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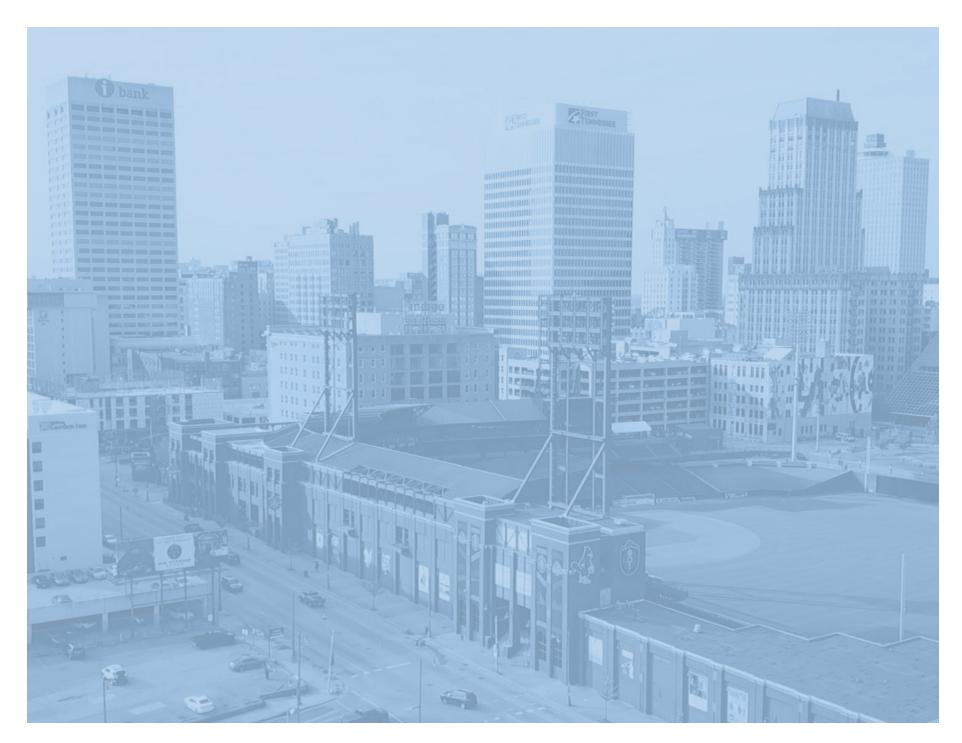
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Executive Summary

Background

The Memphis Innovation Corridor Transit Oriented Development (TOD) plan reimagines the convergence of transit and the built environment in Memphis. The plan envisions increased density around bus rapid transit stations, making it possible for those living and working near the corridor to access daily needs with less vehicular dependency. The Memphis Area Transit Authority (MATA) first examined bus rapid transit (BRT) as a tool to provide higher quality transit service in 2014. MATA's final report recommended BRT as the best solution and identified an eight-mile route from Downtown to the University of Memphis along Union Avenue and Poplar Avenue. In 2016, BRT was adopted as the preferred high-capacity transit service and the route identified became known as the Memphis Innovation Corridor. A Transit Vision Study conducted in 2017 and 2018 recommended short-term and long-term network changes to increase frequency. The Downtown portion of the Memphis Innovation Corridor was included in the shortterm network.

In 2019, MATA and the City of Memphis were awarded a \$12 million BUILD grant from the federal government to design and construct the Memphis Innovation Corridor

BRT system. The new transit system, mConnect, includes two miles of exclusive bus lanes, 17 stations, 31 stops, nine 40-foot electric vehicles with two-door boarding, and electric charging equipment. The system prioritizes pedestrian safety and includes features such as new signage, leading pedestrian crosswalk signals, high-visibility crosswalks, LED streetlighting, and ADA accessibility improvements at and near stations.

Planning Process/Public Engagement

To further support mConnect and encourage more density around the BRT stations, the Memphis Innovation Corridor TOD plan began in January 2021. A partnership between, the Memphis and Shelby County Division of Planning and Development (DPD) and MATA, the planning process engaged the public to receive feedback on the desired level of density, plan principles, future land uses, and zoning changes. Public engagement took place between February and October. Despite the challenges caused by the on-going COVID-19 pandemic, the team engaged with over 4,000 stakeholders and residents through virtual public meetings, online surveys, focus groups, newsletters, stakeholder interviews, and limited in-person public engagement.

Station Typologies

Each of the 17 mConnect stations was assigned a typology utilizing existing and future land uses, current and future density, and the built environment. Stations identified as Core City are characterized by high density areas where new building development should be five or more stories in the form of mixed-use and adaptive reuse. Urban Corridor/Center stations are typically medium density, mixed-use areas where new development should be three to five stories in the form of mixed-use and corridor scale retail. Stations identified as Neighborhood Corridor/Center are low density, mixed-use areas where new development should be three to four stories with a mixture of uses and neighborhood scale retail. A Destination Center station includes institutions and special uses where new development should be five or more stories in the form of mixed-use, office, and institution support.

Sub Areas

The corridor was broken into six distinct sub areas. Existing land use conditions and development opportunities are detailed for each sub area. The Station Area Concept Plan for each sub area identifies potential future land uses and developments based on the station typology, market potential, and planned future developments.

For each sub area, a multi-modal Connectivity Plan was developed. The Connectivity Plan identifies the existing bicycle and pedestrian network and the current conditions. The plan also identifies programmed improvements – those scheduled for future implementation – to the bicycle and pedestrian network. Additionally, the plan identifies recommended improvements to the network intended to improve connections to, from, and between stations and other key places in the Innovation Corridor.

Zoning

Zoning along the Memphis Innovation Corridor varies substantially throughout the length of the corridor. While residential and commercial mixed-use zoning districts are the most prevalent, almost all districts from the Memphis and Shelby County Unified Development Code are represented within ¼ mile of the corridor. This creates challenges when implementing TOD standards due to the differences in setbacks, height maximums, and other building requirements in each of the zoning districts. By rezoning auto-oriented zoning districts, applying frontage requirements, and implementing access management standards, the BRT corridor will become more pedestrian-friendly and safer for all users. Several overlays are present along the corridor conducive with TOD however the overlays do not cover the entire corridor. A Transit Overlay District is proposed to address the inconsistencies and create a more cohesive corridor.

Introduction

In January 2021, the Memphis and Shelby County Division of Planning and Development (DPD), in partnership with Memphis Area Transit Authority (MATA), began the development of a transit-oriented development (TOD) plan for the City's first bus rapid transit (BRT) corridor – The Memphis Innovation Corridor. The TOD plan covers the area connected by the Innovation Corridor

TOD is the creation of compact, walkable, mixed-use communities centered around high-quality transit systems.

through Downtown, the Medical District, Midtown, and University of Memphis area along 2nd Street and B.B. King Boulevard, Union Avenue, and Poplar Avenue. It will guide land use, zoning, development regulations, multi-modal

transportation, infrastructure, and neighborhood connections to ensure the built environment supports the success of the City's first BRT system – mConnect.

What is TOD and BRT?

Transit-oriented development (TOD) encourages compact, walkable, mixed-use communities centered around high-quality transit systems. This allows more residents to serve their daily needs without dependency on cars for transportation. Cities can enable and encourage TOD through changes to zoning, land use and development regulations.

Bus rapid transit (BRT) functions differently than traditional bus routes. BRT buses run at frequent intervals

using dedicated bus lanes and traffic signal priority to make service quicker and more reliable. Stations typically offer greater amenities than traditional bus stops such as off-board fare kiosks, elevated boarding platforms and real-time bus arrival displays.

TOD and BRT work together to increase mobility for residents, create more vibrant and livable communities and support economic and environmental sustainability. BRT makes public transit a quicker, more reliable and more comfortable transportation option. TOD multiplies these advantages by increasing the number of residents and destinations located along BRT routes.

Background

BRT first came under consideration for the Memphis transit system in 2014. The Midtown Alternative Analysis study examined high-capacity transit solutions for Midtown Memphis and surrounding neighborhoods. Expansion of the existing trolley system, modern streetcars, and bus rapid transit were considered as high-capacity transit solutions along 26 potential routes. The final report identified a BRT route from Downtown to the University of Memphis along Union and Poplar – now known as the Memphis Innovation Corridor – as the best alternative.

In 2016, the proposed BRT route was adopted as the preferred high-capacity transit solution by the MATA Board of Commissioners. In the same year, the City



Planning Background

The Innovation Corridor was highlighted in the Memphis 3.0 Comprehensive Plan.

of Memphis embarked on a two-year comprehensive planning process. Throughout the multi-year process of robust community engagement, over 15,000 Memphians were involved. The resulting plan, known as Memphis 3.0, was the first for the City since 1981. The Plan established a roadmap for future development and a new vision: Build Up, Not Out. Memphis 3.0 aims to transform Memphis into a more prosperous and inclusive city by guiding growth and policy for the next 20 years.

As a part of the comprehensive planning process, a Transit Vision Study was conducted in 2017 – 2018. The study recommended short-term (2022) and long-term network (2040) solutions to increase bus service frequency. The need for more frequent and reliable transit service was one of the earliest themes arising from the Memphis 3.0 planning process. The Downtown portion of the Memphis Innovation Corridor is incorporated into the 2022 Short-Term Recommended Network.

In 2019, the U.S. Department of Transportation awarded MATA and the City of Memphis a \$12 million BUILD grant from the federal government to design and construct the Memphis Innovation Corridor BRT system. A Downtown Transit Mall along 2nd Street and B.B. King Boulevard from Union to A.W. Willis will be implemented as part of mConnect and have high frequency bus service every 3-4 minutes at peak hours and use dedicated bus lanes. The mConnect BRT will improve travel time and reliability with electric buses arriving at a station every 10 minutes along Poplar and Union. Transit will improve in areas outside of the Corridor as well, with connections to 18 other bus routes. This will result in access to 39% more jobs within one hour of travel time.

Planning for TOD

The Innovation Corridor is an important step in reimagining not only transit in Memphis but the built environment as well. By planning for transit-oriented development, the City can guide sustainable urban growth supporting high-capacity transit while also following Memphis 3.0's vision to Build Up, Not Out.

Guiding this growth requires consideration of the neighborhoods the Corridor passes through. From the dense central core of Downtown and the Medical District to the residential areas of Midtown and the University District, TOD needs to be context-sensitive with a focus on areas immediately adjacent to transit stops. To compliment new private development, TOD planning also envisions public infrastructure improvements with the addition of wider sidewalks, seating, streetscaping and lighting.

Currently, most people who live in the Corridor leave for work, and most people who work in the Corridor commute in from elsewhere. Encouraging increased density and public infrastructure improvements through TOD planning will provide more opportunities to both live and work in the Corridor and support the use of BRT and other sustainable transportation options.

Public and Stakeholder Engagement & Process Overview

During the Memphis Innovation Corridor Transit
Oriented Development (TOD) planning process, community engagement was crucial to the ideation of station design concepts, desired land uses, and multi-modal options. The Division of Planning and Development (DPD) partnered with a team of consultants to create a vision for the Innovation Corridor. After several meetings with community members and stakeholders, the consultants and DPD compiled input to create a final plan for the Corridor.

Initial Marketing - February 2021

DPD recognized the need to hone in on the experience of stakeholders along the Corridor and conducted focus group interviews. The consultant team and DPD introduced the Corridor and listened as the participants

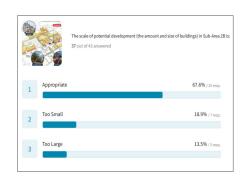
discussed their history, experiences, current thoughts and expectations for the corridor related to land-use, zoning, mobility and economic development. Focus group meetings were held on February 4 and February 10, 2021. These group interviews included local developers, incentive brokers, educational institutions, and the local branch of the Urban Land Institute.

The advisory committee was comprised of City and County leaders, nonprofit and other neighborhood organizations, leaders and staff members of City and County departments and incentive brokers. The first advisory committee meeting was held on February 26, 2021. Committee members were introduced to the planning process and station typologies by the consultant team.



Public Meeting Flier

A flier with a QR Code and registration information for the first virtual public meeting is shown above.



Survey Results

Two surveys were conducted during the planning process with results uploaded to the Memphis 3.0 website.



Public Meeting Display Board

Display boards with information for all public meetings were left at community spaces such as Ben Hooks Library.

First Survey - March 2021

The consultant team and DPD surveyed the community to determine the types of services currently utilized along the corridor and for new amenities such as streetscape improvements, public realm/civic spaces, parking, zoning, land uses and housing affordability. The first of two surveys were released March 17, 2021 and remained open for two weeks. The Memphis 3.0 website, emails to stakeholders, and social media were used for survey promotion. The first survey results helped to inform the development of guiding principles, scale of density desired, and preliminary station design concepts. Survey results were uploaded to the Memphis 3.0 website

Initial Public Meeting Marketing - February/March 2021

The usage of social media and the Memphis 3.0 website became vital during the COVID-19 pandemic. Facebook, the Memphis 3.0 and mConnect websites were updated two weeks before virtual public meetings with event links and registration information. Upcoming meeting information was added to the quarterly Memphis 3.0 newsletter and monthly DPD newsletter. Emails to community and neighborhood groups, other City/ County departments, focus group members, and advisory committee members were sent with a meeting flier. Information boards with a OR code, a link to the first survey and link for the meeting registration were left at Crosstown Concourse, Benjamin Hooks Central Libraru, and the William Hudson Transit Center, Press releases with meeting information were sent to local media sources.

Initial Public Meeting - March 2021

The first community engagement meeting was held via Zoom on March 18, 2021. The virtual workshop consisted of the consultant team, community leaders, members of neighborhood associations, DPD staff members, and residents. Meeting presenters introduced

participants to the planning process and station typologies. Participants utilized the chat function and "raise hand" function to ask questions and provide feedback. The virtual meeting provided a platform to ask questions and give immediate feedback to the consultant team and DPD. The meeting recording and presentation were uploaded to the Memphis 3.0 website the day after the meeting.

Second Advisory Committee Meeting - April 2021

The second advisory committee meeting was on April 27, 2021. Committee members were presented draft station design concepts and potential future land uses along the Corridor. More specifically – the built form and scale of development and future land uses twenty years from now, development strategies, market analysis and potential, and connectivity opportunity to stations. Committee members provided feedback helping to inform the scale of density desired in sub areas, multi-modal connectivity, and desired future land use types.

