

City of Fort Worth



Corridor Plan

2025

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EXECUTIVE SUMMARY

The East Berry Street Corridor Plan outlines a vision and the strategic actions necessary to catalyze economic develop and transform East Berry Street into a walkable corridor for all-ages and abilities. The need for a detailed corridor plan that focused on implementation along East Berry has been established through previous 2002 planning efforts such as the Urban Villages. The 2022 Bond Program also identified East Berry Street as an established corridor in need of redesigning to complete the transformation to a corridor that supports walking, biking, and transit. The strategic actions of this plan will help advance implementation and set the stage for future design and construction activities in future bond cycles.

This study includes several key elements:

- A vision informed through a robust engagement process of listening to stakeholders, an advisory committee, residents, and businesses combined with technical considerations and performance expectations.
- Land use concepts that illustrate the vision through conceptual plans of catalytic sites, tailored to the identified needs for in-fill residential and commercial developments that provide residents opportunities to gather.
- Transportation enhancements that identify the necessary infrastructure to improve the corridor's safety, connectivity, traffic flow, and walkability.
- Economic Strategies that may be leveraged to realize the vision, catalyze development, and capitalize on both public and private sector investments throughout the corridor.
- An implementation strategy that outlines the necessary steps to realize the agreed upon vision and goals, including key infrastructure investments and a form-based zoning code that will allow for realization of the land use concepts.

The East Berry Street Corridor Plan followed a four-phase approach that kicked off in January 2023 and ran through adoption in Summer 2024. The various phases of the planning process included:

- Phase One: Vision, Goals, and Assessment
- Phase Two: Analysis
- Phase Three: Concepts and Recommendations
- Phase Four: Action Plan

Phase One: Vision, Goals, and Assessment: A Stakeholder Advisory Committee (SAC) was formed, consisting of at-large members representing various aspects of the community, that was charged with the development of the vision statement of the corridor, development of the goals, and assisted with facilitating strategies and actions that will support realization of the vision and goals. The following vision statement was established for the East Berry Street Corridor Plan:

"The future of East Berry Street will be a safe, equitable, inclusive, and thriving corridor that connects the diverse community and serves as a catalyst for community building that supports economic development, investments in technology, and shared prosperity."

To compliment the vision statement six goals were established:



1. SAFETY

Create a safe environment along the corridor that encourages people to walk and bicycle.



2. TRAVEL OPTIONS

Improve accessibility, availability, and reliability of public transportation by enhancing infrastructure and increasing connectivity with other parts of the City.



Develop an economically vibrant Corridor with job training and educational opportunities as well as access to investment capital and local development partnerships.

4. BELONGING



Create a welcoming sense of place representative of the community through public spaces, public art, and access to amenities.



5. COMMUNITY BUILDING

Promote compatible development that adds value to our community of all ages, fosters community partnership, and connects people with opportunity.



6. CONNECTIVITY

Support connectivity through community building, enhanced transportation options, recreational facilities, and expansion of public Wi-Fi.





During Phase One, a "Foundations Report" was completed to establish a comprehensive understanding of existing conditions throughout the Corridor.

Phase Two: Analysis focused on analysis and recommendations of key improvements that would be necessary to achieve the vision and goals of the plan. These recommendations serve as the foundation for the concepts developed. The analysis phase seeks to identify complementary transportation and land use strategies that relate to the following topics:

• Cross-Sections

• Pedestrian Experience

Bicycle Experience

Connectivity

• Transit

Management Right-of-Way and Utilities

Land Use

Technology and Access

Safety

Some of the key recommendations from Phase Two include:

East Berry Street Transformation: The Plan included proposed revisions to the existing cross-sections of East Berry Street. The proposed cross-sections were developed specifically to increase travel choice, improve safety, create an inviting condition that supports a walkable development pattern.

Improved Safety: This plan includes a multitude of safety recommendations for East Berry Street to create a safer experience for all mode, ages, and abilities. The proposed improvements include corridor-wide safety countermeasures such as implementing a 35 MPH speed along the entirety of the roadway, as well as spot improvements to increase safety such as roundabouts and enhanced crosswalks.

Enhanced Connectivity: Recommendations are included that focus on opportunities to enhance both vehicular and multimodal connections. A key finding includes improving east-west connectivity options as there is an identified need to distribute trips across a greater network resulting in shorter trips, reduced travel times and reduced reliance on East Berry Street. A second connectivity recommendation is the identification of Westshore Way, an alignment near Lake Arlington that would provide a connection between IH-20 and Spur 303 that would allow local trips to circulate without Loop 820. In addition, this roadway would serve as a trail amenity and compliment future development along the lake.

Land Use Concepts: This study identifies catalytic sites where redevelopment could occur to maximize economic impact through an analysis of the area's susceptibility to change. These locations were then evaluated and refined through public and stakeholder input gathered at the Solutions Workshop.

Phase Three: Concepts and Recommendations provides two categories of design concept illustrations:

- Street Design Concepts
- Development Design Concepts

The two major focus areas for which concept plans were developed are:

- Cobb Park/Riverside Transit/Trail Oriented Development
- Lake Arlington

Additional focus areas included:

- Renaissance Square Retail Center
- Neighborhood nodes at:
 - East Berry Street & Edgewood Park
 - Miller Avenue and Eastland Street
 - Village Creek Road and Eastland Street



Like the Development Design Concepts that are presented, several Street Design Concepts are presented along key segments of East Berry to illustrate the vision for the future of the Corridor. Those segments selected include:

- IH-35W Northbound Frontage Road to Mississippi Avenue
- Old Mansfield Road to Cobb Park Drive
- East Berry Street & US-287 Green Ribbon
- Miller Avenue to Edgewood Terrace
- Business Access and Transit Lane (BAT) & Bus Pads

In support of the concepts presented, the Zoning Framework and Catalyst Site Economic Strategies lay the foundation for realizing the vision, illustrated by the concepts. A Zoning Framework in the form of Form-Based Code is recommended to complement the evolving corridor context by calibrating the development regulations to locations that have the highest potential for walkable mixed-use redevelopment.



Catalyst Site Economic Strategies present and consider economic strategies designed to support the attraction of private investment in three sample activity nodes/place types along the East Berry corridor. The strategies contemplated range from public realm strategies and policies to public policy considerations. Successful implementation of this plan will require policy changes, administrative resources, and the utilization of various funding mechanisms like grants, tax-increment financing, and public/private partnerships to achieve the vision.

Phase Four: Action Plan of the East Berry Corridor Plan establishes a logical, realistic, framework for how the corridor can transform and how (re)development of the remaining area can occur over time. The Action Plan seeks to integrate, preserve, and enhance existing assets and transform the corridor into an active, amenity-rich, transit-forward neighborhood. Each goal set forth in this document has corresponding strategies and actions necessary to achieve the goal. The following strategies are utilized to achieve the goals and vision for the future of the corridor:

- 1. Enhance East-West connectivity throughout the corridor to distribute trips across a greater network
- 2. Ensure pedestrian connectivity is safe, continuous, and accessible for all ages and abilities to access residential and non-residential destinations throughout the corridor
- 3. Implement corridor-wide and site-specific improvements to enhance safety
- 4. Increase connectivity of the roadway network in recommended development areas
- 5. Utilize access management strategies along East Berry Street to improve safety and align the vision for future land uses
- 6. Expand the trails network to eliminate gaps and facilitate multimodal connections to destinations throughout the corridor
- 7. Expand bicycle facilities and related amenities to enhance multimodal connectivity throughout the corridor
- 8. Encourage transit usage by improving the user experience and eliminating barriers to utilization
- 9. Acquire the necessary right-of-way for roadway reconstruction
- 10. Integrate smart corridor technology and continue to upgrade utilities
- 11. Implement projects and policies that seek to enhance the natural environment
- 12. Utilize economic development policies and tools to strengthen the tax base and encourage economic mobility throughout the corridor



Introduction

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PROJECT OVERVIEW

East Berry Street is an east-west thoroughfare located in southeast Fort Worth. A six-mile segment of East Berry Street from IH-35W to Lake Arlington is the focus of this study. The study objective is to identify an integrated transportation, land use, economic development, and technology strategy that results in improved walkability, enhanced safety, additional travel choices, and a development pattern that supports the corridor vision and local community needs. The study will help advance design and construction activities funded in the 2022 Bond program; and prepare project for implementation in future bond cycles.

The study process includes:



VISIONING

Listening to stakeholders, residents, and businesses through a robust engagement process combined with technical considerations and performance expectations.



PREFERRED LAND USE CONCEPTS & TRANSPORTATION ENHANCEMENTS

Communicating the recommended land development strategy, transportation infrastructure needs, traffic operation improvements, transit service additions, and multimodal connections.



IDENTIFICATION AND TESTING ALTERNATIVES

Identifying land development concepts and transportation enhancements that support corridor objectives and evaluating appropriateness.



IMPLEMENTATION STRATEGY

Outlining the steps required to realize the agreed upon vision including a recommended form-based zoning code, supporting policies and key investments.

WHY EAST BERRY STREET?

The first outcome of the East Berry Corridor Study process was the Foundation Report (see Appendix D), which documented the existing conditions, key challenges, and opportunities affecting mobility in this corridor. As documented in that report, several major characteristics make this area of Fort Worth a prime candidate for change and increased opportunity.

The purpose of this study is to develop action items, concepts, and policies that will transform the corridor into a smart, walkable, and safe corridor for people of all ages and abilities to want to live and visit. A focal point of this study is to increase the sense of place along the corridor. The street serves a prominent thoroughfare for the region and should be treated as such. East Berry Street and its residents deserve investment and this plan acts as an initial step in creating a world-class smart corridor.





ADDITIONAL CONSIDERATIONS

A successful corridor planning process must also consider:

MARKET FEASIBILITY

Visioning is an important step to land planning. It's also important to consider development concepts that are realistic and market supportive. Market feasibility assessments ensure that recommended land uses, densities, and mixtures of uses fall within parameters that are locally viable.

SAFETY

It's understood that walking, biking, and driving through portions of the corridor can be dangerous. Recommended changes should be evaluated for their ability to contribute to improved safety conditions throughout the corridor.

TRAFFIC OPERATIONS

Corridor conditions should be improved in ways to maintain adequate traffic flow.

SMART STREETS

Implementing smart street strategies contribute to multiple valuable outcomes for communites including improved economics, environment, health, safety, and social equity.

EQUITY

Ways to ensure voices often missing in a planning process are included and avoiding disproportionate impacts while making corridor additions that improve access to opportunity and quality of life.



SENSE OF PLACE

We should aspire to create places that add lasting value. Future additions to the corridor should be evaluated against their ability to create a more walkable, safe, and vibrant corridor.

KEY DESTINATIONS

Cobb Park

Cobb Park is a 224.8 acre park located near the west side of the East Berry Street study area. This park offers many amenities to the community including recreation areas, public grills, benches, and shelters. Cobb Park also includes a trail that connects to the citywide Trinity Trails network.

Sierra Vista Transfer Center

The Sierra Vista Bus Transfer Station is located at the intersection of Berry Street and Riverside Drive, in Fort Worth, Texas. The Sierra Vista Transit Plaza sits within the Berry/Riverside Urban Village and acts as primary bus stop for residents in the study area.

Renaissance Square

Renaissance Square is a multi-purpose development in the heart of the corridor study area that provides amenities such as retail, dining, multifamily housing, and grocery. This area is key destination for economic development in the region.

East Berry Public Library

The East Berry Public Library is a valuable community center for residents in the study area. The library connects people to information as well as connect people to people. Additionally, the library is one of the few places in the corridor study area that provides public access to internet.

Lake Arlington

The west shore of Lake Arlington is a top priority location for quality open space as well as potential for various future lake shore developments and amenities for the East Berry community.









INGREDIENTS FOR SUCCESS



Safety in the East Berry Street study area has become an increasing concern for the City and residents. This corridor examines vehicle, pedestrian, bicycle, and transit safety and strives to develop recommendations that create an area where people enjoy to spend their time. CONNECT TO PARKS AND TRAILS

Trails are welcoming public spaces for everyone to get outside and be active. While, Cobb Park is currently the only location in the study where trails are present, this corridor study evaluates how to connect the trails to allow for safe pedestrian and bicycle travel on and around East Berry Street, including Lake Arlington. PROMOTE ECONOMIC DEVELOPMENT

The East Berry Street study area is home to thousands of residents deserving of an increase in economic opportunities near their homes. The development of Renaissance Square has been a success for the region and this plan explores ways to build upon that success and expand to more areas.



PLANNING PROCESS

Phase One: Vision, Goals, and Assessment (February 2023 - May 2023)

Began with collecting data on the current conditions regarding transportation, economic development, land use, and zoning and involved the initial phase of public engagement.

Phase Two: Analysis (May 2023 - September 2023)

Evaluated mobility operations, land use suitability, and potential sites for redevelopment or new development within the East Berry Street study area.

Phase Three: Concepts and Recommendations (October 2023 – November 2023)

Develop concepts for envisioning the future of East Berry Street and the developments that surround the corridor. The Solution's Workshop public involvement opportunity occurred during this time as well.

Phase Four: Action Plan (November 2023 - April 2024)

Provides a form-based code and zoning framework to implement the vision for the corridor and mixed-use nodes. This phase also includes the identification of projects by priority for implementation.

ADVISORY COMMITTEE

The Stakeholder Advisory Committee (SAC) consists of at-large members representing various aspects of the community, including the local pastor network, non-profits, Tarrant County representation, small business enterprises, and Chamber of Commerce. The SAC helps facilitate ideas, develop goals and objectives, and confirm actions items. The SAC also assists with public outreach and act as ambassadors for the implementation of the recommendations developed in this plan.

Advisory Committee Meeting





PROJECT TIMELINE JANUARY 2023 FEBRUARY TO Project Kickoff **MAY 2023** and Data Collection Vision, Goals, and Assessment 山田 **SEPTEMBER TO NOVEMBER 2023** Concepts and Recommendations **MAY TO SEPTEMBER 2023** Analysis ✓= □= □= □= **NOVEMBER TO MAY 2024 SUMMER 2024** Action Plan Plan Adoption

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Vision & Goals

VISION & GOALS

The Vision & Goals chapter of the East Berry Corridor Study serves as the foundational element on which the plan's recommended action items and codes are based. Because they provide specific and actionable direction, vision statements are essential to developing a successful corridor study. The vision statement and goals were created with the guidance of the Stakeholder Advisory Committee to understand the importance of East Berry Street to the community.

VISION

The future of East Berry Street will be a safe, equitable, inclusive, and thriving corridor that connects the diverse community and serves as a catalyst for community building that supports economic development, investments in technology, and shared prosperity.

GOALS



1. SAFETY

Create a safe environment along the corridor that encourages people to walk and bicycle.



2. TRAVEL OPTIONS

Improve accessibility, availability, and reliability of public transportation by enhancing infrastructure and increasing connectivity with other parts of the City.



3. UPWARD MOBILITY

Develop an economically vibrant Corridor with job training and educational opportunities as well as access to investment capital and local development partnerships.

4. BELONGING

Create a welcoming sense of place representative of the community through public spaces, public art, and access to amenities.



5. COMMUNITY BUILDING

Promote compatible development that adds value to our community of all ages, fosters community partnership, and connects people with opportunity.



6. CONNECTIVITY

Support connectivity through community building, enhanced transportation options, recreational facilities, and expansion of public Wi-Fi.





S Public Engagement



INTRODUCTION TO PUBLIC ENGAGEMENT

A public involvement plan guided the engagement and stakeholder input during the corridor study process. It involved a combination of in-person and online activities. Efforts were made to ensure traditionally under-represented voices were heard and to maintain public access to the planning process throughout the study. This chapter of the East Berry Corridor Study summarizes the public engagement efforts.



IN-PERSON EVENTS

Open House #1

One method used to engage the public in the planning process was through in-person public events. The first major public event for the East Berry Corridor Study, Open House #1, helped to round out the existing conditions phase of the study in May 2023. The open house was a come-and-go event featuring boards related to the initial findings pertaining to traffic, active transportation, land use, housing, amenities, safety, and more. This open house was designed to elevate the importance of this study in the minds of the community leaders and public, increase awareness, and gather valuable information. 38 community members and 15 staff members attended the open house.

Solutions Workshop and Open House #2

The East Berry Solutions Workshop and Open House #2 was the second major inperson public event held for this study conducted in September 2023. This charrettestyle workshop focused on having in-depth focus group conversation with community members and stakeholders and developing visuals of what the corridor and catalytic sites could look like. This event occurred over a 3-day period ending with an open house and presentation to display the results and obtain additional community feedback. 22 community members took part in the focus group discussion, and 21 attended the open house held at the East Berry Public Library.

Open House #3

The third and final in-person public engagement event was held in April 2024. This was a come-and-go event for the community to provide feedback on recommendations regarding improvements to enhance safety and comfort for all users, as well as the proposed form-based code zoning changes. Post cards were sent to property owners within a 300-foot buffer of the areas affected by the proposed zoning changes to give people an opportunity to learn about the zoning and benefits that it may allow. This event was held over two days with an attendance of 72 residents and business owners.

Open House #1



Open House #2





ONLINE ENGAGEMENT

Interactive Map

Another option for residents to provide input on East Berry Street was through an online interactive map activity. This engagement tool gave users the ability to place a point or line on a map with six comment types available to help organize the information, such as "Ideas or Suggestions" and "Connection Needed." Residents also had the ability to mark an up or down vote on other participant's ideas to indicate agreement or disagreement.

Survey

The survey collected information on resident's vision for East Berry Street, demographics, commuting patterns, mode preferences, concerns, and future project priorities. The survey itself was comprised of 22 questions. In addition to being available on the project website, the survey was printed and distributed at public events and was available in both English and Spanish. In total, 110 surveys were completed.

Figure 2. Interactive Map Results





Common Themes, Thoughts, and Concerns from Community Members



WHAT DID WE HEAR?

Over the course of the planning process, residents and business owners shared their insights and opinions on the what they would like to see in the East Berry area. Community members were engaged through stakeholder workshops, public meetings, and surveys.

There was general consistency in overall sentiment and priorities for the corridor. These include:

- Improved mobility and transportation facilities
- Increased safety and police monitoring
- More food options
- Preserving the existing community and it's values



WALMART FOUNDATION/UPLIFT ENGAGEMENT

During the East Berry Corridor Planning Study, a wide array of partners and stakeholders were involved including the Uplift Mighty Academy, Walmart Super Center, William M. McDonald YMCA, Renaissance Heights Foundation and the ACH children and Family Services.

Topics involving the safety of youth going to and from school, congestion, and how area stakeholders could engage with the community needs were discussed. Stakeholders began holing meetings to explore potential solutions. The initial solutions proposed sought to address a challenge around less than preferable pedestrian and vehicle traffic patterns to and from the area Walmart. The City of Fort Worth study team facilitated a series of meetings with the stakeholders who were committed to finding workable solutions.

After a bit of back and forth on various proposals, a paradigm shift occurred when an additional partner, Dr. Wayne Cohen, CEO of ACH Children and Family Services, suggested shifting focus to solutions that provide a positive intervention with the potential to offer enrichment for area students and that also could engage the entire community. This recommendation gained support of the other stakeholders leading to a more holistic solution, with more long-term viability.

The resulting proposal presented by the YMCA featured three key components:

- Providing teen memberships to students of Uplift Mighty; including access to the YMCA facility, sports, post high school readiness, childcare, and programs
- Establishing a before and after care for Uplift Mighty students, including transportation
- Developing redirection of student/parent traffic patterns to and from the school; away from the Walmart parking lot and store

The proposal has gained the support of the East Berry area with many community members volunteering to assist with providing a safe path from school to the YMCA. Additionally, Walmart offered to sponsor memberships through United Way to the local YMCA to encourage students and parents to drop off and pick up students at the YMCA.





Existing Conditions



INTRODUCTION TO EXISTING CONDITIONS

A wide variety of topics are analyzed during the initial stages of the planning process including a review of existing plans and policies, demographics, economic development, zoning, land use, infrastructure, and mobility conditions. This chapter summarizes results and establishes a foundational understanding of the issues and opportunities for the corridor. This chapter of the East Berry Corridor Study summarizes the findings from the Foundation Report (see Appendix D). The Foundation Report serves as the existing conditions assessment for the East Berry Street Corridor Study. This report was developed by taking a thorough look at the current conditions of East Berry Street and its surroundings in terms of transportation, economic development, zoning and land use, and the natural environment.

The Existing Conditions chapter with cover:



PAST PLANS REVIEW



Lake Arlington Master Plan - 2011

The Lake Arlington Master Plan was a collaborative project between the City of Arlington and City of Fort Worth focused on protecting and optimizing Lake Arlington as a water source and recreational area. Overall, this plan strives to promote quality development around the lake, encourage walking, biking, and water activities, and maintain safety and natural beauty.

One of the major projects presented in the Lake Arlington Master Plan that would impact East Berry Street is the proposed four-lane divided arterial along the west shore of the lake. According to this plan, the first phase of the new connection has been approved for design and construction from East Berry Street to Wilbarger Street. The proposed roadway is meant to provide northsouth connectivity to serve undeveloped land and future developments.

Along East Berry Street, the Lake Arlington Master Plan proposed an off-street trail. Additionally, an Urban Village from Loop 820 to Cravens Road is proposed with the intent to bring mixed-use development to the area. Urban Villages are small geographic areas zoned for dense, multiple-use development that is transit and pedestrian-friendly.

Berry/Riverside Urban Village Master Plan - 2011

Urban Villages were identified as areas that are ripe for development and have investment potential despite social and economic redevelopment challenges. Items specific to Berry/Riverside include:

- Extend the Trinity Trail system
- Widen Sycamore Creek bridge with wider sidewalks
- Construct a paved pedestrian/bike path

NCTCOG Mobility 2045 - 2018

Mobility 2045 is a metropolitan transportation plan developed by the North Texas Council of Governments that guides the implementation of multimodal transportation improvements, programs, and policies in the Fort Worth-Dallas metropolitan area. This plan outlines the entire regions general goals and recommendations for active transportation, safety, and roadway mobility.

This plan also proposes a Rail Transit connection that crosses the western portion of East Berry Street labeled as the Mansfield Line.





City of Fort Worth Race and Culture Task Force - 2018

The City of Fort Worth Race and Culture Task Force document was developed with the purpose of Fort Worth becoming a city that is inclusive, equitable, communal, and compassionate for all residents. This plan outlines transportation related disparities to be addressed in the city including street, sidewalk, lighting, and safety conditions. This document recommends the adoption of an Equity in Transportation Policy which includes a Five-Year Action Plan detailing specific items from addressing transportation related issues.

The Stop Six Choice Neighborhood Transformation Plan - 2019

Updated in 2019, the Stop Six Choice Neighborhood Transformation Plan provides a vision on creating a revitalized neighborhood area in east Fort Worth. This plan's boundary area overlaps with the set boundary for the East Berry Street corridor. One of the community-identified goals provided in this plan is to improve transportation and mobility through improved transit service, new and improved sidewalks, and new bike lanes.





City of Fort Worth Active Transportation Plan - 2019

The Fort Worth Active Transportation Plan (ATP) serves as the master plan for all non-motorized mobility in the city including walking, biking, and wheelchair use. This plan defines the priority infrastructure in Fort Worth to enhance the pedestrian and bicycle facilities to provide a safe, comfortable, accessible, and equitable network that connects to the Fort Worth transit network. This plan also includes a policy and procedure framework which provide actionable items for the city to implement to support meeting the goals.

The ATP outline multiple priority projects on or near East Berry Street that are relevant to this corridor study including high-priority sidewalk gaps and bicycle projects. East Berry Street is identified as a top 150 street for bicycle facilities. In addition, Berry Street has top 300 sidewalk gaps within the City. Two of the City's top 20 priority trails are within this corridor, including number 10 ranked Village Creek Trail connecting Cobb Park to the Carter Park neighborhood and number 20, the Lake Arlington Trail connecting Rosedale Street to Berry Street, as well as a high-priority trail project along the west shore of Lake Arlington from Rosedale Street to East Berry Street.



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City of Fort Worth Park, Recreation, and Open Space Master Plan - 2020

The Fort Worth Park, Recreation, and Open Space Master Plan serves as the City's guide for restoring and maintaining parks, expanding recreational opportunities, and preserving Fort Worth's natural, historical, and developed resources. There are multiple parks that are relevant to the East Berry Street corridor. Parks found on or near East Berry Street include:

- Cobb Park
- Edgewood Park
- Ciquio Vasquez Park
- Morningside Middle School Park
- Ellis Park

- Marie F. Pate Park
- William McDonald Park
- Bunche Park

Eugene McCray Park at Lake Arlington

TxDOT Southeast Connector/Loop 820 Project - 2020

The Southeast Connector is a current TxDOT project that will reconstruct and add capacity to IH-20, Loop 820, and US-287 in southeast Tarrant County. The project spans around 16 miles and adds lanes and multiple frontage roads along the expansion. The project also holds a multimodal aspect as the new frontage roads will include shared-use lanes and sidewalks.

According to this plan, the proposed design for East Berry Street would be updated to include shared-use paths instead of sidewalk and separated bike lanes. This document also includes updated cross sections for the corridor to go from a four-lane undivided to a five-lane undivided with sidewalk on both side of the street.

City of Fort Worth Master Thoroughfare Plan - 2020

The City's Master Thoroughfare Plan acts as the right of way preservation and arterial design for all major transportation facilities within the city. The primary focus of this plan is to balance mobility, safety, and opportunity, as well as including an increased emphasis on active transportation compared to previous thoroughfare plans. The Master Thoroughfare Plan is organized by: street type, number of lanes, type of transit, type of median, presence of on-street parking and right-of-way. The primary categorization for thoroughfares in Fort Worth is the Street Type.

Rather than categorizing thoroughfares solely on the basis of traffic volumes and speeds, the MTP categorizations are designed to reflect streets' respective land-use contexts, and a balanced approach to the various transportation modes needing to use each Street Type. East Berry is a neighborhood connector from Riverside Drive to Miller Avenue and a small section east of Village Creek Road. The area of Renaissance Square and Lake Arlington is identified as an Activity Street. East Berry Street is delineated as an Established Thoroughfare meaning the roadway was built with ultimate lane configuration and right-of-way. East Berry Street was recommended to have off-street bicycle facilities, according to this plan.









City of Fort Worth Comprehensive Plan - 2022

The City of Fort Worth Comprehensive Plan was adopted in March of 2022 and acts as the City's guiding document for future growth and development. In relation to the East Berry Street corridor, the Land Use and Transportation sections are the most applicable from this plan. The Comprehensive Plan outlines the current land use and zoning found in Fort Worth, as well as a future land use plan.









ECONOMIC DEVELOPMENT STRATEGIC PLAN LIPDATE



TID STRATEGIES

Fort Worth Economic Development Strategic Plan Update - 2022

As Fort Worth saw accelerated development from the years 2017-2022, the city adopted an update to the Economic Development Strategic Plan to accommodate the growth. The goals of this plan were to find economic factors for the city to focus on moving forward into the future. These factors include economic disruptions and trends accelerated by COVID-19, new opportunities for real estate development and business growth in Fort Worth, and ongoing workforce challenges, including social inequities, further exacerbated by the pandemic.

