stop spacing along Quivira in the northbound direction is 0.9 mile and in the southbound direction 1.2 miles. Some of this is due to the Quivira overpass on Interstate 35, but opportunities exist to install new transit stops to improve access to the transit system.



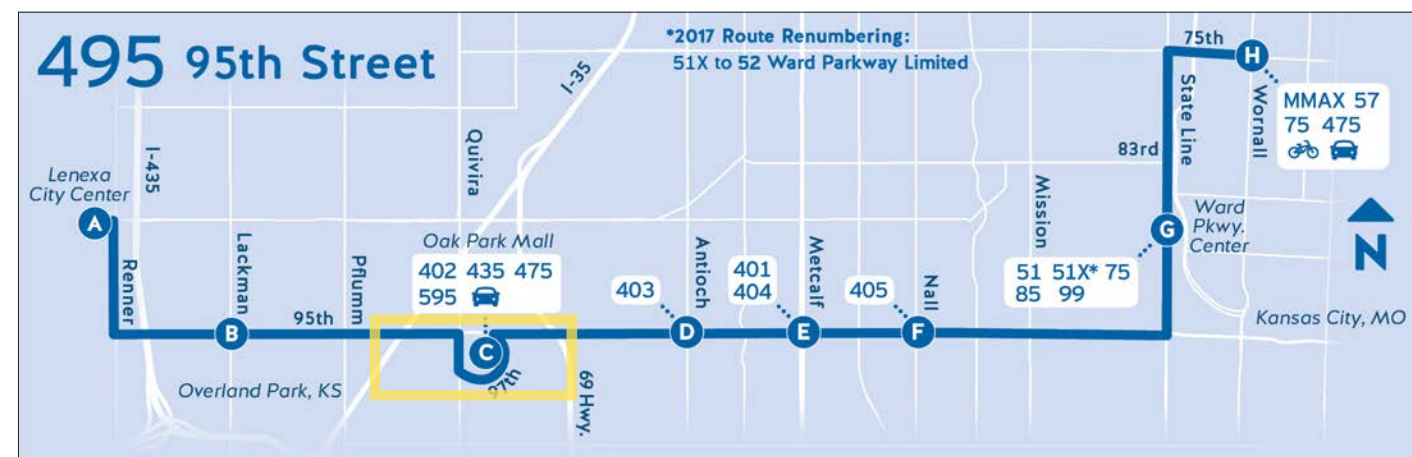
RideKC map for Route #475 (Quivira - 75th Street)

LEGEND

- Regular Route
- Schedule Time Point
- Transfer Options
- Bike Share Station
- FREE Park & Ride



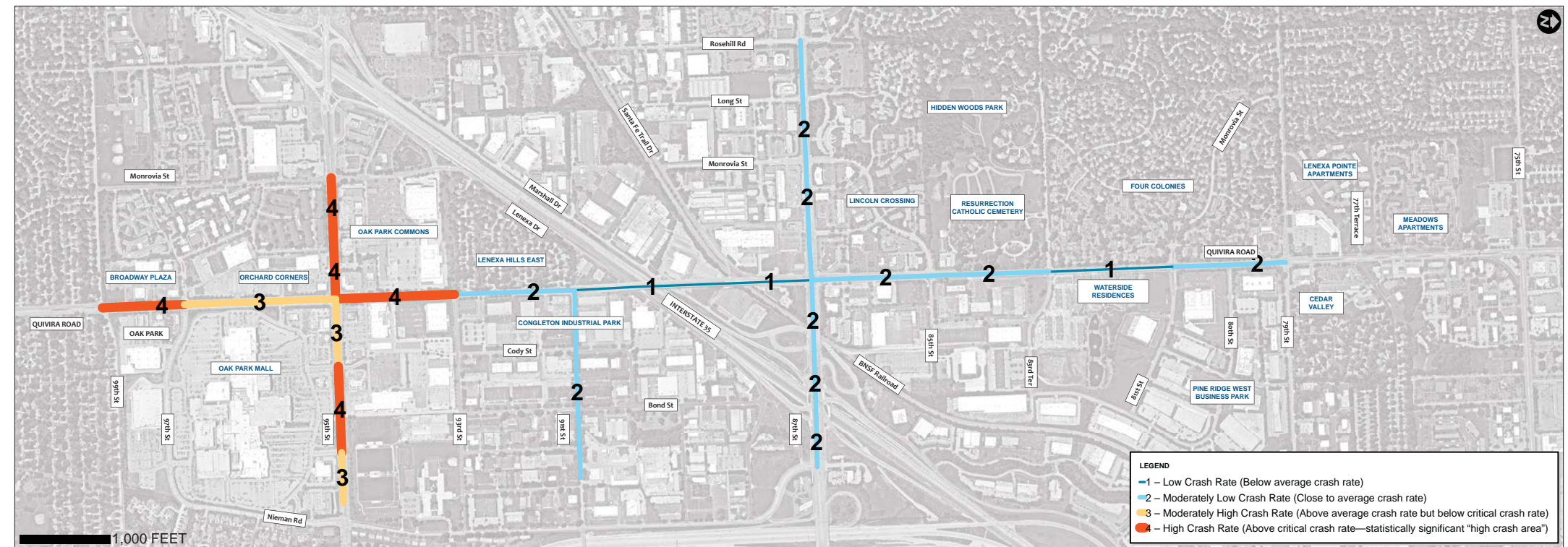
RideKC map for Route #402 (Johnson - Quivira)



RideKC map for Route #495 (95th Street)



Quivira Road & 95th Street: area of highest crash rates



ROADWAY SAFETY

The relative roadway safety for automobile users is generally good in the study area. Crash rates were calculated for all of the intersections and street segments on Quivira Road, 95th Street, and 87th Street. These crash rates compare the number of crashes to the traffic volume to provide a level comparison between intersections.

This is calculated by dividing the number of crashes by the amount of traffic allowing for an “apples to apples” comparison. Just because a street segment or intersection has a high number of crashes doesn’t necessarily mean it is an unsafe intersection. It may just mean that there is a high volume of traffic and thus more conflicts where crashes can occur. So a high traffic volume intersection may have more crashes than a low traffic volume intersection, but the low

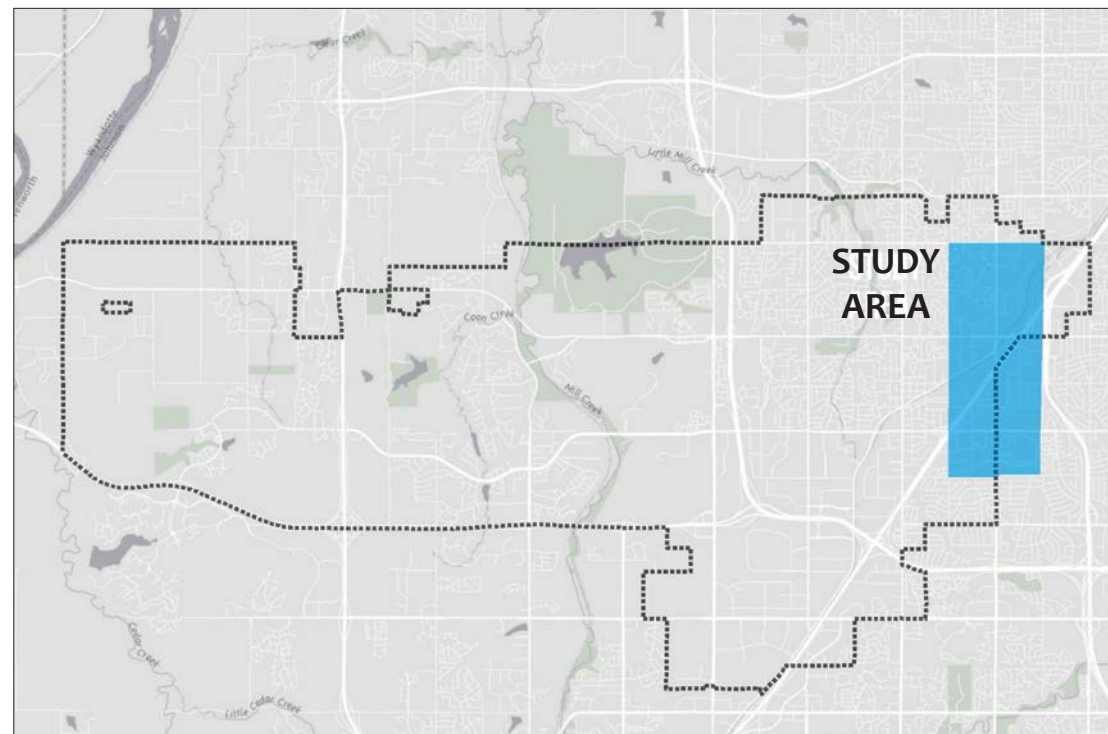
traffic volume intersection may have more crashes per vehicle entering the intersection. This would signify it as having a higher “crash rate” than the high traffic volume intersection.

In the study area covered by this report, there are a high number of crashes. But since the roadways also carry a very high volume of traffic, the crash rates tend to be relatively low compared to similar roads across the State of Kansas. None of the intersections studied were calculated to be “high crash” intersections. None of the street segments on Quivira north of 93rd Street or on 87th Street were calculated to be “high crash” street segments. Generally, the major roads in the study area north of 93rd Street have a high level of safety for automobiles.

South of 93rd Street, several street segments were calculated to be “high crash” segments. These segments include 95th Street west of Quivira, and Quivira from 99th Street to 97th Street and from 95th Street to 93rd Street. Most of these high crash segments coincide with areas that have a high number of unsignalized driveways, limited access management, and 5 to 9 lanes of traffic. The segment of Quivira Road that has limited access management contains a median to limit movements to right-in/right-out, however there are several closely spaced driveways that potentially contribute to the conflicts and problems in this area.

LENEXA QUICK FACTS

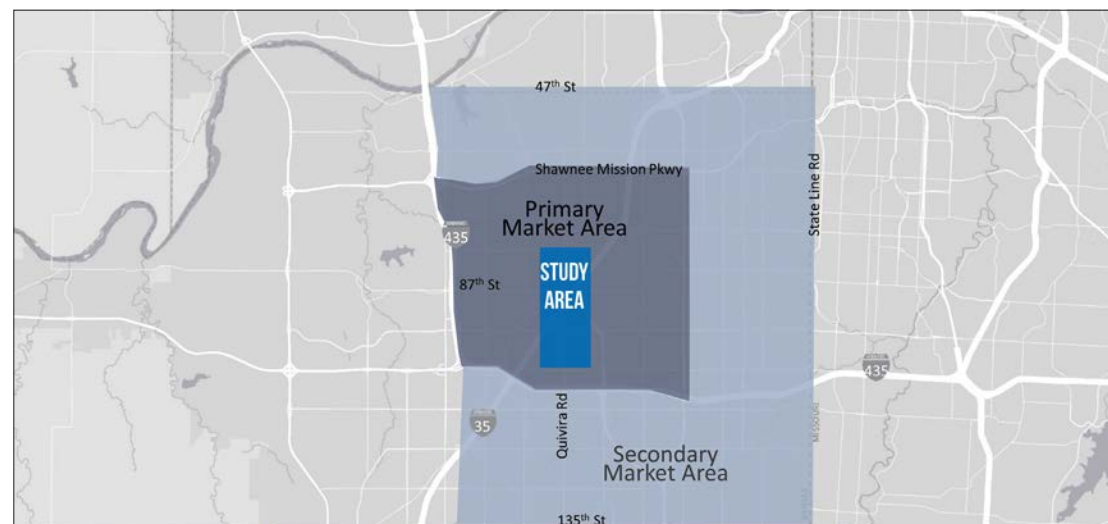
- POPULATION**
53,840
- LAND AREA**
34.4 square miles
- HOUSEHOLDS**
21,334
- MEDIAN HH INCOME**
\$81,000
- MEDIAN DISPOSABLE INCOME**
\$60,000
- TOTAL RETAIL \$ SPENT**
\$1 billion
- TOTAL SQUARE FEET SUPPORTED**
3 million
- RENTER OCCUPIED UNITS**
38%



Study area & Lenexa quick facts

STUDY AREA QUICK FACTS

- POPULATION**
5,173
- LAND AREA**
2.5 square miles
- HOUSEHOLDS**
2,390
- MEDIAN HH INCOME**
\$54,000
- MEDIAN DISPOSABLE INCOME**
\$44,000
- TOTAL RETAIL \$ SPENT**
\$79 million
- TOTAL SQUARE FEET SUPPORTED**
232,000
- RENTER OCCUPIED UNITS**
51%



	Primary Market Area	Secondary Market Area	Kansas City MO-KS MSA
Cities	Lenexa, Overland Park, Shawnee	Shawnee, Merriam, Mission, Roeland Park, Prairie Village, Leawood, Overland Park	-
Population	114,000	204,000	2,132,000
Median Household Income	\$61,500	\$80,100	\$60,200
Median Home Value	\$187,300	\$253,700	\$177,700