Second Public Meeting Marketing - April/May 2021

As previously noted, social media, the Memphis 3.0 and mConnect websites, emails, and newsletters were used as primary communication tools during the COVID-19 pandemic. Information boards with a QR code and link for the meeting registration were left at Benjamin Hooks Central Library and the William Hudson Transit Center. Press releases with meeting information were sent to local media sources.

Second Public Meeting - May 2021

The second community engagement meeting was held via Zoom on May 18, 2021. The virtual workshop consisted of the consultant team, community leaders, members of neighborhood associations, DPD staff members, and residents. The meeting introduced the draft guiding principles, station design concepts, and

future land uses twenty years from now. Participants utilized the chat function and "raise hand" function to ask questions and provide feedback. The virtual meeting provided a platform to ask questions and give immediate feedback to the consultant team and DPD. The meeting recording and presentation were uploaded to the Memphis 3.0 website the day after the meeting.

Second Survey - May 2021

The second survey was released May 24, 2021 and remained open for two weeks. The Memphis 3.0 website, emails to stakeholders, and social media were used for survey promotion. The second survey results helped to refine the guiding principles, scale of development along the corridor, and mix of future land uses. Survey results were uploaded to the Memphis 3.0 website.

Third Advisory Committee Meeting - August 2021

The third advisory committee meeting was on August 19, 2021. Committee members were presented final station design concepts, future land uses along the Corridor, and zoning changes. Committee members provided feedback to any adjustments needed to form, scale, and use along the Corridor.

Final Public Meetings - August 2021

A series of in-person "pop-ups" were held at Benjamin Hooks Library, University of Memphis Student Center, Overton Park - East Parkway Playground and AutoZone Park on August 24, 2021. The same methods of promotion mentioned above were used to promote the pop-ups. Consultants and DPD staff were on hand to discuss draft land use concepts, potential future development along the corridor, and station concepts. Four informational boards with visuals aided the public in understanding the planning process and concepts. Two boards with general questions about BRT and land use were provided for the public to leave feedback using



sticky notes. Copies of the informational boards and questions with instructions on how to provide feedback were uploaded to the Memphis 3.0 website the day before the pop-ups.

Final Plan Marketing - December 2021

Virtual publications were used to advertise the release of the final plans in December. All virtual methods conducted in previous engagement phases were

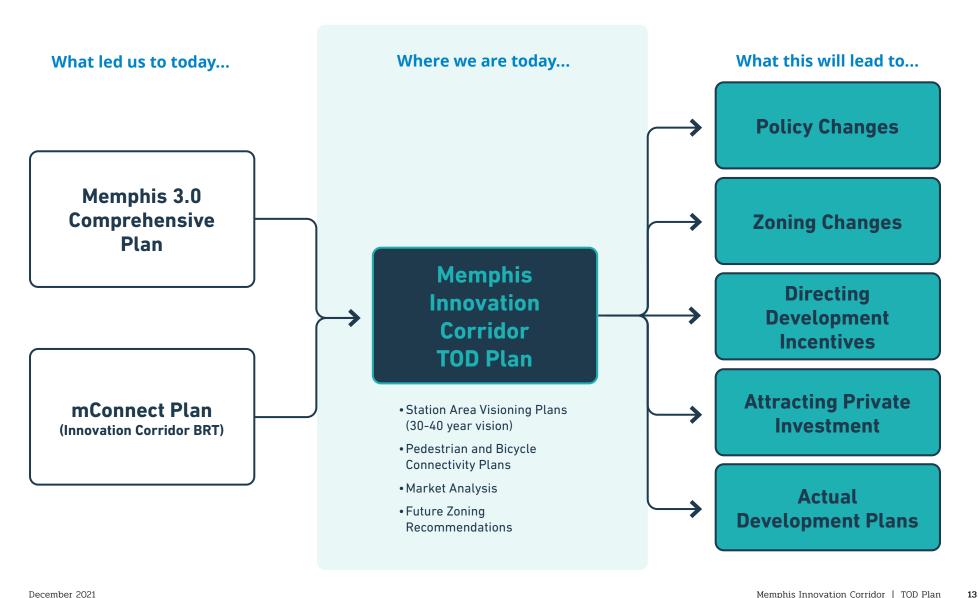
utilized, along with the addition of paper plans printed and left at various important community spaces along the Corridor. Emails to stakeholders, advisory committee

More than 4,000 residents and stakeholders participated in the planning process.

members, Council members and neighborhood leaders assisted in spreading the word of the final plans, along with the advertisement of their addition to the Memphis 3.0 and mConnect websites.

Pop-Up Engagement

Sean Hare from MKSK Studios explains elements of the Innovation Corridor TOD plan to University of Memphis students. Image: |immie Tucker



December 2021 Memphis Innovation Corridor | TOD Plan

TOD Station Typologies

Station Typologies

There are 17 distinct mConnect bus rapid transit station areas along the Corridor. A series of typologies were developed to categorize each station area based on appropriate building forms and land uses to create concepts that align with other segments of the Corridor.

These typologies are based on evaluating the prominent current uses surrounding the stations, the density of current development, and the market potential for new development in the surrounding area.

Core City. Only existing within Downtown, this typology promotes higher density mixed-use development in the future in line with the density of the

TYPICAL BUILT FORM				
TYPOLOGY	CORE CITY (High Density Mixed-Use)	URBAN CORRIDOR / CENTER (Medium Density Mixed-Use)	NEIGHBORHOOD CORRIDOR / CENTER (Low Density Mixed-Use)	DESTINATION CENTER (Institutions, Special Uses)
TYPICAL BUILDING FORM	MID TO HIGH RISE New Development: 5+ Stories	MID RISE New Development: 3-5 Stories	LOW RISE New Development: 1-4 Stories	MID TO HIGH RISE New Development: 5+ Stories
LAND USES	• MIXED-USE • ADAPTIVE REUSE	• MIXED-USE • CORRIDOR SCALE RETAIL	VARIETY OF USES NEIGHBORHOOD SCALE RETAIL	MIXED-USE OFFICE INSTITUTION SUPPORT

Downtown area. New development should be over 5 stories in height and promote active ground floors to encourage street vitality and an improved pedestrian experience.

Urban Corridor/Center. This classification is considered a mid-rise, mixed-use development typology. Typical surrounding uses are walkable urban neighborhoods with medium to high density developments in areas surrounding stations. Future development should be between 3-5 stories and promote a mixture of uses that can both support and be supported by the proximity to the BRT station.

Neighborhood Corridor/Center. Station areas in this classification are surrounded primarily by residential neighborhoods and lower density commercial development along the corridor. Future development should be lower in scale (1-4 stories) and promote smaller mixed-use buildings only at prominent intersections and in close proximity to the stations.

Destination Center. The Innovation Corridor was designed to connect a series of prominent destinations within the city. This last typology accommodates the various conditions of institutions along the Corridor whose density and future development patterns may not properly fit into the other three typologies. Current land uses around these stations include hospitals, educational institutions, and the William Hudson Transit Center. Future development will occur at a variety of scales but likely closer to medium and higher density mixed-use supporting these anchor institutions along the corridor.

Station Area Typologies

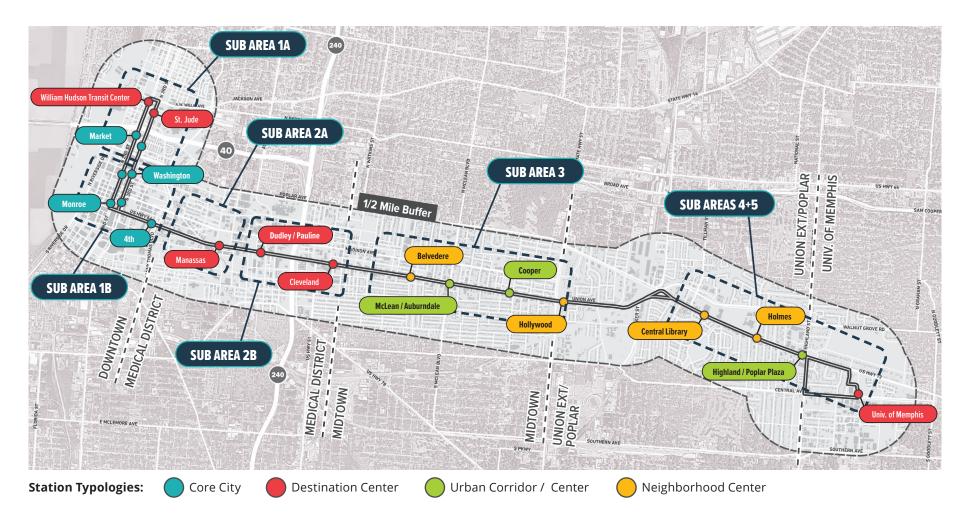
Examples of each station typology. From top to bottom: Core City, Urban Corridor/Center, Neighborhood Corridor/Center, Destination Center. Images courtesy: Opticos Design, City of Memphis











Station Typology Map

The above map shows the station typologies applied to the 17 mConnect bus rapid transit station areas. The typology applied to each station is reflective of both the current conditions and context of the station area, as well as the potential for future development. The significance of new development potential is based on

numerous factors including: availability of underutilized sites, context of existing and recent surrounding developments, nearby uses, and proximity to major cross streets.

The distribution of the various typologies has some correlation with the market sub areas along the corridor as defined by the market analysis of this study.

Overarching Principles

When creating station area conceptual development plans, the project team incorporated four overarching principles to guide the concept plans and future plan implementation. These principles: affordable housing, public realm improvements, multi-modal connectivity, and context appropriate scale were established after conversations with the City of Memphis, the consultant team, community and institutional stakeholders and the public.

Affordable Housing. There is a need for affordable housing options throughout the Corridor. Providing affordable housing would better support the workforce of the Medical District and Downtown. Additionally, affordable housing along the BRT corridor would provide lower income residents access to efficient public transit that connects neighborhoods, commercial areas, employment centers, and many prominent institutions. Because these plans are conceptual and represent one scenario for future development, the specific amount of affordable housing units is not identified. The City of Memphis will provide direction for specific ratios of affordable housing units in new development.

Public Realm Improvements. As the mConnect BRT is implemented, and as new developments occur, improvements to the public realm along the Corridor are necessary. The BRT provides an efficient form of mass transit along the Corridor and is the most effective when paired with other forms of transportation. However, walkability and ADA accessibility are paramount to truly make station areas transit oriented. Strategies to promote walkability and ADA accessibility include mixed-use development, increased density, and public realm improvements. The addition of wider sidewalks, seating, streetscape enhancements and lighting will promote a safer, more enjoyable pedestrian

environment that encourages walking and creates a sense of place along the Innovation Corridor.

Multi-modal Connectivity. In addition to improvements for pedestrians along the Corridor, the plan promotes greater connectivity for bicycles. Improvements to bicycle infrastructure further the ability for BRT users to connect to more places and reach additional places without the use of a car.

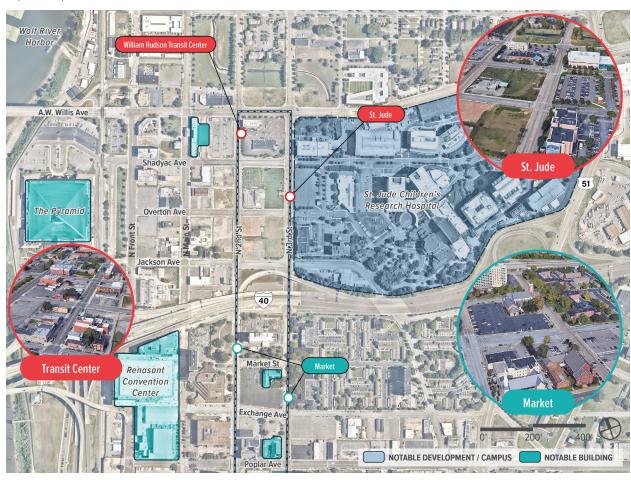
Context Appropriate Scale. The establishment of mConnect BRT will support increased densities in the station areas. However, the new developments need to take into account and respect the surrounding context, uses, and scale. The station typologies are largely based on this principle. Each typology describes the scale of new development based on the ideal building height that will increase activity and promote walkability, but remain appropriate for the surrounding uses.

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Sub Area 1A | Downtown North

Sub Area 1A Overview

Sub area 1A covers the north end of Downtown, the Pinch District, and the St. Jude campus.



Existing Conditions & Opportunities

Sub area 1A includes three station areas -William Hudson Transit Center, St. Jude, and Market. Sub area 1A includes the inbound terminus of the BRT route and will utilize a bus-only lane on the paired one-way streets of 2nd Street and B.B. King Boulevard. The William Hudson Transit Center and St. Jude Children's Research Hospital anchor the station areas at the north end of this sub area. Additionally, the Pyramid is located a few blocks west of these stations. There is an abundance of vacant and underutilized lots in this sub area, some of which is planned for by the St. Jude Master Plan (2020) and the Pinch District Master Plan (2016). Future development plans and concepts should recognize these previous plans and implement a vision supported by the community. The residential neighborhoods north of the St. Jude and Hudson stations will benefit greatly from access to this BRT system and the connections it will provide to entertainment, education, and employment opportunities.

The Market station consists of two stops, one on 2nd Street north of Market Street (outbound) and one on B.B. King Boulevard south of Market Street (inbound). The context for this station area includes a multitude of uses and opportunities for future development. The Renasant Convention Center and two hotels are to the north and west of the station area. Uptown Square Apartments fronts the inbound station on B.B. King to the east. There are several surface parking lots and

single-story commercial buildings on the surrounding blocks that are candidates for redevelopment.

Station Area Concept Plan

The station area concept plan for sub area 1A incorporates as much of the previous plans for this area as possible. The St. Jude Master Plan and the Pinch District Plan combine to significantly infill the

underutilized sites in the area to create a walkable mixed-use district providing opportunities for new residents, businesses, jobs, and visitors of St. Jude.

This concept plan further expands on the vision set out in prior studies to provide additional infill development opportunities with the focus on additional residential development on A.W. Willis Avenue and some smaller parcels throughout the Pinch District

The Market Street station area concept plans proposes multiple mixed-use buildings no more than 4-5 stories in height and includes an active commercial ground floor.

The concept plan also identifies the block southeast of B.B. King & Exchange as a major redevelopment opportunity. This redevelopment should include a mixture of uses that provide housing options in Dowtown with access to commercial uses and efficient public transit.