Some economic strategies that could be applied to East Berry Street from this plan include investments in new technologies and infrastructure on the corridor, develop catalyst projects in east and southeast Fort Worth, and transforming sites and corridors into diverse, walkable, mixed-use areas.



DEMOGRAPHICS AND ECONOMIC DEVELOPMENT

Population and Age

Population in the East Berry Street study area increased by approximately 20.4% between 2010 and 2022, representing an increase of 4,300 new residents. Additionally, targeted multimodal investment along the corridor is expected to cause the rate of population growth to increase. Residents living in the study area are, on average, younger when compared to the Fort Worth-Dallas Metroplex with a higher likelihood of having children living at home. The graphics on the right side of this page display a summary of the population demographics.

Race

Approximately 31.6% of residents in the study area identify as black, followed by 24.6% as white. Not noted in the graphic on this page are residents of Hispanic origin, which can identify with any race. It will be important to ensure that development along East Berry Street be culturally relatable, equitable, and conscious of potential for displacement.

Education

Nearly 40% of residents over age 25 living in the study area have achieved a high school diploma or equivalency degree, representing the most common level of educational attainment. While 12.6% of the corridor's residents have obtained a degree higher than a high school diploma, notably lower than 45.4% of residents who have achieved a similar level in the Fort Worth-Dallas Metroplex.



Income

In 2022, the estimated median household income in the East Berry Street study area was \$41,294. The median household incomes in this area is notably lower when compared to the Metroplex. Improving high-frequency transit along high-activity corridors like East Berry Street can increase residents' access to various employment, training, and educational resources to increase their chances for upward mobility professionally and financially. Additionally, approximately 18% of the households in the study area earned incomes between \$50,000 and \$74,999 annually in 2022.

Employment

The East Berry Street study area contains an estimated 6,968 jobs. Based on data from ESRI Business Analyst, the largest sector along the corridor is Healthcare and Social Assistance (20.9%), followed by Retail Trade (17.5%) and Other Services (12.6%).

As of 2019, approximately 3,161 people traveled into the study area for employment daily and approximately 8,259 of the employed population commuted out. This represents an out-commuting pattern, demonstrating the influence of major regional job centers. The study area had an estimated 110 people who both live and work there.



Housing

As of 2022, there were an estimated 8,777 housing units in the influence area. In comparison to the Fort Worth-Dallas Metroplex, East Berry Street's housing stock is older and has a lower median home value. The share of owner-occupied housing units is roughly consistent with the Metroplex but is offset by a slightly higher renter share.

There are approximately 2,300 apartment units in the East Berry Street study area, representing a variety of product types and ages. More than 28% of the inventory was completed before 1970. However, approximately 400 units have been completed since 2020. Most of the rental communities along East Berry Street are between 100 and 200 units in size. The study area's 2022 average was \$1,028 per month.

Retail

There is 1.3 million square feet of retail space along East Berry Street. Most of the newer space was completed during the 2010s, with 35.2% of the total share of retail space built during this decade. The next most active period for retail construction was before 1970s. The 1.3 million square feet of retail space in the study corridor area comprises one-quarter of the total in the influence area.

Retail Leakage

Retail leakage refers to the difference between the retail expenditures by residents living in a particular area and the retail sales produced by the stores located in the same area. If desired products are not available within that area, consumers will travel to other places or use different methods to obtain those products. Consequently, the dollars spent outside of the area are said to be "leaking." If a community is a major retail center with a variety of stores it will be "attracting" rather than "leaking" retail sales.

The graphic below shows the most recent data on retail sales and consumer expenditures along East Berry Street. The study area had retail export of \$78.2 million over the previous year, meaning that the corridor attracts non-residents to fulfill their needs for retail goods and services.

Figure 5. Leakage Analysis

Study Area Leakage Analysis







Consumers Spent \$148.0 million



Retail Export **\$78.2 million**





LAND USE

Frontage Character

Existing frontage character along the East Berry Street generally vary between commercial and residential but are all car-oriented with parking in the front and commercial buildings setback from the street. The current building frontage character are broken down into five characteristics along the corridor.



Existing Land Use

The existing land uses in the study area are primarily residential, commercial, and vacant/green space. The current land use characteristics are broken down within five context zones along the corridor. These context zones allow for a more nuanced approach to understanding the existing and future land uses, opposed to a corridor-wide approach.



Context Zone 1: IH-35W to Riverside Drive

This section generally includes older commercial development (1960's and 70's era) that caters to auto-service or convenience retail activities. Many of these uses are characterized by dated building formats, non-conforming sites as they relate to landscaping and signage, and limited pedestrian amenities along the street. The section between the rail line and Riverside Drive has older industrial and truck storage yards as well as the Sierra Vista transit center.



Context Zone 2: Riverside Drive to Mitchell Boulevard

This section is home to Cobb Park and most of the undeveloped land found in the study area. It includes scattered commercial land uses through a church, tire shop, and fire station. Additionally, the eastern portion is primarily single-family residential housing.



Context Zone 3: Mitchell Boulevard to US-287

This section is mostly residential land uses and is also home to the recently developed (2013) regional retail center of Renaissance Square from along the southern frontage of East Berry Street. Older residential uses (built in the 50's and 60's) with driveways directly on the corridor occupy the northern frontage of East Berry Street.

Context Zone 4: US-287 to Loop 820

This section is generally residential with smaller commercial uses located at intersections and sporadically along the corridor. This area includes the neighborhoods of Stop Six, South Edgewood, Eastland, Polytechnic Heights, and civic uses as well as multiple churches.



Context Zone 5: Loop 820 to Lake Arlington

This section has retail-commercial uses along the Loop 820 frontage and older industrial uses fronting the corridor. Home to Eugene McCray Park, this portion of the East Berry Street includes acres of undeveloped land near the lake that could be tailored to further meet community's needs and serve as a future regional destination.


Figure 6. Existing Land Use



Figure 7. Future Land Use



ZONING

Existing Zoning in the East Berry Street study area is predominantly Single-Family zoning with Neighborhood Commercial, Mixed-Use, and Planned Development districts at several sections directly on the corridor. 70% of the study area is zoned for housing, 14% for mixed-use and planned development, 10% for commercial, 3% for industrial, and 3% for civic.

Urban Villages and Mixed-Use Zoning

The Urban Villages program in the City of Fort Worth was initiated in 2002 when the mayor appointed a task force that identified thirteen urban villages along high-priority commercial boulevards. Two of the original urban villages are in the study area, Riverside/ Berry and Lake Arlington/ Berry/Stalcup.

Mixed-Use zoning covers approximately 6% of the study area. Despite the presence of the mixed-use zoning, there is no vertical mixed-use development currently within the two urban villages.



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TRANSPORTATION

Roadway Classifications

The East Berry Street study area includes approximately 139.7 miles of roadways. Local roads make up a vast majority of the street network totaling 111 miles, or 79%, of existing roads. Based on observations of the study area, many local roads are in need of repair (example: resurfacing, pavement markings, or signage).

Collector streets in the East Berry Street study boundary make up roughly 7 miles (5%) of the road network. Collector roadways are generally narrower than arterials and are designed for lower vehicle volumes and speeds.

Approximately 10 miles, or 7% of the study boundary roadways are arterial roads, including East Berry Street. Arterial roads are designed with higher speeds and volumes than collectors and local roads to provide regional mobility and access to major highways. In southeast Fort Worth, East Berry Street connects IH-35W to Loop 820.



Figure 9. TxDOT Functional Classifications

Average Annual Daily Traffic

Average annual daily traffic (AADT) is one major metric used for measuring the total use of a roadway by averaging data collected over the course of a year. As of 2019, the highest AADT within the study limits is located west of US-287, with an AADT of 22,800 vehicles per day. Data shows that the eastern portion of the corridor, east of US-287, has an AADT of approximately 15,160 vehicles.

Connectivity

East Berry Street functions as a critical east-west arterial providing connectivity from IH-35W to Lake Arlington. North-south connectivity within the study area is adequate . This study will identify connectivity opportunities to enhance east-west mobility in the study area which will relieve traffic from East Berry Street.

Road Name Current AADT 2041 Estimated **Limits From Limits To** East Berry Street IH-35W **Riverside Drive** 22,772 31,881 East Berry Street **Riverside Drive** Mitchell Boulevard 12.570 17.598 East Berry Street Mitchell Boulevard Miller Avenue 16.209 22.693 East Berry Street Village Creek Road 11,035 15,449 Miller Avenue East Berry Street Village Creek Road Loop 820 13,200 19,800 IH-35W East Berry Street 3.501 4,901 Glen Garden Drive **Riverside Drive Highpoint Road** 9.515 13.321 Glen Garden Drive 9,923 (N) 13,892 (N) Mitchell Boulevard Glen Garden Drive **US-287** 9,072 (S) 12,701 (S) 12,058 (N) 16.881 (N) Miller Avenue Ramey Avenue Hardeman Street 13,186 (S) 18,460 (S) 3,007 (N) 4,210 (N) Village Creek Road **Ramey Avenue** Wilbarger Street 7,276 (S) 10,186 (S) Stalcup Road Ramey Avenue East Berry Street 3,954 5,536

Table 1. TxDOT Functional Classifications

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Crashes and Safety

Crash data was collected along the study corridor from the years 2017-2021. According to the data, a majority of the crashes on East Berry Street occurred on the western end of the corridor near IH-35W and near the intersection at Old Mansfield Road. The corridor totaled 1,169 crashes during this five-year span. Most of the crashes occurred near intersection where there is a higher number of potential conflicts between travelers. The highest contributing factor for crashes was failure to control speed at 19% and most common manner of collisions were crashes that occurred at an angle with both cars going straight, such as a t-bone collision.

The following intersections experienced the highest number of crashes over this time period:

- Evans Avenue & East Berry Street
- Mississippi Avenue & East Berry Street
- Old Mansfield Road & East Berry Street
- Bishop Street & East Berry Street
- Miller Avenue & East Berry Street
- Village Creek Road & East Berry Street

Additionally, from 2017-2021, 29 crashes on East Berry Street were pedestrian-related and 3 were bicycle-related. Many of these bicycle and pedestrian crashes occurred on the west side of East Berry Street between IH-35W and Riverside Drive.

Figure 10. Top Contributing Factors of Crashes on East Berry Street



FAILURE TO CONTROL SPEED



DRIVER INATTENTION



FAILED TO STOP OR YIELD



MULTIMODAL TRANSPORTATION

Sidewalks

The neighborhoods surrounding East Berry Street experience a substantial amount of missing sidewalk facilities. 62% of roadway infrastructure in the study area is without an accompanying sidewalk. There are 52.5 miles of existing sidewalk in the study area.

As part of the Pedestrian Experience Index (PEI) analysis in the Fort Worth Active Transportation Plan (ATP), data on existing sidewalk condition was collected. Roughly, 23%, or about 30.2 miles, of the existing sidewalk is in good condition. Furthermore, 14% (18.7 miles) of the sidewalk is in fair condition, and 2% (3.6 miles) is in poor condition. Along East Berry, 72% of sidewalks are in good or fair condition and sidewalks are generally present on at least one-side of East Berry Street except between US-287 and Miller Avenue.





Trails and Bike Lanes

The Fort Worth ATP also looked at the Bicycle Level of Traffic Stress in the city to understand how comfortable a roadway may be for bicycling (refer to Table). East Berry Street is currently classified at Level 4 which is generally only tolerable for adult, experienced bicyclists who are comfortable in on-street shared traffic. For the entire study area, 61% of roads are Level 1.

The study area lacks bicycle facilities such as trails and bike lanes. The only nearby bicycle facilities are located at Trinity Trails at Cobb Park and the bike lanes along both sides of Miller Avenue, north of East Berry Street. Trails create opportunities for recreation and mobility by offering safe routes for people to walk, bike, or roll. Trails also allow people of all ages and abilities to exercise and increase health through physical activity. Though there are not many facilities existing in this area of southeast Fort Worth today, the City has shown an initiative to implement bike lanes, trails, and sidepaths.

Bicycle LTS Description PEI/LTS Category PEI Description Good Condition -Comfortable for all High comfort for Level 1 (Best) bicyclists from age 8 pedestrians - separated (children) to 80 (seniors). and controlled crossings Fair Condition -Comfortable for Acceptable comfort for pedestrians - some Level 2 mainstream adult bicyclists. separation and/or controlled crossings Acceptable for adult Poor Condition bicyclists comfortable Low comfort for Level 3 in shared traffic but pedestrians - no who may prefer some separation and/or separation. uncontrolled crossings Tolerable for adult Not comfortable for bicyclists comfortable pedestrians - no facilities. Level 4 (Worst) in shared traffic with no separation, or controlled separation. crossings



Transit

The City of Fort Worth is serviced by a local transit agency known as Trinity Metro. This agency currently offers 27 bus routes, 6 limited bus routes, and 4 trolleys/specialty services in the region. Trinity Metro has a ridership of about 16,300 people every weekday as of 2022.

Currently, there are seven Trinity Metro bus routes that overlap the study area. These routes run at a frequency of 15 minutes or 30 minutes depending on the route. Along East Berry Street there is a crosstown Berry Street route serviced by Trinity Metro that circulates from West Berry Street, near TCU, to Stalcup Road. This route runs seven days a week at a 30-minute frequency and includes 39 bus stop locations. This route has the sixth highest ridership of Trinity Metro routes. The Berry Street route averages approximately 9,700 riders per month and 470 riders per day.



Existing Transit Shelter in Middle of Sidewalk





UTILITIES AND GREEN INFRASTRUCTURE

Water

The existing water lines along East Berry Street vary in diameter with lines greater than 12-inches west of Village Creek Road. Water lines east of Village Creek Road are smaller in size ranging from 6-, 8-, and 10-inch and serve the existing designated residential area.

There are two sanitary sewer basins within the East Berry Street study corridor with Sycamore Creek Basin west of the East Berry Street/Freddie Street intersection and Village Creek Basin to the east.

Storm water runoff follows a watershed drainage area that is directed by gravity to a natural stream of water or valley street. There are two primary watersheds in the study area, the Big Fossil Creek-West Fork Trinity River Watershed, and the Village Creek Watershed. The Big Fossil-West Fork is on the west side of the East Berry corridor, and it includes the headwaters of Sycamore Creek. The Village Creek Watershed includes Wildcat Branch-Lake Arlington Sub-watershed, and Village Creek-Lake Arlington Subwatershed. Floodplains are associated with the streams, and drainage ways along the corridor and in some cases conflict with developed areas and residences.

Channelized Waterway at Village Creek Road



Sycamore Creek



Electric

Overhead electric (OHE) congestion is prominent at the intersection of IH-35W and East Berry Street. Power Poles are generally less prominent beyond Edgewood Terrace with low OHE instances near Village Creek Drive and again at Waldorf Drive. The overhead utilities impact the visual aesthetics of the corridor and creating a heavy concentration of fixed objects and utility poles.

Living Systems

The East Berry Street study area has multiple parks, such as Cobb Park, which provide a variety of benefits to the community and improve environmental quality. The study area also has green spaces connected to schools and civic institutions, along with vacant lots and associated with floodplains along the corridor. These properties may present opportunities for public use and/or for the dedication of new parks or trails. Another important open space in the study area is Lake Arlington and Eugene McCray Park.

Additionally, East Berry Street experiences high urban heat especially where the street interacts with major roadway infrastructure such as IH-35W, and US-287. High urban temperatures are caused by impervious cover such as parking lots, buildings, streets, sidewalks, and other hard surfaces that reflect heat back into the atmosphere, causing urbanized areas to be warmer than surrounding, less developed parts of Fort Worth. Healthy, dense tree canopy and green spaces can help mitigate and reduce temperatures up to 10 degrees cooler. Congested Overhead Electric on East Berry Street



Lake Arlington





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Analysis

0.5



INTRODUCTION TO ANALYSIS

The Analysis Chapter for the East Berry Corridor Study considers current transportation and land use conditions within the defined study area. The purpose of the analysis is to identify complementary transportation and land use strategies that support the goals of the corridor regarding safety, travel options, upward mobility, belonging, community building, and connectivity with the aspiration of making the corridor, a more walkable, multimodal corridor for all ages and abilities. This document and recommendations will be used to receive future bonds. These recommendations set East Berry Street up for funding to be used towards design and construction.

Today, East Berry Street is predominantly a car-oriented corridor. Since driving will continue to be an important travel choice, efforts are being made to consider strategies that introduce more travel choices and improve safety without significant disruption to traffic flow. Similarly, the analysis seeks to identify land use and urban design opportunities that result in greater corridor vibrancy, enhanced opportunities for residents, and conditions that attract future investments in the corridor. The sections covered in this analysis include:





TRANSIT ASSESSMENT

TECHNOLOGY & ACCESS MANAGEMENT

AND USE



RIGHT-OF-WAY & UTILITIES



PEDESTRIAN EXPERIENCE





CROSS-SECTIONS

Adding new travel choices to the East Berry Street corridor requires an evaluation of the existing and proposed new cross-sections. The new cross-sections were developed specifically to increase travel choice, improve safety, create an inviting condition for people to travel, and support/promote a walkable development pattern. Evaluating the existing cross-section offers a baseline understanding of existing conditions while the proposed cross-section has been evaluated to test the feasibility of constructing a continuous 10-foot sidepath and pedestrian lighting on both sides of the street along most of the corridor. Additionally, speed data was collected to identify sections of the corridor where speed management strategies could be implemented within the cross-section's updates to achieve a corridor-wide speed of 35 mph.

Figure 13. Proposed Cross-Sections Segment Map





Segment A: IH-35W to Riverside Drive

Segment B: Riverside Drive to Mitchell Boulevard

Segment C: Mitchell Boulevard to US-287

Segment D: US-287 to Miller Avenue

Segment E: Miller Avenue to Edgewood Terrace

Segment E: Edgewood Terrace to Loop 820

Segment F: Loop 820 to Cravens Road



Segment A: IH-35W to Riverside Drive



	Existing	Proposed
Vehicular Realm	Four, 12-foot vehicular travel lanes, a bi-directional center turn-lane, and a posted speed limit of 30 mph.	Four, 11-foot travel lanes divided by a landscaped median with a left turn lane and a 30-mph posted speed limit.
Multimodal/Pedestrian Realm	A 5-foot sidewalk that generally separated from the travelway is inconsistently present along the corridor.	A 6-foot buffer for transit shelters, benches, and pedestrian scale lighting and a 10-foot sidepath for walking and bicycling and other micro mobility options.
	• Greatest volume of crashes on the corridor with two fatal crashes. In addition, IH-35W to Riverside Drive has the largest number of pedestrian related crashes due to pedestrians crossing mid-block between the commercial destinations.	 The proposed cross-section can be accommodated within the existing right-of-way (100'). The 5-foot frontage zone allows for room within the public right-of-way for utilities to be buried.
Notes/Considerations	• There are strong connections between the transit stops and commercial development along the IH-35W corridor. This connection needs improved pedestrian facilities to increase safety.	• A planted median is proposed at this location in direct response to an identified pattern of crashes discussed in the Safety section of this chapter and will improve the potential pedestrian crossings.
	 The average annual traffic volumes are 22,272 vehicles per day which is the highest along the corridor. 	 The proposed median can be designed to include landscaping and vehicular lighting.



Segment B: Riverside Drive to Mitchell Boulevard



	Existing	Proposed
Vehicular Realm	Four, 12-foot vehicular travel lanes and a posted speed limit of 40-mph.	Four, 11-foot travel lanes (undivided).
Multimodal/Pedestrian Realm	A 5-foot sidewalk is inconsistently present along one or both sides of the street often with varying widths and distance from the street edge. There is no dedicated space for bicycling.	A 10-foot sidepath for walking and bicycling and other micromobility options, and an 8-foot landscape buffer on both sides of the street accommodating street trees to enhance the parklike feel.
Notes/Considerations	 This is the corridor segment with highest speed limit (40 mph) and only horizontal curve which makes the intersection of East Berry Street and Cobb Park difficult to navigate. This section of East Berry Street has an 85th percentile speed of 47 mph, 7 mph more than the posted speed limit. There are strong connections between the nearby residential neighborhood and Cobb Park which leans towards people who walk and bike utilizing this area. The average annual traffic volumes drop past Riverside Drive by about 10,000 vehicles per day to an AADT volume on 12,570 vehicles. 	 The proposed cross-section can be accommodated within the existing right-of-way (100'). The 5-foot frontage zone allows for room within the public right-of-way for utilities to be buried. A planted median is proposed at this location in direct response to an identified pattern of crashes discussed in the Safety section of this chapter and will improve the potential pedestrian crossings. The proposed median can be designed to include landscaping and vehicular lighting.

Segment C: Mitchell Boulevard to US-287



Existing

Vehicular Realm Four, 12-foot vehicular travel lanes and a bi-directional center turn lane with a posted speed limit of 35-mph.

A 5-foot sidewalk separated from the travelway by a 5-foot buffer strip and no dedicated space for bicycling.

- This is the corridor segment with the newest commercial development and is a strong connection between this development and the adjacent neighborhoods, YMCA, schools, and multifamily housing.
- The average annual traffic volumes are increased to nearly 20,000 vehicle per day near US-287 due to the commercial development activity.

Proposed

A narrowed 5-lane section with 11-foot lanes and a 12-foot center turn-lane.

A 8-foot sidepath for walking and bicycling and other micro mobility options and a combined hardscape of 5-feet with strategically placed vegetation to provide enhanced separation of pedestrians from the travelway.

- This section consists of houses with multiple driveways to the north and Renaissance Square Retail Center to the south. The proposed cross-section involves narrowing the street to the south to allow space for the sidepath.
- Though this section is currently 80 feet of ROW, it is recommended that 10 feet of right-of-way is acquired from the south.
- There is about 20 feet of buffer space to the south of East Berry Street that would allow for the road to better fit the context.
- A 12-foot center turn-lane is kept to provide access to the existing Renaissance Square shopping center.

Multimodal/Pedestrian Realm

Notes/Considerations



This proposed cross section involves shifting the curb-to-curb roadway from the north to allow space for an 8-foot sidepath as well as the acquisition of 10 feet of right-of-way to the south. The figure shown on this page displays rough concept of the shift and the dimensions associated with the proposed reconfiguration.

Figure 17. Segment C Aerial Cross-Section



Segment D: US-287 to Miller Avenue



	Existing	Proposed
Vehicular Realm	Four, 12-foot vehicular travel lanes with a posted speed limit of 35-mph.	A 4-lane street with a 10-foot raised median.
Multimodal/Pedestrian Realm	This portion of East Berry Street is missing a significant amount of sidewalk. Desire paths have formed along the roadways indicating a need for multimodal facilities. There is no dedicated space for bicycling.	A 10-foot sidepath for walking and bicycling and other micro mobility options and a 4.5 foot buffer to separate the vehicular realm from vulnerable users.
Notes/Considerations	 This is the corridor segment with the least amount of public right-of-way at 80' and is primarily fronted by residential housing and commercial uses. This section of East Berry Street has an 85th percentile speed of 43 mph, 8 mph more than the posted speed limit. There are regular shifts between residential and commercial uses with inconsistent pedestrian accommodations and frequent driveways. The average annual traffic volumes are approximately 11,000 vehicles per day. 	 This cross-section requires acquiring 5 feet of right-of-way on each side of the road, increasing it to 90 feet total. This cross-section involves constructing a 10-foot median along the entirety of the segment to improve access management and increase safety. Pedestrian refuge islands and left-turn lanes should be considers throughout the segment to provide necessary access expanding to 5-lanes including a left-turn lane The buffer is expanded to 4.5 feet. This section recommends a landscape easement outside of the right-of-way.



Segment E: Miller Avenue to Edgewood Terrace



Existing

	Existing	Proposed
Vehicular Realm	Four, 12-foot vehicular travel lanes with a posted speed limit of 35-mph.	A 4-lane divided street with a 6-foot median and on-street parking on the north side.
Multimodal/Pedestrian Realm	Sidewalks are intermittent primarily located along the frontage of commercial land uses. Many of the sidewalks are substandard in width or lack separation from the travelway. There is no dedicated space for bicycling.	A 10-foot sidepath for walking and bicycling and other micro mobility options. The addition of on-street parking provides increases parking options for homes and businesses while also offering greater separation of walkers and bicyclist from the vehicular travelway.
Notes/Considerations	 This is the corridor segment with the least amount of public right-of-way at 80' and is primarily fronted by residential housing and commercial uses. This section of East Berry Street has an 85th percentile speed of 43 mph, 8 mph more than the posted speed limit. There are regular shifts between residential and commercial uses with inconsistent pedestrian accommodations and frequent driveways. The average annual traffic volumes are approximately 11,000 vehicles per day. 	 This cross-section requires acquiring 5 feet of right-of-way on each side of the road, increasing it to 90 feet total. The buffer is expanded to 4.5 feet on the south side of East berry Street and reduced to 2.5 to the south. This section recommends a pedestrian/landscape easement outside of the right-of-way. Two-way left turn lane may be considered depending on future conditions. This cross-section reflects the current 4-lane undivided road with low traffic volumes (~11,000 AADT) and crashes do not currently warrant a turn lane

Segment F: Edgewood Terrace to Loop 820



Existing

Vehicular Realm	Four, 14-foot vehicular travel lanes with a posted speed limit of 35-mph.	A 4-lane undivided street with on-street parking (only where it currently is permitted to serve existing residences fronting the corridor). Due to community and police department feedback, any additional or new on-street parking along East Berry or Stalcup near the intersection is not recommended.
Multimodal/Pedestrian Realm	Sidewalks are present in much of this segment but vary in their size and location. Some sidewalks are separated by a grass buffer, though most is located at the back of curb. There is no dedicated space for bicycling.	A 10-foot sidepath for walking and bicycling and other micro mobility options. The addition of on-street parking provides increases parking options for homes and businesses while also offering greater separation of walkers and bicyclist from the vehicular travelway.
Notes/Considerations	 This corridor segment is comprised of multiple residential neighborhoods, homes that front the corridor and a small number of non-residential uses primarily clustered near intersections. This section of East Berry Street has an 85th percentile speed of 44 mph, 9 mph more than the posted speed limit. There are inconsistent pedestrian accommodations and frequent driveways. The average annual traffic volumes are 13,200 vehicles per day. 	 This cross-section can be accommodated within the existing 90-foot right-of-way. This section recommends a landscape easement outside of the right-of-way. Minor gains in vehicle capacity are expected but isn't a large factor given the relatively low traffic volumes. Low traffic volumes (~11,000 AADT) and crashes do not currently warrant a turn lane Trees will be places in landscape easement on private property A 2-lane with two-way left turn lane my be considered (See Appendix C)



Segment G: Loop 820 to Cravens Roads



	Existing	Proposed
Vehicular Realm	Two, unmarked, wide travel-lanes, with a posted speed limit of 35-mph.	Two, 12-foot travel lanes (undivided) with on-street parking.
Multimodal/Pedestrian Realm	Sidewalks are present in much of this segment but vary in their size and location. Some sidewalks are separated by a grass buffer, though most is located at the back of curb. There is no dedicated space for bicycling.	A 10-foot sidepath for walking and bicycling and potentially utilized for outdoor seating. A 4.5-foot furnishing zone separates pedestrian and bicyclist from the parking area while also accommodating street trees, lighting, and future transit shelters. An additional 5-foot buffer separates the public and private realms.
Notes/Considerations	 This is the corridor segment functions as an industrial collector street. There are inconsistent pedestrian accommodations and frequent driveways. The average annual traffic volumes are 2,605 vehicles per day. 	 This segment includes the Lake Arlington focus area As this area develops, the cross section is recommended to be built and will function as a main street for the urban village. This section should include street trees, street and pedestrian scale lighting, and mobility amenities such as transit shelters and bike racks.