Residential market area map & quick facts



Study area context map



INDUSTRIAL/FLEX	RETAIL	OFFICE	RESIDENTIAL
SQUARE FOOTAGE 4.8M	SQUARE FOOTAGE 3.6M	SQUARE FOOTAGE 850K	HOUSING UNITS 2,500
VACANCY RATE 5.4%	VACANCY RATE 5.1%	VACANCY RATE 6.7%	VACANCY RATE 11.3%
AVERAGE RENT \$6.33/SF NET	AVERAGE RENT \$15.15/SF NNN	AVERAGE RENT \$19.26/SF FS	AVERAGE RENT \$962/MO

*As of November 2017. Sources: CoStar, Development Strategies

Study area real estate metrics

SUMMARY OF THE MARKET CONDITIONS

INTRODUCTION

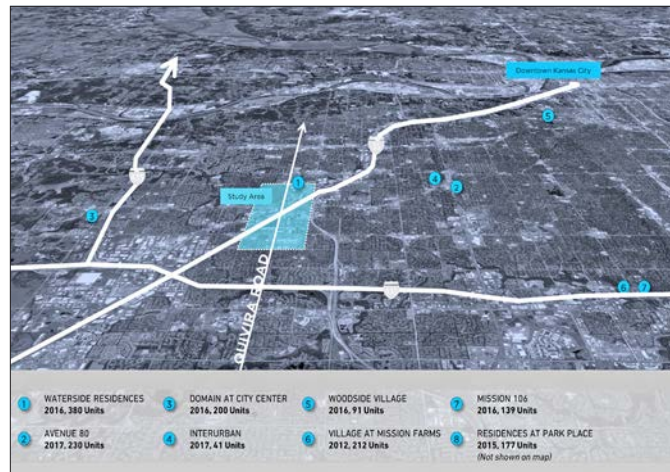
A market analysis was conducted of the primary and secondary market areas to identify local, regional, and national trends that impact development potential in the study area. Market boundaries are defined by hard boundaries, such as rivers, highways and other major thoroughfares, railroads, etc., as well as soft boundaries—changes in socio-economic condition and consumer preferences. A primary market Area (PMA) is typically defined as the smallest geographic area from which a high percentage (often 75 percent) of support for a project will be drawn. secondary market area (SMA) is identified as the origin for most of the remaining support. Overall, there is strong market demand for quality new development in the study area, Lenexa, and general market area. The greatest challenge is to find suitable development sites that can accommodate new development to meet future demand with efficient, multi-modal transportation systems. Key observations that impact real estate demand in the study area are:

- The study area is mostly built out, meaning that there are few available development sites, particularly sites with good access and visibility that are also large enough to support a reasonably-sized development.
- The study area and Lenexa are areas of high growth, with population growth of 8.0 percent and 11.7 percent, respectively, from 2010 to 2017.

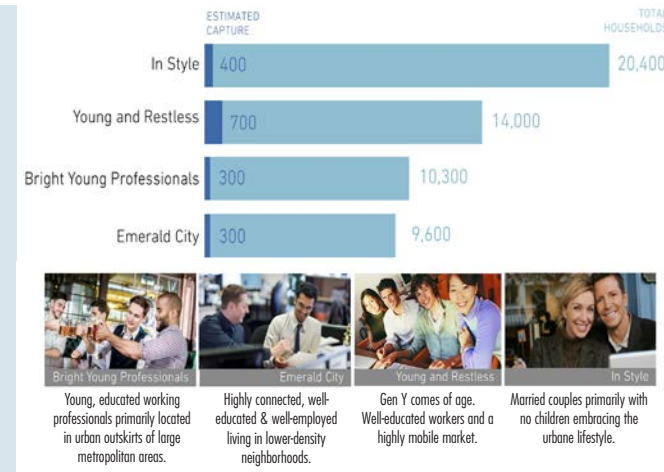
- The study area is an employment center with approximately 16,000 jobs and there is a desire to maintain or grow employment in the corridor.
- Current real estate metrics for the study area indicate that market conditions are stable.
- Infill development is already under way in the study area, indicating strong demand for new or updated real estate product of different types. Projects include Waterside Residences, a new build-to-suit industrial building, a new self-storage facility, and redevelopment/re-tenanting of the former Gordmans space in Orchard Corners.
- The study area has a marketable location in Lenexa, Johnson County, and the Kansas City region. It has good access to transportation networks, employment centers, and recreational activities.
- Demand for new apartments, retail, office, and other real estate is not limited by the strength (or weakness) of the market—the primary limitation for new development in the study area is finding a suitable development site.
- Redevelopment opportunities are primarily limited to sites of older shopping centers with higher-than-average vacancy rates.

Based on these factors, the market analysis focuses on uses that are likely to be components of a mixed-use redevelopment project with frontage along or direct access to Quivira Road. These uses include multi-family residential, retail, and office. Additional industrial development and/or redevelopment is possible within the study area, but this type of use is not likely to be targeted as part of a redevelopment of a retail center adjacent to Quivira Road.

QUIVIRA ROAD Corridor Study



Existing housing supply map



Existing residential demand

Nonetheless, the rental market in the primary market area is very stable—the average vacancy rate is 5.2 percent, and has been trending downward. Average rents have increased over the past several years to a current average of \$860 per month. New developments in this area—like Waterside Residences—are leasing their units at strong rates despite charging rents at the high end of their respective markets. This indicates that there is pent-up demand—and a need for—new multi-family development in the primary market area.

There are several successful models of what new apartment development could look like in the study area. The eight properties included on the Existing Housing Supply Map above were surveyed to obtain current performance metrics for new development types. The occupancy and absorption trends for these properties, as indicated on Housing Supply Summaries, indicate that the market for new construction apartments in the market area is strong.

Trends
Developers are actively looking for opportunities to build new infill multi-family—either free-standing or as part of a mixed-use development—in locations like the study area. Infill multi-family and mixed-use development anchored by apartments is a major trend in

older suburban areas within about a 20-minute drive from the urban core of Kansas City, Missouri. Such developments typically require some level of public involvement in the form of tax abatements, Tax Increment Financing (TIF), and/or other tools.

Demand
As shown in Existing Residential Demand, the study area could capture nearly 1,700 new households if suitable housing options were available. Demand is currently strong for a wide variety of housing types—ranging from affordable properties, to older properties with generally affordable rents, to new, luxury properties with relatively high rents. Demand for new housing options is projected to increase over the next several years based on strong projected population and job growth in Lenexa, Johnson County, and the Kansas City region. A key trend is that more households are choosing to rent, which has served to increase demand for rental housing.

OFFICE MARKET
Existing Conditions
There is less office square footage in the study area than retail; however, office users could make up an important component of a mixed-use development. A significant amount of new office development has occurred in the Kansas City region and Johnson County over the past decade. Most of the 850,000 square feet of existing office development in the study area was constructed before 2000, and is considered Class B or Class C. There is limited Class A space in the study area, which could present an opportunity in a redevelopment project.

Trends
Office rents and occupancy rates are higher in mixed-use development than free-standing office buildings or suburban office parks. For instance, office lease rates at Lenexa City Center, Mission Farms and Leawood Park Place range from \$28 to \$33 per square foot, compared to market averages of \$20 to \$25 per

RESIDENTIAL MARKET

Existing Conditions

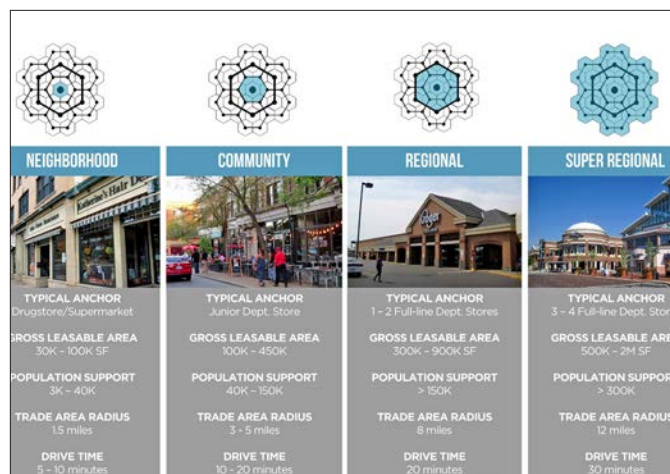
The residential market analysis focuses on the prospective market for multi-family development in the study area. This is because there are no suitable sites for single-family or townhouse development of larger scale. Most infill redevelopment projects in the Kansas City region include a multi-family component or retail anchor. The Market Area Map shows the primary and secondary market areas, which are considered the geographies from which most potential tenants for housing in Lenexa would originate. These geographies also represent the area in which most competition for potential tenants exists.

Supply

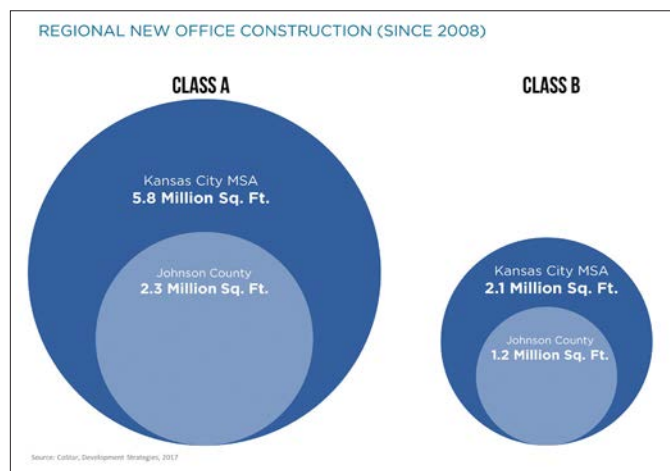
Until Waterside Residences was built, no new multi-family units were constructed in the study area for 20 years. The multi-family housing stock in the primary market area is aging: 86 percent of the nearly 18,000 units were built more than 20 years ago. This older stock of apartments creates challenges because they do not have modern amenities and finishes and, in some cases, cannot be redeveloped to compete with new development.

WATERSIDE RESIDENCES (Lenexa) Avg. Unit Size: 650 - 1,300 Sq. Ft. 1-2 Bedrooms Avg. Rent/SF: \$1.30 - \$1.66 Phase I in Lease-Up: 87% Occupancy 30 Units Leased/Month		DOMAIN AT CITY CENTER (Lenexa) Avg. Unit Size: 600-1,500 Sq. Ft. Studio - 2 Bedrooms Avg. Rent/SF: \$1.44 - \$1.83 96% Occupancy 10 Units Leased/Month
AVENUE 80 (Overland Park) Avg. Unit Size: 500 - 1,300 Sq. Ft. Studio-2 Bedrooms Avg. Rent/SF: \$1.60 - \$1.91 In Lease-Up: 60% Occupancy 15 Units Leased/Month		INTERURBAN (Overland Park) Avg. Unit Size: 800 - 1,400 Sq. Ft. 1-2 Bedrooms Avg. Rent/SF: \$1.36 - \$1.54 93% Occupancy 6 Units Leased/Month
VILLAGE AT MISSION FARMS (Overland Park) Avg. Unit Size: 585 - 1,300 Sq. Ft. Studio-2 Bedrooms Avg. Rent/SF: \$1.48 - \$1.92 98% Occupancy		MISSION 106 (Leawood) Avg. Unit Size: 788 - 1,400 Sq. Ft. 1-3 Bedrooms Avg. Rent/SF: \$1.57 - \$1.93 95% Occupancy 7 Units Leased/Month
WOODSIDE VILLAGE (Westwood) Avg. Unit Size: 600 - 1,500 Sq. Ft. 1-3 Bedrooms Avg. Rent/SF: \$1.80 - \$2.02 98% Occupancy 6 units Leased/Month		RESIDENCES AT PARK PLACE (Leawood) Avg. Unit Size: 950 - 2,000 Sq. Ft. 1-3 Bedrooms Avg. Rent/SF: \$1.61 - \$1.68 98% Occupancy
WESTBROOK VILLAGE (Shawnee) Proposed 105,500 SF Retail 530 Apartments Structured Parking Cost: \$113M \$25.3M Public Incentives (CID, TIF)		DISTRICT AT CITY CENTER (Lenexa) Proposed 175 Apartments 35,000 SF Retail 45,000 SF Office Structured Parking Cost: \$50M \$21.2M Public Incentives (TIF) + IRBs
PROJECT PROMONTORY (Overland Park) Proposed 154,000 SF Retail 420 Apartments Structured Parking Cost: \$97M \$23.4M Public Incentives		WOODSIDE VILLAGE SOUTH (Westwood) Proposed 16,500 SF Retail 244 Apartments Structured Parking Cost: \$20.8M \$11.2M Public Incentives

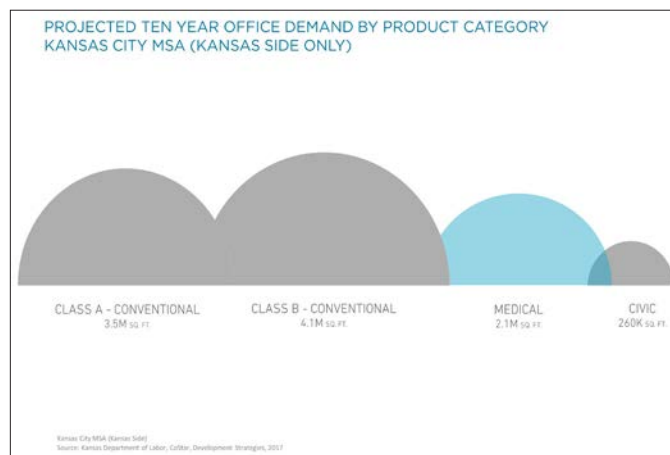
Summary of mixed-use and infill multi-family housing



Retail center classifications



Regional office construction summary



Summary of office demand

square foot. Occupancy rates range from 95 percent to 100 percent at the lifestyle centers, compared to occupancy rates of 90 percent to 95 percent for comparable Class A properties in Johnson County.