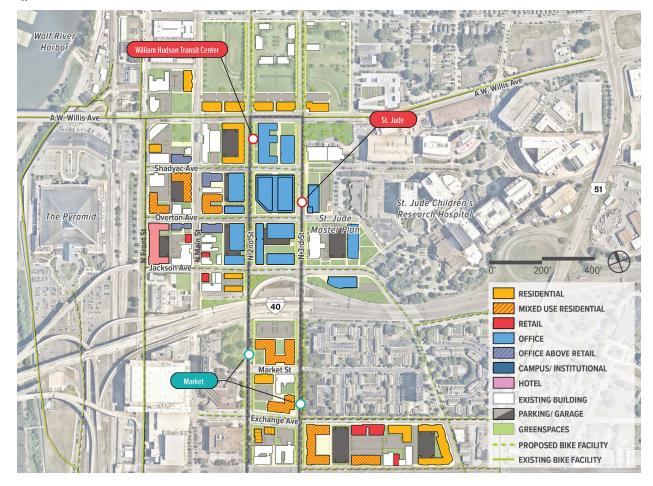
The significant amount of development shown in this sub area is due to the continued growth and expansion of St. Jude, which drives the need for hotel rooms, residential development, and other commercial developments.

Market Station Concept Plan

Currently, N 2nd Street and N B.B. King Blvd have three lanes of one-way traffic and a lane of parking on both sides. The future configuration for these streets will remove the right-side parking lane and replace it with a bus-only lane for the BRT line.

Sub Area 1A Concept Plan

The concept plan for sub area 1A identifies development opportunites for office, residential and mixed-use.



December 2021



Market Station Concept Plan

New residential, mixed-use and public space replaces surface parking lots while preserving existing buildings.

The concept plan diagram illustrates potential new development near the Market Station. The new developments are 5-story mixed-use buildings in line with the scale of the buildings around it. Redeveloping surface parking lots with higher density mixed-use development fronting the sidewalk and street creates a more pedestrian friendly experience in support of the BRT.

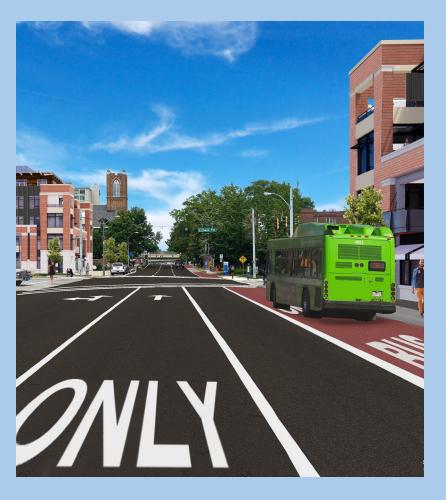
In this sub area it is critical new development is sensitive to and incorporates existing historic architecture.

Preservation of existing buildings will promote a stronger sense of identity and character for new development.



B.B. King & Exchange - EXISTING

This view is looking northbound on B.B. King Boulevard, south of Exchange Avenue. To the right middle ground, you can see the Uptown Square Apartments (northeast corner). To the left middle ground is St. Mary's Catholic Church (northwest corner) and peeking over the roof of the church is the Crowne Plaza Hotel (northeast).



B.B. King & Exchange - PROPOSED

Proposed conditions highlight new mixed-use development utilizing materials that complement existing historic buildings. New development will shift parking to the rear of buildings and reduce curb cuts along the sidewalks to improve walkability along the Corridor.

CONNECTIVITY PLAN

Existing Conditions & Opportunities

mConnect will serve much of the Pinch District, where the sidewalk network is complete and a shared use path runs along the riverfront. Pedestrian connections to activity centers are generally good, but the presence of vacant and underutilized structures along the routes can make the pedestrian experience uncomfortable. Planned development activity in the Pinch District will

likely improve the pedestrian experience by filling existing gaps and strengthening connections to the station areas.

The existing bike network in the sub area is limited. It provides connectivity to the area for people to the east, west, and south, but it does not provide direct connections to the proposed BRT stations along 2nd and 3rd Streets.

Additionally, the existing nearby facilities are either extremely uncomfortable (sharrows along the five-lane wide A.W. Willis Avenue between N Front Street and N Danny Thomas Boulevard) or lack multiple access points (Wolf River Harbor path outside the Coast Guard's floor protection wall).

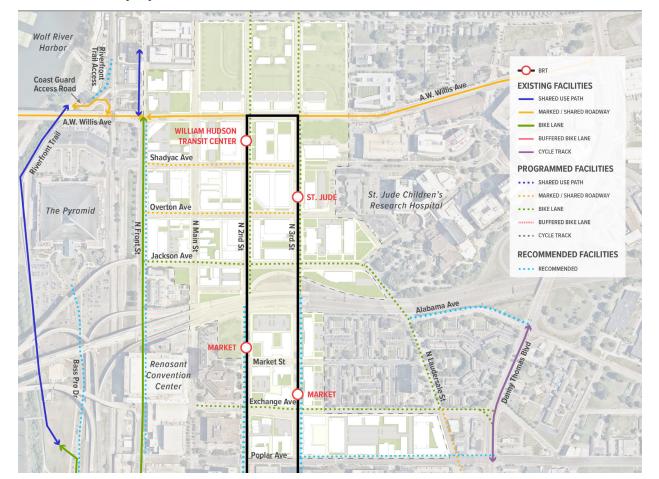
Programmed & Recommended Facilities

Programmed and recommended bike infrastructure will provide additional safe connectivity and fill in missing east/west connections within the sub area, enabling BRT riders and others to reach more places in the station area via bike. Programmed bike lanes along N. 2nd Street and N. 3rd Street and shared roadway markings along Shadyac and Overton Avenues provide more direct connections to the William Hudson Transit Center and St. Jude BRT station.

The programmed infrastructure does not reach as far as the Market Street/Exchange Avenue stations. However, recommended priorities along N 2nd Street and N 3rd Street would fill these gaps and help span the barrier of the I-40 overpass to connect The Pinch and Downtown.

Sub Area 1A Connectivity Plan

Adding bike lanes along the BRT route and to intersecting east-west streets will increase connections by bicycle.

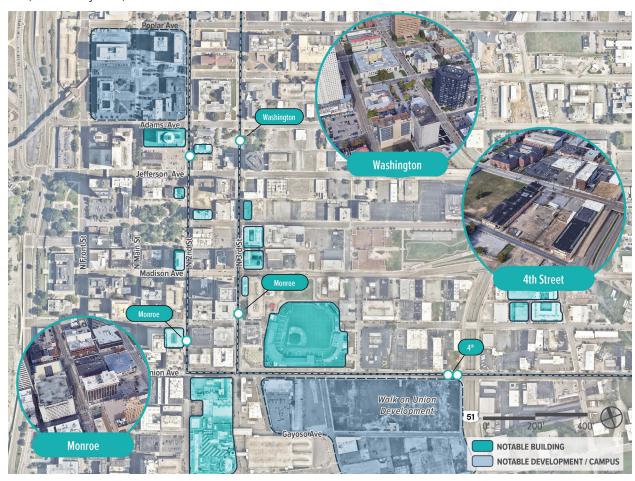


Memphis Innovation Corridor | TOD Plan

Sub Area 1B | Downtown Core

Sub Area 1B Overview

Sub area 1B covers the heart of Downtown and nearby attractions like AutoZone Park, the Peabody Hotel, and Beale Street.



Existing Conditions & Opportunities

Sub area 1B is in the heart of downtown Memphis. The mix of uses and building types around the three station areas is typical of an urban downtown area.

The three station areas are Washington, Monroe, and 4th Street. The context of these station areas includes government buildings, high rises with office and residential uses, AutoZone Park, and the Peabody Hotel. The Walk on Union Development, adjacent to the 4th Street station, is a major development that will bring jobs and residents to the area - potentially increasing the number of users for the BRT in this area.

New development opportunities are limited in the sub area, as the Walk on Union development is utilizing much of the available vacant land in this area. A few smaller surface parking lots and opportunity sites remain scattered in the area. The 2020 Downtown Memphis Master Plan identified multiple existing buildings in this sub area for reuse and revitalization and the concept plan incorporates them.

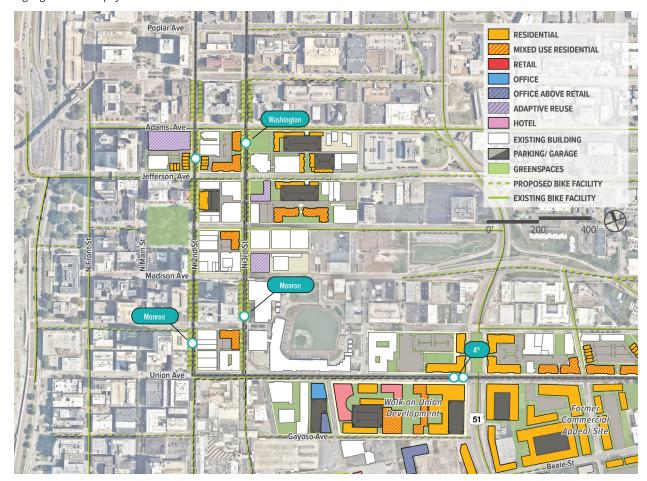
Station Area Concept Plan

The station area concept plan incorporates recommendations from the Downtown plan for key adaptive reuse opportunities, the Edge District Connectivity Playbook, and the Walk on Union planned development.

Additional opportunities for new developments include a few infill buildings along

Sub Area 1B Concept Plan

The Walk on Union development and continued adaptive reuse in Downtown highlight the concept for sub area 1B.



3rd Street. The infill shown on the concept plan east of the Washington station is the best option for increased density with new mixed-use development in the Downtown Core sub area.

The Walk on Union development with its proximity to sporting events, entertainment, restaurants, and bars in the area will drive an increase in demand for residential offerings in a highly walkable environment.

CONNECTIVITY PLAN

Existing Conditions & Opportunities

Existing pedestrian and bicycle connections focus on the primary east/west facilities, but Danny Thomas Blvd creates a major barrier.

The existing bike infrastructure connects people to the Downtown Core sub area from the east, north and south. When the BRT is operational, people will have direct access to the Washington station.

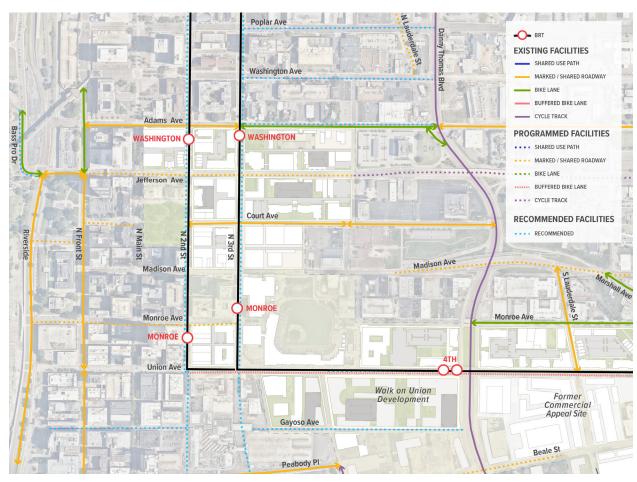
Although the existing bike infrastructure can bring people to and through Downtown, infrastructure connecting people to places within the area is more limited.

Programmed & Recommended Facilities

Programmed facilities fill in the missing parallel connections within the sub area and create additional connections to surrounding communities. Nearly all locations in Downtown, including Court Square, will be within convenient walking distance of mConnect stations.

Sub Area 1B Connectivity Plan

Programmed bike facilities pair with BRT to increase connectivity between Downtown and the Medical District.



Implementation of programmed and recommended bike infrastructure will improve east-west connectivity, particularly to locations east of Downtown.

Meanwhile, recommended priority bike facilities along 2nd and 3rd Streets provide more opportunities to travel north or south through Downtown including access to BRT station areas.

Programmed shared roadways along Monroe Avenue between Riverside Avenue and S. 3rd Street will provide connection to the Monroe station for those traveling from the west. Programmed bike infrastructure on Jefferson Avenue between Front and Cleveland Streets will provide access to the Washington station.

Sub Area 2A | Medical District West

Sub Area 2A Overview

Sub area 2A includes the Edge District and the area around the UT Health Sciences Center.

Existing Conditions & Opportunities

Sub area 2A includes the Edge District neighborhood, which is the western portion of the Medical District along the Corridor. This sub area includes two station areas: Manassas and Dudley/Pauline.

This area of the Corridor provides direct access to several key institutions that will come to define the Innovation Corridor. University of Tennessee Health Sciences Center, SW Tennessee Community College, Regional One Health Medical Center, and Baptist Health Sciences University all contribute to a large daytime population mix of employment and students that provide a market for new housing and businesses in the area.

The Walk on Union and Orleans Station developments as well as the Edge District Connectivity Playbook



(2021) are jumping off points for additional development opportunities. Providing more housing options is critical to support the large daytime populations in the area and could shorten commutes.

The market analysis conducted for this plan suggests that the Medical District is the most development friendly portion of the Corridor. The continuously growing institutions provide a high daytime population, which will help drive new development of various types.

Sub Area 2A Concept Plan

New residential buildings, including the in-progress Orleans Station, increase housing options in the Medical District.

Station Area Concept Plan

There are two major developments, either under construction or planned, incorporated into the area plans. The Walk on Union and Orleans Station provide additional housing with some mixed-use development.

The concept plans for this sub area propose additional institutional expansion opportunities with multiple office building uses along Union Ave between the Manassas and Dudley/Pauline stations.

A goal of this station area concept plan was to provide a mixture of housing typologies to better serve a diverse market of students and employees in the Medical District.

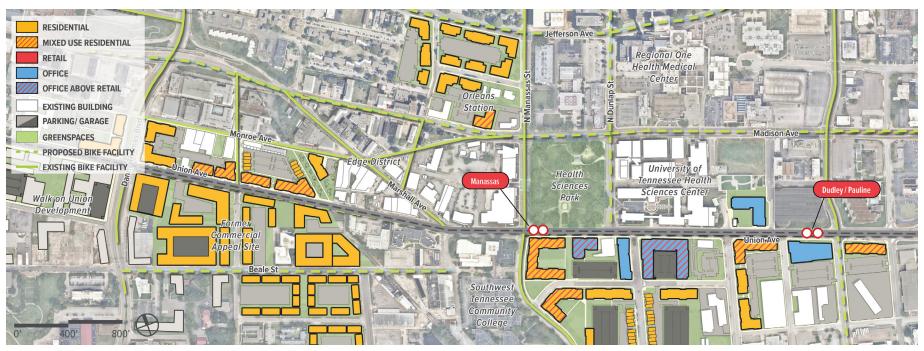
Scale of development is important in the Medical District because of its proximity to surrounding neighborhoods.