CONNECTIVITY

The connectivity recommendations in the analysis cover both roadway and pedestrian connection opportunities in the study area. As the primary east-west roadway in the study area, most east-west trips must occur on East Berry Street. Improved east-west connectivity has the potential to distribute trips across a greater network resulting in shorter trips, reduced travel times and reduced reliance on East Berry Street. In addition, a well-connected road networks improves conditions for multimodal travel adding to the vibrancy of local neighborhoods and increasing local access to opportunity destinations.



Figure 22. Connectivity Recommendations Map



Roadway Connectivity

C1. Expand road network at the Cobb Park / Riverside / Proposed T.O.D. focus area

C2. Increase road network connectivity in the Renaissance Square area

C3. Expand road network at the Lake Arlington focus area

C4. Construct roadway connection between Donalee Street and Freddie Street



C7

C6

C5

C3

C5. Connect Fitzhugh Avenue / Crenshaw Avenue from US-287 to Loop 820

C6. Connect Eastland Street / Grayson Street from US-287 to Loop 820

C7. Connect Hardeman Street / Garden Lane from US-287 to Carey Street

Pedestrian and Bicycle Connectivity

C8. Extend Trinity Trails south of East Berry Street to Sycamore Creek and the proposed T.O.D. focus area

C9. Implement trail connections to the neighborhood east of Cobb Park at Bidecker Avenue, Richard Legacy Lane, and Thannisch Avenue

C10. Construct pedestrian paths in the Renaissance Square focus area

MTP Amendments

C11. Update the City's Master Thoroughfare Plan to include identified connections for Westshore Way, Fitzhugh Avenue/Crenshaw Avenue, Eastland Street/Greyson Street, and Hardeman Street/Garden Lane

Westshore Way

C12. Construct new road with trail (Westshore Way) along the west side of Lake Arlington

Connectivity Recommendations

C1. Expand road network at the Cobb Park / Riverside / Proposed T.O.D. focus area to create a connected roadway system that promotes safe vehicular and multimodal mobility.

This location in the East Berry Street study area is identified as a top candidate for new development and redevelopment. The proposed transportation network seen in the exhibit shows the connections needed to support future development. Additionally, an underpass connecting to Mississippi Avenue should be constructed to allow vehicles to the proposed development.

C8. Extend Trinity Trails south of East Berry Street to Sycamore Creek and the proposed T.O.D. focus area to promote multimodal mobility.

Figure 23. Cobb Park / Riverside / T.O.D. Connectivity



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CONNECTIVITY



C2. Increase road network connectivity in the Renaissance Square retail center area.

Renaissance Square is the central hub in the East Berry Street study area for dining, shopping, and housing. The roadway network is recommended to be further expanded and connected to provide safe mobility for those who live, work, and visit the area.

C10. Construct pedestrian paths in the Renaissance Square focus area.

A pedestrian path should be implemented to allow people to safely walk from the neighborhood west of Mitchell Boulevard to the Renaissance Square area.

A pedestrian path between the Columbia Renaissance Square apartment complex should be implemented to allow residents to safely migrate between the two destinations by foot. Additionally, an opening in the wall located behind the Walmart Supercenter should be created to allow for people of all ages and abilities to be able to reach their destination safely.

Figure 24. Renaissance Square Connectivity



C3. Expand road network at the Lake Arlington focus area.

Lake Arlington is identified as an underutilized asset for people in southeast Fort Worth. This corridor study and analysis strives to bring light to opportunities that the west shore of the lake could be for the community. As development and fresh land uses are presented in this focus area in this study, it is important to think consider the roadways network and connectivity for potential future development. The exhibit to the right displayed the recommended road network for the Lake Arlington focus area. Connectivity to the ONCOR easement north of the focus area should be considered during implementation.

C4. Construct roadway connection between Donalee Street and Freddie Street

The image below displays a roadway connection opportunity idenified between Donalee Street and Freddie Street to improve connectivity.

Figure 25. Donalee - Freddie Connectivity Opportunity



Figure 26. Lake Arlington Connectivity



CONNECTIVITY

EAST BERRY

C5. Connect Fitzhugh Avenue / Crenshaw Avenue from US-287 to Loop 820.

C6. Connect Eastland Street / Grayson Street from US-287 to Loop 820.

C7. Connect Hardeman Street / Garden Lane from US-287 to Carey Street.

East Berry Street is the only thoroughfare located in the study area that runs from IH-35W to Lake Arlington. This analysis recommends that Fitzhugh Avenue/Crenshaw Avenue, Grayson Street/Eastland Street, and Hardeman Street/Garden Lane are to be fully connected and should be considered for addition to the City's Master Thoroughfare Plan.

C9. Implement trail connections to the neighborhood east of Cobb Park at Bidecker Avenue, Richard Legacy Lane, and Thannisch Avenue.

Trail connections are recommended to be considered at the locations seen in the exhibit to the right to provide the neighborhood easy access to Cobb Park. The image is conceptual and grading will need to be considered during design.

C11. Update the City's Master Thoroughfare Plan to include identified connections for Westshore Way, Fitzhugh Avenue/Crenshaw Avenue, Eastland Street/Greyson Street, Hardeman Street/Garden Lane and the primary street connections in Cobb Park T.O.D. and Lake Arlington.

Current thoroughfare plan should be amended to include the recommended roadways connections found in this analysis.

Figure 27. Cobb Park Neighborhood Trail Connections



C12. A North-South Connection - Westshore Way

The goal of the proposed Westshore Way is to improve vehicular and pedestrian connectivity from IH-20 to Spur 303 along the west side of Lake Arlington. Alignments of the existing and proposed roadways in this area considered the proximity of the floodplain, the trail alignments set by the ATP, and maintaining access to the Loop 820 Northbound Frontage Road. Intersections that may consider a roundabout solution are shown on the included exhibit with a circle indicating the approximate physical footprint.

Summary of Alignment Decisions (South to North):

The proposed roadway connection to IH-20 west of Treasure Island Trail will allow for public access around the existing gated community and provide additional access for the existing neighborhoods with a proposed intersection at the neighborhood entrance.

Westshore Way will continue to the north, following the edge of Lake Arlington. The existing four streets between Sun Valley Drive and David Strickland Road will be extended to connect to Westshore Way. This alignment allows the existing lots to be minimally impacted by at 70' right-of-way footprint for full roadway and trail improvements that follow the ATP trail alignment.

The proposed Westshore Way alignment south of Martin Street will impact existing residential lots and spans the floodplain. Martin Street will be improved to include trail improvements to connect to Westshore Way. This will revise the current trail alignment defined in the ATP. Westshore Way will continue north to Wilbarger Street, tightly following the floodplain along Lake Arlington. This portion of the Westshore Way alignment impacts existing residential and industrial sites.

The proposed Westshore Way alignment ends at Wilbarger Street. A continuous connection from south to north along the project limits cannot be made in this area without severe alignment skew and major impacts to the existing lots.

North of Wilbarger Steet, Cravens Road will be reconstructed to continue the north-south connectivity. The existing bridges on Cravens Road spanning the floodplain will need to be reconstructed.

Continuous north to south connection is interrupted as Cravens Road connects directly to Loop 820 Northbound Frontage Road.

Existing Dowdell Road will be reconstructed to connect to existing Quail Road. The ATP trail alignment will continue along Quail Road. Quail Road from Dowdell Road to Willard Road is within the floodplain and may require bridges to span the Lake Arlington footprint. Quail Road will continue to the north, connecting to Spur 303. Two intersection alignments are given at Quail Road and Spur 303. The two intersection alignments consider: intersection skew, proximity to the Loop 820 Northbound Frontage Road, and alignment with the existing road on the north side of Spur 303.

CONNECTIVITY



Figure 28. Proposed Westshore Way Alignment

☆ Frontage Road Connection Alternate Routes Single Lane Roundabout to consider during implementation 90' ROW with Trail 30' Trail 60' ROW Existing Roadway Reconstruction 60' ROW Roadway Alternate Route to consider during implementation Proposed trail along Westshore Way may not fit in section due to ROW constraints.

Figure 29. Proposed Cross-Section



The proposed cross section for the majority of Westshore Way includes two, 12-foot travel lanes (undivided) with on-street parking on the east side of the roadway, along the west shore of Lake Arlington. Westshore Way will include 10-foot sidepath for walking and bicycling and potentially utilized for lakefront outdoor seating. A 6-foot buffer zone separates pedestrian and bicyclist from the parking area while also accommodating street trees and lighting.

- Westshore Way is intended to serve as a connecting roadway for travel to and from destinations along the west shore of Lake Arlington.
- Westshore Way will not be available for through-traffic for trucks and freight. The proposed corridor is intended to service the residents and business adjacent to and surrounding the roadway.

SAFETY

The safety recommendations are organized by systemic safety countermeasures that are intended to be implemented throughout the entirety of the corridor as well as specific locations. This analysis prioritizes roadway safety for motorists and pedestrians through countermeasures that respond to likely factors associated with the types of frequent crashes and conflicts found along the corridor. The safety recommendations in this section of the analysis were developed using the Federal Highway Administration (FHWA) proven safety countermeasures.

The map below displays the safety recommendations developed as a part of this analysis for the East Berry Street study area. These recommendations are intended to reduce crashes and improve overall safety in the study area.





Segment Improvements

S1. Center-running median on East Berry Street

S2. Center-running median on Mitchell Boulevard

S3. Stripe two-way left turn lane on Miller Avenue from Eastland Street to US-287

S4. Corridor improvements on Eastland Street



S9

S13-16

S4

Intersection Improvements

S5. Crosswalk Visibility Enhancements at East Berry Street and Evans Avenue Intersection

S6. Enhance East Berry Street and Riverside Drive Intersection

S7. Canberra

S8. Enhance East Berry Street and Miller Avenue Intersection

S9. Enhance East Berry Street and Village Creek Road Intersection

Roundabouts

S10. Install Roundabout at East Berry Street and East Berry Street South Intersection

S11. Install Roundabout at Mitchell Boulevard and East Berry Street South Intersection

S12. Install Roundabout at Vaughn Boulevard and Wichita Street Intersection

Traffic Circles

S13-16. Install Traffic Circles at the following intersections

- Evans Avenue and Baker Street
- Village Creek Road and Eastland St
- Bishop Street and Crenshaw Avenue
- Bishop Street and Strong Avenue

Safety Recommendations

S1. Install center-running median on East Berry Street to create safer mobility environment and mitigate crashes. (See Segment A in Cross-Sections sections.

According to the Federal Highway Administration (FHWA), medians with marked crosswalks reduce pedestrian related crashes by 46%.

S2. Install center-running median on Mitchell Boulevard to increase safety on the west side of Renaissance Square and promote a more walkable environment.

S3. Stripe two-way left turn lane on Miller Avenue from Eastland Street to US-287

This recommendation is also present in the City of Fort Worth High Injury Network Corridor Evaluation Report.

S4. Implement corridor improvements on Eastland Street such as:

- Refresh Stop Bars
- High-visibility crosswalks
- Stripe on-street parking
- Lower speed limit from 30mph to 25mph

A reduce speed limit increases reaction time for drivers and improves the integration of walkers and bicycling to the street.







S5. Enhance Crosswalk Visibility at East Berry Street and Evans Avenue Intersection.

This intersection experiences a high volume of pedestrian activity and had 5 pedestrian related crashes from the years 2017-2021. The crosswalk at this intersection should be enhanced to increase pedestrian safety. Though not displayed in the figure, pedestrian refuge islands should be implemented at intersections to add a pedestrian safety component to the proposed median.

S6. Enhance East Berry Street and Riverside Drive Intersection with crosswalk visibility enhancements, flashing yellow arrow on signal head, and yellow change intervals to increase safety.

This intersection had 9 pedestrian related crashes from 2017-2022.

S8. Enhance East Berry Street and Miller Avenue Intersection with an updated traffic signal and crosswalk visibility.

S9. Enhance East Berry Street and Village Creek Road Intersection with an updated traffic signal and crosswalk visibility.

This intersection experienced 2 pedestrian related crashes from 2017-2022.

Figure 32. East Berry Street and Evans Avenue Crosswalk Visibility Enhancements





Figure 33. East Berry Street and Riverside Drive Crosswalk Visibility Enhancements



After:



S7. Consider raised median near Canberra Court under prelimainary design to increase safety.

This area of East Berry Street experiences a high rate of speeding drivers. Residents on Canberra Court have raised speeding concerns on East Berry Street as they exit the neighborhood. A raised median should be considered to limit left turn access and slow drivers.

S10. Install Roundabout at East Berry Street and East Berry Street South Intersection to increase safety at the intersection.

This segment of East Berry Street experienced a high volume of crashes from 2018-2022 with 153 crashes. A roundabout is recommended on the corridor at the entrance of Cobb Park to reduce crashes. According to TxDOT, more than 90% reduction in fatalities, 76% reduction in injuries, 35% reduction in all crashes, and the slower speeds at roundabouts are also usually safer for pedestrians.



Figure 34. Proposed Roundabout Concept at East Berry Street and East Berry Street S
S11. Install Roundabout at Mitchell Boulevard and East Berry Street South Intersection.

This intersection currently experiences a complicated system for drivers. The roundabout at this location is recommended to simplify access to Mitchell Boulevard and East Berry Street South, and improve the overall safety of the intersection.

Figure 35. Proposed Roundabout Concept at Mitchell Boulevard and East Berry Street S



S12. Install Roundabout at Vaughn Boulevard and Wichita Street Intersection.

This proposed roundabout promotes vehicle and multimodal safety as people enter and leave Renaissance Square. Additionally, crosswalk visibilty enhancements should be made on Vaughn Boulevard to increase safety.

S13-16. Install Traffic Circles at the following intersections:

- Evans Avenue and Baker Street
- Village Creek Road and Eastland St
- Bishop Street and Crenshaw Avenue
- Bishop Street and Strong Avenue

Traffic circles provide traffic calming, resulting in reduced speeds.

Figure 36. Aerial Example of Neighborhood Traffic Circle in Fort Worth



PEDESTRIAN EXPERIENCE

The Pedestrian Experience sections of this analysis involves creating an intentional pedestrian network along East Berry Street and in the study area that strives to provide residents improved safety and access to schools, parks, transit service and other opportunity destinations by foot. Incorporating pedestrian mobility in the transportation network plays a vital part in making the East Berry Street study area a safe, healthy, walkable community. This section will identify the sidewalk gaps that the City should prioritize.

The Fort Worth Active Transportation Plan (ATP) Pedestrian Experience Index (PEI) was used to identify the current sidewalk condition in the study area. As shown in the Foundation Report (see Appendix D) of this project, 62% of the study area roadways are missing sidewalks.





East Berry Street Sidewalk Gaps

P1. Fill in all sidewalk gaps on East Berry Street

School Walksheds for Top Priority **Sidewalk Gaps**

P2. Fill in Top Priority Sidewalk Gaps at Morningside Middle School Walkshed

P3. Fill in Top Priority Sidewalk Gaps at Mitchell Boulevard Elementary School

P4. Fill in Top Priority Sidewalk Gaps at TA Sims Elementary School Walkshed

P5. Fill in Top Priority Sidewalk Gaps at Christene C. Moss Elementary School

P6. Fill in Top Priority Sidewalk Gaps at AM Pate Elementary School Walkshed

P7. Fill in Top Priority Sidewalk Gaps at Sunrise McMillan Elementary School

P8. Fill in Top Priority Sidewalk Gaps at Jacquet Middle School Walkshed

P9. Fill in Top Priority Sidewalk Gaps at Dunbar High School Walkshed



P9

P8

P6

VILLAGE CREEK RD

EDGEWOOD TER

EDGEWOOD

PARK

MARIE F.

PATE PARK

P7

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Pedestrian Experience Recommendations Methodology

Schools were identified as the leading factor for prioritizing sidewalk gaps in the study area, Therefore, 5-minute and 10-minute walksheds around schools were create to understand the reasonable reach of pedestrians in these locations.

Once the school walksheds are located, the next step in the analysis is to use the Pedestrian Experience Index (PEI) sidewalk condition data from the Fort Worth ATP to identify the missing sidewalk in the walksheds. Road segments touching the 5-minute and 10-minute walksheds guided the prioritization of sidewalk gaps to be filled. The last step of this analysis included a qualitative assessment of sidewalk gaps within the identified walksheds and selecting the top corridors with missing sidewalk to be completed. The result is a set of priority sidewalks that focus on connecting neighborhoods to schools. Multiple factors were considered through the prioritization process including:



Proximity to schools





Locating corridors that make the most sense to connect with schools.

Pedestrian Experience Recommendations

P1. Fill in all sidewalk gaps on East Berry Street to improve pedestrian experience and safety on the corridor.

Figure 38. Sidewalk Gap Example along the north side of East Berry Street



Pedestrian Experience Recommendations

P2. Fill in Top Priority Sidewalk Gaps at Morningside Middle School Walkshed.

The top priority sidewalk gaps within the Morningside Middle School walkshed involves completing the sidewalk on Beverly Avenue, Judd Street, and East Cantley Street. These three corridors were selected due to their direct access to the school and lack of sidewalk connectivity.

- Beverly Avenue
- Judd Street
- East Cantley Street

P3. Fill in Top Priority Sidewalk Gaps at Mitchell Boulevard Elementary School Walkshed.

Overall, the neighborhood adjacent to Mitchell Boulevard Elementary has the most pedestrian connectivity of the walksheds studied in this analysis. The top priority sidewalk gaps for this walkshed are on Renaissance Drive and Moresby Street to provide pedestrian connections at common destinations such as Renaissance Square and the YMCA.

- Renaissance Drive
- Moresby Street





Figure 40. Mitchell Boulevard Elementary School Walkshed





P4. Fill in Top Priority Sidewalk Gaps at TA Sims Elementary School Walkshed.

The corridors surrounding TA Sims Elementary School all have adequate sidewalks to accompany them, therefore the top priority sidewalk connections involve connecting the roadways that lead to the school. These connections will provide students with safer access to school.

- Crenshaw Avenue
- Fitzhugh Avenue
- Little Street
- Campbell Street

Figure 41. TA Sims Elementary School Walkshed



P5. Fill in Top Priority Sidewalk Gaps at Christene C. Moss Elementary School Walkshed.

Christine C. Moss Elementary School has many sidewalk gaps on the corridors to the west and south that lead to the school. These roadways were selected as high priority sidewalks gaps due to their presence in the 5-minute walkshed from the school and their unsafe pedestrian conditions

- Freddie Street
- Grayson Street
- Baylor Street
- Castleman Street

P6. Fill in Top Priority Sidewalk Gaps at AM Pate Elementary School Walkshed.

The corridors identified as having top priority sidewalk gaps in the AM Pate Elementary School walkshed are found in the neighborhood to north of the school. These sidewalk gaps should be filled to allow students safe access from the neighborhood to the school.

- Mountcastle Drive
- Virgil Street
- Lois Street
- Emerson Street
- Reed Street
- Anglin Drive

Figure 42. Christene C. Moss Elementary School & AM Pate Elementary School Walksheds



PEDESTRIAN EXPERIENCE

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P7. Fill in Top Priority Sidewalk Gaps at Sunrise McMillan Elementary School Walkshed.

The top priority sidewalk gaps include neighborhood roadways to the north of the school. These sidewalk gaps were designated as top priority due to their proximity to two schools and concentration of houses. Turner Street was also assigned as top priority to allow for connectivity to the west of the school.

- Alter Drive
- Norris Street
- Cottey Street
- Richardson Street

Waldorf Street

- Burton Avenue
- Pinson Street
- Turner Street

P8. Fill in Top Priority Sidewalk Gaps at Jacquet Middle School Walkshed.

Like Sunrise McMillan Elementary, Jacquet Middle School's top priority sidewalk gap connections are in the neighborhood south of the middle school. In order for students who live in the area to safely travel to and from school, adequate sidewalks are needed along the listed corridors to deter them from walking along unprotected roadways. Though it is outside of the East Berry Street study area, the infill of sidewalk gaps along Stalcup Road are recommended at the following locations:

- Fitzhugh Avenue
- Anderson Street
- Stalcup Road

Figure 43. Sunrise McMillan Elementary School, Jacquet Middle School, and Dunbar High School Walkshed



P9. Fill in Top Priority Sidewalk Gaps at Dunbar High School Walkshed.

For Dunbar High School, the top priority corridors are found to the north of the school. Though this area is outside of the East Berry Street study area, the neighborhood north of Dunbar High School is home to the highest density of residential housing within the walkshed. Filling in these sidewalk gaps also contributes to the safety and pedestrian mobility of students attending Maudrie M. Walton Elementary school located to the northeast of the high school.

• Carverly Drive

Rickenbacker Place

Tallie Road

- Cass Street
- Lucas Drive

BICYCLE EXPERIENCE

The purpose of the Bicycle Experience portion of the analysis is meant to locate the gaps and opportunities in the bicycle network and develop recommendations that integrate biking as a safe and effective mode of travel. This analysis strives to create a bicycle network that is convenient and comfortable for people to use their bikes around the corridor. All bicycle related recommendations are proposed to be amendments or additions to the Fort Worth Active Transportation Plan.

The Trinity Trails is a network of connected trails across the City of Fort Worth which extends to Cobb Park. This study explores ways to connect Cobb Park to Lake Arlington through expanding the Trinity Trails network. The City has identified Lake Arlington as a top priority location for future development, so developing a biking route connection is a top priority during this planning process.





Sidepaths

B1. Construct 10-foot sidepath along East Berry Street (See Cross-Sections)

B2. Construct 10-foot sidepath along west side of Mitchell Boulevard from East Berry Street to Renaissance Drive

B3. Construct 10-foot sidepath along Village Creek Road, south of East Berry Street

TER BUNCHE PARK EDGEWOOD STALCUP RD EDGEWOOD 820 PARK **EAST BERRY ST** MARIE F. CREEK RD WILLIAM MCDONALD VILLAGE PARK **B4** 0.5 1 Miles 0

B13

B12

B8

B3

B4. Construct 10-foot sidepath along the proposed Westshore Way on the east side of the roadway

Trails

B5. Extend Trinity Trails south of East Berry Street to Sycamore Creek and the proposed T.O.D. focus area

Two-Way Cycle Track

B6. Reconfigure Renaissance Drive to include Two-Way Cycle Track on north side of the roadway.

Protected Bicycle Lane

B7. Retrofit the existing bike lanes to fully protected bike lanes by using enhanced pavement markings

Shared-Lane Markings

B8. Stripe shared-lane markings from Miller Avenue to Carey Street

Bike Stations

B9-13. Implement Trinity Metro Bike Stations at the following locations

- Sierra Vista Transfer Center
- Cobb Park
- Renaissance Square
- Fiesta Mart
- Lake Arlington

Bicycle Experience Recommendations Methodology

For the Bicycle Experience analysis, the primary goal was to further evaluate the recommendations from the Fort Worth ATP and locate a route to extend Trinity Trails from Cobb Park to Lake Arlington. Using the bicycle network plan from the City's ATP, each recommendation was studied to confirm that the recommended bicycle facility made sense and was feasible for its context. The next step in this process was to compare the recommended bicycle facilities to the Bicycle Level of Stress results from the Fort Worth ATP.

This analysis allows for the current projects proposed in the Fort Worth ATP to be evaluated and amendments to the plan were developed as seen in the Recommendations section. Due to East Berry Street having a low bicycle comfort level, Level 4, on-street biking facilities are not recommended to be implemented on the roadway.

Level 1 - All Ages and Abilities



Level 2 - Interested but Concerned Level 3 - Enthused and Confident Level 4 - Strong and Fearless







Bicycle Experience Recommendations

B1. Construct 10-foot sidepath along East Berry Street. (See Cross-Sections on pages 52-59)

B2. Construct 10-foot sidepath along west side of Mitchell Boulevard from East Berry Street to Renaissance Drive. (See Mitchell Boulevard Cross-Section on page 70)

B3. Construct 10-foot sidepath along Village Creek Road, south of East Berry Street.

B4. Construct 10-foot sidepath along the proposed Westshore Way on the east side of the roadway.

B5. Extend Trinity Trails south of East Berry Street to Sycamore Creek and the proposed T.O.D. focus area. (See Recommendation on page 62)



B6. Reconfigure Renaissance Drive to include Two-Way Cycle Track on north side of the roadway.

An 8-foot, two-way cycle track is recommended to be striped on Renaissance Drive to provide a bicycle facility to the Renaissance Square retail center. Two-way cycle tracks dedicate and protect space for bicyclists by enhancing comfort and safety.

B7. Retrofit the existing bike lanes to fully protected bike lanes by using enhanced pavement markings on Miller Avenue.

This recommendation is in correspondence with the Oakland Boulevard and Miller Avenue bike lanes safe streets project. Figure 45. Bicycle Improvements Connecting East Berry Street to Renaissance Drive



B8. Stripe shared-lane markings from Miller Avenue to Carey Street.



B9-13. Implement Trinity Metro Bike Stations at the following locations

- Sierra Vista Transfer Center
- Cobb Park
- Renaissance Square
- Fiesta Mart
- Lake Arlington



Source: Trinity Metro Analysis | 83

TRANSIT ASSESSMENT

The Transit Assessment for this analysis focuses on enhancing the public transportation experience in the East Berry Street study area and prioritizing sidewalk gaps that link pedestrians to transit stops. The purpose of this analysis is to develop recommendations to be implemented in the study area that encourage residents to use the public transportation system. Creating a network where different modes of transportation can effectively work together to improve first mile/last mile mobility.

Currently, residents in the East Berry Street study area have expressed that enhanced transit stops and better walking and biking connections to the transit stops would make riding public transportation more inviting. This analysis provides recommendations that mitigate these issues.



Figure 46. Transit Top Priority Sidewalk Gap Walksheds and Stops Map



Top Priority Sidewalk Gaps

T1-6. Fill in sidewalk gaps to improve connections to transit stops.