Demand

Robust projected job growth will drive demand for approximately 3.5 million square feet of new Class A office space and more than 4.0 million square feet of Class B office space in Johnson and Wyandotte counties over the next 10 years. Lenexa is well-positioned to capture a substantial portion of this development because of its location, its investment in Lenexa City Center, and positive demographic and economic trends. A portion of this growth could be captured in a high quality mixed-use development in the study area. Office uses are not expected to be a major component of a mixed-use redevelopment project in the study area; however, certain tenants may be attracted to the specific location, development amenities, and character of the area.

RETAIL MARKET

Existing Conditions

Retail located in the study area consists of neighborhood centers (see Retail Center Classifications) like Four Colonies Plaza, regional centers like Oak Park Commons, and the super-regional Oak Park Mall. Super-regional centers typically have a very large geographical catchment across state lines. The study area is a regional draw for shoppers because of its location with an I-35 interchange and because of existing anchors—namely Oak Park Mall. It has a competitive advantage because of its location and status as a super-regional hub.

Supply

Recent closings of big box stores in the Lenexa portion of the study area—Gordmans and Sports Authority—increased vacancy, but also created opportunities for redevelopment. As detailed in the Existing Conditions Report, the study area is home

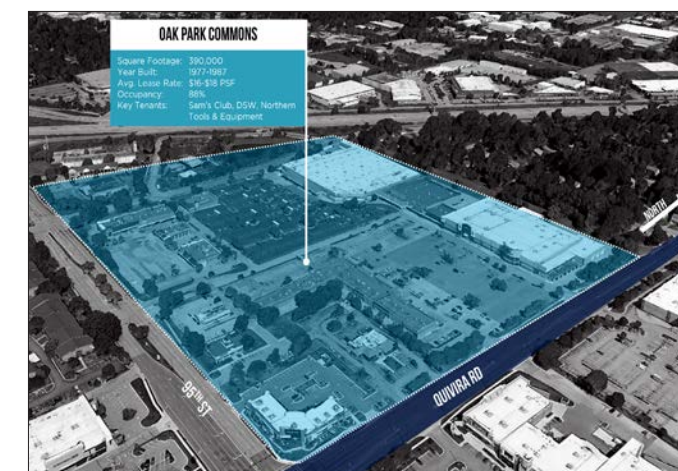
to 3.6 million square feet of retail space—1.3 million square feet of which is located in the Lenexa portion of the study area. Current retail vacancy is 5.6 percent in the study area, but is more than 13 percent in the Lenexa portion. Recently announced re-tenanting of the former Gordmans space in Orchard Corners will reduce vacancy from 13 percent to 10 percent as two new tenants will move in.

Details about the retail supply in the Lenexa portion of the study area are summarized in the three Existing Supply graphics, to the right, and in the Existing Conditions Report. Retail establishments in the study area, particularly at the intersection of 95th and Quivira, are well-located and this intersection should remain a retail destination for many years to come; however, there is a significant amount of retail development within Lenexa (nearly 3 million square feet) and within a 15-minute drive of the study area (more than 24 million square feet). There is generally more retail than the current population supports and both areas have developments, like 95th and Quivira, that are a regional draw—that is, they attract significant retail spending from non-residents.

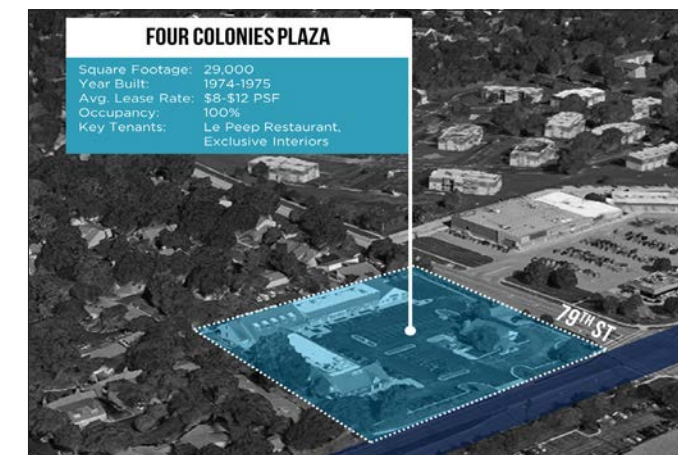
There is an oversupply of retail in the study area—yet, opportunity exists for retail and restaurant establishments that provide a unique experience. For instance, there is a lack of retail suites with less than 2,500 square feet, a size that attracts local businesses and startups. New restaurant concepts also target locations like 95th and Quivira—concepts like food halls, restaurant-grocery hybrids, and new or expanding franchises like Pie Five, Slim Chickens, or SPIN! Neapolitan Pizza. Grocery-anchored retail centers have higher occupancies and lease rates than more traditional centers, and there is market demand for additional grocery space in the study area. Even with this oversupply of retail, there is opportunity for specific retail products in the Study Area.



Existing retail centers: Broadway Plaza & Orchard Corners



Existing retail centers: Oak Park Commons



Existing retail centers: Four Colonies Plaza



Summary of retail opportunities

Trends

Older retail centers, or those developed before 2000, tend to have lower occupancy rates than newer centers and thus have difficulty competing. To compete with new retail development, older centers must be reinvested in, reconfigured, or converted to other uses. Some older retail centers are modernized with new facades (e.g., Orchard Corners in Lenexa and Oak Park Crossing East in Overland Park, both at 95th and Quivira) and reconfigured space (e.g., Regency Park in Overland Park at 93rd and Metcalf). Redevelopment of shopping centers into mixed-use developments is currently planned or under way in Shawnee (e.g., Westbrook Village at 75th and Quivira) and Overland Park (e.g., Gateway Plaza—now called The Promontory, at 91st and Metcalf).

Demand

There is demand for specific retail segments—like grocers—and retail environments that create a unique experience for shoppers. The current oversupply of retail in the market area and the continuously changing retail landscape certainly present challenges. Specifically, online shopping has substantially impacted big box retailers and traditional department stores, which has led to many store closures—retailers like Sports Authority, Gordmans, Sears, and many others. These closures have created challenges for

MISSION FARMS	LEAWOOD PARK PLACE	THE BOULEVARD	95TH & QUIVIRA
Leawood LOCATION	Leawood LOCATION	St. Louis Metro LOCATION	Lenexa LOCATION
36 ACRES	34 ACRES	6 ACRES	14-20 ACRES
15 MINUTE DRIVE TIME	15 MINUTE DRIVE TIME	15 MINUTE DRIVE TIME	15 MINUTE DRIVE TIME
145,000 TOTAL HOUSEHOLDS	143,000 TOTAL HOUSEHOLDS	179,000 TOTAL HOUSEHOLDS	169,000 TOTAL HOUSEHOLDS
\$65,200 MEDIAN HH INCOME	\$69,000 MEDIAN HH INCOME	\$53,800 MEDIAN HH INCOME	\$71,300 MEDIAN HH INCOME
44% HH INCOME > \$75K	47% HH INCOME > \$75K	37% HH INCOME > \$75K	48% HH INCOME > \$75K

Lifestyle center comparisons for quivira road

retail centers because of increased vacancy and the challenges of re-using big box space. The large building footprints need to be reconfigured to accommodate new users, which are typically smaller retailers.

The overall square footage of retail per resident is anticipated to decline over the next several years in response to these changes. However, growing areas like Lenexa will continue to see positive demand for retail because new households will generate new demand.

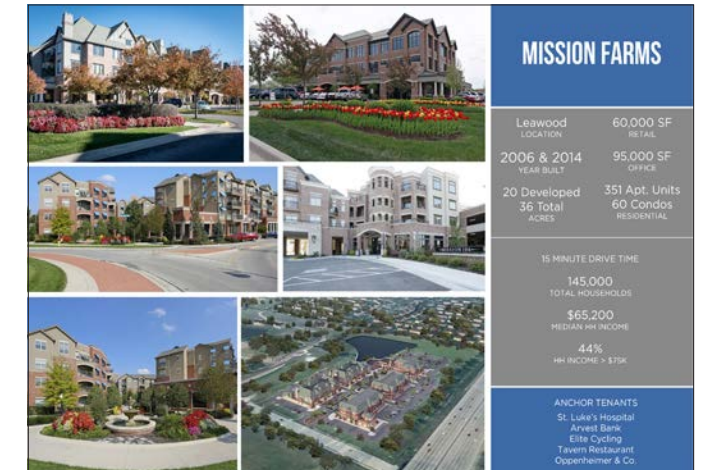
Lifestyle Centers

Many older centers (i.e., built before 2000) struggle because they are reliant on big box stores that can no longer compete with online shopping. In addition, as development continues to move outward, taking up greenfields, retail development follows the new households. One way developers could counteract the loss of tenants in older retail centers would be to redevelop the property as a mixed use, lifestyle center. Lifestyle centers are oftentimes anchored by high-end apartments complemented with ground-level retail and office uses, and public green spaces.

Transitioning single-use retail developments to mixed-use destinations diversifies income sources for property owners, balancing vacancy in one component with the strong performance of another. Because many of the existing retail centers located in the study area are older, rely on big box users, and have above-average vacancy rates, redeveloping the retail centers into mixed-use, lifestyle centers may be a viable option. Transitioning some of these centers to mixed-use lifestyle centers would enhance the long-term viability of those sites and the study area.

The Lifestyle Center Case Studies to the right summarize key metrics of two developments within the secondary market area, as well as The Boulevard in the St. Louis metro area, which was an infill redevelopment project located across from a regional mall (Galleria St. Louis). Existing lifestyle centers in the Kansas City region—namely Mission Farms and Leawood Park Place—have performed well in the market, garner relatively high rental rates, and are undergoing additional development.

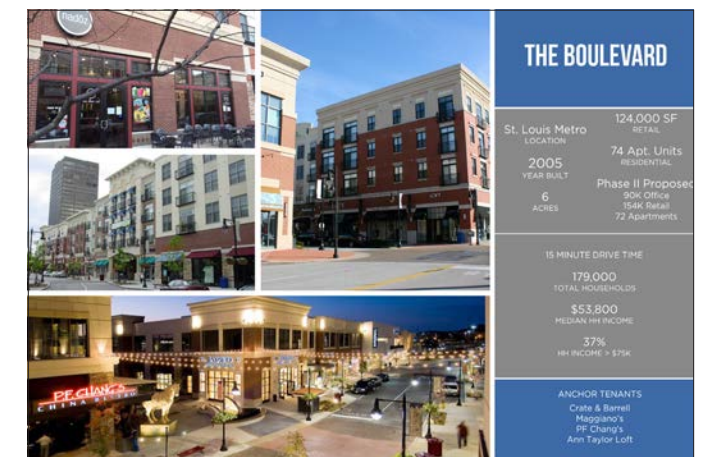
The demographics within a 15-minute drive of the study area compare very favorably to Mission Farms, Leawood Park Place, and The Boulevard. This suggests that a developer would consider the study area for a similar project assuming they could assemble a suitable site.



Lifestyle Center Case Study #1: Mission Farms



Lifestyle Center Case Study #2: Leawood Park Place;



Lifestyle Center Case Study #3: The Boulevard

Section 4.0

VISION FOR QUIVIRA ROAD



Workboard from visioning session

DEFINING THE VISION

The vision for improvements to the Quivira Road Corridor was defined with extensive input from the residents of Lenexa and City staff. The corridor should build on past successes, leverage the existing assets and continue the prosperity of the area into the future. The area has maintained a diverse set of businesses and residents since it's development over 50 years ago. The area has a mix of housing types from suburban single family subdivisions to dense apartment complexes. It includes small neighborhood retail establishments up to regional and super-regional shopping centers. It also includes a diverse mix of office, manufacturing, and biotechnology companies.