Manassas Station Concept Plan

The intersection of Manassas & Union is a critical station area. It sits in the heart of the Medical District and is the only station with park frontage.

The plan seeks to build off the momentum of the Walk on Union just west of the overview, the ongoing development happening in the Edge District, and Orleans Station.

The concept plan diagram depicted here shows a high density future development



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Manassas Station Concept

New residential, mixed-use and expansions to the UTHSC campus revitalize an underused area.

program containing a diversity of uses. The plan shows a mixture of different residential developments including mixed-use, apartment buildings, and townhomes. Additionally, multiple locations for future educational or office uses could serve as expansion opportunities for many institutions in the immediate area.

CONNECTIVITY PLAN

Existing Conditions & Opportunities

Union Avenue near the Manassas station has a high volume of vehicle and pedestrian traffic. While the

sidewalk network is complete, there is insufficient separation between cars and pedestrians, due to the narrow sidwalk width. The current narrow width would decrease the comfort level of pedestrians accessing buses, patronizing businesses or enjoying the amenities in the station area.

From the $4^{\rm th}$ Street station to the Dudley/Pauline station, there is more than half a mile between traffic signals with no mid-block crossings. There are high visibility crosswalks and curb extensions at



Union & Manassas - EXISTING

The existing view is eastbound Union Avenue with Health Sciences Park on the left and the former Office Depot store on the left.



Union & Manassas - PROPOSED

The proposed view reimagines the former Office Depot as a four-story, mixed-use residential development with the BRT station in front. Adjacent to the new development, is a five-story office building. On the left side of the concept in front of Health Sciences Park, a BRT station and a bus only lane are shown.

Sub Area 2A Connectivity Plan

Additional east-west bike facilities and improved pedestrian crossings compliment the existing cycle tracks.

EXISTING FACILITIES RUFFERED RIKE LANE CYCLE TRACK PROGRAMMED FACILITIES SHARED USE PATH MARKED / SHARED ROADWAY . . . BIKE LANE BUFFERED BIKE LANE ... CYCLE TRACK Health Medica RECOMMENDED FACILITIES Health University of Tennesse Health Sciences Center Commercial Appeal Site Southwes Community

the intersection of Union & Manassas, which greatly improves pedestrian safety and slows down traffic turning at this intersection.

The width and speed of Union Ave makes it stressful and dangerous for a bicyclist to even consider using the Corridor. The bike infrastructure currently provides connections north and south of the station areas. Existing cycle tracks on Manassas Street, Monroe Ext./Monroe Ave and MLK Jr. Ave

provide a safe alternative to connect the cyclist to the Manassas and Dudley/Pauline stations. Shared bike lanes on Peabody Avenue connect to the buffered bike lanes on East Street. Several bike share and scooter stations also exist near the Corridor.

Programmed & Recommended Facilities

Programmed facilities will provide greater east-west connections to Union Avenue. It is recommended to extend programmed facilities along Jefferson Avenue and Madison Avenue.

Dunlap Street is programmed to receive bike lanes from Poplar Avenue to Madison Avenue. Extending the lanes to Union Avenue will improve the north-south connection to the Manassas station. Shared lanes programmed for Beale Street between 4th Street and Southwest TN Community College will improve the connection to south between the 4th Street and Manassas Street stations. Continuing bike lanes from Peabody Avenue to Vance Avenue will improve the connection from Downtown to the Medical District. Upgrading the existing bike lane along Peabody Avenue to a cycle track will provide a protected connection to the MLK Jr Avenue facility.

High visibility crosswalks and pedestrian signals at all intersections between the 4th Street and Dudley/Pauline stations will improve pedestrian safety. The installation of mid-block crossings at key sites between the stations are recommended as well.

Sub Area 2B | Medical District, East,

Sub Area 2B Overview

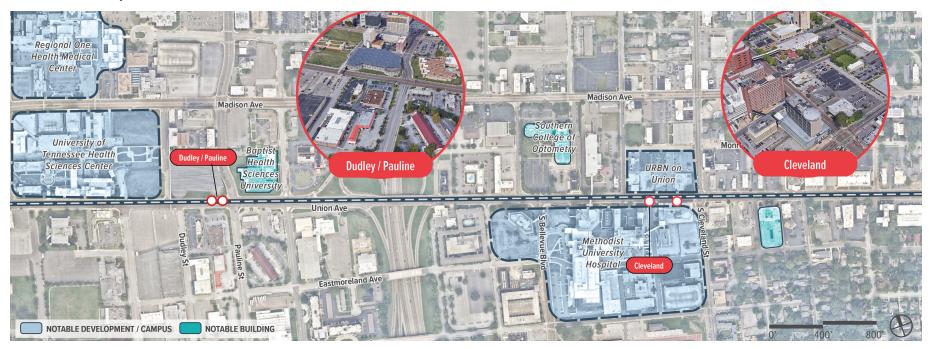
Sub area 2B includes Methodist University Hospital and the portions of the Medical District on either side of I-240.

Existing Conditions & Opportunities

This sub area includes two station areas: Dudley/Pauline and Cleveland and this view includes part of sub area 2A to show the rest of the Medical District.

The URBN on Union development fronting the Cleveland station will provide higher density mixed-use development in line with the type of development needed to support the Innovation Corridor BRT.

Interstate 240 divides this sub area in the middle of the map view. Methodist University Hospital and the Southern College of Optometry east of the interstate are the primary anchors for future development around the Cleveland station. The Dudley/Pauline station is anchored by the Baptist College of Health Sciences and the University of Tennessee Health Sciences Center.



There are numerous surface parking lots and underutilized sites that are candidates for redevelopment in the station area concept plan. The Cleveland station is near residential neighborhoods to the south and east which furthers the need to promote walkability and scale appropriate development in the concept plan.

Sub Area 2B Concept Plan

New residential buildings, many including ground-floor retail, are added along Madison and Union.

Station Area Concept Plan

The eastern extent of sub area 2A is shown to highlight the potential development around the Dudley/Pauline station and its relationship to development around the Cleveland station area.

West of the Southern College of Optometry, the concept plan shows new mixed-use development with a shared parking structure.

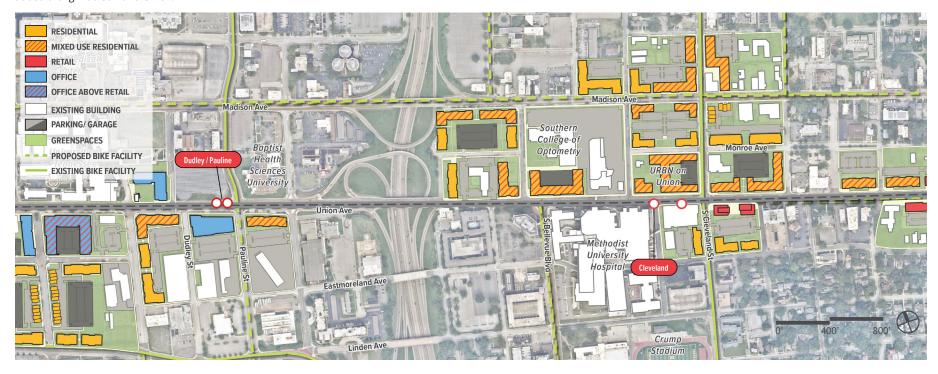
To build off the URBN on Union development, more mixed-use development and residential is proposed along Cleveland. The Cleveland corridor can support higher density development.

Cleveland Station Plan

The concept plan diagram for the Cleveland station area shows the density of the new residential and mixed-use developments proposed in this plan.

The combination of Methodist University Hospital, the Southern College of Optometry, and the Cleveland Ave corridor creates a foundation for a higher concentration of new development around this station area.

The proposed residential and mixed-use developments would aid those institutions in providing housing options for employees and students, while also being respectful of the surrounding neighborhood context and scale.





Cleveland Station Concept

A variety of new housing and retail options surround the Cleveland station, including the planned URBN on Union development.

There are numerous surface parking lots in the area which make good candidate sites for new development. Three parking garages are shown in the area to accommodate for any parking needs of the new residents and visitors of the area.

CONNECTIVITY PLAN

Existing Conditions & Opportunities

Similar pedestrian conditions exist in this sub area along Union Avenue – a complete sidewalk network, but

with a narrow width, large distances between traffic signals and a lack of high visibility crosswalks/pedestrian signals at intersections.

The biggest hurdle for pedestrians and bicyclists alike, are the entrance and exit lanes to I-240. The overpass does have a sidewalk. However, to access the overpass sidewalk, a pedestrian or bicyclist is required to cross into entrance and exit ramps for the interstate. During the day this is a daunting and dangerous task.

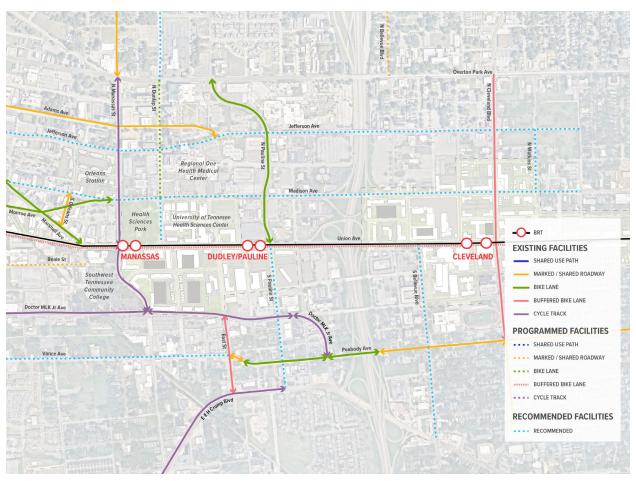
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At night it is even more dangerous, as there is insufficient lighting.

There are existing bike lanes on Pauline Street north of the Dudley/Pauline station. Buffered bike lanes, run north and south of the Cleveland station. Several bike share and scooter stations exist near the Corridor as well.

Sub Area 2B Connectivity Plan

The existing buffered bike lane on Cleveland provides station access and receives new east-west connections.



Programmed & Recommended Facilities

Programmed facilities will provide greater east-west connections to Union Avenue. It is recommended to extend programmed facilities along Jefferson Avenue and Madison Avenue. To improve the north-south connections, bike lanes are recommended on the south sections of Pauline Street and Bellevue Boulevard. To improve access to the Cleveland station, bike lanes are also recommended along Watkins Street and McNeil Street from Jefferson Avenue. These recommended improvements along with the recommendations in sub area 2A will create a more complete network and linking Downtown to the Medical District.

Bicycle infrastructure is recommended along Union Avenue between N 2nd Street and Poplar Avenue. This will facilitate travel between Downtown and the institutions and communities along Union Avenue, while providing direct access to the BRT stations.

Addressing the pedestrian and bicyclist safety issues at Union Avenue and I-240 is strongly recommended. High visibility crosswalks and mid-block crossings where feasible are recommended as well.

Sub Area 3 Midtown

Sub Area 3 Overview

Sub area 3 features the lower density residential neighborhoods of Midtown centered around retail uses on Union.

Existing Conditions & Opportunities

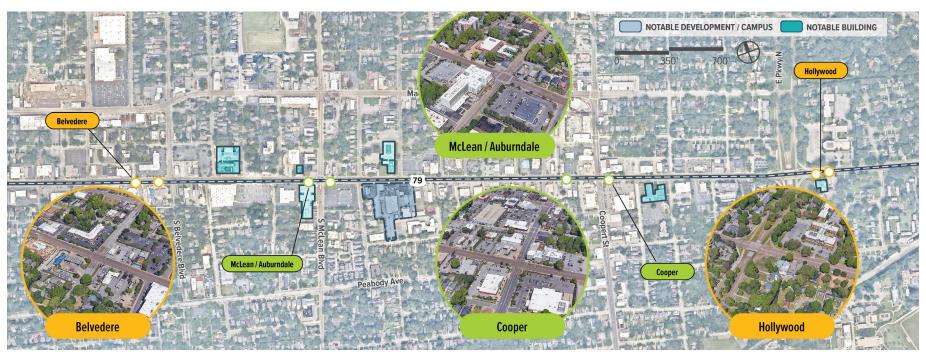
This sub area encompasses the four stations - Belvedere, McLean/Auburndale, Cooper, and Hollywood.

The Midtown sub area primarily contains low-density residential neighborhoods.

The frontage on Union Avenue is primarily auto-oriented commercial uses with larger parking lots and a poor sense of walkability.

McLean/Auburndale and Cooper stations are in the Urban Corridor/Center station typology due to their intersection with prominent north-south corridors and the density of recent developments at those stations.

East of the McLean/Auburndale station is the former Memphis Police facility. Compared to the typical parcel



size in Midtown, this redevelopment site is considerably larger.

There have been a few notable recent developments in this sub area. The Citizen at McLean & Union and the Memphian Hotel on Cooper are developments that should inspire future projects along the Corridor in this area.

Sub Area 3 Concept Plan

Auto-oriented commercial uses are redeveloped into street-fronting, neighborhood-serving retail and mixed-use.

Station Area Concept Plan

This station area concept plan map shows the potential impact of the TOD plan on the areas in between stations. Each Midtown station is only a few blocks apart and the impact of each station will overlap with one another resulting in a more comprehensive approach to future development.

Throughout the sub area there are mixeduse developments primarily located close to the stations themselves. In between stations is a mix of residential and commercial buildings.

Some key common principles of this concept plan include promoting street frontage

for all new development and putting parking in the rear of buildings and shared between buildings, especially for the longer stretch of commercial buildings on the south side of Union between McLean and Cooper.

The concept plan would promote a more walkable neighborhood for existing and new residents in the area and could make this a more attractive neighborhood for commuters to Downtown, the Medical District, and University of Memphis with this direct access to the BRT.





McLean Auburndale Station Concept

Newly developed mixed-use is complimented by adaptive reuse to add street vibrancy to the station area.

McLean Auburndale Station Concept Plan

The concept plan builds off the Citizen development to illustrate future developments in the area. More mixeduse development is possible at these key intersections where higher density development is already happening.

A mix of residential building types ensure the scale of development is reflective of the surrounding neighborhoods and offers different living options for future residents. Providing public space and commercial uses along the Corridor is key to ensuring the area retains

a neighborhood feel while providing amenities and activities for residents.