Transit Stop Enhancements

T7. Enhance priority transit stops to shelters

T8. Enhance all transit stops in the study area to shelters

Business Access and Transit Lane (BAT)

T9. Pave BAT lane at East Berry Street & Riverside Drive

T10. Pave BAT lane at East Berry Street & Mitchell Boulevard

T11. Pave BAT lane at East Berry Street & Miller Avenue



Transit Assessment Recommendations Methodology

Like the Pedestrian Experience section, 5-minute walksheds were developed around all transit stops in the East Berry Street study area. These walksheds provided guidance on the sidewalk gaps that should be filled to better connect residents to transit stops. Once the 5-minute transit stop walkshed was created, the areas that experienced a high volume of missing sidewalk that overlap the walkshed were analyzed through a qualitative lens to identify which locations sidewalk connections should be prioritized. Using this methodology, six locations were identified based on the density of missing sidewalks, density of residential housing, and proximity to transit stops.

Additionally, an inventory of all transit stops in the study area was conducted. Due to the number of residents that expressed the need for transit stops to be enhanced, this inventory assessment allowed the project team to recognize the transit stops in need of improvement. Once the stops needing enhancements were identified, recommendations on the type of enhancements needed were developed. Using the six priority transit sidewalk areas, the transit signs and benches needing enhancements that are closest to these locations are prioritized when making recommendations.



Enhanced Transit Stop Example in Fort Worth

Source: Trinity Metro



Transit Recommendations

T1-6. Fill in sidewalk gaps in priority missing sidewalk areas to improve connections to transit stops and promote public transportation as a safe and viable travel option in the East Berry Street study area.

It is recommended to fill in the sidewalk gaps shown on the map below to improve first mile/last mile mobility on the corridor and in the study area.

Figure 47. Missing Sidewalk and Priority Transit Walksheds Map



T7. Enhance priority transit stops to shelters to create a more comfortable transit experience for users.

The short-term goal regarding transit stops is to convert the existing stops within close proximity to the priority missing sidewalk areas to shelters. See page 86 for an example of an enhanced transit shelter recommended for transit stops in the study area.

T8. Enhance all transit stops to shelters within the East Berry Street study area.

The long-term goal is to convert all bus stops into shelters to provide a comfortable transit experience for East Berry Street residents and visitors. These stops should provide up-to-date technology including public WiFi and screens that display expected bus times.

T9-11. Install Business Access and Transit Lane (BAT) Lanes at East Berry Street & Riverside Drive, East Berry Street & Mitchell Boulevard, and East Berry Street & Miller Avenue.

A BAT lane is a bus queue bypass lane that allows for right turns, generally stretching between signalized intersections. The purpose of BAT lanes is to separate transit vehicles from traffic to improve the operational efficiency of transit services. These lanes are used in coordination with a right-right turn lanes allowing transit buses to bypass intersections, while vehicles must turn right.



Figure 48. BAT Lane Example at East Berry Street and Riverside Drive



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TECHNOLOGY AND ACCESS MANAGEMENT

The lack of up-to-date technology and free access to Wi-Fi in under-served communities surrounding East Berry Street is an issue that residents in this area face. Providing free public Wi-Fi networks benefits residents of all ages and abilities such as the ability to look for employment online, research, or personal entertainment. The Stop Six neighborhood located on the eastern portion of the study area is planned to have free public Wi-Fi coming in the fall of 2023.



Figure 49. Technology and Access Management Recommendations Map

Access Management

Access management strategies are an important component to East Berry Street reaching the goal of the corridor becoming more in sync with its land uses. Some major benefits identified with access management include enhanced mobility of through traffic and a reduction in crashes. Though businesses are typically not in favor of access management, the benefits that increase vehicle and pedestrian safety are often worth implementation. Some strategies include:

- Access spacing such as spacing between traffic signals and distance between driveways.
- Turning lanes such as dedicated left- and right-turn lanes, as well as indirect left turns and U-turns.
- Medians Though businesses are typically not in favor of access management, the benefits that increase vehicle and pedestrian safety are often worth implementation.



Access Management

A1. Reduce number of driveways on East Berry Street from IH-35W to Mississippi Avenue.

A2. Reduce number of driveways on East Berry Street from Old Mansfield Road to Cobb Park Road.

A3. Reduce number of driveways on East Berry Street from Miller Avenue to Edgewood Terrace.

Technology

A4. Install fiber optics along East Berry Street.

A5. Install cooling pavement along East Berry Street.

Technology and Access Management Recommendations

Access Management

A1. Reduce number of driveways on East Berry Street from IH-35W to Mississippi Avenue.

A2. Reduce number of driveways on East Berry Street from Old Mansfield Road to Cobb Park Road.

A3. Reduce number of driveways on East Berry Street from Miller Avenue to Edgewood Terrace.

Each of the access management recommendations above are presented in the Concepts Chapter of this study. It is recommended that multiple driveways are closed at each of these locations to increase safety, mobility, and allow fewer roadway conflicts. An overabundance of driveways increases the rate of car crashes.

Technology

A4. Install fiber optics along East Berry Street to provide a significantly higher bandwidth capacity than traditional cables.

Fiber optics can handle large volumes of data generated by transportation systems, such as traffic signal timing, sensors, and other control systems. Fiber optics along the corridor would also increase internet speed, reliability, and quality for homes and businesses.

A5. Install cooling pavement along East Berry Street.

Cooling pavements include a range of established and emerging technologies used to decrease pavement heat making it more comfortable for people to walk, bike, roll, and use public transit along the corridor. According to the United States Environmental Protection Agency, cooling pavement refers to materials that reflect more solar energy, enhance water evaporation, or have been otherwise modified to remain cooler than conventional pavements.

Cooling Pavement in San Antonio, Texas



Source: San Antonio Express-News



Typical Access Scenario at an Intersection on East Berry Street

Preferred Access Scenario at an Intersection on East Berry Street





Source: Access Management in the Vicinity of Intersections (FHWA)

Example Segment on East Berry Street where Access Management is Recommended



TECHNOLOGY & ACCESS MANAGEMENT

RIGHT-OF-WAY & UTILITIES

Due to the manner of some of the recommendations throughout this Analysis Chapter, there are segments along the corridor that require right-of-way (R.O.W.) acquisition. Right-of-way acquisition refers to the act of purchasing land or easements by the City to complete a project or improvement. The segments called out in this section of the analysis experience limited right-of-way for the recommendations presented in this study. The Appendix of this study includes a roll plot of the specific properties affected by recommended R.O.W. acquisitions.





Recommendations R.O.W.

R1. Acquire right-of-way from properties in accordance with the recommendations found in the analysis

Cross-Sections R.O.W.

R2. Obtain 10 feet of right of way from Mitchell Boulevard to US-287

R3. Obtain 10 feet of right-of-way from US-287 to Miller Avenue

R4. Obtain 10 feet of right-of-way from Miller Avenueto Edgewood Terrace

R4. Obtain 20 feet right-of-way from Loop 820 to Cravens Road



Water, Sewer, and Utilities

This section of the analysis chapter also discusses the current water and sewer facilities present in the East Berry Street study area as well as provides policy and design criteria to be considered for projects moving forward.

Right-of-Way Recommendations

- R1. Acquire right-of-way from properties in accordance with the recommendations found in the analysis.
- R2. Obtain 10 feet of right of way from Mitchell Boulevard to US-287.
- R3. Obtain 10 feet of right-of-way from US-287 to Miller Avenue.
- R4. Obtain 10 feet of right-of-way from Miller Avenue to Edgewood Terrace.
- R5. Obtain 20 feet right-of-way from Loop 820 to Cravens Road.

See Appendix B for the proposed right-of-way and utility alignments for East Berry Street.



Water

Pressure Plane

There are two pressure planes within the study corridor with the Southside 2 Pressure Plane to the west of Sycamore Creek and Eastside Pressure Plane to the east. Through modeling and master planning efforts, pressure plane areas are designated to maintain adequate pressure and flow to accommodate growth and meet fire flow protection requirements throughout the water service area. Water main modeling should be considered to adequately size the water mains for future density.

Pipe Material

Pipe material utilized within the existing system range varies from Polyvinyl Chloride (PVC), Ductile Iron (DI), Cast Iron (CI), Asbestos Cement (AC), Concrete, High Density Polyethylene (HDPE), etc. Significant linear footage of cast iron pipe, which is subject to extreme rapid thermal expansion and cracking due to its brittle properties, was identified within the study area. As the corridor is reconstructed, cast iron water main replacement should be considered.

City of Fort Worth Water Main Replacement



Policy and Design Criteria

The following are key policy and design criteria applicable to the study area as provided in the City of Fort Worth Installation Policy and Design Criteria for Water, Wastewater, and Reclaimed Water Infrastructure and should be considered.

- Parallel water main lines for wide paved streets: The City criteria states that water service lines exceeding 55 linear feet will require parallel water main lines. In segments where ROW exceeds 110 linear feet, water service lines exceeding 55 linear feet are likely and therefore parallel water main lines should be considered.
- Minimum water line size: The City criteria states that the minimum water line size is 8-inches. Linear footage of 6-inch water mains identified within the study area should be considered for up-sizing to 8-inch or greater.
- Water Meters: The City criteria states that the minimum water meter size is 3/4-inch or 1-inch and located a minimum of 2.5 feet behind back of curb. As alternatives are considered, water meter relocations and meter size replacements may be needed.
- Water Main Sizing: Currently the City will not tap or provide direct service from water mains twenty-inch diameter and greater in size, therefore installing a 12-inch or smaller parallel water main to service property owners along the ROW should be considered.

Source: William Joy (WFAA)

Sewer

Sewer Basins

The study corridor spans two sanitary sewer basins with Sycamore Creek Basin west of the East Berry Street/Freddie Street Intersection and Village Creek Basin to the east. Sewer Basins are areas that follow the drainage features within a service area for the City's primarily gravity flow system and are utilized in hydraulic modeling of the sewer system. Through master planning and modeling efforts, the sanitary sewer lines identified within the sewer basins are sized to meet wastewater flow estimates from land use projections. Sanitary sewer modeling should be considered to adequately size the sanitary sewer mains for future density.

Pipe Material

Pipe material utilized within the existing system range varies from Reinforced Concrete Pipe (RCP), Polyvinyl Chloride (PVC), Ductile Iron (DI), Cast Iron (CI), Vitrified Clay Pipe (VCP), High Density Polyethylene (HDPE), and Fiberglass Reinforced Plastic Pipe. Vitrified clay pipe, which is prone to roots and costly when repairing has been identified just west of Riverside Drive and at the Cobb Park, Bishop Street, Village Creek Road intersections. VCP sanitary sewer line replacement from manhole to manhole should be considered as the corridor is reconstructed.

Age of Infrastructure

Infrastructure greater than 50 years old should be considered for replacement during reconstruction.

Policy and Design Criteria

The following are key policy and design criteria applicable to the study area as provided in the City of Fort Worth Installation Policy and Design Criteria for Water, Wastewater, and Reclaimed Water Infrastructure and should be considered.

- Parallel sanitary sewer lines for wide paved streets: The City criteria states that sanitary sewer service lines exceeding 55 linear feet is not permitted and will require a sanitary sewer line extension as long as the installation is not prohibitive due to topography, depth, and geometry required to meet TCEQ design standards. In segments where the ROW exceeds 110 linear feet, sanitary sewer service lines exceeding 55 linear feet are likely and therefore sanitary sewer line extension should be considered.
- Minimum sanitary sewer line size: The City criteria states that the minimum size for any public gravity wastewater collection main shall be 8-inches. Up-sizing existing sanitary sewer lines to 8-inch or greater should be considered as the corridor is reconstructed.



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GREEN STORMWATER INFRASTRUCTURE

The purpose of the Green Stormwater Infrastructure (GSI) section of this report is to provide recommendations that are broad enough to be implemented corridor-wide, while also providing opportunities to implement water quality strategies into future improvements and development. East Berry Street varies significantly from east to west, making a consistent GSI treatment along the roadway difficult. As such, the recommendations that follow are organized into GSI policies, programs, and projects that differ depending on the context of the area.



G1. Policy: Implement more stringent stormwater management regulations focused on water quality protection at the proposed Lifestyle Villages near important water bodies such as Sycamore Creek (Cobb Park), Ciquio Vasquez Park, and Lake Arlington.



G2. Project: Incorporate vegetation beds and tree planting with improvements associated with the Neighborhood Nodes where improvements intersect city owned property or have wide enough R.O.W.

median at Miller Avenue to Edgewood Terrace.

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G4. Project: Install linear GSI projects such as vegetative filter strips, no mow zones, swales, and tree planting at the Trinity Trail connectivity opportunities C7 and C8 (Connectivity Section).

G5. Project: Install linear GSI projects such as vegetative filter strips, no mow zones, swales, and tree planting at Renaissance Square connectivity opportunity C9 (Connectivity Section).

G6. Project: Install linear GSI projects such as vegetative filter strips, no mow zones, swales, and tree planting at Westshore Way connectivity opportunity C10 (Connectivity Section).

G7. Project: Install shade trees along East Berry Street where pedestrian sidewalk improvements intersect city owned property or have wide enough R.O.W. (Pedestrian Experience Section).

G8. Project: Install shade trees within school pedestrian watershed zones (P2-P9) where pedestrian sidewalk improvements intersect city owned property or have wide enough R.O.W. (Pedestrian Experience Section). G9. Project: Install and/or maintain trash capture technologies.

G10. Program: Launch educational campaign focused on healthy, clean waterways promoting trash management, pet waste management, and eliminating the use of pesticides, herbicides, and fertilizers at residences and in the East Berry study area neighborhoods.

G11. Project: Install pet waste disposal systems at parks, trails, and dense residential areas.

G12. Project/Program: Monitor frequent illegal dumping areas and put up signage to deter behavior.

G13. Policy: Explore the creation and implementation of a Public Improvement District (PID) to offset costs associated with public improvements and maintenance.

Green Stormwater Infrastructure Recommendations Background

Green stormwater infrastructure (GSI) is defined as nature-based solutions that mitigate water quality issues created by urban stormwater runoff. GSI includes water-soil-plant systems that slow down, infiltrate, and evaporate stormwater, and release cleaner water back into the city storm system. To adequately treat and clean stormwater from impervious urban areas, a certain volume of water must be diverted to GSI systems. The Water Quality Volume (WQv) is the volume needed to capture and treat 90% of the average annual rainfall which represents the first flush of rainfall that carries the most polluted water. In Fort Worth, the WQv is 1.5 inches of rainfall and systems must be sized to accommodate; the exact location, impervious cover, land use, and ownership all influence the type of GSI appropriate for the East Berry study area.

The GSI recommendations in this section of the analysis were developed using the *City of Fort Worth (2015), Stormwater Criteria Manual* and *Tarrant Regional Water District (TRWD) 2018 Water Quality Guidance Manual: Management of the Trinity River* to protect water supply, reduce the risk of flooding, and enhance the quality of life by creating recreational opportunities and enabling active lifestyles. These recommendations are intended to provide opportunities for managing water quality, while also providing tree canopy and green space in the East Berry Street study area.

Green Stormwater Infrastructure Recommendations

G1. Implement more stringent stormwater management regulations focused on water quality protection at the proposed Lifestyle Villages near important water bodies such as Sycamore Creek (Cobb Park), Ciquio Vasquez Park, and Lake Arlington.

The City of Fort Worth Stormwater Criteria Manual provides stormwater design focus areas for stream bank protection, flood mitigation and conveyance, and water quality protection; however; the latter is not mandatory, but encouraged in the city. The proposed Lifestyle Villages are along important water bodies, Sycamore Creek and Lake Arlington, which provides the unique character, ecosystem services, and quality of life benefits. Protecting the environmental health and integrity of these waterways is important.



Implement water quality protection regulations using zoning requirements or a design overlay including the following design criteria:

- Use site design practices for conserving natural features, reducing impervious cover, and using natural drainage systems, and
- Treat the Water Quality Protection Volume (WQv) by reducing total suspended solids from the development site for runoff resulting from rainfalls of up to 1.5 inches (85th percentile storm).

Planning for the type and location of green stormwater infrastructure needs to consider the pollutant(s) of concern, available right-of-way or land, existing soil conditions and infiltration rates, and other specific aesthetic goals of the proposed improvements. The following is a table of GSI systems to consider for treating water quality:

GSI System	Definition	GSI Design Types	Suitability
Constructed Wetland	Stormwater wetlands serve larger drainage areas where the water quality volume is treated by wetlands species and stored for a short to long period of time.	Different wetland habitats can be utilized for these systems including wet meadows, emergent species dominated, and forested wetlands	These systems are most suitable for park areas, floodplains, and adjacent to lacustrine areas (relating to or associated with lakes)
Wet (pond) Basin	These systems are designed to retain runoff in ponds with standing water for long term water treatment. They require a source of water to keep a permanent pool and are suited for larger drainage areas.	Wet ponds, stormwater ponds, and retention ponds	These systems are most suitable for high density neighborhoods, mix use, and big box commercial areas
Extended (dry) Detention Basin	These systems are typically used for flood control, but the extended detention time can have positive effects on water quality by capturing sediment, trash, and debris.	The City of Fort Worth requires these systems for flood control mitigation and in some cases streambank protection for certain development	These systems are most suitable for big box commercial areas and often do not provide habitat and recreation opportunities

Constructed Wetland



Bridgeland Creek Parkway. Souce: hrgreen.com

Wet (pond) Basin



Wet basin in north Austin, Texas.

Extended (dry) Detention Basin



Detention Basin at Battle Bend in Austin, Texas.

Bioretention System



Vegetative Filter Strip



Vegetative Filter Strip. Source: Bloomfield.

Grass Swale

Grass Swale. Source: Little Falls Watershed Alliance.

GSI System	Definition	GSI Design Types	Suitability
Bioretention Systems	These systems use living elements such as plants, microorganisms, and soils to remove pollutants from stormwater. Bioretention systems commonly use an engineered mix of highly-permeable natural material that help to remove pollutants.	Rain gardens, rain meadows, biofiltration basins, biofilters, bioswales, and stormwater planters	These systems are most suitable for low- high density neighborhoods, mix-use, and in some cases small scale commercial
Vegetative Filter Strips & No Mow Zones	Filter strips and no mow zones are usually gently sloping vegetated areas. These areas are designed to receive and manage sheet flows over the entire area and typically run parallel to impervious surfaces they intend to treat.	Vegetative filter strips and no mow areas can be designed with many different plant communities and habitats	These systems are most suitable for low density neighborhoods, park areas, floodplains, along trails, and adjacent to waterways and lacustrine areas
Grass Swale	Grass swales are designed to receive and treat stormwater as water drains slowly over a gently sloped channel. These areas are usually designed to convey stormwater to other GSI systems, but in some instances, such as along a greenway trail, can manage small areas of impervious surface.	Swales can be designed with many different plant communities including turf grasses, or taller wet meadow species	These systems are most suitable for low density neighborhoods, park areas, floodplains, along trails, and adjacent to waterways and lacustrine areas



G2. Incorporate vegetation beds and tree planting with improvements associated with the Neighborhood Nodes where improvements intersect city owned property or have wide enough R.O.W.

Align Neighborhood Node improvements with increasing the urban tree canopy where possible. Providing more comfortable outdoor environments will encourage active transportation and improve quality of life.

G3. Install meadow bioswale median at Miller Avenue to Edgewood Terrace.

Install a GSI pilot project at Miller Avenue to Edgewood Terrace along East Berry Street. Incorporate a bioswale median planted with prairie mid-grasses, wildflowers, and engineered soils. An overdrain will be needed to take excess water to the local stormwater drainage system to reduce the risk of ponding over the drive surface. More details illustrating this recommendation can be found in the 06 Concept Section for Miller Avenue to Edgewood Terrace.

G4-6. Install linear GSI projects such as vegetative filter strips, no mow zones, swales, and tree planting at the Trinity Trail, Renaissance Square, and Westshore Way connectivity opportunities (C7 - C10).

Linear GSI systems such as vegetative filter strips, no mow zones, swales, and tree planting can be both relatively inexpensive and easy to install especially if coordinated with other transportation improvements. These strategies have many benefits from improving water quality, to reducing runoff, providing habitat, and providing a more comfortable urban environment.

G7-8. Install shade trees pedestrian sidewalk improvements intersect with city owned property and/or have wide enough R.O.W. to accommodate plantings (P1-P9).

Expanding the urban tree canopy, especially if coordinated with sidewalk improvements, can be an efficient way to improve the comfort of the urban environment and encourage walking.



Biofiltration system in the parking lot of the Perot Museum of Nature and Science. Tall prairie grasses and horse tail are planted between accent boulders and rock.



A GSI feature at Family Dollar along East Berry accumulates trash and debris after large rain events.

G9. Install and/or maintain trash capture technologies.

Trash accumulation along waterways and in existing GSI features are common within the East Berry Street study area. Install storm drain inlet, in-line, and end of pipe trash capture technologies where appropriate. Align improvements with other drainage or infrastructure projects for efficiencies within the process. Maintain existing open water trash capture areas along waterways, especially at the confluence with Lake Arlington. Maintenance of these interventions are important for the continued functioning of the technologies.

G10. Launch educational campaign focused on healthy, clean waterways promoting trash management, pet waste management, and eliminating the use of pesticides, herbicides, and fertilizers at residences and in the East Berry Street study area neighborhoods.

Work with local partners or City departments to launch an educational campaign focused on healthy, clean waterways promoting trash management, pet waste management, and eliminating the use of pesticides, herbicides, and fertilizers at residences and in the East Berry study area neighborhoods. There are opportunities to use public art for outreach and to include local schools.



Inlet badge that reads "No Dumping, Drains to Creek" in Austin, Texas.



Community art by Stacy Levy titled Passage of Rain. Souce: Stacy Levy, www.stacylevy.com/





A GSI feature at Family Dollar along East Berry accumulates trash and debris after large rain events.



Report Illegal Dumping Sign

G11. Install pet waste disposal systems at parks, trails, and dense residential areas.

Pet waste pollutes local waterways and increases the presence of fecal coliform when not properly disposed of. Install pet waste stations in parks, trails, and residential areas. Providing these stations at proposed, higher density development sites with larger dog populations is important for healthy waterways.

G12. Monitor frequent illegal dumping areas and put up signage to deter behavior.

Work with local partners or City departments to monitor illegal dumping and provide educational signage to report offenders.

G13. Explore the creation and implementation of a Public Improvement District (PID) to offset costs associated with public improvements and maintenance.

A PID could be utilized to help establish and continue maintenance of landscaping and other public improvements throughout the corridor. Working with the community would allow the City to establish the types of improvements, maintenance level, and assessment amount to be levied against affected property owners.

Green Stormwater Infrastructure Considerations

The climatic conditions, ecosystem type, and hydrological conditions dictate what stormwater management solutions work best where. Planning for the type and location of green stormwater infrastructure needs to consider the pollutant(s) of concern, available right-of-way or land, existing soil conditions and infiltration rates, and other specific aesthetic goals of the proposed improvements. In addition, contaminated soils may be a challenge within the East Berry Study area which would require remediation before filtration stormwater features could be installed.

LAND USE

Upon assessing the East Berry Street study area, many areas were identified as having potential for walkable/mixed-use development. The assessment examined existing land uses, street and block patterns, connectivity to surrounding neighborhoods, existing zoning, potential for street transformation, and proximity to major amenities such as schools, parks, or shopping centers.

After conducting the survey, two Place Types emerged: Lifestyle Villages, and Neighborhood Nodes. These are in addition to the city's already recognized Urban Villages. Place Types are used to help people visualize the character of redevelopment that a specific location could likely accommodate based on its locational context.




Lifestyle Villages

Major open space amenities such as parks, trails and water bodies with high potential for new development/ redevelopment.

Neighborhood Nodes

Proposed areas intended to accommodate a cluster of small neighborhood-serving businesses, shops and gathering places within walking distance of existing neighborhoods.



ArcGIS Urban Integration

The analysis for East Berry Street utilized the visualization software, ArcGIS Urban, to build three-dimensional scenario plans within the study area. This assessment is divided into four parts.

GIS Data Collection

An inventory of data was organized in ArcGIS Pro to understand the study area and identify the patterns within the data.

Suitability Analysis

The suitability analysis is provided to identify the properties in the East Berry Street study area that are best suited to absorb future corridor growth. This exercise involves using quantitative data combined with knowledge of existing and emerging market conditions to inform a future development strategy for the corridor. The process also includes a comparison of properties based on a set of criteria and the creation of visuals where re-development and infill development is most suitable. The table at the bottom of the page provides a list of different variables used to build the suitability model for the study area.

Building Scenarios for the Catalytic Sites

The final step in the ArcGIS Urban model was to build scenarios specific to the locations called out in the analysis. The areas that were developed using this tool include Renaissance Square, Miller Avenue, Edgewood Park, and Lake Arlington.

Variable	Start	End	Suitability Score	Note
Ratio of Land Value and 2x Building Value	1	10,000	4 to 10	Higher score for parcels where the land value is higher than the building value
Building Age	Up to 30	30 years or more	10	Higher score for buildings that are 30 years or older
Access to Civic Facilities	1/4 mile	1/2 mile	6 to 10	Higher score for more walkable distance (1/4 mile)
Underdeveloped Parcels	City Owned	Undeveloped	1 to 10	
FAR	0	2	2 to 10	Lower FAR higher the score
Land Value vs Improvement Value	1	10,000	6 to 10	Higher the ratio higher the suitability score
Underutilized Parking	Yes	No	6 to 10	If yes – higher the suitability score

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Final Outputs

The series of analytical steps starting from building a digital twin, performing a suitability analysis to identify catalytic sites and developing various test scenarios helped the team understand the effects of density, height in relation to its context and demographic alterations with the proposed development scenarios. Most importantly introduction of various allowed land uses that could help the each of the catalytic site be developed into a retail hub to a neighborhood node.

Figure 53. Edgewood Park



Figure 55. Street Section Examples for East Berry Street and Westshore Way



Figure 54. Renaissance Square



Figure 56. View of East Berry Street approaching Lake Arlington



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Methodology

GIS (Geographic Information System) data -> ArcGIS Urban

For this analysis, parcel, land use, and building data were the primary features used to identify the locations in the East Berry Street study area most attractive for in-fill development and redevelopment. This analysis was conducted using Geographic Information System (GIS) and ArcGIS Urban which are both planning tools that help streamline the urban planning, design, and visual representation process to clearly and accurate convey analysis results. The analysis considers the following factors:

- Land Use
- Parcel size
- Existing building age
- Comparison of land and existing building value
- Proximity to civic attractions (example: parks and trails)
- Utilization of space (Floor areas ratio and parking)
- City ownership

The scoring methodology was intentionally weighted to preserve existing residential and promote the redevelopment of underutilized or under-performing commercial parcels and building. Results are expressed as a score of 1-10 with the composite of factors resulting in a combined suitability score (10 being most suitable and 0 being least suitable).

Figure 57. Susceptibility to Change Parcel Map





Identifying Walkable/Mixed-Use Focus Areas

Upon conducting an assessment of the East Berry Street study area, numerous areas were identified as having potential for walkable/ mixed-use development. The assessment examined existing land uses, street and block pattern, connectivity to surrounding neighborhoods, existing zoning, potential for street transformation, and proximity to major amenities such as schools, parks, or shopping centers.

After conducting the survey, two Place Types emerged: Lifestyle Villages, and Neighborhood Nodes. These are in addition to Fort Worth's recognized Urban Villages. Place Types are used to help people visualize the character of redevelopment that a specific location could likely accommodate based on its locational context.