To accommodate these users, a vision for improving the area was formed to create:

- An inclusive environment that serves all of the diverse users and needs of the area today
- An area open to change and redevelopment to serve the needs of future generations of area users
- A street network that accommodates all modes of transportation including bicycles, pedestrians, and transit users but also maintains an efficient traffic flow for drivers
- An attractive, unique, and cohesive area that has a distinct sense of place



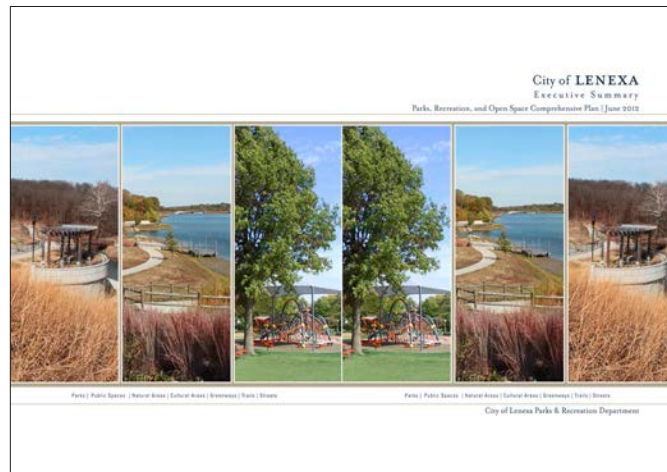
Sample design from the 2004 Quivira Road Study

GROUNDING THE VISION IN CITY GOALS

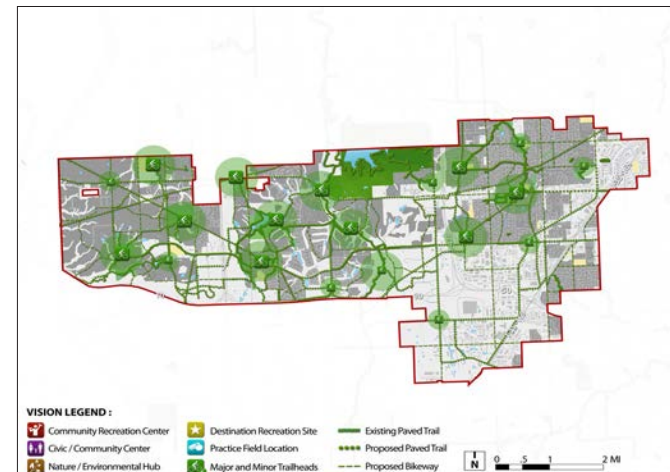
The vision laid out in this plan is grounded in goals set forth by the City of Lenexa and expands on past planning efforts. Some of the documents referenced as part of this planning project included City of Lenexa Comprehensive Plan, the City of Lenexa Parks, Recreation, and Open Space Comprehensive Plan, the Quivira Road Corridor Study (2004), MARC Regional Bikeway Plan, MARC MetroGreen Plan, and others.

The following is the vision laid forth in the **Lenexa Vision 2030** document:

“Lenexa is a progressive, vibrant city in the Kansas City Metro that blends a small town atmosphere and strong sense of belonging with the best of city life. Lenexa is a quality place to live, a cohesive, active community in which to play, work, and most importantly, a wonderful place to call home.”



2012 Parks, Recreation, and Open Space Comprehensive Plan



Vision for trails, bikeways, and trailheads

VISION FOR QUIVIRA ROAD

The original vision of the Quivira Road area was an auto-oriented suburb. The area was designed primarily to serve commuters who lived and shopped in the local area, but who worked in downtown Kansas City. Over time, the major centers of employment have shifted, and many people who live in the area now also work nearby. This has shifted traffic patterns throughout the region and along Quivira Road and I-35. In addition to this change in employment centers, the construction of the Quivira Viaduct in 1991 drastically changed the traffic patterns throughout the area, opening Quivira Road up as a major north-south arterial road.

In addition to the change in motor vehicle traffic patterns, the attitudes of the residents of Lenexa have changed with regards to transportation. This has come about with a new understanding of public health, community cohesion, and quality of life. There is a renewed desire to utilize other forms of transportation like walking, biking, and public transit. There also exists a new desire to live, work, and play in a centralized and cohesive community.

Today, the area contains a diverse mix of development types. This includes both luxury housing and affordable housing and jobs that range from service

and retail jobs to banking service and biotechnology manufacturing. It also includes both luxury and discount retailers. Because of the range of housing choices, job types, and retail establishments, the area has a diverse mix of people including younger and older residents. Both millennials and baby boomers are showing a renewed interest in active transportation and community living.

This great diversity and changing lifestyles and traffic patterns in the Quivira area has created a need for a changing transportation network and redevelopment standards. To realize the vision for Quivira Road in this environment, this study makes specific recommendations for transportation facilities, public amenities, and redevelopment guidelines.

The importance of efficient and convenient driving to the area and through the area cannot be overlooked. As a result, this study does not recommend any reduction in capacity for motor vehicles on the streets. Improvements identified in the previous 2004 Quivira Study should be implemented to address safety between 91st and 95th. To accommodate the active transportation needs for the area, a varied set of facility types in a connected network is proposed. These facilities are strategically planned to provide a convenient walking and biking network that connects area residents to area destinations and accommodates users of all ages.

Specific recommendations are included to increase the quality of life and enjoyment of area users. These include things like increasing the visibility and use of existing city assets like Hidden Woods Park and providing pleasant streetscapes for both drivers and people on foot or bike through the use of landscaping, public art, and street trees.

The development of private spaces is considered as well. To achieve the vision of a connected and centralized community, recommendations are made to enable and catalyze the construction of high quality lifestyle center developments.



Trail corridor from the long range vision

CONCEPTS, ROUTES & FACILITY TYPES

Building on the foundation of previous planning efforts, a primary strategy of the plan is to connect area residents, workers, shoppers, school children, worshipers, and others to their destinations in a convenient, enjoyable, and safe network of connected facilities. This is done by utilizing:

- On-street facilities like bike lanes and calm streets
- Off-street facilities like sidewalks and trails
- Enhanced transit amenities

The types of redevelopment envisioned have a distinct impact on private development. All developments should include:

- Quality multi-modal transportation connections from public streets to the front doors of businesses,
- Public gathering spaces and green space
- High quality construction and landscaping
- A mix of uses



Low altitude image of the Quivira Road Corridor

HOW TO USE THIS ACTION PLAN

This action plan details the strategies needed to achieve the vision of Quivira Road and the City of Lenexa. The plan includes recommendations for:

1. **Development Strategies**—redevelopment standards to foster the creation of new spaces to accommodate the changing demographics, lifestyles, and business needs in the area
2. **Transportation Network**—enhancements to safely and conveniently accommodate all users
3. **Placemaking Opportunities**—quality of life, beautification, and placemaking enhancements to foster a more cohesive and enjoyable community

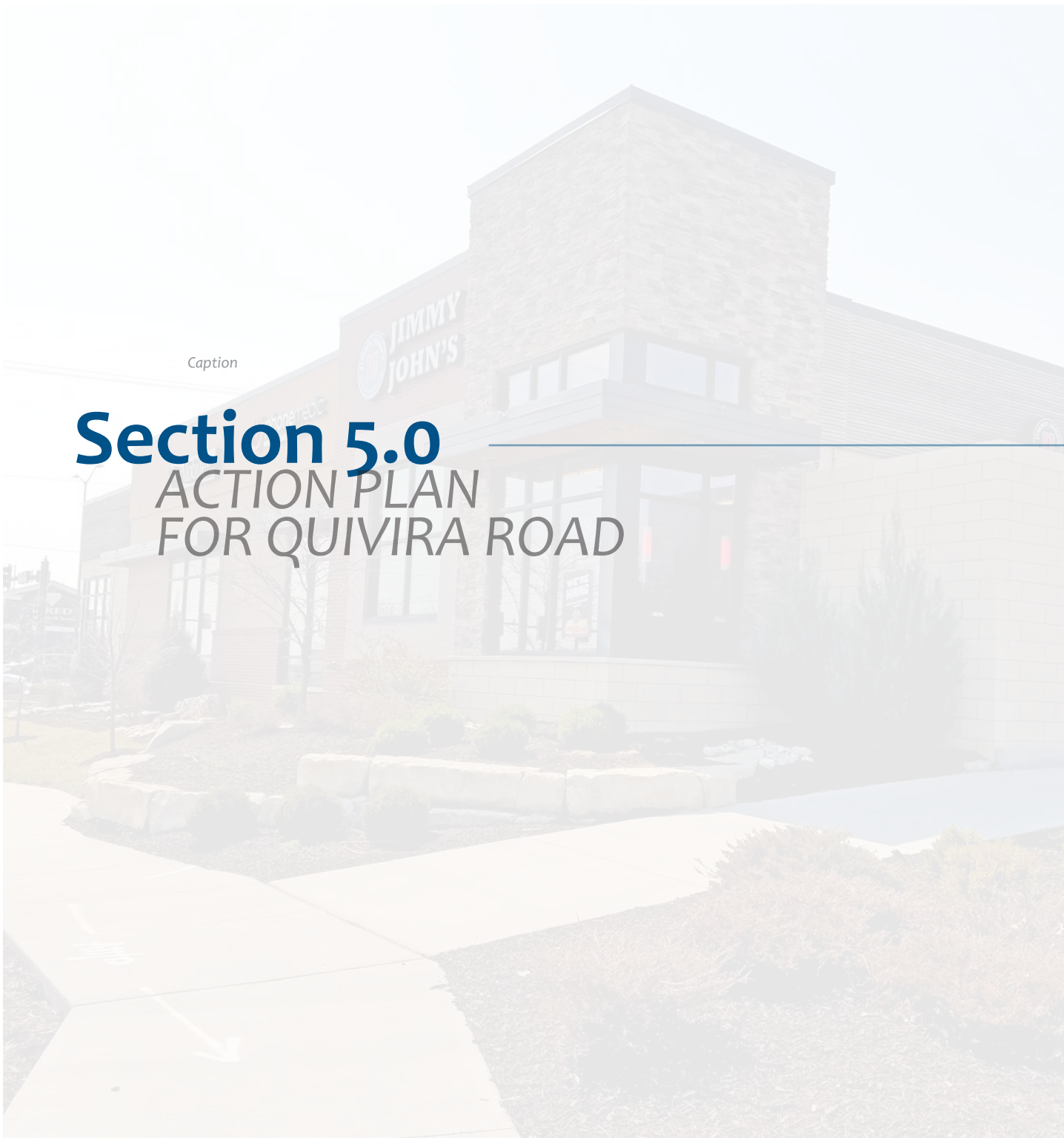
A summary of the recommendations that fit into each of these goals can be found in Section 6 of this document. Each of the three main areas of recommendations reflect the three goals of the project as developed by the Advisory Committee and the public:

- Goal #1** We want the corridor to be a major reinvestment opportunity that is positioned for long-term financial prosperity.
- Goal #2** We want the corridor to be accessible for multiple modes of transportation and walkable, workable, and livable for all.
- Goal #3** We want the corridor to be unique, attractive, and branded to support the distinct character of its place.

SYNERGIES WITHIN THE ACTION PLAN

Each of the strategies and recommendations could be implemented individually. However, the power of the plan comes through the interconnection of the recommendations. When combined, there is a strong synergy among the transportation, placemaking, and redevelopment goals.

A connected multi-modal transportation network will drive business to redevelopment areas increasing their success. New mixed use lifestyle centers will attract people who want to use the active transportation amenities through their accommodation of these users on site and their incorporation of parks and public gathering spaces. The placemaking elements on both the public streets and private redevelopment areas will foster a cohesive and unique area and foster a greater enjoyment and quality of life in the area. This in turn will drive more foot, bicycle, and transit traffic to the area as people are attracted to this space. As such, the strategies within this action plan should be considered as a cohesive whole, rather than three distinctive parts.



Caption

Section 5.0

ACTION PLAN FOR QUIVIRA ROAD

Section 5.1 DEVELOPMENT STRATEGY

"We want the corridor to be a major reinvestment opportunity that is positioned for long-term financial prosperity."



Three Potential Development Sites along Quivira Road

INTRODUCTION

A critical component of any corridor plan is identifying potential development and redevelopment opportunities. Such opportunities are limited along Quivira Road because of the lack of vacant development sites. Therefore, where there is strong market demand, existing developments that are under performing because of age, design, or other factors, are likely to be targeted for redevelopment in the future. Not all existing developments or locations are suitable for a redevelopment project. This is where feasibility testing is most useful—it is the process of vetting potential development projects through more detailed analysis, including site capacity, market analysis, economic vitality, and political support.

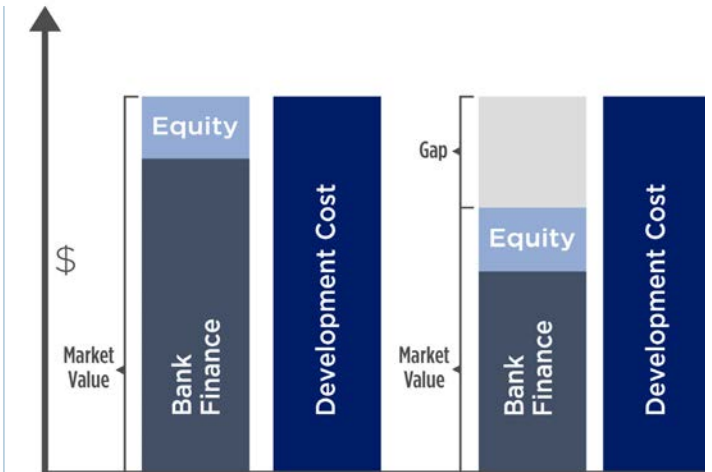
Site capacity analysis considers site size, development type, and the regulatory environment to determine the scale of development that can be supported. Market analysis evaluates real estate trends and statistics to determine what types of development—and how much—can be supported on a specific site. Economic vitality refers to the costs of developing and operating a real estate project. Finally, certain development types, specifically those that require subsidy, may or may not have the political support in a given community.

The market analysis concluded there is strong demand for a variety of uses in the study area. These uses—or typologies as summarized in the graphics to the right—are likely components of a redevelopment project.