CONNECTIVITY PLAN

Existing Conditions & Opportunities

Union Avenue in sub area 3 is mostly commercial businesses and services. The sidewalk network is mostly complete along Union Avenue in this sub area, as is the surrounding residential neighborhoods. The gaps in the sidewalk network on Union Avenue are due to excess curb cuts, which are hazardous to pedestrians and bicyclists.

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Union & McLean - EXISTING

The existing view is east on Union and west of the McLean Blvd. intersection.



Union & McLean - PROPOSED

The rendering shows improved streetscaping on the right side of the image with a new mixed-use development similar to the existing Citizen building. Wider sidewalks, street trees outdoor dining, and bringing new developments closer the street improve pedestrian comfort and the public realm.

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Existing bicycle facilities along Madison Avenue, Belvedere, and McLean Boulevard provide limited connections. There are four north-south corridors of bicycle facilities and some level of east-west connectivity. The most complete east-west connectivity is found by traveling along Peabody Avenue south of Union Avenue and then continuing south along Cooper Street to Central Avenue. Additionally, there are gaps in the network, which limits connectivity.

Programmed & Recommended Facilities

Additionally, there are gaps in the network,

Nearly all of the streets in Midtown have

sidewalks, and then continuing south along Cooper Street to Central Avenue.

which limits connectivity.

Programmed facilities extend connections along Peabody Ave (east-west) and along Hollywood Street from Jackson Avenue to Broad Avenue (north-south). Recommended facilities provide further connectivity to the east along Vinton Ave, Madison Ave, and Avery Ave. North-south recommendations include E Parkway which currently creates a substantial barrier. Lower priority recommendations include bike lanes along North Parkwau.

Along some stretches of corridors such as Madison Avenue, there are blocks between crosswalks or crosswalks are located at either end of a long block. Addressing this gap will allow people to more comfortably cross the street and provide more direct connections. A more complete north-south corridor along with the existing bike lane along Alicia Drive will include the bike lanes programmed along Hollywood Street from Jackson Avenue to Broad Avenue. North/south infrastructure is recommended from Broad Avenue to Poplar Avenue, reaching Alicia Drive. Central Avenue has signed roadways east of Copper Avenue and upgrading to continuous bike lanes both east and westbound from Cooper Avenue, would increase connectivity.

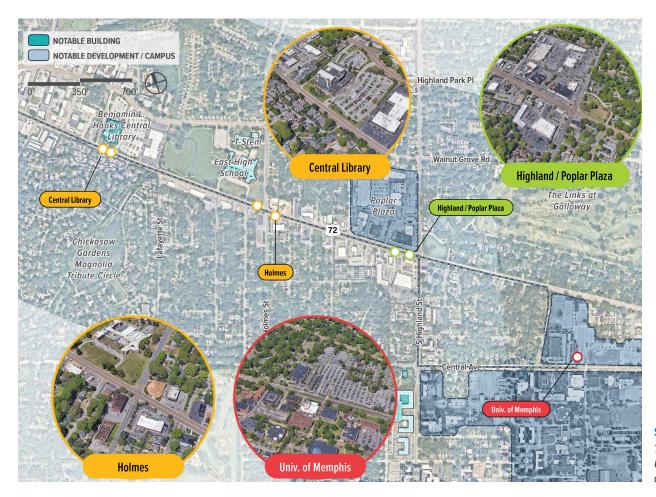
Sub Area 3 Connectivity Plan

Existing bike facilities are extended and new routes added to the east end of the sub area.



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Sub Areas 4 & 5 | Union Ext/Poplar & University of Memphis



Existing Conditions

Sub areas 4 and 5 include four stations: Central Library, Holmes, Highland/Poplar Plaza, and the University of Memphis.

These sub areas include three station typologies with a variety of building scales and densities for future development.

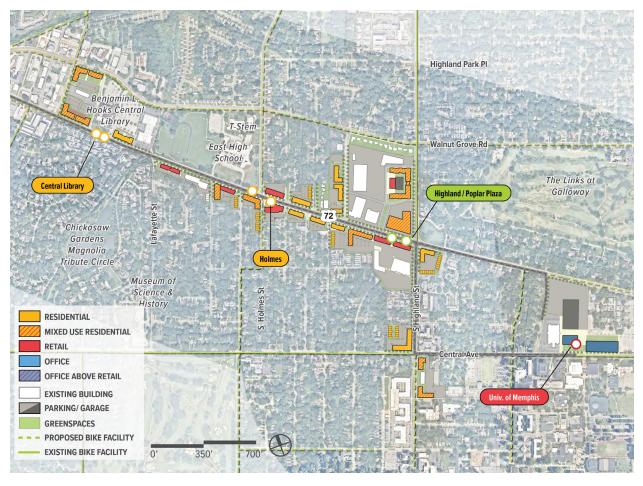
The surrounding context for this area includes a mix of commercial and light industrial uses, historic larger single-family home neighborhoods, and the University of Memphis.

There are few vacant sites in the area, which suggests infill and retrofitting are important development strategies in this area

Much of the commercial areas are autooriented and this portion of the corridor is not highly walkable.

Sub Area 4 & 5 Overview

This sub area covers the area along Union and Poplar just east of Midtown and the University of Memphis campus.



Station Area Concept Plan

The concept plan for sub areas 4 and 5 focuses on a comprehensive approach to improving walkability and increasing the variety of housing opportunities for new residents in the area.

There is already some redevelopment at Poplar Plaza. This plan identifies additional opportunities to retrofit the shopping plaza to build more mixed-use development that could provide housing for University of Memphis students in combination with new commercial uses.

The two Neighborhood Corridor/Center stations in this area are surrounded by residential neighborhoods with much of the development directly fronting Poplar.

New development should also front the corridor and promote greater walkability considering the proximity to traditional single-family neighborhoods and a student population that will benefit from walkable business districts.

Sub Area 4 & 5 Concept Plan

Redevelopment of auto-oriented uses along Poplar and at Poplar Plaza expand housing and retail options.



Holmes Station Concept Plan

Mid-rise residential and mixed-use buildings add context-appropriate housing density to the station area.

Holmes Station Concept Plan

The concept plan for the Holmes station includes lower-density development as compared to other station areas. The development plan reflects smaller mixed-use buildings along Poplar Avenue with a focus on utilizing 3-4 story buildings to complement the surrounding neighborhoods and the existing single-story commercial buildings in this station area. Future commercial development should front the sidewalk and street and provide parking in the rear of buildings to encourage a more walkable Poplar Avenue corridor.

CONNECTIVITY PLAN

Existing Conditions & Opportunities

Overall, pedestrian connections to residential areas in sub areas 4 and 5 are very similar to those in Midtown and typical of those in much of Memphis. Although the sidewalks are narrow and traffic is relatively fast, the walking environment is generally good because of the landscaped buffer. At Highland Street/Poplar Plaza, unbuffered sidewalks in the vicinity of Poplar Avenue and numerous curb cuts degrade pedestrian comfort.

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The signalized crossing aids pedestrian connections into the neighborhood and edge zones of the station area.

Throughout the sub area there is a limited bike network with large gaps in the bike infrastructure, particularly around the Benjamin Hooks Central Library and Chickasaw Gardens neighborhood.

There is east-west connectivity along Central Avenue but only one north-south linkage to Poplar Ave at Highland St which connects to the Highland/Poplar Plaza station. The Central Library and Holmes stations are not connected to any existing bike infrastructure. However, many linkages can be made through low-traffic, low-speed residential communities.

Programmed & Recommended Facilities

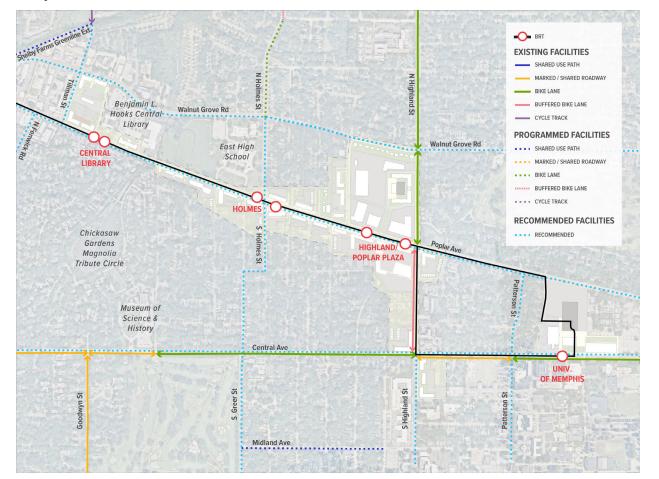
Programmed facilities along Holmes St and Greer St would provide north-south linkages to the Holmes station.

Recommended facilities along Walnut Grove Rd would provide a parallel route to Poplar Ave while also connecting to north-south routes to stations at Central Library, Holmes and Highland/Poplar Plaza. Bike facilities are recommended along Patterson Street and adjacent roads to provide access to and through the University of Memphis campus and BRT station.

Although Central Avenue has existing bike facilities with a mix of signed roadways and bike lanes, it is recommended the facility is upgraded to a continuous bike lane. A Poplar Avenue bike facility would create a needed connection to provide access to existing and future land-uses along the corridor.

Sub Area 4 & 5 Connectivity Plan

Recommended facilities would add bike connections to the Central Library and Holmes stations.



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Zoning Recommendations

Introduction

Zoning along the Memphis Innovation Corridor varies substantially. While residential and commercial mixeduse zoning districts are the most prevalent, almost all districts from the Memphis and Shelby County Unified Development Code are represented within ¼ mile of the corridor. This creates challenges when implementing transit-oriented development standards due to the differences in setbacks, height maximums, and other building requirements in each of the zoning districts. By rezoning auto-oriented zoning districts, applying frontage requirements, and implementing access management standards, the BRT corridor will become more pedestrian-friendly and safer for all users.

Rezoning High Intensity, Auto-Oriented Commercial Zoning

Commercial Mixed-Use – 3 (CMU-3) is the highest intensity commercial zoning district in the city and allows auto-oriented uses such as gas stations, tire shops, and car washes. These uses create problems for surrounding neighborhoods and conflict with the goals of transit-oriented development. CMU-3 zoning is found throughout Midtown and must be addressed along the BRT route, especially around the station areas. A comprehensive rezoning should be undertaken to rezone these areas to either lower intensity commercial (CMU-1), mixed-use (MU), or similar zoning depending on the context. Downzoning CMU-3 along the Innovation

Corridor will limit auto-oriented development in the future, encourage density, and create a more walkable environment.

Apply Frontage Requirements

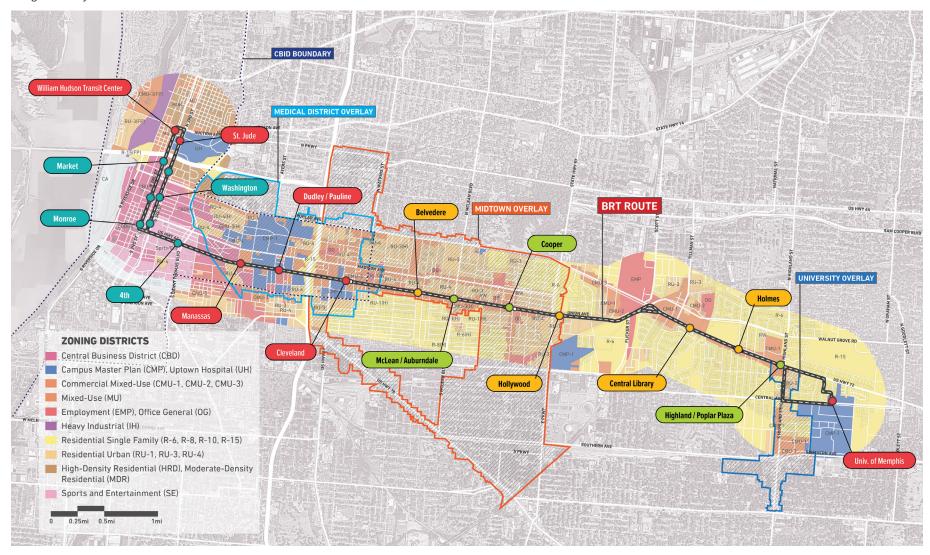
Applying street frontages is another tool to enhance the walkability of the corridor by regulating the placement of buildings, parking, and building transparency along the street. Designating a frontage type for a street regulates building placement standards for new development. Frontage requirements apply to all buildings regardless of the underlying zoning district, which is important when planning for transit-oriented development along a corridor with varied zoning districts. Appropriate application of frontages can create a continuous walkable corridor regardless of the land uses.

Overlays are prevalent throughout the Innovation Corridor, there are overlays in the Medical District, Midtown Overlay, and the University District. These overlays are used to further regulate development in a manner that is more tailored to a specific area. Frontage requirements are applied in addition to land use and other regulations. For example, the Shopfront frontage requires buildings to abut the street front and sidewalk and restricts any parking to the rear of buildings, creating a "Main Street" environment. In the

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Innovation Corridor Zoning Map

The Corridor features a wide variety of zoning types from single-family residential to high-intensity commercial.



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Medical District Overlay, Union Avenue is designated a Shopfront frontage but that frontage ends at Kimbrough/McNeil and does not continue in the Midtown Overlay. This plan recommends apllying frontage requirements on Union Avenue throughout the Midtown Overlay. Further analysis is required to determine specific frontage and locations along the corridor.

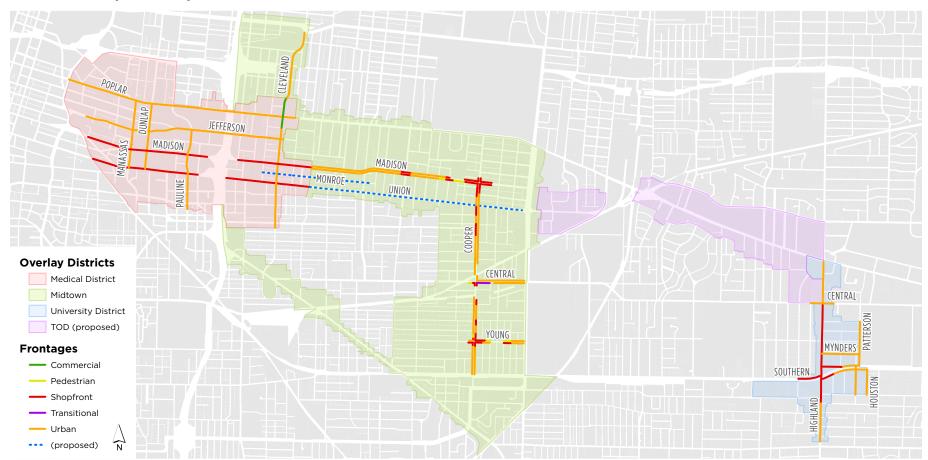
Access Management Standards

Access management controls vehicle access to properties by managing driveway spacing, turning lanes

and medians. Improving access management creates a safer and more efficient roadway for all users. This is especially true for sections of the Innovation Corridor that contain excessive driveway access points, creating dangerous conflict zones for pedestrians. Vehicle access to sites along the corridor must be addressed to create a more walkable corridor. This includes preventing driveways from being permitted close to bus stops or transit stations. Further evaluation of access management standards along the Innovation Corridor and throughout the city as a whole are recommended.