Figure 58. Focus Areas

Lifestyle Villages

Major open space amenities such as parks, trails and water bodies can be powerful catalysts for new development/redevelopment. People from diverse backgrounds are drawn to amenities that support a more active, outdoor lifestyle.

There are two such major public open space amenities within the East Berry Street study area that can be leveraged to catalyze new development - Cobb Park and Lake Arlington. Currently, neither amenity has been fully embraced by surrounding development, but the opportunity is there.

Cobb Park

Cobb park is a beautiful natural open space that follows Sycamore Creek and eventually merges with the Trinity River to the north. The park system extends to the north and has potential to extent to the south as well.

The privately owned land in the vicinity of East Berry Street, a substantial portion of which is vacant, does not take advantage of the parks proximity. However, this can be seen as an opportunity to create a redevelopment vision for the area that can be implemented through appropriate zoning tools that ensure that future development takes full advantage of the park.

Lake Arlington

Lake Arlington lies at the eastern edge of the study area. The potential node area is sandwiched between the lake and Loop 820 and currently consist of light industrial and storage uses. East Berry Street terminates at Cravens Road which is bordered by undeveloped, privately owned land. Views of the lake are obscured by trees on the vacant land.

The lake offers a major opportunity as an amenity for walkable mixed-use development and a destination for the whole corridor. The properties are already zoned for mixed-use - MU-1 and MU-2 (along Loop 820). The zoning in and of itself has yet to yield redevelopment of this area. This could be due to existing legacy industrial and storage uses and lack of earmarked public realm improvements in support of mixed use redevelopment. In addition, the market has yet to realize the untapped potential of the lake and its vicinity. The area could also benefit from a clearer vision that would coordinate private and public investment.



Lake Arlington



Cobb Park



Sycamore Creek in Cobb Park

Figure 59. Cobb Park



Trail at Cobb Park



Existing Zoning:	E (Neighborhood Commercial), C (Medium Density Multi-Family), CF(Community Facility), A-7.5 (Single-Family)	
Notes / Considerations	Cobb Park is a regional recreational destination that is underutilized as an amenity for development.	
Constactactoris	Inconsistent zoning and property ownership may slow redevelopment of the overall vision.	
Potential	GOOD	

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Figure 60. Lake Arlington



Eugene McCray Park at Lake Arlington



Existing Zoning:	MU-1(Low Intensity Mixed-use), MU-2(High Intensity Mixed-use)
Notes / Considerations	Lake Arlington is an major regional amenity that is underutilized along its western edge due to lack of visibility, access, and existing industrial uses. The right calibration of the existing MU zoning can facilitate redevelopment along with a clearer vision for the area.
Potential	EXCELLENT



Neighborhood Nodes

There are several opportunities to advance walkability within existing neighborhoods that fall within the East Berry Street study area. One strategy is to nurture small neighborhoodserving businesses that do not rely on high traffic counts for survival and that can be easily accessed by foot, bike, and other forms of micromobility. Some of these locations are already providing neighborhood serving uses at strategic intersections within the neighborhood fabric.

With this objective, Neighborhood Nodes are a proposed Place Type that is intended to accommodate a cluster of small neighborhood-serving businesses, shops and gathering places within walking distance of existing neighborhoods. By making these areas attractive to residents, it can give the neighborhood a sense of place by providing an informal "third-place" and reduce vehicle miles traveled as more residents opt for walking, biking, or shorter car trips.

Existing Zoning:

To increase the likelihood of implementation, we identified areas that already have some form of commercial zoning in place. It may include some adjoining vacant or under-utilized sites that are residentially zoned.

Challenges

There are some challenges to implementation which should be recognized:

None of the proposed Neighborhood Nodes currently have high quality pedestrian realms that would support good urban form. Therefore, in order to fully implement this vision, there would need to be some investment in the public realm (sidewalks, street trees, etc.) to create a more comfortable and safe pedestrian experience.

The existing zoning varies within each area, so a zone change or overlay would need to be utilized to bring zoning into alignment with the vision.

Some neighborhood residents and business owners may be resistant to change.

Implementation

There are two primary actions needed to implement the vision for walkable neighborhood nodes: a form-based code zoning and investment in walkable infrastructure.

d ice	Flexible Uses and Form	Create and allow broader categories of uses (including "missing-middle residential). Focus building form and scale of the use to ensure that it fits the neighborhood context. Adopt performance standards on how any non- residential uses that may typically have negative impacts on the adjoining properties adapt to the neighborhood context.
is		Many of the commercial sites were developed
are	Incremental Redevelopment	under Euclidean zoning where the building was set-back from the street and parking is located in front. Future zoning should allow property owners to modestly improve their properties by allowing incrementally redevelopment and flexibility on their existing non-conformities.
h eet	Public Realm Infrastructure	Just as important as zoning, implementation would necessitate substantial public investment in the public realm, i.e., the street right-of- way. Most streets would need some level of transformation that might include wider, shaded sidewalks, bike lanes (where appropriate), on- street parking, and other traffic calming measures to slow traffic. Zoning alone cannot create a walkable environment without improvements to the public realm.

Figure 61. Mississippi Avenue & Glen Garden Lane



Figure 62. Mitchell Boulevard & Crenshaw Avenue



Existing Zoning:	CF (Community Facility - church), E (Neighborhood Commercial), B (Duplex), A-5 (Single Family)
Notes / Considerations	Proximity to Cobb Park is an asset with the ability to connect to trail system. There is a small neighborhood park (Wesleyan Hills Park) at Strong Avenue and Wesleyan Drive that can become a focus of the neighborhood. Challenge will be to get uses that are not fast- food or auto-oriented retail due to frontage and proximity to US-287.
Potential	FAIR



Figure 63. Vaughn Boulevard

Existing Zoning:	Mostly E (Neighborhood Commercial)	
Notes / Considerations	Vaughn Boulevard has potential to function as a walkable neighborhood node, or a local main street. The lots are too small for suburban pad sites, but compatible with smaller neighborhood businesses. Should also explore the potential for some "missing middle" housing and live-work at mid-block locations since retail demand will be low.	
Potential	GOOD	



Neighborhood Nodes

Figure 64. Miller Avenue & Baylor Street



Figure 65. Village Creek Road & Eastland Street



Existing Zoning:	E (Neighborhood Commercial), CR (Low density Multi-Family), CF (Community Facility)
Notes / Considerations	Several undeveloped and underdeveloped parcels located at this key intersection can create the potential for a new neighborhood node. The area's site geometry and street layout lends itself to being a node or center. Low density area to the south may not support medium intensity commercial uses.
Potential	GOOD

LAND USE

Figure 66. Stalcup Road & Ramey Avenue

Existing Zoning:	E (Neighborhood Commercial)
	This site has the advantage that all of the property has the same zoning district (E).
Notes / Considerations	Portions of the site are owned by Fort Worth ISD and is being used for school parking. However, there may be sufficient property to the north and south to merit development as a Neighborhood Node. Adjacency to Bunche Park just east of the school should be an advantage. There are already some neighborhood serving retail uses at this node.
Potential	GOOD



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CONCEPTS

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The concepts provided in this chapter display illustrations based on the recommendations in the Analysis Chapter of the report. This chapter provides two categories of design concept illustrations: Street Design Concepts and Development Design Concepts.

STREET DESIGN CONCEPTS	DEVELOPMENT DESIGN CONCEPTS
IH-35W Northbound Frontage Road to	Cobb Park/Riverside Drive T.O.D. Concept
Mississippi Avenue Concept	Lake Arlington Concept
Old Mansfield Road to Cobb Park Drive	Renaissance Square Concept
Concept	East Berry Street & Edgewood Park
East Berry Street & US-287 Green Ribbon	Neighborhood Node
Concept	Miller Avenue & Eastland Street Neighborhood
Miller Avenue to Edgewood Terrace Concept	Node
BAT Lanes & Bus Pads	Village Creek Road & Eastland Street Neighborhood Node

Based on the Susceptibility to Change analysis, parcels were ranked from low susceptibility to change to high susceptibility to change. In addition to the quantitative factors that went into the susceptibility to change analysis, the team utilized qualitative factors such as assemblage of land, adjacency to other redevelopment initiatives, location relative to other nodes along the corridor and prior redevelopment initiatives already at play to identify the focus areas for the initiative.

Ideas Map

As the first step during the Solutions Workshop, a preliminary Ideas Map was developed to help clarify the vision for redevelopment at the different focus areas. The stakeholder and public input during the workshop help validate the ideas presented and solidify the vision for different locations along the corridor. The Ideas Map shows all the potential locations where redevelopment could occur, but the solutions workshop focused on specific locations to target redevelopment energies and align infrastructure investment with zoning and market potential.





Each location provides a unique opportunity along the corridor. Some of the big ideas include:

- Focus on increasing residential development opportunities everywhere along the corridor
- Extend and connect to the Trinity Trails network south of Cobb Park along Sycamore Creek and to the neighborhoods east and west
- Commercial development along Berry to be focused at key intersections and neighborhood nodes for maximum benefit to the residents
- Reserve the potential for a transit-oriented development at a future commuter rail station at Sycamore Creek and the UP Rail line to Mansfield
- Enhance placemaking (possible public gathering place) and walkability in and around Renaissance Square
- Explore opportunities for Neighborhood Nodes with improved neighborhood retail and "missing middle" housing at key locations along the corridor and within adjoining neighborhoods
- Preserve and prioritize public access to and along Lake Arlington from East Berry Street
- Explore the opportunity to transition existing industrial uses into a true mixed-use neighborhood with frontage and access along Lake Arlington as an asset at the eastern end of Berry Street

Introduction to Concepts

With the overarching goals for East Berry Street and the specific ideas for the different focus areas along the corridor, the Solutions Workshop (SWS) explored concept plans for key locations along the corridor. The Concept Plans developed during the SWS provided some illustrative examples of how streets and blocks, lots, buildings, open space, and parking could all be arranged if development and redevelopment were to happen at these locations. The two major focus areas for which concept plans were developed are Cobb Park/Riverside T.O.D. and Lake Arlington. Other focus areas included Renaissance Square Retail Center and neighborhood nodes at East Berry Street & Edgewood Park, Miller Avenue and Eastland Street, and Village Creek Road and Eastland Street.

IH-35W Northbound Frontage Road to Mississippi Avenue Concept

CONCEPT PLANT SCHEDULE







Design Considerations

To be evaluated and/or applied at preliminary engineering phase of implementation.

Roadway:

- Include left-turn lanes at signalized intersections (i.e. Pate Drive)
- Evaluate priority of each driveway closures
- BAT lanes verify left turn movements with curb radius
- Align cross streets if possible (i.e. Mississippi Avenue)
- Evaluate positive offsets for left-turn lanes.
- Ensure lanes are aligned across IH-35W bridge
- Extend roundabout splitter island to eliminate cross access of Glen Garden Drive
- Evaluate the need for widening existing bridge east of Riverside Drive
- Native landscaping to be considered during design and implementation

Pedestrian Facilities:

- Directional ramps to be provided at all intersections
- Use blended transition ramps if necessary
- Crosswalks to be placed at end of curb radius
- Pedestrian Hybrid Beacon to be provided at any mid-block pedestrian crossing
- Provide full-width side path across railroad
- 6' minimum adjacent sidewalk may be considered at Mitchell Boulevard intersection to minimize ROW impact

Transit:

- Preferred station locations to be identified by Trinity Metro during 30% design.
- Stations to be placed on far side of any major intersection
- Access management measures to be considered for transit facilities

Old Mansfield Road to Cobb Park Drive Concept





East Berry Street & US-287 Green Ribbon Grant



Miller Avenue to Edgewood Terrace Concept

CONCEPT PLANT SCHEDULE



MEXICAN FEATHERGRA FOUNTAIN GRASS GULF COAST MUHLY

ACCENT SHRUB RED YUCCA COLOR GUARD YUCCA AGAVE

> EVERGREEN SHRUB LEMON LIME NANDINA KALEIDOSCOPE ABELIA SALVIA







Median Planting Enlargement





Design Considerations

To be evaluated and/or applied at preliminary engineering phase of implementation.

Roadway:

- Include left-turn lanes at signalized intersections (i.e. Pate Drive)
- Evaluate priority of each driveway closures
- BAT verify left turn movements with curb radius
- Align cross streets if possible (i.e. Mississippi Avenue)
- Evaluate positive offsets for left-turn lanes.
- Ensure lanes are aligned across IH-35W bridge
- Extend roundabout splitter island to eliminate cross access of Glen Garden Drive
- Evaluate the need for widening existing bridge east of Riverside Drive
- Native landscaping to be considered during design and implementation

Pedestrian Facilities:

- Directional ramps to be provided at all intersections
- Use blended transition ramps if necessary
- Crosswalks to be placed at end of curb radius
- Pedestrian Hybrid Beacon to be provided at any mid-block pedestrian crossing
- Provide full-width side path across railroad
- 6' minimum adjacent sidewalk may be considered at Mitchell Boulevard intersection to minimize ROW impact

Transit:

- Preferred station locations to be identified by Trinity Metro during 30% design.
- Stations to be placed on far side of any major intersection
- Access management measures to be considered for transit facilities

Business Access and Transit Lane (BAT)





Bus Pads



Cobb Park / Riverside Drive T.O.D. Concept



6. Extend Cobb Park to the south and connect to Ellis Park via bike/pedestrian trails, with

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Cobb Park/Riverside T.O.D.

This focus area encompasses the southwest quadrant of the intersection of East Berry Street and Riverside Drive. There are lot of existing industrial uses along the two rail lines that cross each other. In addition, Sycamore Creek swings down to the west of Riverside Drive, just south of East Berry Street behind Ellis Park, and provides an excellent opportunity for future trail linkages north to Cobb Park and the Trinity Trails. The existing rail line acts a barrier in terms of connectivity to the west and south. There are several drainage issues in this vicinity that need storm water consideration as plans for a future rail station and associated improvements are implemented.

The Concept Plan for Cobb Park/Riverside T.O.D. illustrates a central spine of redevelopment along Yuma Drive. New streets and blocks would break down some of the existing large blocks into a more walkable network. Some of the streets could be shared streets or pedestrian connections instead of full-fledged auto connectivity. Development would be supported mostly by surface parking with the exception of the block closest to the future rail station platform which could accommodate structured parking. Coordination with NCTCOG on the potential transit stop location of the Mansfield Line is a key consideration in moving this concept forward. Similar coordination between the city and Trinity Metro will need to occur regarding the development of Sierra Vista into a transit hub. Development within the core of the T.O.D. would mostly be residential at various scales and commercial would most probably be limited to the East Berry Street frontage in the initial stages of the T.O.D. There may be limited opportunities for some neighborhood scale commercial at the rail station fronting the new square. This plan also envisions retaining much of the existing industrial west of the T.O.D. along the north-south rail line.

A major element of this plan also envisions extending the influence and reach of Cobb Park south along Sycamore Creek and thus providing trail connectivity to the future T.O.D. and from the T.O.D. to the Trinity River Trail network. This linear system of connected parks can then be the catalyst for some new residential at East Berry Street and Old Mansfield Road, and East Berry Street and Cobb Park Road (site of the existing First Saint John Cathedral). All redevelopment shown in these concept plans are aspirational to provide property owners and future investors guidance in terms of the range of uses and redevelopment vision desired in these areas.

Transit Oriented Development

Trails and Paths

Residential and Mixed-Use Development









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Figure 67. Rendering of Potential Transit Oriented Development at Cobb Park / Riverside Drive



Lake Arlington Concept



Lake Arlington

Lake Arlington is one of the two major focus areas along East Berry Street with significant potential for transformation. This encompasses the area east of Loop 820 from approximately Elizabeth Road to the north to Eastland Street to the south. It is a large area that is currently occupied by a mix of older industrial, storage, auto-service, and residential uses. The area also has significant properties within the flood plain and has limited public access and view of the lake itself. There is one city park (Eugene McCray Park) but suffers from being isolated with limited visibility and access from East Berry Street. Eastward views of the lake along the corridor should be enhanced and preserved through future development, including the potential for cityacquired land. The concept plan integrates the potential future north-south connection of Westshore Way in a manner that maximizes its role to provide public access along Lake Arlington, a critical infrastructure and quality of life consideration for this concept.

This Urban Village has the potential to be a major mixed-use neighborhood and destination on par with the Trinity Lakes development. However, the challenges of the fractured ownership, existing under utilized properties, and lack of an overall street and block framework have stymied redevelopment. The goal of this initiative is to address these barriers to redevelopment through a zoning and implementation framework.



Lakefront Views



Lakefront Residential and Mixed-Use Development

Eugene McCray Park



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Figure 68. Rendering of Potential Development at Lake Arlington



The illustration shows the extension of East Berry Street east toward Lake Arlington. The street terminates with a "market street" which then leads to a pedestrian green and a waterfront outdoor amphitheater. The open space is activated with commercial uses at the ground floor level.

Renaissance Square Concept





Renaissance Square

This is the most significant commercial development in the East Berry Street study area and is located between Mitchell Boulevard and US-287. It was originally envisioned as an Urban Village, but the fractured PDs and associated development have never seamlessly fit together as a whole in terms of connectivity or character. Rather, there are several missed opportunities to connect the commercial to the residential to the south of Renaissance Square and provide better internal connectivity between adjoining uses (Uplift Mighty Preparatory and East Berry Street). There are several plans already in place for some private development along Moresby Street, just south of the shopping center.

The concept plan developed for Renaissance Square as part of the East Berry Corridor Study initiative developed ideas to reinforce the edges of the commercial development and better connect them to nearby sites and opportunities. One of the critical connections and considerations expressed in the concept plan is the implementation and connections to the "neighborhood square". Development off the parking lot with liner buildings can help focus commercial development in a way that supports utilization of the neighborhood square, in addition to providing for some place-making elements that can create additional places for people from adjoining neighborhoods to congregate. Any implementation of these ideas will require working with the existing property owners to create the tools in the existing PDs, including recruitment and development of a major institutional user for the large undeveloped land along Vaughn Boulevard.



Retail Shopping



Community Gathering



Preserving History

Neighborhood Nodes

In the analysis phase, the team identified numerous areas within the overall study area that have attributes that make them good candidates for walkable neighborhood nodes. These areas typically already have Neighborhood Commercial zoning (E and ER) and occur on streets that carry less traffic, making the streets good candidates for a more urban retrofit that might include on-street parking and wider sidewalks. Infill could take the form of missing middle residential or small retail or office based on the market.



Potential:





East Berry Street and Edgewood Park



- 1. Edgewood Park with new improvements
- 2. Proposed median to facilitate pedestrian crossings from south to park
- 3. 1-story neighborhoodserving commercial space with corner plaza

Miller Avenue and Eastland Street



- 1. Existing school
- 2. Existing church
- 3. Enhanced pedestrian connection to school
- Retrofit street with on-street parking and tree-lined sidewalks.
- 5. New neighborhoodserving commercial fronting on the street
- Infill housing with a mixture of dwelling types including "missing middle" building types

This was a neighborhood node that was added at the Solutions Workshop to take advantage of the improvements the city is currently undertaking to Edgewood Park located on E Berry (between Hughes and Edgewood Terrace). In this particular context, the improvements to Edgewood Park could be complemented by improvements to Berry Street (addition of a median and cross walks) itself which could provide the impetus for redevelopment in the blocks immediately adjacent to Edgewood Park. This is an opportunity to illustrate how public improvements can add value to private property that can start driving redevelopment. This private redevelopment can, in turn, complement the public investments. One approach to catalyze private development would be for the city to purchase tax-delinquent properties and in turn position them for redevelopment.

This was a neighborhood node identified due to the proximity of the existing commercial along Miller to Christene Moss Elementary School on Eastland/San Rose Drive. A lot of the existing commercial along Miller is neighborhood serving and small in scale. Pedestrian connections along Miller and to the adjoining neighborhoods could potentially be improved and on-street parking could be accommodated on Miller as well. The concept plan for this neighborhood node explores the potential to add some modest missing middle residential along the corridor to keep the existing neighborhood commercial more viable.

Eastland Street and Village Creek Road



- 1. Existing senior care facility
- 2. Retrofit street with on-street parking and tree-lined sidewalks
- 3. Neighborhood-serving commercial uses fronting on street
- 4. Townhouses around a shared pedestrian green
- 5. Cottage court
- 6. Apartment court
- 7. Duplexes with rear alley access

This neighborhood node was identified due to the relative significance of the Eastland Street and Village Creek Road intersection with proximity to AM Pate Elementary school, some existing aging multifamily and some vacant properties at the intersection. The concept plan explores ideas for potential redevelopment of the multi-family into more neighborhood scale missing-middle. The concept plan shows different options and scale for the infill residential and shows the range of missing middle that could be developed at this scale – from townhouses to cottage court to duplexes to apartments – all within the appropriate design and transitions within the neighborhood.


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ZONING FRAMEWORK

One of the city's key implementation tools to turn the vision for East Berry Street into reality is zoning. Although zoning alone will not implement the vision for walkable, mixed-use redevelopment along the corridor, it is a key element. Ensuring the right public realm context (i.e., streets, sidewalks, etc) to support walkable redevelopment is also just as important. This requires major public investment and needs to be phased based on the city's competing budget priorities. Fixing the zoning is a much easier lift (and less costly) compared to the improvements to the public realm.

Chapter 4 provides the framework to refine zoning based on the corridor's stage in its evolution from existing auto-centric to walkable. Most of East Berry is still in Stage 1 which is a very auto-centric corridor with minimal pedestrian facilities. Making the entire corridor walkable at the same time will be challenging given the level of investment in the public realm and the limited market for walkable mixed use.



FORM-BASED CODE

In this context, the zoning framework should complement the evolving corridor context by calibrating the development regulations to locations that have the highest potential for walkable mixed-use redevelopment in the short run.

The recommended approach to zoning along the corridor is to first, focus on minimizing any regulatory barriers to redevelopment, i.e., "allow good things to happen". Current zoning is single-use zoning that separates commercial uses from single-family uses and multi-family uses. And where mixeduse zoning is in place along the corridor, the roadway context is entirely auto-oriented (such as Riverside and Berry) or there is no regulatory way to implement a walkable, compact, block structure which is typically accomplished via a "regulating plan." Successfully implementing mixed use or form-based zoning essentially requires continuity over a larger focus area (say, within a quarter mile walk-shed). Zoning individual sites or parcels for mixed use will not aggregate the benefit of walkable development over the needed critical mass of a walk-shed.

Form-based zoning, by its very definition, implements a specific urban form and is based on the vision balanced with realities on the ground (market, community, and roadway). The East Berry corridor is similar to several other aging commercial corridors in the city. As the city moves forward with investing in redevelopment along these other corridors, it will become important to have a consistent zoning framework that can be calibrated to the specific needs of the different corridors, but also creates a common set of zoning tools for ease of administration and applicability.





MULTIPLE CODES FOR SIMILAR CONTEXTS

The city has several stand-alone form-based codes (approximately six) and each of them have different formats, vocabulary, and organizing principles. Each of these was created to implement a specific vision for a defined location in the city. At the same time, much of the code language, graphics and metrics are the same or similar from one code to the next.

Moving forward, the planning team recommends that the city adopt a zoning approach that will simplify the writing and implementation of form-based districts so that it can be used along other aging corridors, which should save the city money (that is paid to consultants to develop a code from scratch) and which should simplify administration of the code by decreasing redundancy and standardizing language and graphics.



CORRIDOR FORM-BASED CODE FRAMEWORK

Sec. 13: GENERAL CORRIDOR FORM STANDARDS (general form-based standards which can be applied to multiple corridors within the City):

- Administration
- Establish Sub-districts
- Permitted uses by Sub-district
- Public Realm Standards
- Urban form by Sub-district
- General Building Design Standards
- General Landscape Standards
- Sign Standards

Sec. 13_: East Berry Corridor Form-Based District

- District-specific standards
- Regulating plan allocates sub-districts and special requirements (A/B streets, vistas, etc.)

Sec. 13_: East Lancaster Corridor Form-Based District

- District-specific standards
- Regulating plan allocates sub-districts and special requirements (A/B streets, vistas, etc.)

Sec. 13_: Other Future Corridor Form-Based Districts

- District-specific standards
- Regulating plan allocates sub-districts and special requirements (A/B streets, vistas, etc.)







A NEW TOOL FOR CORRIDORS

Instead of creating another custom code from scratch, which is often redundant, the planning team recommends the creation of a Corridor Form-Based Code that would be an adaptable but standardized zoning tool that could be applied to East Berry Street and other aging corridors around the city. As shown in the organizational digram on page 150, the tool would divide the form-based code into two sections, one would have the standards that are general in nature and that would apply to all corridors, followed by a district-specific code section that would include the district's Regulating Plan and any other standards that are specific to the district (in this case, East Berry Street). Such a zoning tool would become a universal corridor form-based code framework (similar to a Corridor Specific SmartCode) with sub-districts (similar to transect zones) to address a range of conditions from the most urban/walkable to sub-urban/auto-oriented that marries the street context with the private realm redevelopment opportunities.

This Corridor Code would create four to five sub-districts that would be applied along commercial corridors based on the current and future roadway context identified (thus far, this framework has four sub-districts).

Each corridor may not have all sub-districts, but should have at least three of the sub-districts below. The Regulating Plan would designate the boundaries of the different sub-districts included in the Corridor Code together with improvements to street and block networks. The initial sub-districts outlined in this report include the following:



A TOOL FOR NEIGHBORHOOD NODES

In addition to the focus on the East Berry Street corridor, the planning team identified areas outside the corridor that had potential to become walkable, neighborhood-serving nodes, these were identified as Neighborhood Nodes. These node locations most closely correlated to the presence of E/ER Neighborhood Commercial zoning within nearby proximity of a residential neighborhood. The team proposed two alternative approaches to these areas that are discussed in greater detail on the following pages.

Table 3. Proposed Corridor Form-Based District Sub-Districts



CORRIDOR CENTER

Allow for long-term implementation of walkable, mixed use, urban centers oriented along major intersections and arterials, and at major destinations and amenities such as large parks, lakes and major transit stations. This zone is similar to the entitlements in the MU-2 zone, but unlike the MU zones, the Urban Center does not prescribe the exact mixture of uses (except as regulated by the Regulating Plan). To accommodate the existing context and market, this zone may still experience single story commercial-only development, which should be accommodated in a way that facilitates easy and safe pedestrian access.

Allow for long-term implementation of walkable, mixed use, urban villages oriented along major intersections and arterials. This zone is similar to the entitlements in the MU-1 zone, but unlike the MU zones, the Corridor Node does not prescribe the exact mixture of uses (except as regulated by the Regulating Plan). To accommodate the existing context and market, this zone may still experience single story commercial-only development, which should be accommodated within the framework of a walkable environment.

CORRIDOR GENERAL

This sub-district is intended for commercially zoned properties along the corridor that occur between major intersections and nodes. These areas will likely remain as low-intensity singlestory commercial uses for the foreseeable future. The subdistrict should allow for modest redevelopment with a focus on improving pedestrian safety and site aesthetics including access management and landscaping. This sub-district is primarily intended for lots that are less than two acres in area.