Three potential redevelopment sites were identified based on the market analysis, evaluation of the age and performance of existing retail centers, and an assessment of site size/capacity:

- Site #1: Broadway Plaza combined with the southern portion of Orchard Corners
- Site #2: Oak Park Commons East
- Site #3: Four Colonies Plaza

Economic feasibility analysis evaluates and tests development products by determining development value and weighing it against development and operational costs. Where development value exceeds development costs, a project is likely to be viable and attractive to private investment. Where it is not, public or institutional funds are needed to make a project feasible. That is, the potential cost of the development is higher than its market value. The gap between cost and value represents the funds needed to make it viable—see Development Gap Illustration. Typically, this gap is filled by public incentives.



Development Gap Illustration

RESIDENTIAL		
QUALITY SUBURBAN APARTMENTS	UPSCALE APARTMENTS	SENIOR HOUSING
Avg. Rent Per Month \$1,000-\$1,650	Avg. Rent Per Month \$950-\$2,300+	Avg. Rent Per Month \$2,600-\$5,100 Independent \$3,600-\$6,200 Assisted
Unit Sizes (Sq. Ft.) 700-1,300	Unit Sizes (Sq. Ft.) 500-1600	Unit Sizes (Sq. Ft.) 400-1,000
Avg. Rent Per Sq. Ft. \$1.30-\$1.65	Avg. Rent Per Sq. Ft. \$1.55-\$2.10	Avg. Rent Per Sq. Ft. \$5.10-\$6.50 Independent \$6.20-\$6.60 Assisted
Units Per Acre 15-25	Units Per Acre 45-60	Units Per Acre 25-35
Target Market Young and Mid-Career Professionals	Target Market Young and Mid-Career Professionals	Target Market 25-35

Potential Residential Development Typologies

COMMERCIAL			OFFICE	HOTEL
ANCHOR TENANTS	IN LINE TENANTS	LIFESTYLE	CLASS A OFFICE	FULL SERVICE HOTEL
Lease Rate Per Sq. Ft. GLA \$18	Lease Rate Per Sq. Ft. GLA \$22-\$26	Lease Rate Per Sq. Ft. GLA \$30	Lease Rate Per Sq. Ft. GLA \$26-\$32	Average Room Rate \$140-\$160
Parking Spaces 5/1,000 Sq. Ft. GLA	Parking Spaces 4/1,000 Sq. Ft. GLA	Parking Spaces 4/1,000 Sq. Ft. GLA	Parking Spaces 6/1,000 Sq. Ft. GLA	Occupancy 70%
Tenant Types Grocery Store, Upscale Chain Restaurants	Tenant Types Mid-Upscale Restaurants, Coffee Shops	Tenant Types Mid-Upscale Restaurants, Coffee Shops, Place-based anchor	Tenant Types Financial and Legal Firms	Target Market Business Travel

Potential Commercial Development Typologies



Overview map of Site #1

SITE #1: BROADWAY PLAZA AND ORCHARD CORNERS SOUTH

If combined, Broadway Plaza and the south portion of Orchard Corners contain nearly 19 acres of land. Current uses include various retail establishments, office users, and restaurants. Both centers are aging and are experiencing above-market vacancy. Based on market research, the estimated acquisition cost for this site would be approximately \$1,250,000 per acre.

The owners of Orchard Corners recently announced that 42,000 square feet of the 66,000 square foot former Gordmans space will be re-tenanted. This will improve the short-term economic viability of the center. However, redevelopment of that property could still occur over the long-term planning horizon.

It is also possible that similar redevelopment projects could occur on each of the two properties separately and by different entities. The primary intent of this exercise is to show what is reasonably possible.

The site would be large enough to introduce new greenspace into the corridor and allow for improved connections to the pedestrian and bicycle network.

Scenario 1

This scenario tests the feasibility of redeveloping the existing properties into modern, high-end suburban shopping centers. This would require selective demolition and reconfiguring the current layout. As indicated in Feasibility Testing Scenarios, the development value would be approximately 93% of the redevelopment cost. Thus, this project would require a relatively small amount—\$4 million, or 7 percent of project costs—in gap funding.

BROADWAY PLAZA/ORCHARD CORNERS SCENARIO 1: RETAIL CENTER



BREAK EVEN POINT		PROPOSED DEVELOPMENT DETAILS	
		RETAIL Total Area 210,000 SF Avg. NNN Lease Rate \$22/SF EST. ANNUAL PROPERTY TAXES \$1.8 Million IMPLIED LAND VALUE \$1,060,000/Acre TOTAL SITE SIZE 19 Acres	
DEVELOPMENT VALUE	\$56M	DEVELOPMENT COSTS	\$60M
SURPLUS/(DEFICIT)	(\$4M)	Land Cost	\$1,250,000/acre
VALUE/COST	93%		

Feasibility Testing Scenarios for Site #1

Scenario 2

This Scenario tests the feasibility of redeveloping the sites containing a mixed-use lifestyle center with multi-family, office, and retail uses. This development would have a value-to-cost ratio of 96% and would require \$7 million in gap funding, or less than 4 percent of development costs. This would diversify development on the site, bringing new residents and consumers to the study area. It has the potential to produce significantly higher tax revenues than Scenario 1. These factors are key to accomplishing Goal #1 of this study—enhancing the long-term prosperity of the corridor. It

BROADWAY PLAZA/ORCHARD CORNERS SCENARIO 2: LIFESTYLE CENTER



BREAK EVEN POINT		PROPOSED DEVELOPMENT DETAILS	
		COMPONENTS Multi-Family Units 450 Avg. Rent/Month \$1,300 Retail Space 150,000 SF Avg. NNN Lease Rate \$30/SF Office Space 100,000 SF Avg. FS Lease Rate \$32/SF Total Building Area 650,000 SF ADDITIONAL DETAILS Implied Land Value \$900,000/ac. Est. Annual Property Taxes \$4.2M	
DEVELOPMENT VALUE	\$179M	DEVELOPMENT COSTS	\$186M
SURPLUS/(DEFICIT)	(\$7M)	Hard Construction	\$220/SF
VALUE/COST	96%	Soft Costs	14%
		Parking Garage	\$18,000/stall
		Land Cost	\$1,250,000/acre

would require slightly more gap financing than Scenario 1; however, it would bring more than three times the investment to the site than Scenario 1. Also, under Scenario 1, the site would continue as a retail center—a single real estate use type—that would be more susceptible to economic changes, such as what is occurring today in the retail market.



OAK PARK COMMONS EAST
 120,000 SF Existing
 38% Vacancy
 14 Acres
 \$1,000,000/Acre Acquisition
 \$14 Million
 Source: Development Strategies

Overview map of Site #2

SITE #2: OAK PARK COMMONS EAST

Oak Park Commons is a relatively large shopping center with multiple owners with various parcels being divided up in a challenging way. A developer might be able to assemble the site as noted above, or it may have a different shape. Certain elements—particularly Sam’s Club—are not included in these development scenarios.

The highlighted portion of Oak Park Commons contains 14 acres and consists of mostly retail tenants, plus a fast food restaurant. This site would be large enough to support a lifestyle center and it is also suitable for a reconfigured modern retail redevelopment. The development scenarios that were tested are the same as for Site #1: redevelopment as a modern retail center and redevelopment into a mixed-use lifestyle center.

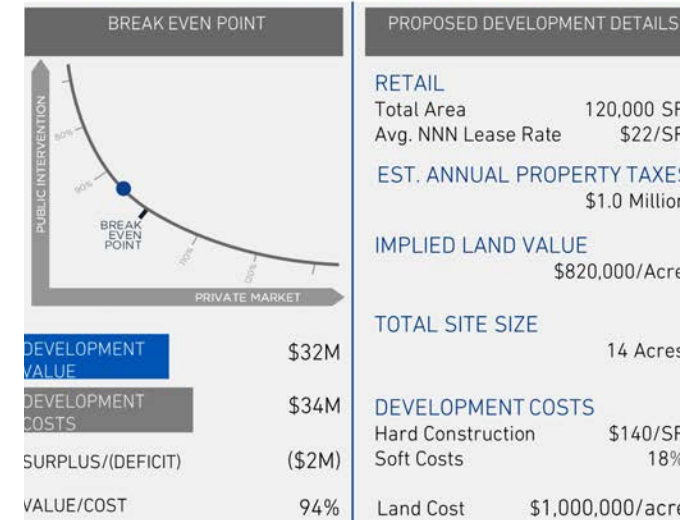
Like Broadway Plaza and Orchard Corners South, this site would be large enough to introduce new greenspace into the corridor and allow for improved connections to the pedestrian and bicycle network.

It is important to note that it is not likely that both Site #1 and Site #2 would be redeveloped as lifestyle centers, but either are a good candidate because of their size and location.

Scenario 1

This scenario tests the feasibility of redeveloping the existing properties into modern, high-end suburban shopping centers. It would require selective demolition and reconfiguring the current layout. As indicated in Feasibility Testing Scenarios: Site #2, the development value would be approximately 94% of the redevelopment cost. Thus, this project would require a relatively small amount—\$2 million, or 6 percent of project costs—in gap funding.

OAK PARK COMMONS EAST SCENARIO 1: RETAIL CENTER

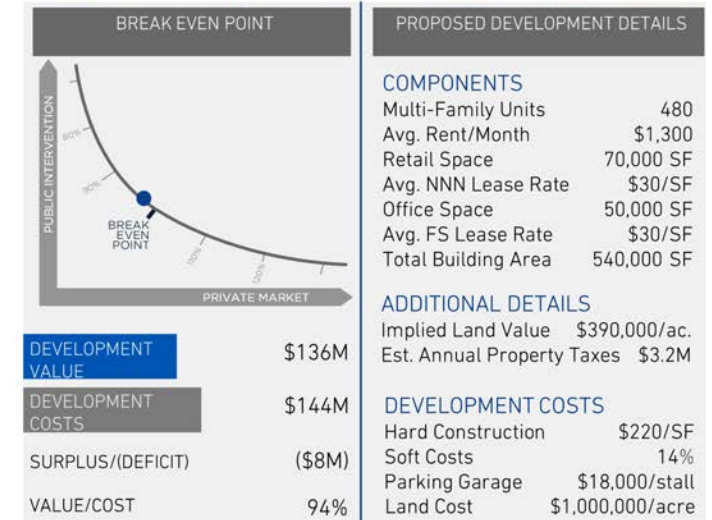


Feasibility Testing Scenarios for Site #2

Scenario 2

This scenario tests the feasibility of redeveloping the sites with a mixed-use lifestyle center with multi-family, office, and retail uses. This development would have a value-to-cost ratio of 94% and would also require gap financing—\$8 million, or 6 percent of the total development costs. This would diversify development on the site, bringing new residents and consumers to the study area. It has the potential to produce significantly higher tax revenues than Scenario 1. These factors are key to accomplishing Goal #1 of this study—enhancing the long-term prosperity of the corridor. In this example, this is again preferable to Scenario 1 because

OAK PARK COMMONS EAST SCENARIO 2: LIFESTYLE CENTER



it would introduce a mix of uses rather than rely on a single use type. This would make it less susceptible to changes in the real estate market and general economic trends. Scenario 2 would also bring significantly more investment to the site than Scenario 1.



Overview Map of Site #3

SITE #3: FOUR COLONIES PLAZA

Four Colonies Plaza is a neighborhood shopping center that is well-occupied, but has lease rates at the low end of the market. Most of the tenants are office or service users and the site contains approximately 4 acres.

A mixed-use or dense commercial development would be challenging at this location (considering the property abuts residential uses) because it would require a developer to go through the process of rezoning to a more intensive zoning classification.

One possible use that would enhance the long-term economic viability of the site and corridor that would likely also have community support is high quality independent senior housing. This type of facility is usually highly profitable, meaning it rarely requires gap funds.

Based on Feasibility Testing Scenario: Site #3, an independent senior housing facility would have a value-to-cost ratio of 111%, which is very positive for any development type.

This use would provide a new housing option in the study area that would allow some residents who no longer want to care for their homes to remain in the area.



Feasibility Testing Scenarios for Site #3



Sample development typology: The Boulevard; St. Louis, MO



Sample development typology: Zona Rosa; Kansas City, MO

THE CITY'S ROLE IN REDEVELOPMENT

Through public engagement, focus groups, and other interviews with citizens, developers, and others, a strong preference was communicated for lifestyle center development in the study area. Such development, more than perhaps any other development type, meets the three project goals of this project: it helps position the area for long-term prosperity, improves connectivity for all modes of transportation if designed correctly, and adds character to the corridor. Another stated preference is to add new parks and/or public greenspace in the corridor.

At the same time, most of the property in the study area is privately owned. The city cannot—and should not—force specific development action on property owners. However, there are multiple ways in which the city can promote the development types that meet the long-term vision for the corridor created during this planning process.

The City of Lenexa should consider the following:

- Create a zoning overlay district for specific development areas within the study area suitable for more dense lifestyle center development, allowing reduced setbacks, specific building heights (e.g., four- to five-story development is needed to make most infill lifestyle centers feasible), a mix of uses, and reduced parking requirements.
- Engage with current property owners to understand their plans for the development opportunity properties, communicate the vision of this plan, and discuss how the city could partner in a development that meets that vision.
- Define how the city will participate in projects that meet the vision of this plan, including, but not limited to:
 - Direct investment in the form of installing and/or maintaining a public park/plaza.
 - Offering economic incentives like TIF, CID, IRB, property tax abatement, etc.
 - Other public improvements, such as improved sidewalks, connections to bicycle network, road improvements, crosswalks, transit stop enhancements, etc.