Street Frontages

There are currently street frontage designations within the Medical District, Midtown, and University District overlays.



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Transit-Oriented Development (TOD) Overlay

Since sub area 4 is not currently in an overlay distric, an overlay district has been developed to remedy this. The overlay - named the Transit Overlay District - is applied along the Corridor in sub area 4. The Transit Overlay District references chapters and articles of the Memphis and Shelby County Unified Development Code (UDC) and it is recommended that this overlay is included in the UDC as part of a future Zoning Text Amendment.

Exhibit A: Transit Overlay District Boundary Map

Transit Overlay District

District Intent Statement

The intent of this overlay district is to provide standards that support transit-oriented development in locations of the city where there is existing or planned bus rapid transit (BRT). These areas are intended to be mixed-use and urban, and sustain an accessible shopfront corridor. The district's emphasis on pedestrian-oriented land use will complement the planning goals of BRT, enhancing community character and quality of life.



Boundary

The Transit Overlay District applies to all properties within the boundary of Exhibit A: Transit Overlay District Boundary Map.

Building Height

Maximum building height shall be in conformance with Exhibit B. The maximum height standards of underlying zoning districts shall not apply. Station area typologies along the BRT corridor were noted on the boundary

map to provide context for building height. Below are brief descriptions of each station area typology:

Neighborhood Corridor/Center. This station area typology supports a mix of uses and generally contains low rise buildings of a neighborhood scale.

Urban Corridor/Center. This station area typology supports a mix of uses and generally contains mid-rise buildings.



Exhibit B: Transit Overlay District Maximum Building Height Map

Height Maximums: 3 Stories 4 Stories 6 Stories

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Destination Center. This station area typology supports a mix of uses and generally contains mid to high rise buildings.

Applicability

Within the Transit Overlay District, the use and sign standards of this Chapter shall apply to all land. All other standards shall apply to:

- **A.** All new building construction.
- **B.** All building expansion with removal of more than 25% of existing walls facing a public street, or of a street-facing elevation if the parcel is landlocked; or removal of more than 50% of all existing exterior walls; and
- **C.** Any site not subject to this chapter's non-use standards per the above provisions, but which does not conform to its underlying zoning district, shall be governed by Article 10.

Administration

A. Site Plan Approval

The Zoning Administrator is authorized to approve site plans within the Transit Overlay District in accordance with Chapter 9.13.

B. Administrative Deviations

The Zoning Administrator is authorized to approve administrative deviations in accordance with Chapter 9.21. The Zoning Administrator is also authorized to approve administrative deviations from any platted front setback, provided that the setbacks of this overlay district are maintained.

C. Special Exceptions

The Land Use Control Board is authorized to approve special exceptions to any height and parking standards found within this Chapter in accordance with Chapter 9.14.

Uses

Uses shall be permitted in accordance with Section 2.5.2, unless modified by this chapter's use table, which shall apply to all zoning districts.

Building Envelope Standards

A. The frontage standards of Section 3.10.3 – if designated an urban street – shall supersede the building envelope standards of all nonresidential zoning districts. Where that section and this overlay district conflict, the overlay district shall govern. Any underlying standards not otherwise addressed shall remain enforceable.

General Development Standards

A. Applicability

The following general development standards shall supplement underlying standards in all nonresidential districts within the Transit Overlay District.

1. Fences and walls shall not be constructed in any clear sight triangle.

B. Parking

1. A development must provide a minimum of 75% and a maximum of 110% of the number of parking spaces that would be required by Sub-Section 4.5.3B, taking into account any available parking reduction allowances per Sub-Section 4.5.3E.

C. Signage

- 1. Signs should incorporate high quality materials (such as neon, hand painting, some metals, or well-crafted wood), exterior lighting, unique shapes, and outstanding graphic composition. Signs should be scaled to fit their context, complement the principal structure, and not obstruct architectural details.
- 2. Plastic signage shall be prohibited.
- **3.** Text on signs shall be limited to the name of the establishment only.
- 4. Pole signs and similar sign types shall be prohibited.
- **5.** Where Chapter 4.9 and this overlay district conflict, the overlay district shall govern. Any underlying standards not otherwise addressed shall remain enforceable

D. Multi-modal Connectivity

Development shall foster a walkable and bicyclefriendly environment that is designed to be safe, comfortable, and functional.

- 1. Pedestrian Connectivity
 - **A.** Robust pedestrian facilities shall be provided in accordance with Sub-Section 4.5.5M. Developers shall be encouraged to utilize unique pavers or other such like materials, where appropriate to demarcate pedestrian facilities.
 - **B.** Any development that has a property line within 300 feet of the edge of a BRT station shall repair and/or replace sidewalk whether or not adjacent to the subject property as needed to provide a path between the development and the station

- that conforms with local and federal sidewalk standards.
- C. Pedestrian-scale lighting shall be provided along pedestrian facilities, where appropriate. The Zoning Administrator may require a lighting plan during site plan review.

2. Bicycle Parking

- **A.** Bicycle parking shall be provided in accordance with Sub-Section 4.5.3C, except as modified below.
 - Multifamily residential uses within nonresidential zoning districts shall provide a minimum of 1 bicycle parking space per 4 dwelling units.
 All fractions shall round up to the next whole number.
 - 2. Between 70% and 80% of the minimum number of bicycle parking spaces for multifamily residential and office uses shall be designated as "limited-access bicycle parking." Up to 20% of the minimum number of bicycle parking spaces for other uses may be provided as limited-access parking. Limited-access bicycle parking shall meet the following standards.
 - a. Limited-access bicycle parking may be provided in the following locations: within the building, co-located with off-street automobile parking (such as within a parking garage), or elsewhere subject to administrative approval.
 - b. Limited-access bicycle parking shall be limited-access, well-lit, and protected from the elements.

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- **c.** An unobstructed path shall be maintained between the building entrance and any indoor, limited-access bicycle parking.
- **d.** Limited-access bicycle parking within a parking lot or parking garage shall be protected from vehicular damage by physical barriers, such as a curb or bollards.
- **3.** Bicycle parking that is not designated as "limited-access bicycle parking" shall be considered "general-access bicycle parking." Such parking shall be publicly accessible, and within a well-lit and highly trafficked location. Such parking shall be clearly visible from the

principal building entrance, or else signage shall be posted that indicates its location. Special consideration shall be given to sidewalk accessibility standards when placing bicycle parking within the right-of-way.

Streetscape Standards

Underlying streetscaping standards shall apply, with the exception that the minimum sidewalk width shall be 6 feet.

Transit Overlay District Use Table			
Uses	Permitted	Not Permitted	Special Use Approval
Single-family attached (semi-attached, two-family, and townhouse)	X		
All commercial parking		X	
Restaurants, drive-in			X
Restaurants, drive-thru			X
All other drive-thru uses, non-restaurant		X	
Convenience store with gas pumps, gas station, commercial electric vehicle charge station		X	
Payday loan, title loan, and flexible loan plan establishments		X	
Pawnshop		X	
Vehicle parts and accessories			X
All self-service storage		X	
All vehicle service		X	
All vehicle repair		X	
All vehicle sales, rental, leasing		X	
All warehouse and distribution		X	

Conclusion

Implementation of the mConnect is anticipated in 2026. Transit oriented development along the Innovation Corridor will go hand in hand with guiding sustainable growth in Memphis and improving the pedestrian environment. Encouraging increased density and public infrastructure improvements through TOD planning will provide more opportunities to both live and work along the Corridor and support the use of BRT and other sustainable transportation options.

Short Term Implementation Steps

- Analyze and rezone high-intensity, auto-oriented CMU-3 zoning districts along the corridor.
- Amend the UDC to simplify overlays and apply street frontage requirements to Union Avenue throughout the Midtown Overlay.
- Adopt the Transit Overlay District into the Memphis & Shelby County Unified Development Code.
- Evaluate access management standards along the corridor
- Prioritize the implementation of programmed and recommended network improvement projects to strengthen multi-modal connections between stations.

Appendix

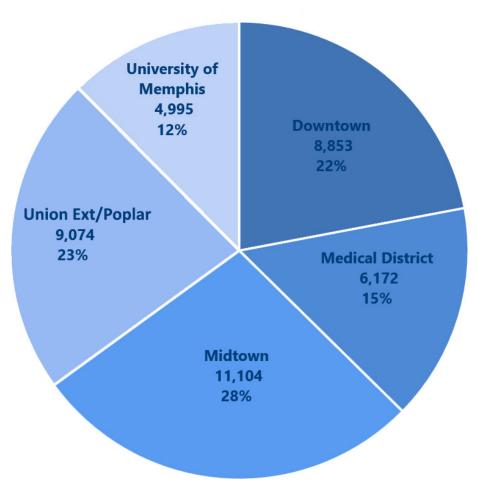
The Memphis and Shelby County Division of Planning and Development engaged HR&A Advisors, Inc. to conduct a baseline market scan and an inventory of available funding sources to aid in development of the Memphis Innovation Corridor. The market scan includes Corridor demographics, housing stock (single and multifamily), retail inventory, and commercial office inventory. It is important to note, the sub area names and boundaries shown on the market scan will not match the existing corridor sub areas. The boundaries and names of the sub areas evolved during the planning process due to input from the advisory committee and the community.

December 2021

53

Demographics | Population

2020 Corridor Population by Sub Area

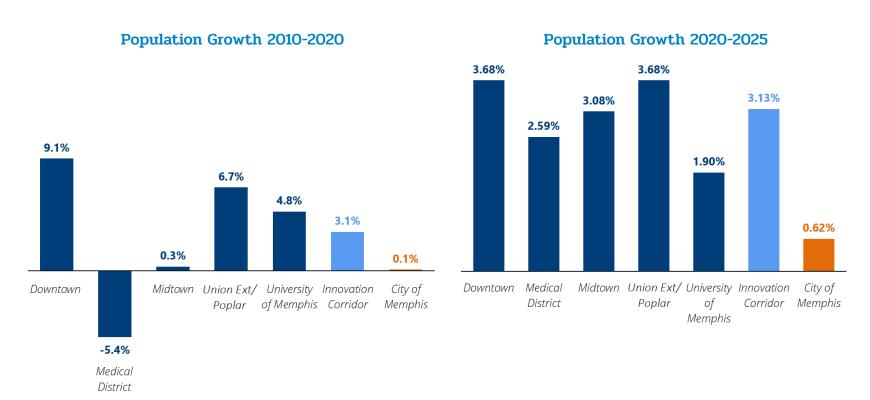


40k
Residents
Live in Corridor

Of the 40,000 Corridor residents, 51% live in the Midtown and Union Ext/Poplar sub areas.

6.2% of Total Population in Memphis

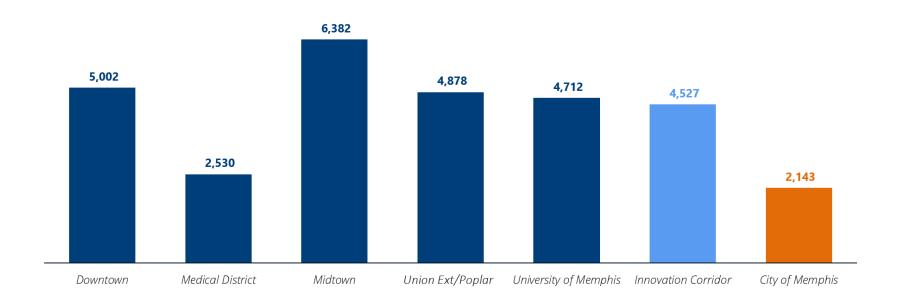
Demographics | Historical and Projected Population Growth



The Downtown and Union Ext/Poplar sub areas have experienced rapid population growth between 2010 and 2020, while overall growth in Memphis remained static. Over the next five years, population is projected to grow more evenly across the sub areas. Overall, the Corridor is expected to continue to outpace the City of Memphis.

Demographics | Population Density

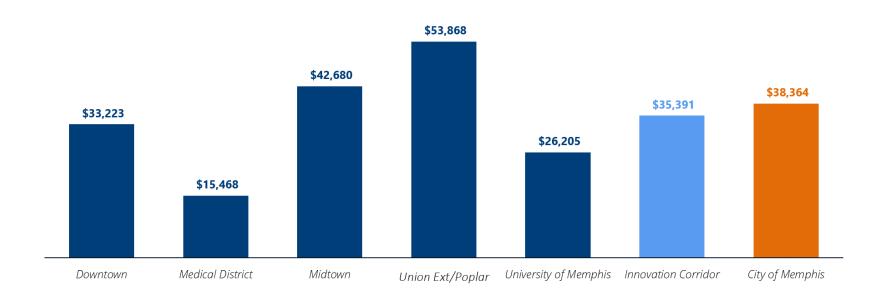
Population Density (per sq mi)



The Medical District is notably less densely populated than other Corridor sub areas, emphasizing its primary function as an employment hub rather than a residential area. Midtown multifamily developments themselves are notably less dense than Medical District mid-rise, yet they outnumber those in the Medical District by nearly two to one.

Demographics | Median Household Income

Median Household Income



Median household income varies widely across sub areas, although overall Corridor income is aligned with the Memphis average. Low median household incomes in the University of Memphis sub area is partially due to the large student population, and low income in the Medical District sub area reflects the large stock of affordable housing.

Demographics | Housing Units and Tenure

Corridor Housing Units by Tenure

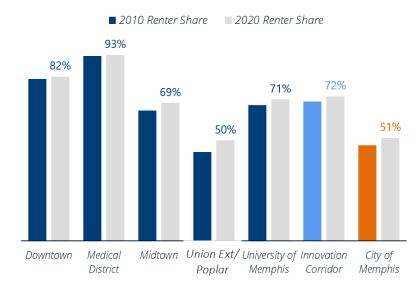
1.910

Midtown

Medical

District

Renter-Occupied Share of Housing 2010-2020



Nearly 23,000 housing units are distributed across Corridor sub areas, with 72% of Corridor residents renting rather than owning these units.