This sub-district is intended for properties which may have existing single-family or residential zoning, but that are located along an arterial or as a transition between a commercial corridor and single family residential. It may also be used for undeveloped properties that abut existing single-family neighborhoods and which do not currently have commercial entitlements. The intent of the proposed sub-district is similar to the UR zone which allows a mixture of "missing middle" housing types along with limited small-scale commercial uses. The sub-district may also incorporate elements of the MR zone which is currently under development.

INTENT

USE MIX

MOST SIMILAR TO:

• All uses permitted in the MU-2 • and MU-1 districts (without proximity test). Ground floor commercial to be required where indicated on the Regulating Plan.

MU-2

- Generally, all uses permitted in the "E" and "F" Commercial Districts with the ADDITION of residential uses. Some uses permitted in the E and F zones may be excluded.
- Specifically not permitted: • drive-throughs (for banks, restaurants, pharmacies, etc.)

All uses permitted in the MU-1 • district (without proximity test). Ground floor commercial to be required where indicated on the Regulating Plan.

MU-1

• Generally, all uses permitted in the "E" and "F" Commercial Districts with the ADDITION of residential uses. Some uses permitted in the E and F zones may be excluded.

- E/ER + UR
- All uses permitted in the E (Neighborhood Commercial) zone with the addition of residential uses.
- Specifically not permitted: drive-throughs.

- UR
- All uses permitted in the UR zone.
- Small-scale, neighborhood oriented, corner commercial uses may be permitted.
- Specifically not permitted: drive-throughs and autooriented uses (repair and tire shops, auto sales, etc).



Proposed Corridor Form-Based District Sub-Districts Continued

	CORRIDOR CENTER	CORRIDOR NODE	CG CORRIDOR GENERAL	CORRIDOR TRANSITION
HEIGHT	Maximum: 8 stories maximum Minimum: 2 story	Maximum: 5 stories maximum Minimum: 1 story	Maximum: 3 stories maximum Minimum: 1 story	Maximum: 3 stories maximum Minimum: 1 story
MIN. FRONTAGE BUILD-OUT	80% (preliminary, T.B.D.)	60% (preliminary, T.B.D.)	None (but no parking between the building and the primary street	T.B.D., calibrated to existing context
SITE STANDARDS	 Setbacks: Reduced setbacks along all streets, coordinated with street type No parking between the street and the building's primary façade. Parking to be located at the rear and side of buildings. 	 Setbacks: Reduced setbacks along all streets, coordinated with street type No parking between the street and the building's primary façade. Parking to be located at the rear and side of buildings. 	 Setbacks: Reduced setbacks along all streets, coordinated with street type No parking between the street and the building's primary façade. Parking to be located at the rear and side of buildings. 	 Setbacks: Reduced setbacks along all streets, coordinated with street type No parking between the street and the building's primary façade. Parking to be located at the rear and side of buildings.
MAY REPLACE	MU-1, MU-2, F/FR, CF, D, C, I, J,	MU-1, F/FR, E/ER, CF, D, C, I, J, K	E/ER, F/FR, CF, I, J,K	CF, I, Single family residential zones abutting an arterial, Undeveloped properties zoned for single-family.

MU-2, High Intensity Mixed-Use; MU-1, Low Intensity Mixed-Use; F/FR, General Commercial/General Commercial Restricted; CF; D, High Density Multi-Family; C, Medium Density Multi-Family Community Facilities; I, Light Industrial; J, Medium Industrial; K, Heavy Industrial

A TOOL FOR NEIGHBORHOOD NODES

OPPORTUNITY FOR WALKABLE URBANISM

The best opportunity to implement a walkable environment may not necessarily be along a busy commercial arterial, but within existing commercially zoned properties that occur on secondary arterials and collector streets, and that are typically more embedded in existing residential neighborhoods. These properties tend to be zone E/ER, Neighborhood Commercial/ Neighborhood Commercial Restricted. Because they are embedded in the neighborhoods, they are in closer proximity to residents, and in terms of walkability, proximity is everything.

With this objective, two approaches are offered which could be used to transform these existing commercial areas into walkable Neighborhood Nodes:

Create a new zoning district that would allow similar uses to the E/ER district and add residential entitlements, or;

Amend the current E/ER zoning district city-wide to add the residential entitlement and modify metrics to allow more urban, walk friendly, development.

If the city elects to create a new zoning district, it is recommended that property owners be able to request a zone change to the new district. However, if substantial public investment is made to improve walkability (sidewalks, parking etc.), it may warrant a city-initiated zone change. Figure 70. Aerial view of one of the proposed Neighborhood Nodes at the intersection of Eastland and Miller Avenue



LAST BERRY

CHALLENGES

None of the proposed Neighborhood Nodes currently have high quality pedestrian realms that would support good urban form. Therefore, in order to fully implement this vision, there would need to be some significant investment in the public realm (sidewalks, street trees, etc.) to create a more comfortable and safe pedestrian experience. Most streets would need some level of transformation that might include wider, shaded sidewalks, bike lanes (where appropriate), and traffic calming measures to slow traffic. Zoning alone cannot create a walkable environment without improvements to the public realm.

On-street parking, or some other form of shared public parking, is imperative to support local businesses and encourage people to "park once and walk". Therefore, any street retrofit should accommodate on-street parking if possible. If not possible, other accommodations for shared parking should be implemented.

The city should work with residents of nearby neighborhoods to a certain the support for these significant changes to existing neighborhood commercial nodes.

PROPOSED NEW ZONING DISTRICT

M	U-N NEIGHBORHOOD MIXED-USE		
INTENT	This is a new zoning district that would not be part of the initial FBC area. The intent of this new zone would be to allow property owners in existing neighborhood commercial areas (typically having E/ER zoning), to request a zone change to the new Mixed-use Neighborhood district which would allow for additional residential entitlements in addition to the commercial entitlements permitted in the existing Neighborhood Commercial (E/ER) districts. Many of these areas do not yet have the public realm improvements (sidewalks, on-street parking, etc.) to justify adherence to higher design standards as required by this zone. Therefore, an opt-in approach is recommended.		
MOST SIMILAR TO:	E/ER + UR		
USE MIX	All uses permitted in the E/ER zone plus residential uses that equate to "missing middle" housing types and small-scale mixed- use buildings. Single-story commercial-only buildings would still be permitted. Specifically not permitted: drive-throughs.		
HEIGHT	Maximum: 3 stories maximum Minimum: 1 story		
MIN. FRONTAGE BUILD-OUT	None (but no parking between the building and the primary street		
SITE STANDARDS	Setbacks: Reduced setbacks along all streets, coorindated with street type No parking between the street and the building's primary façade. Parking to be located at the rear and side of buildings.		
MAY REPLACE	E/ER = Neighborhood Commercial/Neighborhood Commercial Restricted		

ZONING FRAMEWORK MAP



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- CORRIDOR CENTER (MU-2 Equivalent) 8 stories max.
- CORRIDOR NODE (MU-1 Equivalent) 5 stories max.
- CORRIDOR GENERAL (Neighborhood Commercial Equivalent + residential) - 3 stories
- CORRIDOR TRANSITION (Sim to UR/MR district) -3 Stories max.
- Recommended natural open space
- Recommended modifications to the E/ER zones (Not to be included in the FBC)

88. -]]

CATALYST SITE ECONOMIC STRATEGIES



OVERVIEW

This chapter will present and consider economic strategies designed to support the attraction of private investment in three sample activity nodes/place types along the East Berry corridor. These sample place types are intended to be representative of several identified opportunities as shown on the Ideas Map and demonstrate different scales of development potential.



LARGE-SCALE LIFESTYLE VILLAGE

The large-scale Lifestyle Village demonstrated the potential for larger-scale, mixed-use urban infill development that is focused on access to a variety of mobility options. The larger scale of these catalyst sites result in a larger, regional destination opportunity for Fort Worth residents. These representative catalyst areas will include both development and redevelopment opportunities.

Sample Area #1: Cobb Park/Riverside TOD (Transit Focused Large-Scale Lifestyle Village)

The Cobb Park/Riverside TOD site is envisioned as a large-scale Lifestyle Village that is highly dependent on proximity to fixed-rail transit as a catalyst to attract private development. Its proximity to Cobb Park, Ellis Park, and Sycamore Creek can provide future connectivity to the regional Trinity Trails network.



- 1. Existing Cobb Park extend trail system along Sycamore Creek to north with eventual connection to Trinity Park and downtown Fort Worth
- 2. Encourage residential and mixed-use development to take advantage of Cobb Park as an amenity
- 3. Transition to low/medium density housing adjacent to existing neighborhoods
- 4. Expand Sierra Vista Transfer Center into a transit hub
- 5. Anchor development with neighborhood grocery
- 6. Extend Cobb Park to the south and connect to Ellis Park via bike/pedestrian trails, with spurs connecting to new and existing neighborhoods
- 7. Preserve existing treeline, can be incorporated into street median
- 8. Extend Yuma Drive south to station.
- 9. Station plaza
- 10. Proposed NCTCOG's Mansfield Line
- 11. Transit oriented development (residential, institutional and mixed-use)
- 12. Yuma Drive connection to Riverside Drive
- 13. Potential destination attraction or institutional campus



Sample Area #2: Lake Arlington Lifestyle Village (Natural Amenity Focused)

The Lake Arlington Lifestyle Village is envisioned to leverage its proximity and access to nature (Lake Arlington) and mobility (trail and Westshore Way) to catalyze private development and provide a major quality of life amenity for those who live in Southeast Fort Worth. This area represents an opportunity to redevelop older industrial space into a walkable, mixed-use, center (City of Fort Worth Urban Village) and "open up" additional connections to natural amenities near the East Berry Street corridor. The future development pattern should be designed to preserve and enhance the view corridor to Lake Arlington.



- 1. Preserve public access to lakefront
- 2. Proposed boulevard along Lake exact alignment to be determined
- 3. Retrofit of East Berry Street with on-street parking, and improved streetscape
- 4. "Market street"
- 5. Unobstructed view of Lake
- 6. Lakefront Amphitheater
- 7. Residential and mixed-use development
- 8. Shared regional storm water management
- 9. Transition to low/medium scale residential adjacent to existing neighborhood
- 10. Retain natural drainage and flood plain as public open space with connecting trails
- 11. Proposed office development

Market Opportunities

Development Opportunities

Large-scale Lifestyle Villages will attract a wide variety of real estate sectors to create a mixed- or multi-use development pattern. The overall size, scale, and context of this catalyst site presents opportunities for urban development intensities. In addition to the built environment, large-scale Lifestyle Villages will also offer a mixture of active and passive recreation options that provide a live-work-play environment. This place type will likely create a regional trade area through anchoring uses and thoughtful design, drawing in visitors from outside of Fort Worth.

While large-scale Lifestyle Villages will likely attract a variety of real estate sectors, significant public sector investment will be needed on multiple fronts before their true development potential can be realized. There are some that will present more immediate development opportunities than others that could be realized at a smaller scale while the market matures for more significant redevelopment. Development timing of these projects will often occur over multiple years, sometimes over longer periods of 10+ years. As such, careful phasing of these catalyst sites and public sector investment is critical to encourage compatibility across the project area and to retain key parcels for long-term opportunities. The following graphic demonstrates demand opportunities across several real estate sectors for large-scale Lifestyle Villages along the East Berry Corridor. Although the Cobb Park/Riverside TOD and Lake Arlington areas will present differences in terms of location, mobility options, and natural amenities, there are many similarities in market attraction that can be assumed.





Target Market for Future Residents and Tenants

Residential, in the form of primarily rental multifamily, will likely be an early attractor for large-scale Lifestyle Villages. These new rooftops will increase activity on the streets and drive additional demand for retail goods and services. Based on market dynamics and local input solicited through the planning process, the residential target market is likely to include people on both ends of the age spectrum, from young adults, both singles and couples, to older lifestyle renters who are seeking to downsize from single-family homes. In most cases, existing residents and stakeholders communicated that accessibility to employment, retail services and dining, parks, trails, and entertainment will be important ingredients for success. Community amenities should include both on-site options, as well as community-serving options that are part of the larger activity node. The potential to access reliable transit options will be important for residents, workers, and visitors alike.

Lake Arlington offers a unique opportunity to serve as a regional urban living destination only surpassed by Panther Island/ Downtown Fort Worth. Its central location, ease of access, and views along Lake Arlington are unmatched in the Metroplex and can serve as the drivers for a new and vibrant lakefront district, if positioned right with public and private investment.

The potential NCTCOG Mansfield Line-type fixed rail transit station and connections to the regional parks and trail network incorporated into the design of the Cobb Park/Riverside TOD concept could elevate the development intensity of that Lifestyle Village. Distinct to the East Berry Corridor but akin to the Farmington Station and Riverfront Park case studies included later in this chapter, there is a unique opportunity to capitalize on regional transit investment, as well as a unique and distinct natural amenity. Capitalizing on one of these opportunities would be seen as a leg-up to competing regional projects, but taking advantage of both could provide unparalleled opportunity.

Community serving retailers, including dining and entertainment tenants, were among some of the most discussed community desires throughout the process. Regional or specialty retailers are unlikely to gravitate to the East Berry corridor until the market is more matured, typically following new residential development. Similarly, office or employment-generating uses, will also be slower to gravitate to the East Berry corridor in the short-term. However, office space located in well-designed mixed-use projects like CityLine in Richardson, or near urban central business districts with regional transit access (Fort Worth T&P Station) have achieved success in attracting talent-seeking companies and young, educated workers.

Tenants expect their employees to be more satisfied in places that offer diverse, connected land uses, including proximity to cafes, restaurants, retail shops, personal and business services, hospitality, and civic uses. These companies anticipate higher productivity, less turnover, and more innovation because of a well-designed, integrated development pattern. Hospitality tenants, seeking access to a broad range of customers, will also land later in the development cycle, driven by demand created from the catalyst areas themselves.

Current Market Considerations

The East Berry corridor currently hosts about 2,300 apartments, representing a variety of product types and ages. More than 415 units have been built in the study area since 2020, demonstrating current development momentum. However, it's important to note that significant federal and local subsidies were utilized to deliver most of the new units during that period. Similarly, the units are price controlled with a portion of the units being listed at 30% Area Median Income (AMI), making them accessible to residents with diverse needs and income levels. There are several projects proposed within the study area, while Palladium East Berry Street is under construction, and anticipated to deliver an additional 240 units. Overall, multifamily along East Berry Street has a lower vacancy rate when compared to the Fort Worth Metroplex at 6.1%. However, price points are also lower, averaging less than \$900 per month, which will present a barrier to entry for new construction in the short-term.

The 1.3 million square feet of retail space along the corridor is strategically concentrated at major intersections and interchanges with access to interstate highways (US-287). Most of the retail space within the corridor is free standing, constituting more than half of the total development. The table below illustrates the total retail square footage categorized by typology within the corridor.

East Berry Corridor Retail by Typology	Gross Leasable Area (GLA)	Share of Total Retail Space
Power Center	313,404	22.70%
Neighborhood Center	179,320	13.00%
Strip Center	101,680	7.40%
Free Standing Building	787,991	57.00%
Total	1,382,395	100.00%

Source: CoStar

There is very little available retail space today with the current vacancy rate estimated at less than 1.0%; however, price points will be a challenge, particularly for retailers that are part of vertically integrated buildings as planned for the large-scale activity nodes.

There are currently limited modern office offerings along the corridor with only 88,000 total square feet. Of the existing office space, nearly 80% is classified as Class C, with the remainder classifying as Class B. There is more than 25,000 square feet of medical office space within the corridor, and average lease rates are estimated at less than \$10 per square foot.



Development Challenges

Development challenges are all but guaranteed to be prevalent throughout the planning, design, and implementation stages of these large and complex development projects. The challenges associated with these types of projects will need to be understood and mitigated on a project-by-project basis.

Oftentimes, the lack of political will associated with large scale projects can stymie or outright halt progress. Political will is one of the most important ingredients in enabling these types of initiatives to happen. Overcoming resistance from competing special interest groups or direct opposition can be best combatted with quantitative analysis, most effectively when paired with public engagement and education to create awareness. Educating all parties on the trade-offs associated with the project allows for everyone to make decisions from the same perspective.

Local regulations can often be interpreted as a barrier to project development as well. Most local zoning and subdivision regulations facilitate conventional, single-use, suburban-type development. However, zoning and subdivision regulations can also be flexible to encourage cluster development (nodes), mixed uses, narrower streets, urban residential densities and other development concepts. Working with innovative, experienced developers who seek to preserve and enhance the environment or provide walkable mixed-use developments is a targeted approach to mitigating traditional regulations. Having a shared vision in place between the Developer and City will curtail some risks related to the "by-the-book" approach which generally prevails over innovation, even if it hurts the environment. This will also allay NIMBY fears from the community at large and immediate neighbors.

The lack of capacity and significant demands on public dollars will affect the city's ability to pay for additional critical infrastructure (roads, utilities, etc.) and is a significant (and common barrier) to redevelopment in the East Berry Corridor. Certainly, proposing development in an area already flush with infrastructure is a benefit, but that's not always the case. One way to mitigate that challenge is through the creation of a Tax Increment Financing (TIF) or Tax Increment Reinvestment Zone (TIRZ) district, which Fort Worth has already identified through the TIF, which overlaps much of East Berry St, from IH-35W to US-287. The existing TIF is set to expire in 2028, and has already committed the majority of it's funds, which presents a challenge if there is no remaining increment to commit. However, upon expiration of the TIF, the City will be able to utilize Chapter 380 Grants to incentivize development.

TIF identifies under-performing real estate, helps to establish redevelopment plans, and works with private developers to implement these plans while reinvesting a portion of property tax revenues generated from new real estate development into the area to encourage the implementation of the redevelopment plan. TIF funds are generally utilized to offset the cost for improvements to the public realm, including public infrastructure and amenities. TIF funds may also be used to assist developers and investors with extraordinary costs related to project construction.

Transit Oriented Development Case Study

Farmington Station: Farmington, Utah

Station Park is an open-air retail center located adjacent to the Farmington FrontRunner Station, a commuter rail, in Farmington, Utah. Since its inception, Station Park has added almost 1 million square feet of retail development, as well as office and hotel uses, with integrated public spaces to an area of the region that had experienced limited commercial investment to that point. The investment by CenterCal Properties, LLC spurred additional investment and development in the area, including significant interest in developing the remaining 317-acres of undeveloped land adjacent.

Facing this development pressure in conjunction with previously approved private development plans that entitled new residential and commercial development, Farmington City recognized it was time to plan. A key purpose of the plan is to incorporate all previous and existing efforts into a cohesive vision, and to establish objectives and goals for the future into an area-wide comprehensive plan. The plan does not reconsider past land use decisions on already entitled properties. This Farmington Station Area Plan seeks to facilitate a more singular vision, but at the same time demonstrate and show development concepts and distinct neighborhood identities as part of the whole, through the lens of market-based reality.

Amongst the project area, there are 21 various property owners, some of which have existing entitlements. Robust stakeholder engagement was conducted by the project team in conjunction with an existing conditions study and market analysis to guide the plan direction. The results of the various analyses included:

- The identification and integration of three distinct "neighborhoods" within the study area. These neighborhoods are identified by both distinct and unifying urban design elements, as well as the integration of various natural amenities. Three creeks and their respective riparian zones create natural buffers and separations between each neighborhood.
- The market analysis indicated significantly more regional demand than originally anticipated by the City, ultimately allowing them to "raise the bar" in terms of the anticipated densities.
- A parking demand analysis was conducted on the Utah Transit Authority (UTA)-owned park and ride parcel that serves the station. The results indicated that an excess of current and projected parking would allow UTA to redevelop their parcel immediately adjacent to the platform with a higher and better use.
- A regulating plan was established and adopted as part of the process to guide two major road infrastructure projects that are currently under construction because of the plan. Similarly, a flexible block pattern was established to preserve and prioritize the pedestrian experience, regardless of use type.



Example: Farmington Station T.O.D Map



Source: GSBS Consulting

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Trail-Oriented Development / Natural Amenity Leverage Case Study

Riverfront Park: Denver, Colorado

Riverfront Park is an urban infill community that was developed in Denver, Colorado including a mix of more than 1,800 rental and owner-occupied housing units, and almost 50,000 square feet of retail and commercial development. The development is anchored by a 19-acre city-owned park and connected across the South Platte River by several pedestrian bridges, and major arterials. The City of Denver initiated the project and worked with a master developer to assemble and rezone the various parcels of land under a cohesive vision codified with form-based zoning.

Built on a brownfield and former rail-yard, similar to Sample Area #1: Cobb Park/Riverside TOD (Transit Focused Large-Scale Lifestyle Village), the project was funded through a mix of public and private investments. The result of the public-facing planning and visioning process was an implementable 21-block infrastructure and development plan. East West Partners purchased the entitled land from the previous ownership group in 1999, citing Commons Park and access to the South Platte River as key attractors to the project, as it aligned with their vision for future development of the area.

During the process, the City established a special district as well as the South Platte River Commission, which each facilitated the sale of 25-acres of land along the South Platte River that was used for the development of a new park to anchor the private development. The city also had to invest considerable dollars to remediate the railroad land, which had been contaminated with coal ash over the years. The process also established urban design standards and guidelines for the area that addressed a variety of design considerations, requirements, setbacks, and standards.

As with most large-scale projects of significant complexity, financing the project was an exercise in patience, phasing, adaptability, and sales/presales. The financing strategy deployed involved selling various strategic parcels once the vision and plan were established to other developers, often apartment and residential developers. Each building within the project was financed independently, allowing developers to finance development costs through sales revenues and deposits, thus reducing debt and interest costs.



Example: Riverfront Park Trail-Oriented Development Map



Source: Design Workshop

Strategies to Attract Investment

A proactive approach to reducing risk is a necessity for projects of any size, but especially for large, complex projects. Some key considerations to risk reduction include developer vetting, land assemblage, due diligence, and zoning. Equally important is the vision for the future, which should be shared and agreed upon between the developer and the city. While due diligence entails a thorough investigation and evaluation of the project (think of this as the science part of the equation) to ensure that it meets investment objectives and potential pitfalls, having the right development partners onboard ensures that the shared and desired end-result is achieved (this can be thought of as the art portion of the equation). Together, the art and science must add up to make the project pencil. While the following list is not intended to be comprehensive, some key elements to be considered when conducting due diligence include:



Regulatory Compliance

Ensures that applicable laws, regulations, and zoning requirements are met with regards to the property and its operations. Title and Survey review should also be completed to understand any encroachments, easements, or restrictions that may have implications on the project.

Environmental Assessments



An evaluation of current and previously remediated environmental risks like soil or groundwater contamination should be conducted to ensure there are no liabilities, or discovered so a path towards remediation can be implemented.



Financial Analysis

To assess the property's financial performance, including historical and current income, rent rolls, operating costs, and vacancies. Existing leases and tenant relationships should also be investigated to determine the status of current and future relationships.

Site Specific Market Analysis

Conducted to understand the properties competitive nature across multiple real estate sectors, these studies help owners and developers understand and position their projects for the greatest value capture possible.



Public Realm Strategies

A variety of Infrastructure and Public Realm Strategies can be deployed to efficiently complete large-scale development projects of significant complexity. While no single tool, approach, or sequencing can be prescribed beyond a project-to-project basis, a combination and collaboration between the developer and City of Fort Worth should ultimately decide the path forward. However, there are tools and mechanisms in place that traditionally serve well for large scale development projects, and they're generally described below:

- Bond Funding (current and future) represents one of the most significant mechanisms for the city to fund Capital Improvement Projects (CIP). Generally, bonds are utilized to fund CIP projects that benefit the community, and if a bond proposition is approved the city is then authorized to sell bonds up to the indicated amount. In 2022, Fort Worth voters approved a \$560 Million bond package that included significant improvements to support street and mobility infrastructure, including the East Berry Corridor from IH-35W to US-287, as well as intersection improvements at E Berry St and Riverside Dr. As a result of this plan and the associated goals, future improvements and projects may be included in upcoming bond elections (2026).
- One mechanism intended to promote development or redevelopment within a defined area already exists in relation to the Cobb Park/ Riverside TOD Catalyst Site, a Tax Increment Reinvestment Zone (TIRZ). TIF Number 12 seeks to support viable economic redevelopment in southeast Fort Worth by assisting with public infrastructure (sidewalks, water, sewer, storm drainage) associated with mixed-use development or redevelopment. The TIRZ was created in 2006 and has an expiration of December 31, 2027. Most of the funds have been directed at redeveloping Renaissance Heights, the 200-acre Masonic Home greenfield site, but sufficient funds remain for one or two more needed commercial or mixed-use projects.
- A significant portion of the study area west of Cobb Park is federally designated as an "Opportunity Zone", which allows new investments, that meet criteria, to receive preferential tax treatment. The primary benefit for investors is deferred tax payment on capital gains from prior investments.
- Rezoning is often a necessity for large scale development projects. The first step in rezoning is establishing a plan to understand the intended uses. Several guiding documents are in place to help communicate the City of Fort Worth's vision for the future of development throughout the process, including: the Comprehensive Plan, specific Area Plans, Transit Master Plan, amongst others. Working with development partners throughout the planning process can also head off roadblocks or impediments before planning review, and planning commission meetings take place, making for a smoother process. According to the Form-Based Code Institute, "A form-based code is a land development regulation that fosters predictable built results and a high-quality public realm by using physical form (rather than separation of uses) as the organizing principle for the code. A form-based code is a regulation, not a mere guideline, adopted into city, town, or county law." An alternative to conventional zoning regulations, form-based codes offer a powerful and adaptable avenue to development.

- Once a "critical mass" of investment has been made into a project, focus can shift towards the maintenance and operational expenses associated with high-quality public realm amenities and experiences. To accomplish this a Public Improvement District (PID) may be created, which would require approval by most property owners, within the legally constituted district. Members of the PID pay a special tax that in turn gets reinvested to maintain amenities, public areas, and ongoing operational costs of the district. In conjunction with a TIF, the PID would extend monies needed to provide quality of area services (think clean, safe, beautiful) while allowing the TIF to fund other major projects.
- A land swap can be utilized between parties in exchange for making infrastructure improvements like new roads, bridges, or public spaces.
- Developing streets as places may seem like a simple concept, but incorporating the public and pedestrian realm considerations in street design can make a significant difference for the user experience, sometimes even making or breaking projects.
- Community Planning and Involvement is a process that can save headaches upfront by involving the end users of the development throughout the process to align desired goals. Insight into the community from those who experience it firsthand and understand the strengths, weaknesses, opportunities, and threats is invaluable to project developers. Similarly, this process can help identify priorities, preferences, and create a sense of ownership while generating buzz about the project. Key stakeholders for helping to facilitate this community planning process along the Berry Street Corridor include Southeast Fort Worth Inc. and Renaissance Heights Foundation as well as local Neighborhood Associations.
- The Texas Parks and Wildlife Department (TPWD) administers the National Recreation Trails Fund in Texas. According to TPWD, "This federally funded program receives its funding from a portion of federal gas taxes paid on fuel used in non-highway recreational vehicles. The reimbursable grants can be up to 80% of project cost with a maximum of \$300,000 for non-motorized trail grants."
- An additional option for open space acquisition in Fort Worth is the Community Park Dedication Policy. The policy seeks to maintain adequate park and recreational areas as residential (re)development brings additional residents to an area. The city has a variety of materials available for developers online including a fee sheet, facility standard manual, and various checklists to streamline interactions.
- The City currently manages a Tree Fund which utilizes penalty fees associated with tree removal as part of development. City Council authorized utilization of these funds on "land or conservation easement acquisition to preserve native tree stands, especially where native trees are not feasible for replanting with an acceptable survival rate."
- The Neighborhood Empowerment Zone (NEZ) Program makes tax abatements and fee waivers available for qualified projects. Fee waivers are allowed for areas that overlap with the TIF boundary.
- Chapter 380 Economic Development Agreements can be used on project specific incentives and is a powerful tool that can be utilized for a variety of development and redevelopment projects. A 380 agreement can include several provisions a majority of which are performance based and refund a portion of the additional sales tax and property tax created. A 380 agreement would be ideal for individual catalyst projects.