CITY OF LENEXA ECONOMIC DEVELOPMENT INCENTIVES

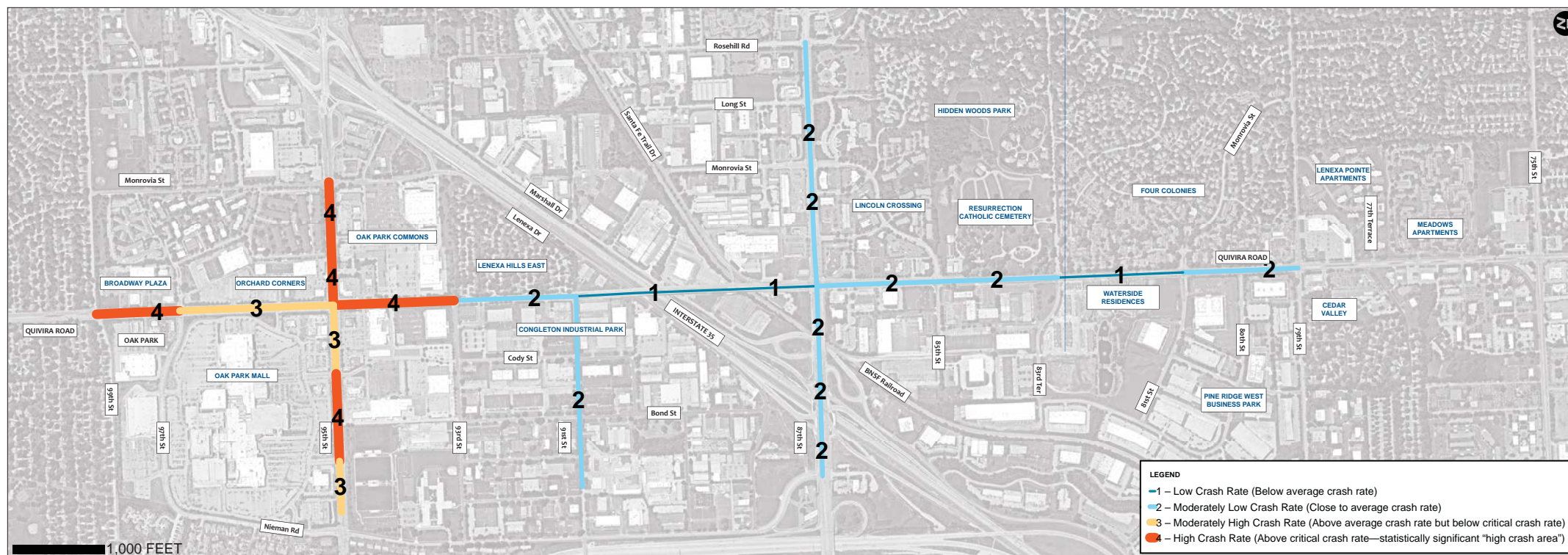
The City of Lenexa offers various economic development incentives to support projects that meets its long-terms goals and provide positive benefits to the community.

The city should also be clear that offering incentives or direct public investment is tied to redevelopment projects that meet the long-term vision of the plan. Incentives would be less likely to be offered for projects that do not meet the goals and objectives.

The following table summarizes specific incentives and tools that may be available in the study area subject to city policies and procedures and governing body approval.

City of Lenexa Economic Development Incentive Matrix			
Incentive Program	Description	Revenue/Benefit Source	Use Types
Community Improvement District (CID)	A CID typically involves a special tax or assessment that can be used to finance both capital costs and working capital expenditures including construction, renovation, maintenance, security improvements and marketing.	Property and/or sales tax	Typically commercial, but can also be applied to residential properties.
Special Benefit District	A Special Benefit District typically involves levying and collecting special assessments in the defined improvement district to pay for all or any part of the cost of agreed upon improvements. Improvements funded in Special Benefit Districts are eligible public improvements including streets, sidewalks, sewer lines and water infrastructure.	Special property tax assessments	Commercial and Residential
Tax Abatement	Tax Abatement provides a tax exemption from ad valorem property taxes with the developer paying a portion of their tax liability through a Payment in Lieu of Taxes (PILOT) with the City. A Tax Abatement may occur through an industrial revenue bond abatement or a constitutional abatement. Tax Abatements require performance standards and a cost-benefit analysis.	Property Tax Abatement	Commercial, Industrial and Manufacturing.
Tax Increment Financing (TIF)	TIF allows for the tax increment created from the incremental increase in property taxes over a TIF District's base tax year valuation to be used to fund certain improvements within a TIF District and identified in a project plan. In Lenexa, the use of TIF must advance certain city objectives including promoting and stimulating the general economic welfare of the state and City, redevelop or revitalize central business areas, or assist with development in areas that need assistance because of unique site constraints.	Property tax	Typically used for commercial properties, or commercial components of mixed-use developments. Can be used on residential properties, but that practice is less common.
Industrial Revenue Bonds (IRB)	IRBs are used for the financing of buildings, equipment, furniture and fixtures in projects that promote economic development. IRBs provide a sales tax exemption on construction materials for the project. The sale of IRBs and associated expenses are the responsibility of the developer.	Sales tax exemption	Commercial, Industrial, Manufacturing and Recreational

Economic Development Incentive Matrix



Crash rates by street segment along Quivira Road (source: crash data obtained from MARC's database)

Section 5.2 TRANSPORTATION NETWORK

"We want the corridor to be accessible for multiple modes of transportation and walkable, workable, and livable for all."

ACCOMMODATING ALL USERS

The key to accommodating all users and all modes of transportation is to understand the varying needs of different users. The sidewalk that a teenager might walk on may be completely unacceptable to a family walking with small children. Handicapped users also have very specific needs on pedestrian networks that require careful design and consideration. Similar to the different users of the pedestrian network, users of the bicycle facilities have varying needs and different users are accommodated by different facility types. The on-street bicycle lane that an experienced adult may feel very comfortable using may seem dangerous and unusable to someone who doesn't frequently ride a bicycle.

In understanding the differences between users, it is possible to provide facilities that can accommodate all of the prospective users. In order to achieve the

vision of an inclusive transportation network, this plan utilizes a variety of facilities and routes for bicyclists, pedestrians, and transit users. There is a great desire to walk and bike on the arterial roads in the area, especially on Quivira Road. However, this road may never be comfortable for some users. Because of this, an alternate routing network adjacent to Quivira Road has been laid out using low traffic volume, low speed streets to compliment the multi-modal network on the arterial streets.

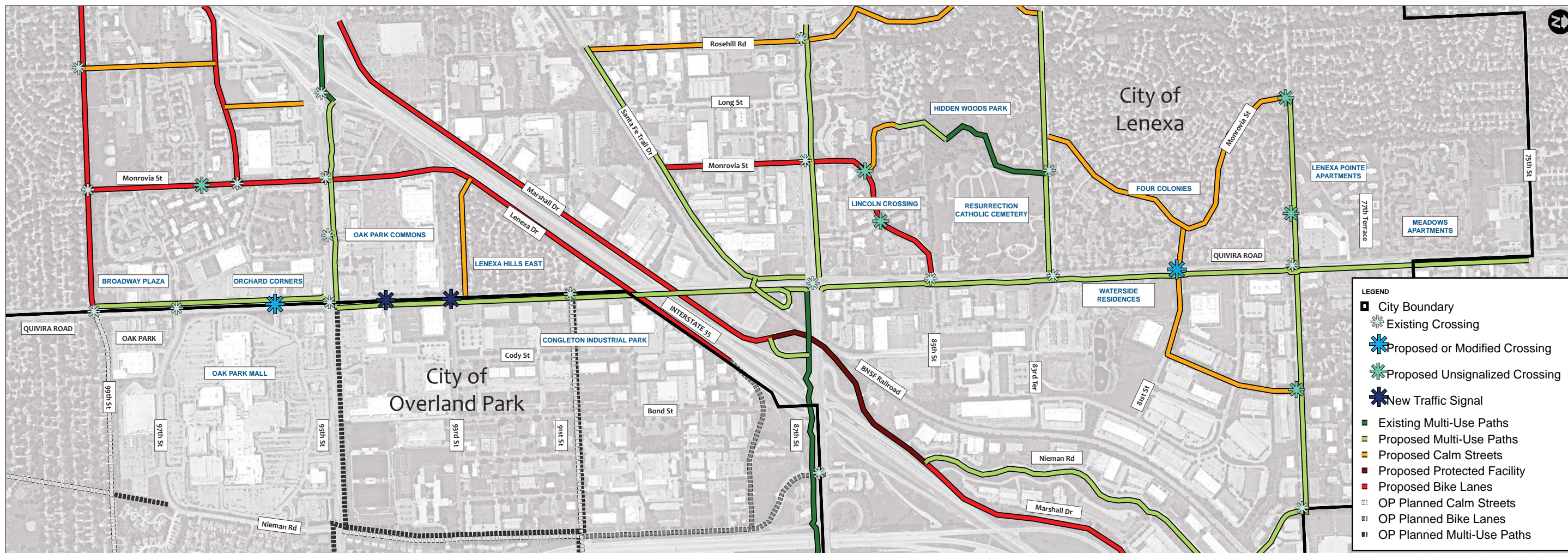
In addition to the non-motorized users, safety and quality of the driving environment was focused on in this plan. Currently, the roadway network accommodates motor vehicles well in terms of travel times, delay, and levels of service. But improvements can be made in targeted areas for safety and the overall driving experience can be improved through placemaking elements.

Arterial Street Network

Improvements were identified for driving along the arterial roads based on community input and the data analysis. There was a desire by the public to maintain or improve the driving environment in the area. The major streets of Quivira Road, 87th Street, 95th Street, and 79th Street have sufficient motor vehicle capacity to accommodate the traffic volumes well into the future. The signals on all of the major streets are currently on the Operation Green Light network of signal interconnection and are actively being optimized. This effort should be continued into the future and the signal optimization should be reevaluated on a regular basis to ensure that new traffic patterns are being accounted for. Also of note is the planned addition of a new right turn lane for the eastbound approach to Quivira Road on 83rd Street. This right turn lane will improve traffic operations at this intersection with the recent construction of the Waterside Residences development

In addition to motor vehicle operation, safety improvements are needed on Quivira Road in the segment from 93rd Street to 95th Street. Lenexa, in partnership with Overland Park, developed a Quivira Road Corridor Study in 2004 that made specific recommendations to the 95th & Quivira area. This study recommended that many of the driveways on Quivira Road between 93rd Street and 95th Street be eliminated, combined, or converted to "right-in/right-out" driveways. The study recommended that a new traffic signal be installed half-way between 93rd Street and 95th Street to provide access to the existing parking lots. The study also recommended that a center turn lane be added between 91st Street and 93rd Street to facilitate safer left-turn movements and improve traffic flow on this section of road. These recommendations will significantly improve the safety of the area and should be implemented.

In addition to the new signal installed half-way between 93rd Street and 95th Street, it was identified by the public and stakeholders that a new signal was needed at 93rd Street. This signal will serve to improve the motor vehicle access to 93rd Street and provide a high-quality crossing location for pedestrians. This crossing loca-



tion was deemed essential to provide access from the Lenexa Hills East residential subdivision to the Westridge Middle School for children and for recreational opportunities.

Side Street Network

To complement the trail network on the arterial streets, an adjacent network of bicycle and pedestrian facilities is planned. These streets will utilize on-street bike lanes, “calm streets” treatments, and include sidewalks on both sides of the streets. This network of low traffic volume, low speed streets will provide area users the choice of whether they feel comfortable walking and biking adjacent to lots of traffic, or if they would like a lower stress, but less direct facility.

Arterial Road Trail Network

Based on community input, the desire to use the arterial roads on foot and bicycle has to be balanced by a desire for a low-stress facility and a desire to maintain motor vehicle traffic to today’s levels. Because of these desires, this plan includes multi-use paths or trails to accommodate both bicycles and pedestrians along the major streets. These trails, when constructed to a 10-foot width and with safe intersection treatments will create a facility that can be used by the full range of pedestrians and low to medium skill cyclists. The arterial streets will remain unchanged and continue to accommodate motor vehicles and high skill cyclists.

BICYCLE IMPROVEMENTS PLAN

To ensure cyclists of any age and ability can traverse the entire study area, the vision was created with connectivity and mobility in mind. The vision accomplishes this by connecting facilities from end-to-end so that riders can traverse the entire city and all destinations with safe facilities. Different facilities were considered to align with the users, adjacent roads and traffic travel patterns.

Bicycle & Trail Facility Types

The following information was obtained from the NACTO Urban Bikeway Design Guide and the 2012 Parks, Recreation and Open Space Comprehensive Plan for the City of Lenexa.

Trails / Multi-Use Paths

These facilities are intended for use by cyclists and pedestrians and are physically separated from the street either by a barrier or a landscaped open space. The facilities are commonly referred to as “multi-use paths” when they are built adjacent to streets and “trails” when they are built independent of a street

(such as along a river greenway), but the design criteria are the same. The facilities are designed for two-way travel by all non-motorized users and are constructed wide enough for safe passing of pedestrians by cyclists. The facilities act as a supplemental network to the sidewalk, bike lane, bike boulevard, and street network for these users. They provide a high quality network of transportation facilities when fully integrated into these other facility types. Multi-use paths should not preclude the use of adjacent on-street bike facilities since these two facility types serve different types of bicycle users.