1,370

566

University of

Memphis

1.955

Union Ext/

Poplar

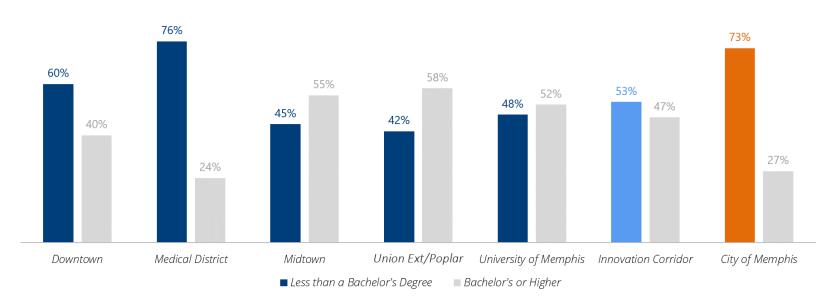
1,000

687

Downtown

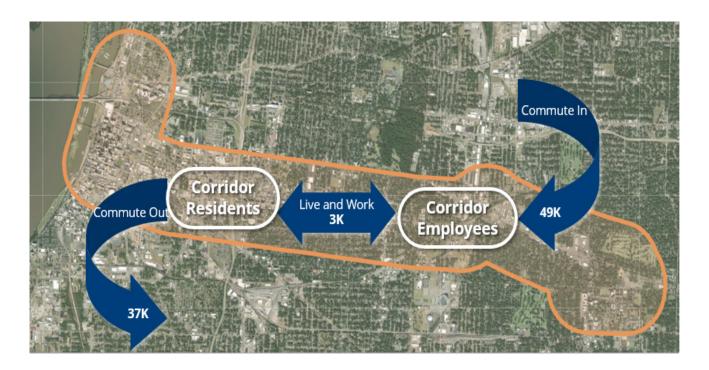
Demographics | Educational Attainment

Educational Attainment



The Union Ext/Poplar, Midtown, and University of Memphis sub areas have the highest proportion of residents with a bachelor's degree or higher.

Demographics | Living and Working on the Corridor



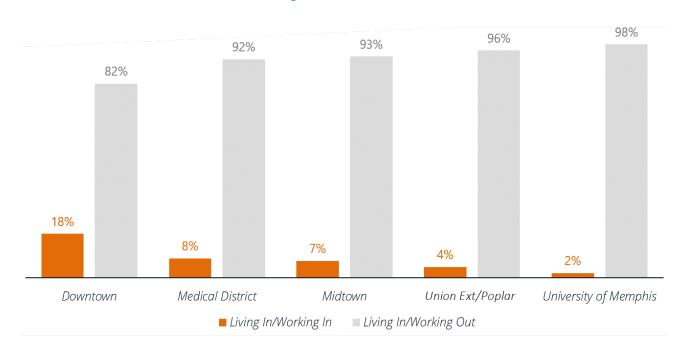
40k
Residents
Live in Corridor

52kEmployees Work in Corridor

Most people who live in the Corridor leave for work, and most people who work in the Corridor commute in from elsewhere. Increasing density provides more opportunities to both live and work in the Corridor, while taking advantage of BRT.

Demographics | Where Corridor Residents Work

Resident Flows by Sub Area (Share of Residents)



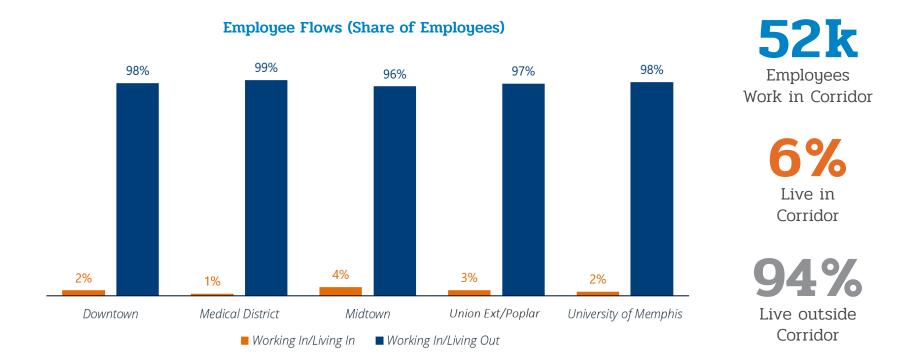
40k
Residents in
Corridor

24% Work in Corridor

76%Work outside
Corridor

30,000 Corridor residents (76%) work outside of the Corridor.

Demographics | Where Corridor Employees Live



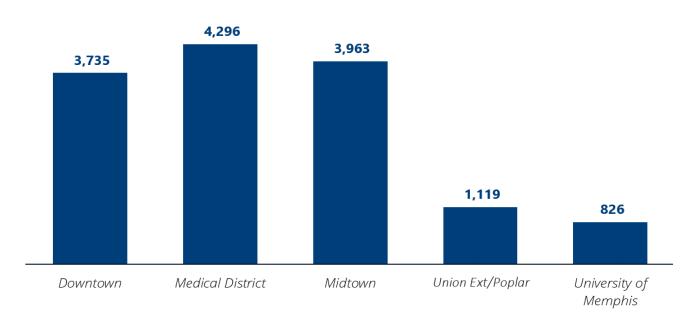
The Corridor accounts for 52,000 Memphis jobs (15%), with the majority located Downtown and in the Medical District. Only 3,000 of these Corridor employees also live on the Corridor, meaning that 49,000 employees are commuting from outside the Corridor.

Demographics | Key Takeaways

- The Corridor is outpacing the rest of Memphis in population growth, led by the Downtown and Union Ext/Poplar sub areas.
- The Corridor represents a major employment hub, accounting for 15% of all Memphis jobs, but most workers live elsewhere and commute to the Corridor.
- There is a significant disconnect in terms of income and educational attainment between residents of the Medical District and those who work there (and live elsewhere), indicating potential risk of displacement in coming years.

Multifamily | Inventory

2020 Multifamily Housing Units Inventory

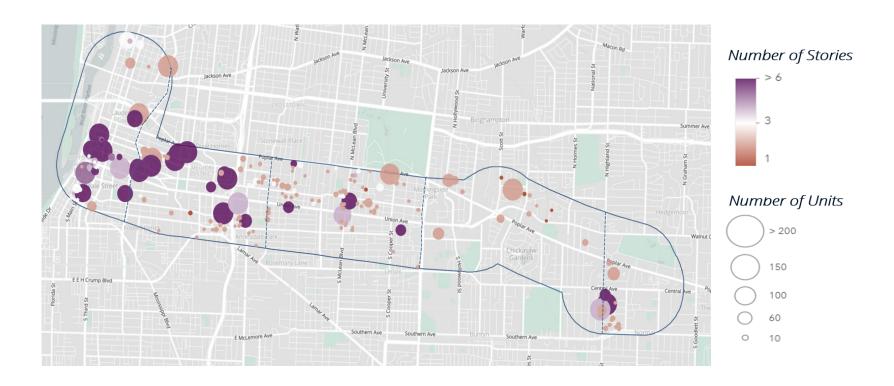


14k
Multifamily Units
in Corridor

13% of All Multifamily Housing in Memphis

Multifamily housing in the Corridor accounts for 13% of all units in Memphis and is concentrated in the Medical District, Midtown, and Downtown. Multifamily units account for roughly 70% of all housing within the Corridor and is concentrated along Union Ave. Single-family, owner-occupied homes are generally set back from the Corridor.

Multifamily | Existing Development Typologies

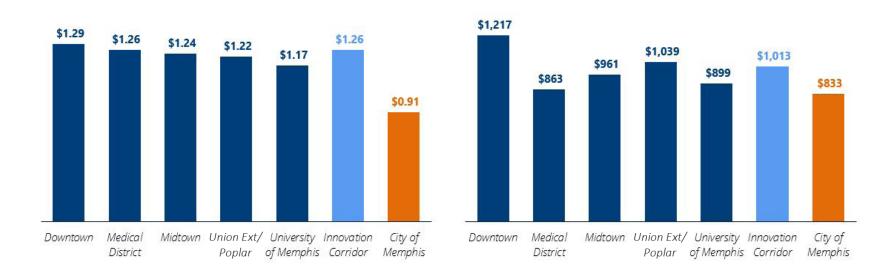


Most multifamily developments east of the Medical District sub area are 3 stories or fewer, regardless of unit count. Higher density developments with high unit counts are concentrated in the Downtown and Medical District sub areas.

Multifamily | Rent

2020 Multifamily Avg. Rent (per sq ft)

2020 Multifamily Avg. Rent (per unit)



Rents per square foot in the Corridor, and in each sub area, are notably higher than the Memphis average, and rents per unit are nearly \$200 higher, despite being nearly 130 square feet smaller.

Multifamily | Class A Product

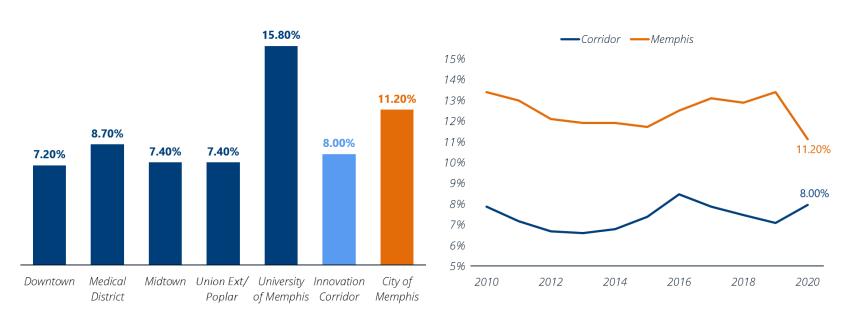


Class A multifamily commands roughly 40% more per square foot than total multifamily product in the corridor and is concentrated in the Downtown and Midtown sub areas.

Multifamily | Vacancy

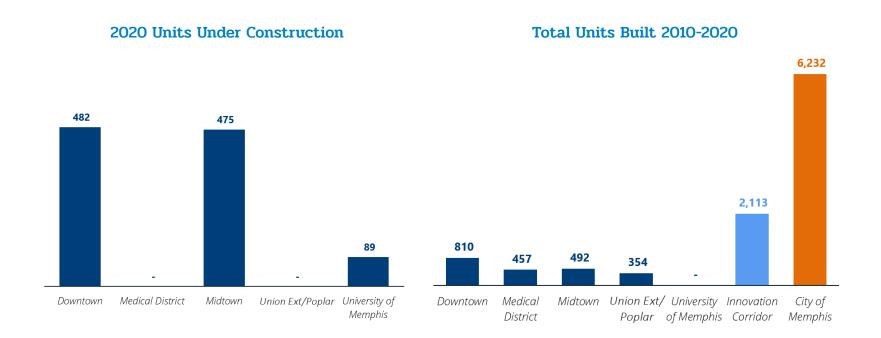


Historical Multifamily Vacancy 2010-2020



Multifamily vacancy in the Corridor has historically trended between 3% and 5% below the Memphis average since 2010.

Multifamily | Units Under Construction and Historical Development



There are more than 1,000 multifamily units currently under construction along the Corridor, which reflects an active market that has accounted for nearly 35% of total multifamily development in Memphis since 2010, despite only representing 3% of its total area.

Multifamily | Market Potential

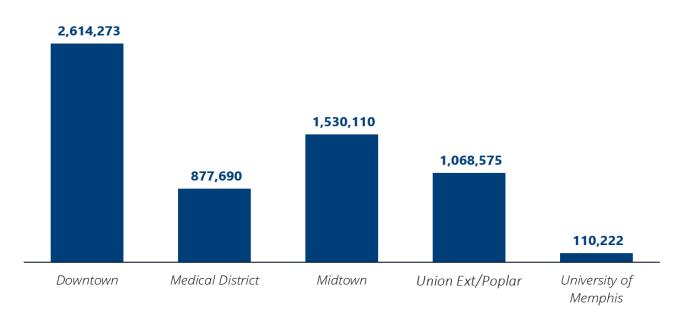


Current market conditions require public incentives (PILOT) to support multifamily development. Market potential is relative and assumes baseline of continued public support.

Memphis Innovation Corridor | TOD Plan December 2021

Retail | Inventory

2020 Retail Inventory (in sq ft)

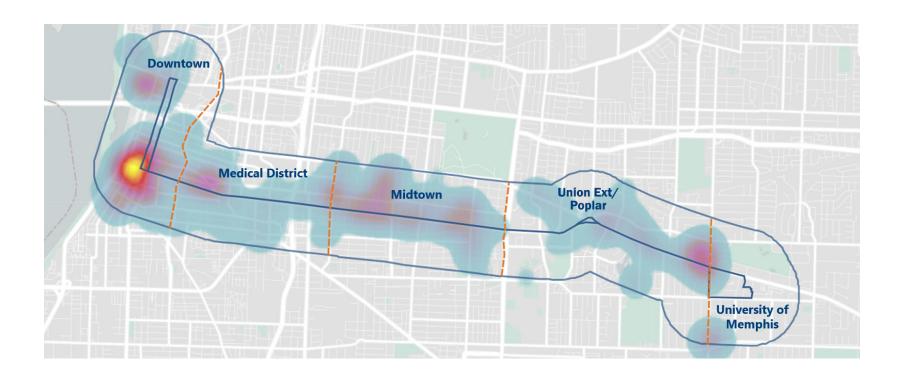


6.2MSq Ft of Retail Space in Corridor

11%
of All Retail Space
in Memphis

Retail in the Corridor accounts for 11% of total space in Memphis and is concentrated in the Downtown and Midtown sub areas.

Retail | Corridor Heat Map



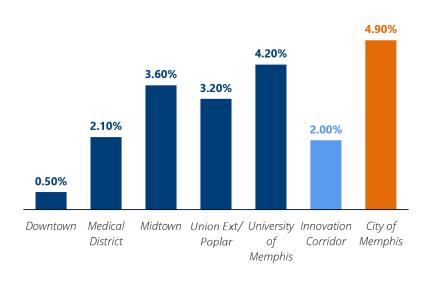
Corridor retail is distributed along the BRT Corridor, with the highest concentration in the Downtown sub area at the corner of Union Ave and S 2^{nd} St.