Public Policy Strategies

Public Policy Strategies should be approached through a flexible lens throughout the project to ensure success. While there's no single, prescriptive approach to public policy strategy that can generate the desired results, there are some key considerations that should be evaluated throughout the projects life. While it may seem painfully obvious, patience is a key to success in all real estate projects, but especially those with elevated complexity. For example, a single tenant backing out of a Letter of Intent (LOI) may cause strain on initial cash flow, but exhibiting patience and bringing the right tenant in instead of accepting the next immediate opportunity can pay significant returns over the long-term.

One of the first steps commonly implemented to attract investment for large-scale development projects is to establish branding around the project, and subsequently use those materials to market the project. A strong branding identity allows potential investors to identify with the project and gain some limited level of understanding related to the core identity of the project. Once the plan and branding are in place, the opportunity and value proposition can be clearly communicated to potential investors through a culmination of the following strategies:

- Establishing a control center (virtual and/or physical) to distribute the materials. Creating awareness and "buzz" can be achieved by attending physical locations that are likely to have large quantities of your target audience such as trade shows, and established public events that can be piggybacked on. Partnering with organizations like the Fort Worth Chamber of Commerce, the Fort Worth Hispanic Chamber of Commerce, the Fort Worth Metropolitan Black Chamber of Commerce, Southeast Fort Worth Inc., Renaissance Heights Foundation, Economic Development Department, and other regional partners such as the Urban Land Institute (ULI), American Planning Association (APA), National Association of Home Builders (NAHB) or International Council of Shopping Centers (ICSC) is a great way to reach a more qualified and targeted audience.
- Establishing an Anchor or Destination end-user will also help in attracting other symbiotic users and can even help drive rental rates. Drawing in potential homebuyers or renters with recognized and coveted end-users can create a sense of desire.
- Providing a variety of product types with meaningful and public amenities at the onset or early-stage development will diversify the target market and help accelerate the rate of absorption. In terms of residential offerings, offering a variety of price points will help generate interest from a wider variety of consumers, while contributing to a more comprehensive socio-economic makeup amongst the development.

NEIGHBORHOOD NODES

Neighborhood Nodes are intended to be central to residential neighborhoods or business centers, often acting as neighborhoodscale destinations for local jobs, goods and services, and community gathering places. Oftentimes, success lies in the integration and mix of uses, including residential and commercial development. Neighborhood nodes throughout the East Berry corridor showcase opportunities to improve neighborhood retail and "missing middle" housing in areas with adjoining neighborhoods. The focus on these areas is to serve as walkable nodes that can take on a more urban land use pattern, to enhance the pedestrian experience and improve performance through increased activity.

Sample Area: Miller Avenue and Eastland Street



- 1. Existing school
- 2. Existing church
- 3. Enhanced pedestrian connection to school
- 4. Retrofit street with on-street parking and tree-lined sidewalks
- 5. New neighborhood-serving commercial fronting on the street
- 6. Infill housing with a mixture of dwelling types including "missing middle" building types

Market Opportunities

Development Opportunities

Neighborhood nodes within the East Berry plan area present an opportunity to infill new residential units into the existing land use pattern of the community. Corridor Nodes are similar, but are located with more direct links to East Berry and the existing improvements within the corridor. Both for-sale and rental housing options will be attractive in these nodes, which are strategically located near major intersections, existing small-scale retail nodes, and/or community amenities. Some additional retail or professional service office spaces could be incorporated into these nodes to enhance current offerings to the surrounding neighborhoods. Retaining existing non-residential tenants should be a focus of these areas through anti-displacement support policies. Ensuring appropriate transitions to existing neighborhoods is also important.





Target Market for Future Residents and Tenants

The target market for infill residential in the activity nodes along East Berry is as diverse as the unit types that could be incorporated into these areas. The target market includes existing and new residents of the corridor like younger adults seeking a starter home, small families that might be attracted to nearby amenities, to older adults that want to age in place while downsizing to a smaller, more modern, house. In the case of the Miller/Eastland sample area, enhanced accessibility to the elementary school will be particularly attractive to young families. Developing infill housing that supports all income ranges not only provides greater variety of housing options, but helps develop mixed-income neighborhoods. This also affords economic mobility for existing residents of the corridor who may desire a change in their residence that corresponds to their changing life stages. Similarly, new housing-related investments should benefit current residents, and seek to mitigate any potential displacement created.

Non-residential tenants will be heavily neighborhood serving, including smaller convenience stores, pharmacies, or dining options, to professional service office tenants that are seeking locations convenient to customers. For all target resident and commercial tenants, price points will be sensitive.

Current Market Considerations

Residential price points along the East Berry corridor are lower when compared to the larger Fort Worth region. Home values are \$222,000 in the larger study area, compared to \$330,000 for the larger region. With 52.8% of the housing units being owner-occupied, the neighborhood nodes represent important opportunities to incorporate for-sale housing units along the corridor. Sales prices for residential units since 2010 have typically ranged from \$150,000 to \$200,000 and rental rates average less than \$900 per month. Constructing new residential options will likely require higher price points than what currently exists along East Berry or will need gap financing.

It should be noted that the lower land values (on average) along the East Berry corridor can be a positive when attracting developers to the area. Comparatively, base investment costs to control the land are more affordable in this area, reducing overall risk for the developer. With a lower barrier to entry, infill residential in this area could be attractive to smaller developers or investors, increasing the pool for potential activity. The resulting increase in supply will create a variety of price points that can create attainability for residents of many income levels.

As previously noted, the current vacancy rate for retail buildings along the East Berry corridor is estimated at less than 1.0%. For both retail and small-scale office spaces, price points will be highly sensitive, with current lease rate averages well below current construction cost targets to achieve an optimal return on investment.



Development Challenges

According to Dan Parolek, Founding Principal of Opticos Design and pioneer of the Missing Middle Housing concept, "The reality in most cities is that their planning and regulatory systems are barriers to delivering the housing choices that communities need." A rigid system based on dwelling units per acre, or square footage required for each unit incentivizes developers to simply build for sake of fulfilling market demand, opposed to place-oriented demand. Minimum lot sizes, like those established in Fort Worth's "One-Family Residential Districts" can (un)intentionally necessitate larger lot sizes than needed or desired, and serve as a significant barrier to redevelopment. Resultingly, minimum lot sizes can stifle the production of housing, oftentimes a product type that is more affordable when or devoid in the market.

Neighborhood opposition is a common challenge that prevents (re)development within an established node. Oftentimes, the labor and man-hours needed to devise a plan for building in communities with existing regulations that requires a tedious public process such as a rezoning is enough to deter potential developers. Ironically, the large-scale implication is that this type of push-back stymies context-sensitive neighborhood scale development, and incentivizes developers to pursue larger, more disruptive, and less nuanced development opportunities.

The exorbitant development costs required including materials, labor, land, and various fees are a natural barrier to any development type but have heightened implications with Missing Middle type housing. From a material and labor perspective, there is an incentive for both developers and contractors to pursue larger projects, with larger returns. As a result, small-scale projects tend to experience significant challenges competing for construction labor. Another challenge faced by developers pursuing these project types is related to fixed-fees, impact fees, and other utility fees. Unit-based fees, regardless of size, serve as a deterrence to providing alternative housing types.

A study by the Congress for the New Urbanism (CNU) explored the relationship of Missing Middle housing and parking. As anticipated, off-street parking requirements were found to have significant impact on small-scale residential development. Requiring more than one off-street parking space per unit creates significant physical and economic challenges.

Missing Middle Housing Case Study

Asheville, North Carolina

A study conducted by Opticos Design for the City of Asheville, North Carolina identifies the best opportunities for Missing Middle Housing to occur near walkable, neighborhood nodes, like the catalyst areas previously discussed in this chapter. Access to a variety of amenities like goods and services, schools, employment, and community gathering spaces are all considered key ingredients to the framework, and oftentimes already exist in proximity to development opportunities. The report continues to detail the framework characteristics of a successful Missing Middle Housing neighborhood by the following measures:

- Smaller block sizes: which allow for enhanced connectivity, and encourage pedestrian mobility by providing increased route options, and reduced distance between destinations. Avoiding dead-end streets, cul-de-sacs and circuitous routes increase walkability.
- Access to bicycle routes: provides an alternative to driving medium-to-longer distance trips.
- Accessible to mixed-use areas: allows residents to accomplish most needs and desires without having to travel significant distances.
- Appropriate zoning: reinforces the housing stock with a variety of housing types, and encourages pedestrian activity through compact development.
- Small-to-medium lot sizes: encourage human-scale development and discourage large tract development which can lead to degradation of the public realm.

In conjunction with a series of financial feasibility test fits by zoning typology, a displacement risk assessment was conducted to identify areas of the city where residents are most vulnerable to displacement and where to deploy Missing Middle Housing to maximize benefits, while minimizing potential harm. The report identifies areas of the existing built environment that can support existing and future residents. It also identifies areas that can be incrementally transformed into walkable areas that support Missing Middle Housing.

In conclusion, recommendations to facilitate the advancement of Missing Middle Housing in Asheville included:

- Reinforcing walkable environments.
- Preservation of existing neighborhood character.
- Review and clarify next steps for corridors with identified transformational potential.
- Define and distinguish Missing Middle Housing.

- Articulate Missing Middle goals.
- Clarify Missing Middle typologies.
- Develop an implementation plan.
- Balance Missing Middle Housing with the natural environment.
- Ensure ease of implementation.





Example: Asheville Missing Middle Housing Walkable Areas Map

Source: Opticos Design

Strategies to Attract Investment

Updating zoning standards in selected areas can help remove barriers, man hours, and time spent by developers. A form-based approach can help to establish clear standards and remove the need for discretionary review. There are several implementation strategies to achieve results, including through zoning code text amendments - rewrites, or most likely as a base zoning form-based code district.

The public sector is generally expected to "set the stage" for this type of incremental (re)development. Ensuring that adequate utility infrastructure is in place is one approach to attracting investment, as sites with upgraded water and sewer lines are more attractive and remove barriers for developers to "get to market". Continuing to coordinate on CDBG and CIP project allocation will help eliminate barriers to (re)development as well.

The City of Norfolk Virginia commissioned and adopted a "Missing Middle Pattern Book" through a Community Development Block Grant (CDBG) that helps facilitate and direct where Missing Middle Housing can be developed throughout the city. The pattern book helps potential developers and residents locate what zoning and character district the property is in, determine the allowable lot size and unit count, calculate parking needs, pick a building type and style, select materials and finishes, and incorporate resilience and construction tips into building plans. Developing and implementing something like the pattern book described would streamline and facilitate residential (re)development throughout the city and cut down on time and costs for all parties involved.



Traditional – 2-story porch for smaller neighborhood scale



Missing Middle Pattern Book Elevation. Source: Work Program Architects


The State of Vermont Agency of Commerce and Community Development initiated and is hosting a "Homes for All Toolkit" event. The event is described as an "Interactive event for novice and emerging small-scale home builders, community development professionals, and local leaders interested in innovative home-building and home-renovation solutions." Through this project, the agency seeks to accomplish the following:

- Creation of a Missing Middle Homes Design Guide that broadly appeals to Vermont architecture.
- Complete 5 Neighborhood Infill Design Case Studies that illustrate how building designs can be integrated into existing neighborhoods.
- Create a Builders' Workbook that serves as a "How-To" providing a comprehensive roadmap to real estate development novices. Guidance will include regulatory, financing, infrastructure, design, and partnering advice to help developers achieve success.
- A complete training resource for both public and private sector residents to promote the toolkit.

A culmination of education, resources, and empowerment is intended to bring prospective "developers" of all size and skill levels to the table, in hopes of building affordability, cultivating local support, and spurring community change. The mix of these strategies is needed on a broad scale to bring about successful development projects of this nature.

An additional strategy to attract investment into currently undervalued neighborhoods is like a land banking program but called a Community Land Trust (CLT). CLT's are nonprofit, community-based organizations responsible for holding land "in trust" for the benefit of community members. Resident leadership and the community at large control the land, shepherd the long-term vision which is frequently a result of a public planning process, and ultimately ensure long-term housing affordability. According to the Houston Community Land Trust, "Community land trusts create housing affordability through shared ownership: the homeowner owns the home itself, while the community land trust owns the land beneath, stewarding it for the benefit of the homeowner, future homeowners, and the community as a whole."



Vermont Homes for All Toolkit Trainer Summit Networking | Training | Funding Opportunities | Missing Middle Housing Resources | Pizza Homes for All: Advertisement. Source: State of Vermont

Reducing Displacement/Gentrification Strategies

The first step in preparing a strategy to mitigate displacement is understanding who and where residents are most vulnerable to displacement. To achieve this, a quantitative approach can be taken to identify areas that are most impacted in conjunction with a qualitative analysis. There are several key data points that can be utilized via the Census Bureau to assess vulnerable populations, including, household income, housing tenure (rent or own), educational attainment, median age, race and ethnicity, and other socioeconomic inputs. Through this analysis, which is measured over a historical time to understand change, we can better locate where the populations at greatest risk of displacement reside and supplement the quantitative analysis with boots-on-the-ground analysis. Conducting interviews, community meetings, and seeing things from a pedestrian-perspective can help shed qualitative light on an otherwise binary analysis.

Analyzing market pressures (change in rent/sale price, number of closings, availability, etc.) in conjunction with demographic change can help illuminate where gentrification has been occurring, and ultimately be utilized with the displacement vulnerability analysis to help develop strategies to mitigate the effects. Measuring the same variables utilized in the displacement analysis in conjunction with housing market changes over a historical period of time can help us to understand areas of the City that may have experienced gentrification.

Aligning the displacement and gentrification analyses with areas of the city that have strong existing built environment can hone in on the areas most likely to support Missing Middle Housing. Walkability, block length, connectedness of the street network, and accretive land uses are all strong considerations in evaluating the built environment.

Opticos outlines three general approaches to their anti-displacement approach, which are as follows:

- Producing new housing for all income levels, especially affordable housing, and relieving market pressure on existing affordable housing.
- Preserving existing affordable housing, both subsidized and organic.
- Protecting residents through programs that serve the most vulnerable from displacement.



Infrastructure and Public Realm Strategies

A fundamental approach to identifying infrastructure needs is to identify the extents of the study area or corridor, and subsequently the underutilized or under-performing parcels. Once the physical extents are understood, a thorough analysis of existing conditions can then start to align the physical opportunity with the market opportunity and the vision for the future. In the case of Neighborhood Node Development, these parcels can be identified through community mapping activities, community meetings, and informal community engagement activities. Identifying goals that align with community priorities, such as increasing affordable housing, maximizing tax revenue, or encouraging economic development can help refine the vision.

After the nexus of existing conditions, market opportunity, and vision for the future has been established, the necessary or desired infrastructure and public realm improvements can be thoroughly understood and prioritized. Some elements to be considered when visioning the future functionality of the area include thoroughfare types, public spaces, frontage types, and building/use types.

A key to success for developments of this type is a parking management plan/strategy. A parking management plan can be implemented to account for short and long-term strategies to support development of the node. The parking management plan should support the long-term success of (re)development of the node by aligning future development opportunities and the vision with adequate parking. Similarly, efficient parking can improve traffic operations, eliminating excess parking, and improving the pedestrian experience. The parking management plan should include the following:

- Comprehensive analysis of existing parking within the identified district, including both public and private
- A parking utilization and needs analysis based on peak periods to understand opportunities to consolidate and share parking
- Bicycle and pedestrian infrastructure and safety analysis to determine key pedestrian routes, barriers to connectivity, and opportunities to overcome said barriers
- Vehicular circulation and volumes analysis
- Rideshare and vanpooling survey to understand existing and anticipated volumes, and key destination allocation
- Travel trends survey to understand how people are currently accessing the area, and how they would like to in the future

Once improvements are understood, partnership opportunities can be evaluated, including public-private partnerships. The city may explore strategic opportunities for public-private parking projects to support structured parking and overflow if deemed necessary. The city may also opt to utilize a Request For Proposal (RFP) to promote directly with the development community and initiate proposals to facilitate momentum.

ENHANCED PLACEMAKING/INFILL DEVELOPMENT

Parcels representing opportunities for enhanced placemaking, or infill development characterize significant portions of the existing retail development along the East Berry corridor. The existing status of these parcels indicates potential to receive additional private investment through intensification and improvement of the public realm.

Sample Area: Renaissance Square/Renaissance Heights



- 1. Liner buildings along entry street to create a more walkable experience
- 2. Enhanced north/south pedestrian connection between the shopping center and Renaissance Heights to the south
- 3. Proposed neighborhood square facing Mitchell Boulevard, lined with 1-story commercial
- 4. Enhanced pedestrian crossings along Mitchell Boulevard
- 5. "Market Street" with internal street parking and lined with open "stalls" to screen parking and facilitate periodic craft and food markets
- 6. Multifamily development arranged in blocks to facilitate pedestrian circulation
- 7. Proposed pedestrian connection to enhance walkability within the development
- 8. Proposed institutional use with central green

EAST BERRY

Market Opportunities

Development Opportunities

The enhanced placemaking/infill development opportunity focuses on intensifying the existing Renaissance Square/Renaissance Heights retail center. The intensification focuses on underutilized parcels that exist today, as well as surface parking lots that have high levels of visibility to major transportation corridors. New development should be complimentary to the existing center, including smaller in-line suites that would be attractive to dining and entertainment expansions for the corridor. Similarly, urban living or multifamily development is viable along internal streets and corridors, and upper floors of commercial development.

Renaissance Square has several development opportunity sites and some could be appropriate for higher-density multifamily development, particularly those areas that are further from the main transportation corridors. Community-focused recreation should also be incorporated as an amenity to residents, employees, customers, and visitors.



Target Market for Future Residents and Tenants

Demand for infill retail goods and services will be driven by several market sources, including residents, employees of the area, and visitors. Each of these groups have their own motivations for consumer spending but will likely be drawn to the immediate area because of a visit to one of the anchoring big-box tenants. As such, target tenants for infill retail additions to the Renaissance Square catalytic development opportunity will likely be focused on complimentary uses to the anchors, including fast casual food and dining options. A small amount of professional office space that co-locates with retail could also be attracted to the area, primarily focusing on tenants that are seeking convenient locations to their customer base.

The residential target market is likely to include primarily young singles and couples, as well as a limited number of older lifestyle renters who are seeking to downsize from family homes. Easy accessibility to employment, services, and entertainment will be important. Community amenities will include both on-site options, as well as community-serving options that are part of the Renaissance Square site.

Current Market Considerations

The East Berry corridor hosts more than 1.3 million square feet of retail space. As previously noted, there is very little available retail space today with the current vacancy rate estimated at less than 1.0%; however, price points will be a challenge for infill development that is likely to have more complex ownership structures to ready sites for development. There are currently limited modern office offerings along the corridor with only 88,000 total square feet. Lease rates are estimated at less than \$10 per square foot.

Multifamily development as part of Renaissance Square could incorporate surface parking and more suburban gardenstyle product that could reduce development costs. Overall, multifamily along East Berry Street has a lower vacancy rate when compared to the Fort Worth Metroplex at 6.1%. However, price points are also lower, averaging less than \$900 per month, which will present a barrier to entry for new construction in the short-term even garden-style.



Renaissance Square, ACH Child and Family Services, and Uplift Mighty Preparatory



Development Challenges

Infill development has the potential to create transformational change in areas and districts that may currently be devoid of activity and investment. Infill development can reduce development pressure on outlying areas, reduce Vehicle Miles Traveled (VMT), make significant contributions to quality of life and social health, as well as spur economic vitality. However, the nature and genesis of infill development is not without its own challenges, which may include:

- Smaller parcels with fragmented ownership
- Increased costs associated with development

• Challenging environmental contexts

• Challenging regulatory approval process

In instances where more than one parcel of land is needed to provide the space for development, land assemblage is often the first challenge encountered. Fragmented ownership creates complexity in acquisition negotiations and can even entirely halt progress if the owner is unwilling to participate. Similarly, the acquisition cost is often significant in infill scenarios due to existing infrastructure investment.

Challenging environmental contexts can present themselves in both physical and social contexts regarding infill development. Environmental contamination can serve as a significant impediment to development and can present itself in a variety of ways. Environmental contaminants can encumber a site even if that use wasn't present on the site previously, but nearby or adjacent. Uses like gas stations, dry cleaners, and industrial production or processing can leech into soils and permeate into nearby parcels, as they don't adhere to regulatory boundaries. However, even if environmental contaminants are present, remediation is certainly achievable. Federal, State, and Local agencies offer a wide array of tools, tax incentives, low interest loans and assistance programs to help resolve potential issues.

Development Challenges Continued

Social contexts can also impede infill development in the form of nonconforming uses. A simplified example could be an infill opportunity across from a school, but would not allow specific uses in many cases, like restaurants that serve alcohol or "lewd" uses. Merchandising is a critical consideration when considering infill development, as particular end users of infill scenarios may prefer to be adjacent or proximate to symbiotic uses, to leverage the existing customer base and synergy. A study conducted by the Metropolitan Policy Program at the Brookings Institute found that "Residents of places with poor walkability are generally less affluent and have lower educational attainment than places with good walkability... However, there is no significant difference in terms of transit access to jobs between poor and good walkable places."

Increased upfront costs can dissuade some developers from pursuing infill development, but the short-sighted nature of this perspective often neglects the long-term returns. In the case of infill housing, construction may be more expensive due to demolition costs and site design, but homes integrated into urban fabric also often command a premium. In a similar vein, commercial construction costs tend to be higher with infill development, but rental rates often offset the initial investment after a period.

One of the most significant and challenging barriers to overcome regarding infill development is the regulatory environment. In many instances, infill opportunities are significantly hindered from a future use perspective due to the land use that previously encumbered the parcel. Similarly, the City's subdivision ordinance, which is written for greenfield development rather than infill development, is often more restrictive than zoning. Conflicts arise when the envisioned use of the parcel is represented by separate zoning designations from the existing, and have resulted in different requirements, especially for parking. Regardless, developers must get approval to deviate from the established zoning designation through a public process, one that can be lengthy and uncertain, cost-prohibitive, or too labor intensive for the incremental development process.



Infill Development Case Study

Neighborhoods in Bloom Program, Richmond, Virginia

Just before the year 2000, the City of Richmond, Virginia, launched Neighborhoods in Bloom (NIB), an equitable effort to distribute Community Development Block Grant (CDBG) funds in conjunction with capital improvement and other various public and private funds to seven targeted neighborhoods. Through the NIB Plan, the City hoped to catalyze "self-sustaining, private-market activity." A retrospective analysis was conducted by the Community Affairs Office of the Federal Reserve Bank of Richmond in 2005 to understand the implications and results of the NIB Plan.

As a supplementary and coordinated effort, the local Community Development Corporation (CDC) targeted strategic investment subsidies into the neighborhoods. Similarly, the Richmond office of LISC also played a significant role in transforming the neighborhoods through coordinated investment. The 2005 report goes on to say that "The quantitative and qualitative analyses show that the Richmond NIB program and Local Initiatives Support Corporation (LISC) investments produced impressive direct outcomes in the targeted areas."

The decision to ultimately develop and deploy a concentration of resources opposed to a thin blanket across all qualified areas of the city was supported by the acting City Manager and several council representatives. To identify the selected neighborhoods, the City took a quantitative and community-based approach by identifying capacity for revitalization, market factors, and neighborhood trends in each potential neighborhood, ultimately deciding on the seven selected.

Ultimately, once neighborhoods were defined and selected, existing plans for the area were analyzed and two-year work plans and budgets were developed through the NIB Plan. Each work plan identified buildings to be acquired, rehabilitated, or demolished and illustrated where new housing was to be developed. Allocation of the CDBG funds supported acquisition, demolition, new construction, and rehabilitation of dilapidated housing, as well as down payment assistance. Capital improvement projects included funding for streetlights, alleys, sidewalks, and street improvements throughout each neighborhood. Other public sector initiatives that supported infill development included: increased code enforcement, tax-delinquent sales and vacant property disposition, an expedited historic property review process, and replacement housing assistance.



Example: Neighborhoods in Bloom Program (Richmond, Virginia) Investment Properties Map

Source: Federal Reserve Bank of Richmond



Strategies to Attract Investment

Public and private investments often work together in a song-and-dance that culminates with a completed development project. One of the most successful ingredients to accomplish the resulting development is strong internal and external coordination. Consensus building is a shared task amongst public and private sectors, that yields the best results inclusively, opposed to mutual exclusivity. The City of Fort Worth has made large investments in accommodating this consensus through several programs and efforts including Development Approval Assistance. This streamlined process offered by the Development Services Department offers a single point of contact for the developer as they work through the approval process for construction, zoning, or permitting. Aligning infill development opportunities with the vision of existing plans or planned developments (PD) will not only fulfill the overall goals of the plan or PD but can catalyze the project and spur further investment. Coordination and contribution towards a common goal can help break down barriers to development, build community consensus, and maximize potential investments.