Bike Lanes

Bike lanes designate an exclusive space for bicyclists through the use of pavement markings and signage. The bike lane is located adjacent to motor vehicle travel lanes and flows in the same direction as motor vehicle traffic. Bike lanes are typically on the right side of the street, between the adjacent travel lane and curb, road edge, or parking lane. Bike lanes enable bicyclists to ride at their preferred speed without interference from prevailing traffic conditions.

Calm Streets / Bike Boulevards

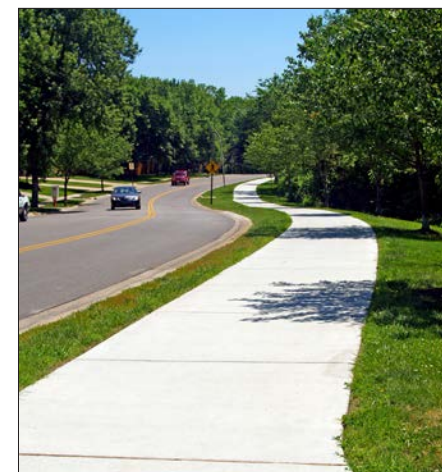
These facilities are streets that are specially chosen and designed to provide a safe, low-stress, and comfortable riding experience for cyclists. The most important part of the creation of a Calm Streets network is to identify streets that already have low traffic volumes and low speeds that also can be connected to create a continuous network of facilities. The streets are then augmented with pavement marking, signing, and traffic calming measures to ensure that cyclists can navigate the network, that there is a heightened awareness of cyclists by drivers, and that vehicle speeds and traffic volumes remain low. Designating a street as a Calm Street can also be beneficial to pedestrians, since the same wayfinding signage for cyclists can be used by pedestrians, and low vehicle speeds and traffic volumes also creates a higher quality walking environment.

<https://nacto.org/publication/urban-bikeway-design-guide/bicycle-boulevards/>

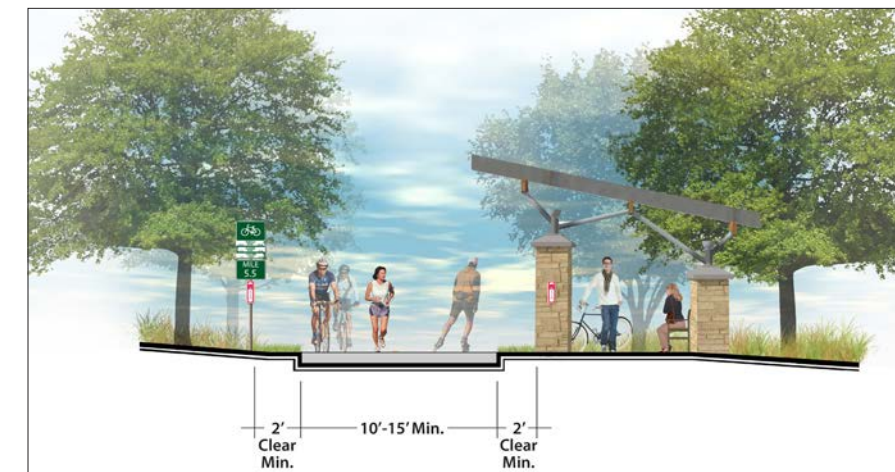
Trails / Multi-Use Paths

Design Elements

- Paved surface of concrete or asphalt
- All elements satisfying accessibility requirements in the Americans with Disabilities Act (ADA)
- Minimum 10' width to provide safe passing of pedestrians by cyclists
- Maintained 2' minimum side and 8' minimum overhead clearance including regular trimming of shrubs and trees
- Speed management of motor vehicles making turning movements across the facility
- Sufficient sight distance at intersections for motor vehicles crossing the facility



83rd and Lackman linear park

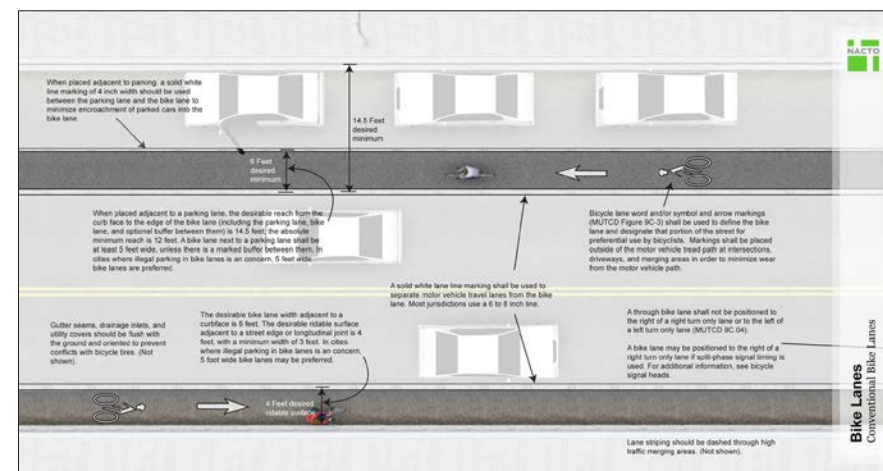


Typical multi-purpose paved trail (from 2012 Parks, Recreation & Open Space Comprehensive Plan)

Bike Lanes

Design Elements

- Street signs and cyclist wayfinding signs
- Minimum 5' wide bike lane with bicycle symbol pavement markings
- 6" wide (minimum) solid white pavement marking line separating cars from bikes
- Extension lines and green conflict zone pavement markings at intersections
- Bike boxes at signalized intersections for turning movements on bikes
- Ramps connecting bike lane to multi-use path at roundabouts and bike facility transitions
- Well-maintained pavement surface
- Modified on-street parking to avoid parked cars blocking bike lane



Bike lane design details (courtesy NACTO)

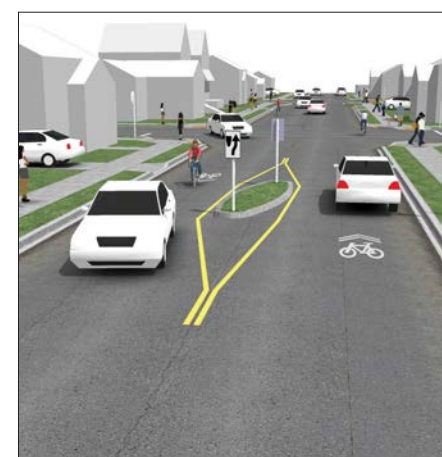


Sample of bike lane (courtesy NACTO)

Calm Streets / Bike Boulevards

Design Elements

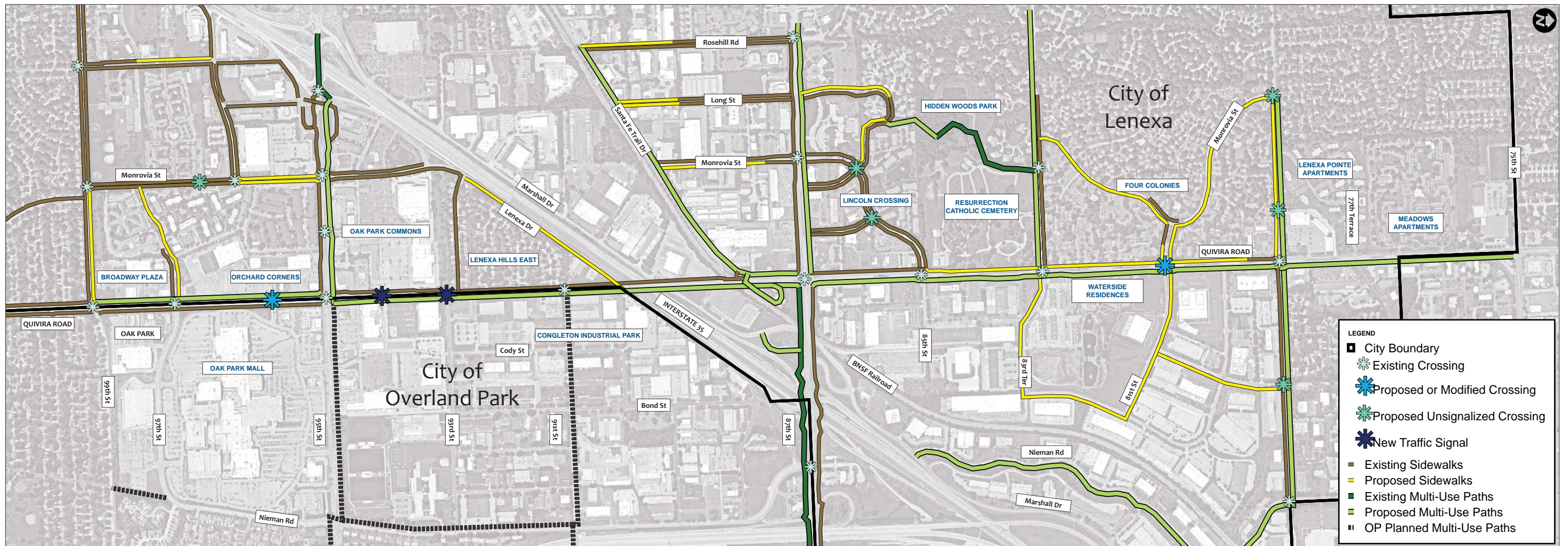
- Route planning
- Street signs, branded street name signs, and cyclist wayfinding signs
- Pavement marking including shared use markings and wayfinding markings
- Speed management of motor vehicles
- Traffic volume management of motor vehicles
- Minor street crossing modifications to minimize cyclist delay
- Major street crossing modifications to provide safe and convenient crossings



Sample of bike boulevard (courtesy NACTO)



Sample of speed management technique on bike boulevard: mini traffic circle



PEDESTRIAN IMPROVEMENTS PLAN

Existing Conditions Recap

The pedestrian experience along Quivira Road varies. In those areas where sidewalks exist, they are between four and six feet in width. Some sections don't have sidewalks or connections to other transportation systems. Some sidewalks are right alongside the roadway, while others have a tree lawn or landscaped area between the walkway and the vehicular travelway.

Pedestrian Crossings

Crosswalks should be designed to offer as much comfort and protection to pedestrians as possible. Intersection crossing should be kept as compact as possible, facilitating eye contact by moving pedestrians directly into the driver's field of vision. Stripe all signalized crossings to reinforce yielding of vehicles during a green signal phase.

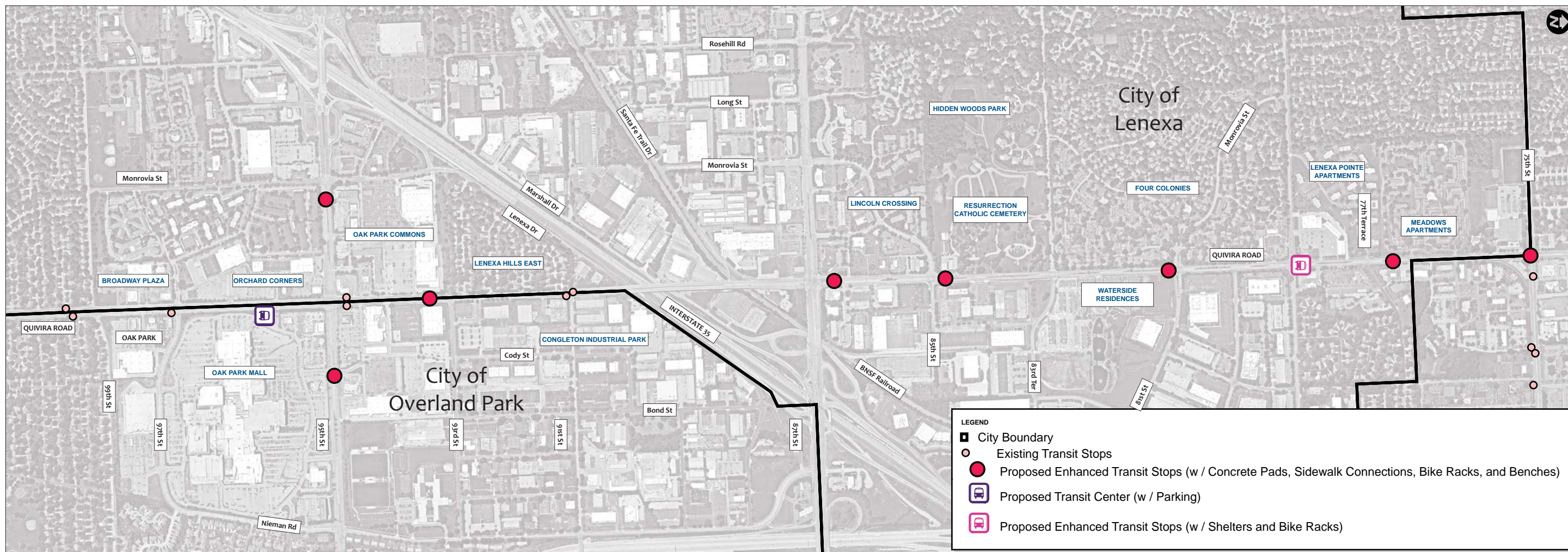
Stripe the crosswalk as wide or wider than the walkway it connects to. High-visibility ladder, zebra, and continental crosswalk markings are preferable to standard parallel or dashed pavement markings.