Retail | Rent and Vacancy



\$13.52 \$12.81 Downtown Medical District Midtown Union Ext/ University Innovation City of Poplar of Corridor Memphis Memphis

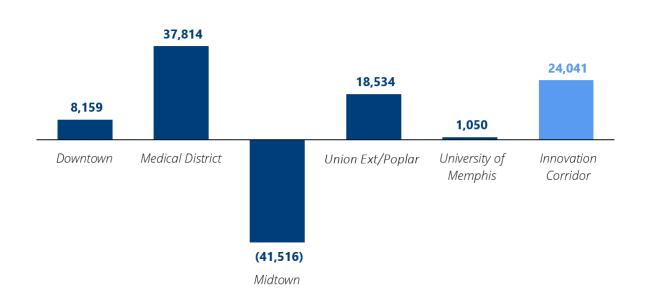
2020 Retail Vacancy



The Corridor commands significantly higher retail rents per square foot than the city on average. Retail vacancy across the Corridor is lower than the city on average, with Downtown experiencing a remarkably low vacancy rate of 0.5%

Retail | Net Absorption

2020 Net Retail Absorption (in sq ft)

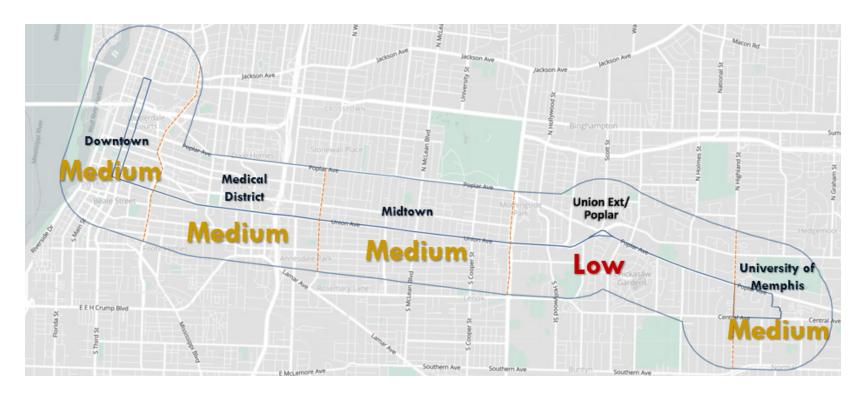


24k
Sq Ft Net
Retail Absorption
in Corridor

-195k
Sq Ft Net
Retail Absorption
in Memphis

Despite negative absorption of nearly 200k sq ft in Memphis, the Corridor maintained positive net retail absorption in 2020. Combined with higher rents and lower vacancy, this indicates a significantly healthier retail market in the Corridor relative to the city of Memphis overall. Negative absorption in Midtown was largely due to an uptick in 2020 vacancy and a decrease in total inventory.

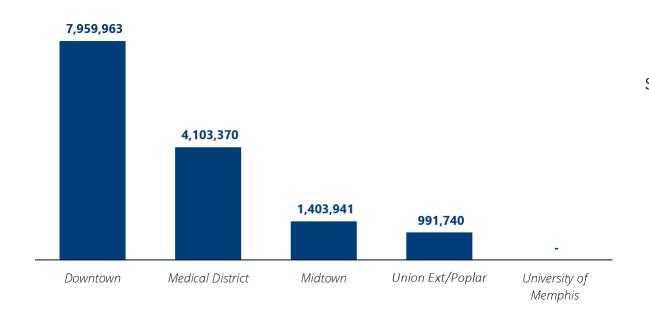
Retail | Market Potential



Walkable mixed-use retail potential is highest in the Downtown sub area and can supplement new development there. Mixed-use development trends and future population growth in Medical District and Midtown have the potential to support additional retail along the Corridor if delivered in walkable mixed-use format.

Office | Inventory

2020 Office Inventory (in sq ft)



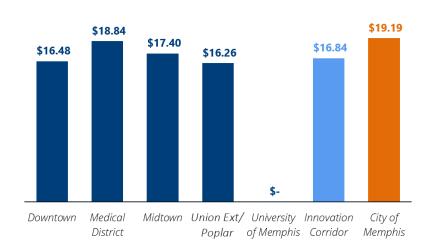
14.5M
Sq Ft of Office Space in Corridor

25%
of All Office Space
in Memphis

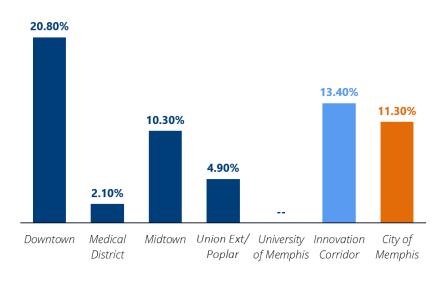
25% of all office space in Memphis is located in the Corridor and is concentrated in the Downtown and Medical District sub areas.

Office | Rent and Vacancy





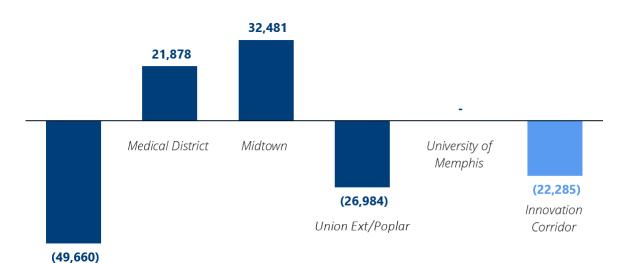
2020 Office Vacancy



The Corridor commands lower office rents and maintains a higher vacancy than Memphis as a whole. Low rents and high vacancy in the Downtown area (8M sq ft) offset rents consistent with Memphis and an extremely low vacancy rate in the Medical District sub area (4M sq ft). Lower vacancy and higher rents in the Medical District sub area are reflective of more expensive, specialized, medical office product and limited supply.

Office | Net Absorption

2020 Net Office Absorbtion



-22k

Sq Ft Net Office Absorption in Corridor

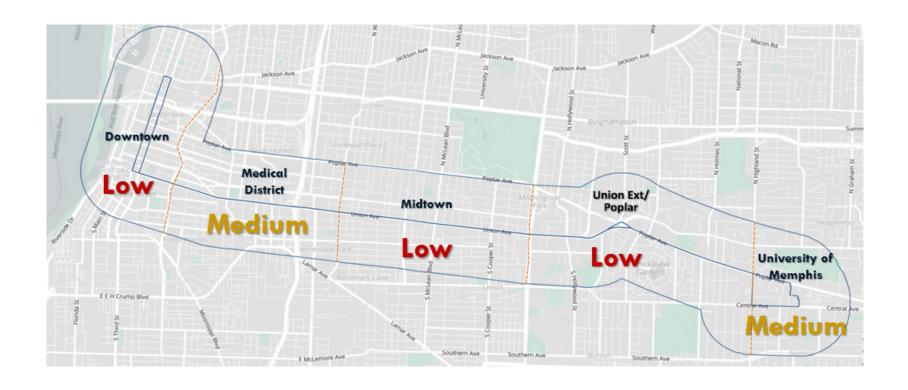
-100k

Sq Ft Net Office Absorption in Memphis

Office performance varies dramatically by sub area. Strong rents, a vacancy rate of 2%, and high positive absorption in the Medical District sub area are offset by low rents, vacancy over 20%, and negative absorption in the Downtown sub area. This reflects an overall Corridor office environment consistent with the city of Memphis.

Downtown

Office | Market Potential



Historical challenges caused by COVID-19 have placed considerable constraints on the office space market in the near-term. Demand for specialized lab/medical office space should buoy the Medical District market. Complete absence of office space in the University of Memphis sub area presents an opportunity to cater to industries interested in co-location through creative flex-working space.

Strategies to Address Corridor Challenges

Challenge	Strategy
Low-income corridor employees cannot afford housing near their jobs.	Close gap by amplifying existing employer-assisted housing programs and developer incentives for workforce housing.
There is limited financing available for Corridor development (high LTV ratios, lack of comps, unproven product types, etc).	Reduce risk through continued PILOT program and new gap financing tools.
Lack of large-scale redevelopable parcels; speculation deterring assemblage of small-scale. parcels.	Scale up scattered-site master development model (North Poplar project); ramp up capacity of Blight Authority of Memphis.
Vacancy risk for ground-floor retail; banks deterred by small-footprint retail development without anchor tenant.	Write down ground-floor retail spaces as non-revenue generating amenities.
Misperceptions of Corridor dampen market potential.	Catalyze market by transforming perceptions via low-cost placemaking interventions (arts and culture, programming and activation, etc.).
Limited resources to address challenges throughout the Corridor.	Concentrate resources on select BRT nodes to establish strong precedents for walkable mixed-use TOD.

Memphis Innovation Corridor | TOD Plan December 2021

Funding Sources Inventory

LOCAL SOURCES

Economic Development Growth Engine for Memphis & Shelby County (EDGE)

EDGE PILOT (Development)

Provides up to 75% abatement for up to 15 years based on level of economic development supported by new development, expansion, jobs creation, residential investment, and more.

EDGE Inner City Economic Development (ICED) Loan (Redevelopment)

Three-year, forgivable loan program providing up to \$25,000 for revitalization. Primarily for building façade and streetscape improvements. Building must be located in New Markets Tax Credit eligible census tract (most of corridor eligible).

EDGE Industrial Revenue Bond (Economic Development)

Tax-exempt bonds used for:

- Purchase of buildings
- · Engineering costs
- Infrastructure
- · New equipment
- Purchase of land

These bonds are used to finance industrial facilities with a cap of \$10 million. There are exemptions to this cap.

EDGE Neighborhood Emergency Economic Development Grant (Economic Development)

Provides grants up to \$10,000 to businesses in New Markets Tax Credit eligible census tracts that have experienced at least a 25% loss in revenue as a result of COVID-19.

Downtown Memphis Commission (DMC)

DMC PILOT (Development)

Provides pre-development property tax freeze for up to 15 years for new development within the Central Business Improvement District (CBID). Multifamily outside CBID and within Parkways may be approved.

DMC Development Loan Program (Development)

Intended to encourage commercial real estate development in the CBID through provision of low-interest loan up to \$200,000 for renovations. Amortized over 20 years at 1% interest with balloon payment at end of 10th year. May be used for new development, renovations, improvements, etc.

DMC Exterior Improvement Grant (Redevelopment)

One-to-one matching grant up to \$100,000 for exterior improvements in CBID.

DMC Retail Tenant Improvement Grant (Redevelopment)

Reimbursable grant providing up to \$30,000 for permanent interior improvements for retail in the CBID.

DMC South City Good Neighbor Grant (Redevelopment)

Grant covers up to \$50,000 in total project costs for exterior improvements in South City Focus Area (partially included in corridor).

Memphis Medical District Collaborative

Pre-Development Grant Program (Development)

Provides grants up to \$5,000 to offset pre-development costs for new small businesses and developers in the Medical District.

Façade Improvement Grants (Redevelopment)

Façade improvement grants for commercial, mixed-use, and multifamily properties.

Small Business Remobilization Fund (Economic Development)

Provides up to \$10,000 in funds to neighborhood-serving businesses in the Medical District. Business must also have been awarded COVID-19 Restart or Remobilization support dollars from a CDFI or other agency.

Live Local Employer-Assisted Housing Program (Economic Development)

MMDC employer-assisted program provides employees of participating institutions up to \$2,000 toward new

lease or \$15,000 for new home within 1 mile of the Medical District.

TIF Districts in Corridor

There are three TIF districts in the corridor. There are several TIF-granting agencies in Memphis, including EDGE and Community Redevelopment Agency (CRA).

University District-Highland Strip (EDGE)

District created to support redevelopment of the Highland Strip to improve the University District.

Approved: 2016

TIF amount: \$21.1M

Projected increase in jobs: 235

Uptown TIF (CRA)

The Uptown TIF was created for the purpose of improving public spaces in the Uptown area. The northern portion of the Downtown sub area is included in the district, and the district was expanded in 2019. Early financing for specific projects utilized HOPE VI funding.

Approved: 2001

TIF amount: \$42.9M

Binghampton TIF (CRA)

The Binghampton district's goals address five categories: 1) Housing and neighborhood development; 2) infrastructure improvements; 3) public facility improvements; 4) environmental improvements/site acquisition; and 5) community equitable economic development.

Approved: 2017

TIF amount: \$26.2M

STATE SOURCES

Community Investment Tax Credit (Development/Redevelopment)

The Tennessee Housing Development Agency and the Tennessee Department of Revenue cooperatively administer the Community Investment Tax Credit, which provides financial institutions with a tax credit against certain taxes when qualified loans, investments, grants, or contributions are extended to housing entities that support low-income housing activities.

FEDERAL SOURCES

Low Income Housing Tax Credit (Development/Redevelopment)

Tax credit for construction or rehabilitation of affordable rental housing for low-income households.

New Market Tax Credit (Economic Development)

New Market Tax Credit (NMTC) program provides federal income tax credit in exchange for equity investments in Community Development Entities (CDEs). This program is for investors, and the CDEs serve as intermediaries for the provision of loans, investments, or financial counseling in low-income communities.

National Housing Trust Fund (Development/ Redevelopment)

The Tennessee Housing Development Agency administers the federally funded National Housing Trust Fund (NHTF) which is designed for the production and preservation of affordable rental housing through the acquisition, new construction, or rehabilitation of affordable housing for households with extremely low incomes. NHTF grants are awarded through a competitive application process to Public Housing Authorities and non-profit entities. Roughly \$4 million in awards

are allocated in amounts ranging from \$100,000 up to a maximum of \$900,000.

Home Investment Partnership Program (Development/Redevelopment)

Home Investment Partnership Program (HOME) provides formula grants to states and localities that communities use to fund a wide range of activities including building, buying, and/or rehabilitating affordable housing for rent or homeownership or providing direct rental assistance to low-income people. HOME is the largest federal block grant to state and local governments designed exclusively to create affordable housing for low-income households. HOME funds may be used for land/property acquisition in conjunction with new construction or rehabilitation of rental properties, rehabilitation of rental properties, and demolition in conjunction with new construction of rental properties.

Community Development Block Grants (Development/Redevelopment)

The Community Development Block Grant (CDBG) Program provides annual grants on a formula basis to states, cities, and counties to develop viable urban communities by providing decent housing and a suitable living environment, and by expanding economic opportunities, principally for low- and moderate-income persons.