Trends and studies focused on infill opportunities for both the residential and commercial sectors indicate that there are many economic incentives to mitigate the potential barriers to infill development, oftentimes with the support of local governments as well. A variety of incentives can be deployed to spur investment in infill projects, including some of the existing programs and policies in Fort Worth:

- The aforementioned TIF Number 12 seeks to support viable economic redevelopment in southeast Fort Worth by assisting with public infrastructure (sidewalks, water, sewer, storm drainage) associated with mixed-use development or redevelopment. While most of the funds have been directed at redeveloping Renaissance Heights, the 200-acre Masonic Home greenfield site, sufficient funds remain for one or two more needed commercial or mixed-use projects.
- The creation and utilization of a PID could be leveraged to help lay the groundwork for clean, safe, and beautifying initiatives near identified infill opportunities. Offsetting the associated maintenance and public improvement costs can also further existing development momentum in some areas, particularly the Renaissance Square area.
- Neighborhood Improvement Strategy Areas have been selected by the City, and are eligible for set-aside funds designed to improve neighborhood vitality. The Ash Crescent neighborhood resides directly west of Cobb Park, and was allocated \$2.77 Million by City Council in 2018, of which more than \$1 Million remains (as of Fall 2023). The available funds are a result of a half-cent allocation of the municipal property tax rate that's utilized to develop capital projects, improve public safety, and generally attract private investment in underserved neighborhoods. Several infrastructure and public realm improvements have already been completed because of the program, including illegal waste removal and technology for monitoring, demolition of hazardous structures, streetlight upgrades, Code Enforcement outreach, and public community and stakeholder meetings.
- The Land Transactions Incentive was designed to assist developers in the assemblage and acquisition of projects targeted for infill. The City maintains a database of tax-foreclosed and surplus properties that can help developers select and advance economic prosperity.
- The City has a Facade Improvement Program that helps improve curb appeal for local businesses with their storefront/facades. Currently, projects must be located within CDBG eligible urban villages, of which the Lake Arlington/Berry/Stalcup are included in the study area. Although eligible projects must be located in designated urban villages currently, future renewal/expansion of the program should be considered to include additional revitalization opportunities and more frequent and diverse funding allocations.

Strategies to Attract Investment Continued

There are also several programs and strategies that can be utilized to generate developer attraction and momentum, including:

- Land Banking Program would allow for the City to buy underutilized, abandoned, or foreclosed properties at below market rate. In return, the City maintains the property, and identifies and sells the property at reduced cost to an approved developer, with the intent of redeveloping the parcel. Houston and Dallas are two local cities with land banks in place. An amendment to the Inter Local Agreement between the taxing entities could also allow for commercial properties, not just affordable housing to be purchased, easing this process.
- Chapter 380 Economic Development Agreements can be used on project specific incentives and is a powerful tool that can be utilized for a variety of development and redevelopment projects. A 380 agreement can include several provisions a majority of which are performance based and refund a portion of the additional sales tax and property tax created. A 380 agreement would be ideal for individual catalyst projects.
- The Neighborhood Empowerment Zone Program makes tax abatements and fee waivers available for qualified projects. Fee waivers are allowed for areas that overlap with the TIF boundary, as well as those outside the boundary for up to five years.

Grass roots efforts can be equally effective at reimagining and reinventing public spaces as critical gathering spaces at the heart of corridors like East Berry. Efforts to strengthen and further community connection between the people and places of their community are commonly referred to as placemaking. Centered around the people who live, work, and recreate in the East Berry Corridor, placemaking focuses on creating and implementing a shared vision for the future of the area. Placemaking reaches far beyond the concepts of urban design and technical planning, blurring the line between implementation and recommendations. Placemaking affords particular attention to the physical, cultural, and social identities that define a place and support its ongoing evolution, oftentimes because these efforts have been community led and have such strong support from the individuals who utilize the space regularly. As part of the City of Fort Worth's "Full-Strength Fort Worth Revitalization Strategy" placemaking and design are included in the Revitalization Toolkit to recognize and promote individual neighborhood characteristics for locals and visitors alike.

• Tactical Urbanism is a short-term, low-cost implementation of placemaking concepts that can spur long-term change. Projects can be led by governments, non-profits, grassroots groups, or residents, but generate the greatest impacts when buy-in exists across multiple parties. Tactical Urbanism can serve as a tool to build community's capacity to help transform their neighborhoods, create ownership, build community and a sense of place, acivate spaces, or lay ground work ideas for infill development. A local example of this implementation was at "The Post at River East" - spurred by a pop-up concert, a developer saw the impact and community buy in resulting in the development of a permanent music venue along Fort Worth's Race Street.



Pre-development incentives can be deployed to prepare parcels for development, but also as a marketing and communication strategy. Pre-development incentives may include the demolition of vacant or hazardous structures as just the first step to prepare a lot for new construction. Similarly, administrative improvements, design pre-approval, and early process meetings may further expedite the infill development process.

- The City of Fort Worth has several Grant and revolving loan funds available to offset the burden of environmental remediation for projects that align with relevant Area Plans and established Economic Development Goals.
- Pre-inspection of utilities is one tactic that has been deployed through various municipalities in California, that involves a proactive inspection of water, sewer, electric, and gas lines on vacant lots. Inventorying and communicating the state of utilities before development occurs can reduce the financial risk for prospective developers upfront.
- The City of Bryan, Texas regulates pre-approved building designs through overlay districts. The Midtown Pattern Overlay District breaks the Midtown Neighborhood into four separate areas where four different pre-approved housing typologies are pre-approved and tracked through a differentiated development process.



Tactical Urbanism example along Magnolia Street in Fort Worth. Park(ing) Day, 2019 Source: Near Southside, Inc.



Tactical Urbanism - Recapturing parking spaces Source: Upper Westside Community Improvement District



Implementation



This plan is intended to guide **future investments and improvements** for East Berry Street in both the **short and long term.**

IMPLEMENTATION

COSTING

Included in this chapter of the report are the total estimated project costs for East Berry Street and the proposed Westshore Way. These cost estimates include the necessary reconfiguring and improvements to East Berry Street as well as the cost to construct Westshore Way.

Similarly, this chapter includes a consolidated matrix (Action Plan) of recommended actions that should be pursued and accomplished to satisfy the vision set forth through the planning process. The Action Plan should also be used to guide and monitor implementation over time. At the beginning of the Action Plan are general indications of the City's level of financial responsibility for completing an item, ranging from relatively low cost (\$) to more significant costs, more than \$1 Million (\$\$\$\$). Similarly, there is a table indicating the general time frame anticipated for initiating an action.

ACTION PLAN

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Conceptual Level Project Cost Projection

From	То	Total Project Cost	Design Cost
IH-35W	Miller Avenue	\$92,400,000 - \$103,700,000	\$10,400,000 - \$11,800,000
Miller Avenue	Loop 820	\$25,900,000 - \$56,200,000	\$3,300,000 - \$5,600,000
Loop 820	Lake Arlington	\$7,600,000 - \$13,000,000	\$1,600,000 - \$3,300,000

Cost Savings Considerations (Value Engineering)

To be evaluated at preliminary engineering phase of implementation.

- Riverside Drive and East Berry Street Intersection – Omit from design, recent intersection improvements
- Cobb Park to Mitchell Boulevard Sidewalk and landscaping improvements only
- Mitchell Boulevard to US-287 Revise proposed cross section to maintain current roadway footprint to avoid additional rightof-way
- US-287 to Miller Avenue Provide sidewalk/sidepath and parkway improvements; roadway maintenance where needed
- Omit BAT lanes (pavement and signal infrastructure)
- Limit driveway consolidation
- 8' side path or bike on parallel path in areas to avoid additional right-of-way



Westshore Way Cost Estimates

Conceptual Level Project Cost Projection

From	То	Total Project Cost	Design Cost
IH-20	Martin Street	\$34,300,000	\$2,600,000
Martin Street	Cravens Road	\$17,900,000	\$1,450,000
Cravens Road	Berry Street	\$26,900,000	\$2,400,000
Berry Street	Ramey Avenue	\$21,800,000 - \$33,700,000	\$2,100,000 - 3,400,000
Ramey Avenue	Spur 303	\$12,100,000	\$740,000

1. SAFETY

Create a safe environment along the corridor that encourages people to walk and bicycle.

2. TRAVEL OPTIONS

Improve accessibility, availability, and reliability of public transportation by enhancing infrastructure and increasing connectivity with other parts of the City.

3. UPWARD MOBILITY

Develop an economically vibrant Corridor with job training and educational opportunities as well as access to investment capital and local development partnerships.

4. BELONGING

Create a welcoming sense of place representative of the community through public spaces, public art, and access to amenities.

5. COMMUNITY BUILDING

Promote compatible development that adds value to our community of all ages, fosters community partnership, and connects people with opportunity.

6. CONNECTIVITY

Support connectivity through community building, enhanced transportation options, recreational facilities, and expansion of public Wi-Fi.

ACTION PLAN

The Vision and Goals for the East Berry Corridor Plan were developed early in the planning process and established the direction and tone for the remainder of the project. The goals provide a foundation for the plan and will continue to serve as guideposts for City leaders as they contemplate policies, programs, capital investments, and development applications. The goals also tie together the interrelated elements represented in the chapters of this document, which address a variety of topics related to the physical development of the community—including the development of land, buildings, and the necessary infrastructure to support it as well as the use of the city's natural areas.

Fulfilling the community's vision for the future will depend upon more than simply adopting this plan. There must also be an achievable and clearly articulated strategy for implementation. This strategy must be translated into a coordinated and comprehensive approach that includes not only the list of specific tasks or actions to be taken, but a recognition of the amount of time and resources needed, and a system for monitoring and adjusting the plan as needed over time.

City Staff will be responsible for monitoring implementation progress over time. The Action Plan was developed as a tool for both staff and elected officials to reference. It represents a plan for the steps required for implementation. It is organized around a set of strategies and includes a supporting set of action items for each strategy, as well as information regarding the timing and duration of each one, related strategies, and a cost estimate. The action items function like a to-do list for the many parties that will play a part in implementing the plan. These are specific tasks that need to be completed to achieve the goals of the plan.

The Appendix at the end of this report includes costing for the TxDOT and NCTCOG funding partnership for implementation and construction of improvements on East Berry Street.



ACTION PLAN

Estimated Timeframe

Immediate: Within 2 years

Short: 2-5 years

Medium: 5-10 years

Long: More than 10 years

Estimated Duration



1-2 years

More than 2 years

Estimated Costs



Up to \$250,000 \$250,000 - \$500,000 \$500,000 - \$1 million More than \$1 million

*Indicates costing is includes in the estimates on pages 196-197

1. Enhance East-West connectivity throughout the corridor to distribute trips across a greater network Action # Description **Related Goals** Timeframe Duration Cost Update the City's Master Thoroughfare Plan to include identified Travel Options, \mathbf{X} \$ connections for Westshore Way, Fitzhugh Avenue/Crenshaw Avenue, 1.1 Immediate Connectivity Eastland Street/Greyson Street, and Hardeman Street/Garden Lane Connect Fitzhugh Avenue / Crenshaw Avenue from US-287 to Loop Travel Options, 1.2 \$\$\$ Long 820 Connectivity Travel Options, XX \$\$\$ Connect Eastland Street / Grayson Street from US-287 to Loop 820 1.3 Long Connectivity Connect Hardeman Street / Garden Lane from US-287 to Carey Travel Options. XX \$\$\$ 1.4 Long Connectivity Street Design and construct roadway connection between Donalee Street Travel Options, XX \$\$ 1.5 Medium and Freddie Street Connectivity

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2. Ensure pedestrian connectivity is safe, continuous, and accessible for all ages and abilities to access residential and non-residential destinations throughout the corridor						
Action #	Description	Related Goals	Timeframe	Duration	Cost	
2.1	Construct pedestrian paths in the Renaissance Square focus area	Safety, Travel Options, Connectivity	Short	X	\$/\$\$	
2.2	Fill in all sidewalk gaps on East Berry Street	Safety, Travel Options, Connectivity	Short	X	\$	
2.3	Fill in Top Priority Sidewalk Gaps at Morningside Middle School Walkshed	Safety, Travel Options, Connectivity	Medium	X	\$/\$\$	
2.4	Fill in Top Priority Sidewalk Gaps at Mitchell Boulevard Elementary School Walkshed	Safety, Travel Options, Connectivity	Medium	X	\$/\$\$	
2.5	Fill in Top Priority Sidewalk Gaps at TA Sims Elementary School Walkshed	Safety, Travel Options, Connectivity	Medium	X	\$/\$\$	
2.6	Fill in Top Priority Sidewalk Gaps at Christene C. Moss Elementary School Walkshed	Safety, Travel Options, Connectivity	Medium	\mathbf{X}	\$/\$\$	
2.7	Fill in Top Priority Sidewalk Gaps at AM Pate Elementary School Walkshed	Safety, Travel Options, Connectivity	Medium	\mathbf{X}	\$/\$\$	
2.8	Fill in Top Priority Sidewalk Gaps at Sunrise McMillan Elementary School Walkshed	Safety, Travel Options, Connectivity	Medium	X	\$/\$\$	
2.9	Fill in Top Priority Sidewalk Gaps at Jacquet Middle School Walkshed	Safety, Travel Options, Connectivity	Medium	X	\$/\$\$	
2.10	Fill in Top Priority Sidewalk Gaps at Dunbar High School Walkshed	Safety, Travel Options, Connectivity	Medium	X	\$/\$\$	
2.11	Extend Cobb Park to the south and connect to Ellis Park via a new trail segment	Safety, Travel Options, Connectivity	Medium	X	\$\$	
2.12	Update the Active Transportation Plan to include the recommended additional pedestrian and trail connections	Safety, Connectivity	Short	X	\$	



3. Implement corridor-wide and site-specific improvements to enhance safety							
Action #	Description	Related Goals	Timeframe	Duration	Cost		
3.1	Enhance crosswalk visibility at the intersection of East Berry Street and Evans Avenue through the instillation of pedestrian refuge islands	Travel Options	Immediate	X	\$		
3.2	Enhance the East Berry Street and Riverside Drive intersection with crosswalk visibility enhancements, flashing yellow arrow on signal head, and yellow change intervals	Safety	Immediate	X	\$		
3.3	Implement improvements on Eastland Street including refreshing stop bars, installation of high-visibility crosswalks, striped on-street parking, and lowering of speed limit to 25 mph	Safety	Immediate	X	\$		
3.4	Update the traffic signal and enhance crosswalk visibility at the East Berry Street and Village Creek Road intersection.	Safety	Immediate	X	\$		
3.5	Design and install a roundabout at the East Berry Street and East Berry Street South intersection	Safety	Medium	XXX	\$\$\$\$		
3.6	Design and install a roundabout at the Mitchell Boulevard and East Berry Street South Intersection	Safety	Long	XXX	\$\$\$\$		
3.7	Design and install a roundabout at the Vaughn Boulevard and Wichita Street Intersection	Safety	Long	XXX	\$\$\$\$		
3.8	Design and install a traffic circle at the intersection of Evans Avenue and Baker Street	Safety	Medium	XXX	\$\$\$		
3.9	Design and install a traffic circle at the intersection of Village Creek Road and Eastland Street	Safety	Medium	XXX	\$\$\$		
3.10	Design and install a traffic circle at the intersection of Bishop Street and Crenshaw Avenue	Safety	Medium	XXX	\$\$\$		
3.11	Design and install a traffic circle at the intersection of Bishop Street and Strong Avenue	Safety	Medium	XXX	\$\$\$		
3.12	Stripe a two-way left turn lane on Miller Avenue from Eastland Street to US-287	Safety	Medium	X	\$		
3.13	Implement corridor-wide 35 MPH speed limit	Safety	Immediate	X	\$		

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4. Increase connectivity of the roadway network in recommended development areas						
Action #	Description	Related Goals	Timeframe	Duration	Cost	
4.1	Expand the road network at the Cobb Park / Riverside / Proposed T.O.D. focus area to create a connected roadway system that promotes safe vehicular and multimodal mobility	Travel Options, Community Building, Connectivity	Long	Ongoing	\$\$\$\$	
4.2	Increase road network connectivity in the Renaissance Square retail center area	Travel Options, Community Building, Connectivity	Long	Ongoing	\$\$\$\$	
4.3	Expand road network at the Lake Arlington focus area	Travel Options, Community Building, Connectivity	Long	Ongoing	\$\$\$\$	
4.4	Construct Westshore Way Phase 1 - East Berry Street to Ramey Avenue	Travel Options, Community Building, Connectivity	Medium	XXX	*\$\$\$\$	
4.5	Construct Westshore Way Phase 2 - Ramey Avenue to Spur 303	Travel Options, Community Building, Connectivity	Long	XXX	*\$\$\$\$	
4.6	South Construct Westshore Way Phase 3 - East Berry Street to IH-20	Travel Options, Community Building, Connectivity	Long	XXX	*\$\$\$\$	
4.7	Coordinate with NCTCOG on the proposed Mansfield Line for recommended Transit Oriented Development	Upward Mobility	Immediate	Ongoing	\$	
4.8	Connect underpass to Mississippi Avenue	Travel Options, Connectivity	Medium	XX	\$	

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5. Utilize access management strategies along East Berry Street to improve safety and align the vision for future land uses						
Action #	Description	Related Goals	Timeframe	Duration	Cost	
5.1	Evaluate driveway closures along entirety of East Berry Street	Safety	Medium	X	\$	
5.2	Design and construct a median along East Berry Street from I-35W to Riverside Dr	Safety	Medium	XX	*\$\$\$\$	
5.3	Consider median along East Berry Street at Canberra Court	Safety	Medium	X	*\$\$	
5.4	Design and construct a median along East Berry Street from US-287 to Miller	Safety	Medium	XX	*\$\$\$\$	
5.5	Design and construct a 6-foot median along East Berry Street from Miller Avenue to Edgewood Terrace	Safety	Long	XX	*\$\$\$	

6. Expand the trails network to eliminate gaps and facilitate multimodal connections to destinations throughout the corridor						
Action #	Description	Related Goals	Timeframe	Duration	Cost	
6.1	Extend Trinity Trails south of East Berry Street to Sycamore Creek and the proposed T.O.D. focus area (Cobb Park)	Travel Options, Connectivity	Medium	XXX	\$\$\$\$	
6.2	Implement trail connections to the neighborhood east of Cobb Park at Bidecker Avenue, Richard Legacy Lane, and Thannisch Avenue	Travel Options, Connectivity	Immediate	X	\$\$	
6.3	Construct 10-foot sidepath along East Berry Street (See Cross-Sections)	Safety, Travel Options, Connectivity	Medium	XX	*\$\$\$\$	
6.4	Construct 10-foot sidepath along west side of Mitchell Boulevard from East Berry Street to Renaissance Drive	Safety, Travel Options, Connectivity	Medium	XX	\$\$\$	
6.5	Construct 10-foot sidepath along Village Creek Road, south of East Berry Street	Safety, Travel Options, Connectivity	Medium	XX	\$\$\$	
6.6	Construct 10-foot sidepath along the proposed Westshore Way on the east side of the roadway (included in cost estimate)	Travel Options, Connectivity	Long	XX	*\$\$\$\$	
6.7	Update the City's Active Transportation Plan to include new trail connections and additions	Travel Options	Immediate	X	\$	



7. Expand bicycle facilities and related amenities to enhance multimodal connectivity throughout the corridor

Action #	Description	Related Goals	Timeframe	Duration	Cost
7.1	Place Trinity Metro Bike Stations at strategic locations including: Sierra Vista Transfer Center, Cobb Park, Renaissance Square, Fiesta Mart, and Lake Arlington	Travel Options, Belonging, Connectivity	Medium	X	\$
7.2	Reconfigure Renaissance Drive to include Two-Way Cycle Track on north side of the roadway.	Safety, Travel Options	Short	X	\$\$
7.3	Retrofit the existing bike lanes on Miller Avenue to fully protected bike lanes by using enhanced pavement markings	Safety, Travel Options	Short	X	\$
7.4	Stripe shared-lane markings on Eastland Street from Miller Avenue to Carey Street	Safety, Travel Options	Short	X	\$

	8. Encourage transit usage by improving the user experience and eliminating barriers to utilization							
Action #	Description	Related Goals	Timeframe	Duration	Cost			
8.1	Enhance priority transit stops to shelters to create a more comfortable transit experience for users	Travel Options, Belonging, Connectivity	Short	\mathbf{X}	\$\$			
8.2	Enhance all transit stops in the study area to shelters	Travel Options, Belonging, Connectivity	Long	Ongoing	\$\$\$			
8.3	Consider Business Access and Transit Lanes (BAT) at East Berry Street & Riverside Drive, East Berry Street & Mitchell Boulevard, and East Berry Street & Miller Avenue.	Safety, Connectivity	Medium	XXX	\$\$\$\$			
8.4	Fill in sidewalk gaps in priority missing sidewalk areas to improve connections to transit stops and promote public transportation as a safe and viable travel option	Safety, Travel Options, Upward Mobility, Connectivity	Short	X	\$\$			



9. Acquire the necessary right-of-way for roadway reconstruction								
Action #	Description	Related Goals	Timeframe	Duration	Cost			
9.1	Acquire right-of-way from specific properties in accordance with sidewalk expansion	Travel Options, Connectivity	Short	XXX	\$\$\$\$			
9.2	Obtain 10 feet of right of way from Mitchell Boulevard to US-287	Travel Options, Connectivity	Medium	XX	\$\$\$			
9.3	Obtain 10 feet of pedestrian/landscape easement right-of-way from US- 287 to Miller Avenue	Travel Options, Connectivity	Medium	XX	\$\$\$			
9.4	Obtain 10 feet of pedestrian/landscape easement right-of-way from Miller Avenue to Edgewood Terrace	Travel Options, Connectivity	Medium	XX	\$\$			
9.5	Obtain 20 feet right-of-way from Loop 820 to Cravens Road	Travel Options, Connectivity	Medium	XX	\$\$			

10. Integrate smart corridor technology and continue to upgrade utilities						
Action #	Description	Related Goals	Timeframe	Duration	Cost	
10.1	Install fiber optics along East Berry Street.	Upward Mobility, Connectivity	Medium	XX	\$\$	
10.2	Install cooling pavement along East Berry Street.	Community Building, Connectivity	Long	XX	\$\$\$\$	
10.3	Explore opportunities to expand free public Wi-Fi throughout the corridor.	Upward Mobility, Connectivity	Medium	XX	\$	
10.4	Utilize water main modeling to adequately size and align future density with future needs.	Community Building, Connectivity	Short	X	\$	
10.5	Replace degraded or age-appropriate water main lines in conjunction with reconstruction on East Berry Street.	Community Building, Connectivity	Medium	XX	\$\$\$\$	
10.6	Replace linear footage of 6-inch water mains to meet minimum standard on East Berry Street.	Community Building, Connectivity	Medium	XX	\$\$\$\$	
10.7	Relocate existing water meter locations and replace undersized meters as needed.	Community Building, Connectivity	Medium	XX	\$\$\$\$	
10.8	Replace oversized water mains to service property owners as reconstruction occurs along East Berry Street.	Community Building, Connectivity	Medium	XX	\$\$\$\$	
10.9	Utilize sanitary sewer modeling to adequately size and align future density with sanitary sewer mains along East Berry Street.	Community Building, Connectivity	Short	XX	\$	
10.10	VCP sanitary sewer line replacement from manhole to manhole should be considered during reconstruction of East Berry Street	Community Building, Connectivity	Medium	X	\$	



11. Implement projects and policies that seek to enhance the natural environment						
Action #	Description	Related Goals	Timeframe	Duration	Cost	
11.1	Implement more stringent stormwater management regulations focused on water quality protection at the proposed Lifestyle Villages near important water bodies such as Sycamore Creek (Cobb Park) and Lake Arlington.	Belonging, Connectivity	Immediate	XX	\$	
11.2	Incorporate vegetation beds and tree planting with improvements associated with the Neighborhood Nodes where improvements intersect city owned property or have wide enough R.O.W.	Upward Mobility, Belonging, Community Building	As Needed	X	\$	
11.3	Install vegetative filter strips, no mow zones, swales, and tree planting at the Trinity Trail connectivity opportunities	Belonging, Community Building	As Needed	X	\$	
11.4	Install vegetative filter strips, no mow zones, swales, and tree planting at Renaissance Square connectivity opportunity	Belonging, Community Building	As Needed	X	\$	
11.5	Install vegetative filter strips, no mow zones, swales, and tree planting at Westshore Way connectivity opportunity	Belonging, Community Building	As Needed	X	\$	
11.6	Install shade trees along East Berry Street where pedestrian sidewalk improvements intersect city owned property or have wide enough R.O.W.	Belonging, Community Building	Medium	XX	\$	
11.7	Install shade trees within school pedestrian watershed zones where pedestrian sidewalk improvements intersect city owned property or have wide enough R.O.W.	Belonging, Community Building	As Needed	X	\$	

11. Implement projects and policies that seek to enhance the natural environment									
Action #	Description	Related Goals	Timeframe	Duration	Cost				
11.8	Install and/or maintain trash capture technologies.	Belonging, Community Building	Immediate	X	\$				
11.9	Launch educational campaign focused on healthy, clean waterways promoting trash management, pet waste management, and eliminating the use of pesticides, herbicides, and fertilizers at residences and in the East Berry study area neighborhoods.	Upward Mobility, Belonging, Community Building	Immediate	XXX	\$				
11.10	Install pet waste disposal systems at parks, trails, and dense residential areas.	Belonging, Community Building	Short	X	\$				
11.11	Monitor frequent illegal dumping areas and put up signage to deter behavior.	Safety, Community Building	Immediate	Ongoing	\$				
11.12	Explore the creation and implementation of a Public Improvement District (PID) to offset costs associated with public improvements and maintenance.	Upward Mobility	Immediate	XX	\$				
11.13	Implement water quality protection regulations using zoning requirements or a design overlay	Safety, Community Building	Immediate	X	\$				
11.14	Implement Green Ribbon Grant concept	Belonging, Community Building	Immediate	X	\$\$				



12. Utilize economic development policies and tools to strengthen the tax base and encourage economic mobility throughout the corridor									
Action #	Description	Related Goals	Timeframe	Duration	Cost				
12.1	Consider and utilize opportunities for event programming at catalytic sites	Upward Mobility, Belonging, Community Building	Immediate	Ongoing	\$				
12.2	Develop a land banking program to identify, and prioritize key parcels and help promote larger-scaled development at catalytic sites	Upward Mobility, Community Building	Short	\mathbf{X}	\$				
12.3	Create an entity that's responsible for establishing a PID for reinvestment within the applicable district(s)	Upward Mobility	Medium	X	\$				
12.4	Prioritize and pursue development projects that can be funded through Grants and Public/Private Partnerships	Upward Mobility	Immediate	Ongoing	\$				
12.5	Consider releasing a Request for Expression of Interest (RFEI) for the identified Large-Scale Village Centers	Upward Mobility	Medium	X	\$				
12.6	Utilize Grant and Revolving Loan Funds to help offset the cost of environmental remediation, where applicable	Upward Mobility	Short	Ongoing	\$				
12.7	Continue to prioritize the remaining TIF 12 funds to assist in infrastructure development of selected projects	Upward Mobility	Immediate	Ongoing	\$				
12.8	Continue to utilize the Neighborhood Empowerment Zone Program to provide tax abatements and fee waivers for applicable projects	Upward Mobility, Community Building	Immediate	Ongoing	\$				
12.9	Continue coordination with CDBG and CIP project allocation to ensure appropriate utility infrastructure is in place to support development opportunities	Upward Mobility	Immediate	Ongoing	\$				
12.10	Leverage enhanced placemaking strategies as a tool to build community and a sense of place, acivate spaces, and or lay ground work ideas for infill development	Belonging, Community Building	Immediate	Ongoing	\$				
12.11	Implement a base zoning form-based code district to support development of the identified catalytic sites	Upward Mobility, Belonging, Community Building	Immediate	X	\$				



APPENDIX