During the upcoming complete streets study, consideration should be given to creating guidelines and standards for putting in different crosswalk types. Street lighting should be provided at all intersections. Accessible curb ramps should be evaluated to be compliant and enhanced for safety.

For more information see:
<https://nacto.org/publication/urban-street-design-guide/intersection-design-elements/crosswalks-and-crossings/conventional-crosswalks/>



Example: enhanced crossing with pavement marking



TRANSIT IMPROVEMENTS PLAN

Currently there are three public transit bus service routes that serve the study area. These routes operate on weekdays only and primarily in the AM and PM peak periods. There are five northbound and four southbound stops, with minimal if any amenities, and one transfer station with a shelter and park-n-ride. Most stops are not connected to the greater sidewalk system with pedestrian walkways or sidewalks.

Transit Upgrades & Improvements

All bus stops should be upgraded to include a concrete pad and connection to the pedestrian sidewalk system. Universal street design should be used create comfortable and convenient connections at every transit stop for all users. Enhanced signage and stop times should be included at the stops to bring more awareness to the system. If development changes occur, combining transit stops or moving stops to align with other transportation systems should occur.

The Oak Park Mall site should be relocated to be alongside Quivira Road for more efficient transit service, as well as to enhance awareness for transit and provide better pedestrian connections to the surrounding area. This new location should still include a park-n-ride and transit stop and other transit amenities to boost service. Other transit amenities, like benches, shelters, trash cans, etc, should be considered at more stops in the future.



Sample transit amenities (from visual preferences survey)



Examples of placemaking improvements

PLACEMAKING STRATEGIES

All of these strategies should consider the surrounding context. The strategies are not all needed at every location and can be worked into other development or improvement projects.

1) Pedestrian Crosswalks

These should be designed to offer as much comfort and protection to pedestrians as possible and raise awareness for safety. Intersection crossings should be kept as compact as possible, facilitating eye contact by moving pedestrians directly into the driver's field of vision. Stripe the crosswalk as wide or wider than the walkway it connects. Use high-visibility ladder, zebra, and continental crosswalk markings.

2) Pedestrian Intersection Treatments

Intersections can be used as an opportunity to create gateways for the corridor. They can be branded using different materials, specifically in the pedestrian realm. These could be used as traffic calming measures in addition to creating character along the roadway. Identifying intersections at key locations to provide gateways and traffic calming will help brand the corridor.

3) Streetscape Lighting

Uniform street and pedestrian lighting will help improve safety and security for all users, while also providing a platform for branding, identity, and character throughout the area. It is important to ensure that streetscape lighting relates directly to the evening functions of the street and the street's character. Proposed lighting should be evaluated for the size of the roadway, the need for pedestrian lighting, and positioning to ensure that illumination serves potential users. Pedestrian lighting should be included where transit stops are located, adjacent to crossings with vehicular movements, at intersections, and near pocket parks and other public spaces.

4) Pocket Parks

Also known as mini-parks, these open space, small scale green spaces can be tucked into and scattered throughout the urban fabric where they serve the immediate local population. Despite their size, they have huge benefits for the areas they serve. They can meet a variety of needs for open spaces and greenery along the corridor. Pocket parks can be incorporated near transit stops, along the corridor where small areas of right-of-way are available, and into open areas in future developments. The characteristics of these public realm places can vary by design, function, and placement. They could be public plazas in lifestyle centers or small, green seating areas near transit stations along multi-use paths.

Section 5.3 PLACEMAKING OPPORTUNITIES

"We want the corridor to be **unique, attractive, and branded to support the distinct character of its place.**"

CONNECTING PLACE WITH TRANSPORTATION

A key issue for prosperous development is the relationship between transportation and land use. Therefore, the vision for Quivira Road includes a goal to better connect people with the places they want to be. Creating a vision for the types of places people would like to enjoy along Quivira Road enhanced by the multi-modal transportation vision to provide mobility and connectivity is the first step.

The link between land use, or place, and transportation has been studied for decades. It is more recently referred to as Placemaking. When considering integrated land use and transportation planning, placemaking promotes a simple principle: if you plan cities for cars and traffic, you get cars and traffic. If you plan for people and places, you get people and places.

The power of placemaking for Quivira Road means creating a vision of the types of enhancements and places that residents and participants want to see in the area and incorporating them into the built environment over time. Placemaking along this corridor will help create a destination in Lenexa for people to visit. It will create places for the greater community to come and enjoy and enhance the quality of life for residents by creating areas reimagined and reinvented by the community.

Strengthening this connection between people and the places they share, placemaking refers to the collaborative engagement effort taken to ask participants to tell us what they wanted to see along the study area and in any public realm spaces.

5) Trees, Landscaping & Raingardens

When it comes down to a return on investment for public improvements, soft infrastructure such as street and median trees, landscaping, environmental features, and natural elements definitely provide the most “bang for your buck”. It is important to create an attractive landscaping plan that is sustainable and maintainable. Street trees can enhance the walking experience by adding a sense of protection and enclosure through canopy. Other features such as landscaping and raingardens are not only good for the environment, they provide a sense of protection from vehicles and add beauty to the street. It is important to ensure that pedestrians can cross these features, and that elements do not block the view shed of bicycles and vehicles.

6) Trail Design & Detailing

The design of trails should incorporate essential elements that celebrate and elevate the bicycle and pedestrian experience. This should include trail branding, route amenities, safety and crossing signage, trailheads, shelters, lighting, and other amenities that support the needs of the cycling and pedestrian communities and encourage use.

7) Benches

Consideration should be given to adding places to sit, enjoy the city, and connect with the environment. Incorporating benches into transit stops for people to wait for the bus. Putting benches in pocket parks, along the trails, and roadside between developments will provide more opportunities for users to create more liveliness along the corridor. When the participants had the opportunity to vote on bench styles, they preferred benches that were more functional than artistic in nature.

8) Transit Shelters & Amenities

Amenities that support transit-riders such as bus shelters, electronic ticketing, service signage, real-time updates, and other features can increase ridership. Considerations for these types of amenities should include long-term maintenance and durability.

9) Branding, Public Art, Wayfinding & Signage

Often overlooked, these placemaking features put the finishing touches on great places. It is very important that users have an understanding of destination and directionality through simple, clear, and celebratory district wayfinding and signage. Users also enjoy the visual, emotional, and spatial stimulation that is created and fostered through public art, district branding, and identity elements in public spaces and streets.



Example of pedestrian crosswalks



Example of pedestrian intersection treatments



Example of streetscape lighting



Example of pocket park



Example of trees, landscaping & rain gardens



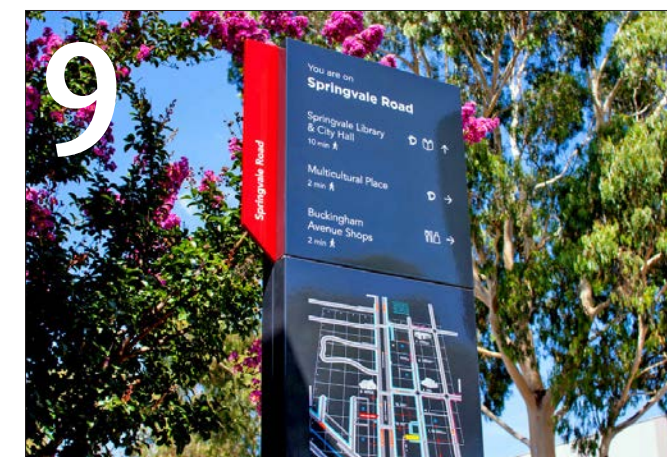
Example of trail design & detailing



Example of transit / pedestrian benches



Example of transit shelters & amenities



Public art, wayfinding & signage

Section 6.0 FINAL RECOMMENDATIONS / NEXT STEPS

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IMPLEMENTATION ACTIONS

This section is intended to guide the City in implementing the vision and goals developed through this planning process. This section is intended to outline the actions needed to move forward with implementation or future studies to accomplish the ideas set forth in this corridor study.

These actions fall into four main categories: policy and ordinance changes, engagement and operations, capital improvements, and further studies and analysis needed. These recommendations are organized into short- and long-term actions in order to help prioritize phasing; however, they are not intended to be in any particular order.

SHORT-TERM ACTIONS

- Adjust policies and ordinances to align with recommendations in this plan
- Engage property owners near potential redevelopment sites to discuss redevelopment opportunities
- Create an overlay district between 99th and 87th Streets enabling construction of “lifestyle” type mixed use developments and requiring the construction of multi-modal transportation infrastructure
 - Regulations for building height, parking, and setbacks
 - Requirements that developers provide public gathering spaces and multi-modal transportation infrastructure
- Investigate adjusting parking regulations to include parking maximums and reduced parking minimums
- Define how the city will participate in projects that meet the vision of this plan, including, but not limited to:
 - Direct investment in the form of installing and/or maintaining a public park/plaza.
 - Offering economic incentives like TIF, CID, IRB, property tax abatement, etc.
 - Other public improvements, such as improved sidewalks, connections to bicycle network, road improvements, crosswalks, transit stop enhancements, etc.
- Conduct Complete Streets Study and prioritize proposed improvements (sidewalks, crosswalks, facility types, design elements, etc)

- Optimize signal timing for vehicles along Quivira and adjust pedestrian timing (ongoing effort)
- Consider readdressing crosswalks to align with the new guidelines and standards identified in the Complete Streets citywide study.
- Construct connections to transit stops via sidewalk network
- Explore opportunities to purchase and install amenities for the transit stops
- Develop unified design standards for bicycle and pedestrian facilities
- Explore sidewalk/trail lighting needs and create inventory of where enhancements are needed
- Explore funding opportunities and partnership with Overland Park to construct the multi-use paths in the 95th and Quivira area
- Incorporate trees into street and median landscaping
- Construct sections of arterial road trail where opportunities arise. Coordinate with Overland Park for federal funding submittal for sections of corridor.

LONG-TERM ACTIONS

- Construct top priority improvements in the study area as identified in the Complete Streets Study
- Construct center turn lane, new traffic signals at 93rd Street and between 93rd and 95th Streets, and other improvements, as recommended in the 2004 Quivira Road Study
- Stripe high quality pedestrian crossing at new traffic signal at 93rd Street to improve safety
- Incorporate "calm streets" treatments along identified routes
- Rebrand corridor to include wayfinding signing and enhanced landscaping and street trees
- Evaluate connections across Quivira Viaduct for pedestrians and cyclists
- Improve street, trail, and pedestrian lighting based on analysis of current inventory
- Construct enhanced transit amenities
- Construct trail connection from Hidden Woods Park to 85th Terrace
- Coordinate with other municipalities to construct trail connection from Nieman Road to Turkey Creek Trail
- Work with Overland Park and KCATA to relocate Oak Park Transit Center



Section 7.0

ACKNOWLEDGMENTS

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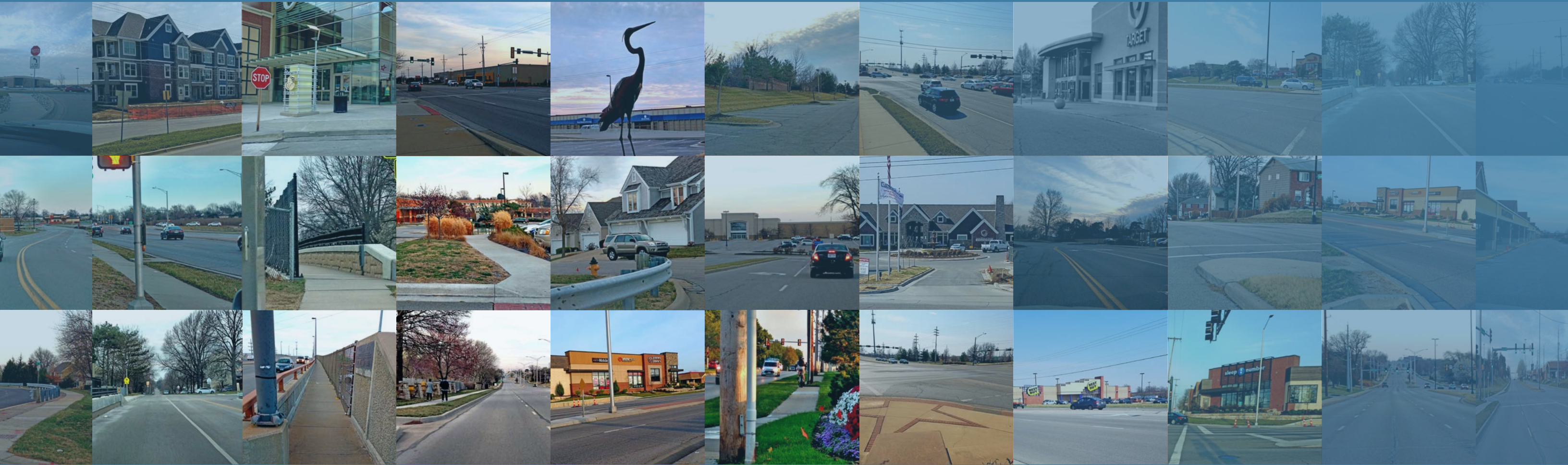
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