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They've got catfish on the table
They've got gospel in the air
And Reverend Green be glad to see you
When you haven't got a prayer
But, boy, you've got a prayer in Memphis
MARC COHN, "WALKING IN MEMPHIS" (1991)

1 OVERVIEW

Walking (and Biking) in Memphis will make two crucial connections in the Wolf River Greenway. When complete, this 26-mile transportation corridor will be a vitally important walking and biking facility and transit connection for disadvantaged communities in north Memphis—100% of the project is within Areas of Persistent Poverty.

PROJECT DETAILS

Location

City of Memphis, Shelby County, Tennessee

Total Mileage

1.0 miles (bicycle/pedestrian bridge and bicycle/pedestrian underpass)

Estimated Completion

Q2 2028

Project Cost

Total Cost \$21,141,497.27 Local Match \$845,659.89* RCN Funding Request \$20,295,837.38

Project Administration

City of Memphis and Wolf River Conservancy

Project Webpage

Grant application materials and letters of support are available at:

https://memphisparks.com/park/wolf-river-greenway/

PROJECT BENEFITS

Equity and Environmental Justice

Addresses existing disparities in health, wealth, and transportation safety by increasing quality of life and economic opportunities.

Access

Increases transportation choices and provides access to greenspace and daily destinations.

Facility Suitability

Reduces physical and socioeconomic barriers to connectivity, health, and affordable transportation.

Community Engagement

Represents the outcome of a successful public and private partnership with robust public input shaping the project.

Equitable Development

Creates a unique community asset that is sensitive to local context and history.

Climate and Environment

Provides high-quality choices for low-carbon transportation by facilitating walking, biking, rolling, and taking transit.

Workforce Development and Economic Opportunity

Will increase job and business opportunities; implementation process will meet or exceed the City's DBE requirements.

^{*}The City of Memphis has committed to a local match of \$1,000,000.00 (4.7% of the total project cost). \$845,659.89 reflects 4% of the total project cost, since Form SF424C only allows whole numbers for Federal Share percentage in Row 17.

Introduction

The Walking (and Biking) in Memphis project will complete the Wolf River Greenway, a 26-mile active transportation corridor through north Memphis, Tennessee, from the Mississippi River to the suburb of Germantown. 25 miles of the trail have already been funded and are either complete, under construction, or construction is planned. The state of Tennessee recently awarded the City of Memphis and the Wolf River Conservancy \$10.3 million, which will be used to complete 3.9 miles of trail, leaving just a small portion of the trail still unfunded.

If awarded, RCN funds will be used to construct the two remaining unfunded sections of trail: a bicycle/pedestrian bridge over a railroad and an underpass under Austin Peay Highway/Jackson Avenue. If these two critical connections are not constructed, the Wolf River Greenway will remain in separate pieces rather than becoming a continuous corridor as originally envisioned.

When complete, the Wolf River Greenway will connect 22 neighborhoods in north Memphis, providing access to over 850 acres of green space and re-creating connections between communities that have long been separated from downtown Memphis and from each other by dangerous, high-speed roadways, including Interstate 40. If funds are awarded, the Wolf River Greenway completion project will create new local connections in low-income communities of color in Memphis that have been historically underserved. This will help achieve the administration's transportation equity and sustainability goals by providing a safe walking and biking connection to transit, greenspace, schools, and other important destinations/community assets in a part of the city where pedestrian and bicycle fatalities are high and there is no existing equivalent safe route for non-motorized travel.

PROJECT GOALS



Reconnect North Memphis communities to each other, the Wolf River, and key public parks: Epping Way, Rodney Baber Park, and John. F. Kennedy Park.



<u>Serve and prioritize the needs</u> of historically marginalized residents of north Memphis neighborhoods.



<u>Provide sustainable and equitable multi-modal transportation</u> choices for those without cars to access jobs, services, and recreation.

Community Context

The neighborhoods surrounding the project have a high population of people of color, low median incomes, and lack access to several key resources (see Table 1). Once a manufacturing hub of Memphis, these neighborhoods faced significant deindustrialization and disinvestment at the end of the 20th century. Of the many factories that once were located in these neighborhoods, the ones that remained towards the turn of the century were mostly chemical plants, resulting in legacy pollution in the area.

The history of these north Memphis neighborhoods has also been shaped by transportation and housing policy decisions that resulted in further disinvestment and fragmentation of connectivity. Redlining in the 1940s labeled North Memphis neighborhoods as bad investments for mortgage lenders due to the so-called "undesirable" presence of African Americans. As a result, it became

extremely difficult for residents in these areas to access homeownership and the generational wealth it can build.

In the 1970s, North Memphis was divided by the construction of Interstate 40. The highway was originally planned to pass through Overton Park in downtown Memphis, but a group of concerned residents sued to stop the interstate from going through the park. In 1971, the Supreme Court decided in their favor, and the interstate was re-routed north through Klondike Smokey City, Frayser, Raleigh, and other historically Black communities, which were subsequently cut off from access to the center of Memphis. The legacy of pollution, economic downturn, racism, and fragmentation has had a profoundly negative effect on the built environment in these areas, as well as the general health and well-being of the people living in them.

Table 4. Project Area Census Tracts Compared to State of Tennessee

Area	Black or African American [†]	Median Household Income [†]	Households with Zero Vehicles [†]	Traffic Fatalities per 100K People	Households without Internet [†]
Tract 8	98.6%	\$21,342	29%*	28*	50.8%
Tract 111	97.3%	\$16,543	18%*	42*	45.9%
Tract 205.42	95.0%	\$35,297	11%*	11*	25.7%
Tract 205.43	85.8%	\$21,854	29%*	41*	39.9%
TENNESSEE	15.5%	\$58,516	5% [†]	19 ‡	16.2%

^{*} USDOT Equitable Transportation Community (ETC) Explorer

[†]U.S. Census Bureau, 5-Year American Community Survey, 2017-2021 Estimates
†Insurance Institute for Highway Safety. https://www.iihs.org/topics/fatality-statistics/detail/state-by-state

Project Scope and Details

PHASE 6A:

BICYCLE/PEDESTRIAN BRIDGE WITH APPROACHES (0.4 MILES)

This phase of the greenway will stretch from the end of Peres Avenue to the end of Calvert Avenue, incorporating a bicycle/pedestrian bridge over the Canadian National Railway tracks where there is currently no formal railroad crossing. Construction of the pedestrian bridge, beyond its larger importance to the completion of the Wolf River Greenway, will provide an important active transportation connection for people living in the neighborhoods on both sides of the tracks. In particular, this greenway connection will allow those living on the Douglass side of the railroad tracks to use the greenway as an easy and safe route to destinations in the Hollywood neighborhood, including the library and community center. This section of greenway is currently in the 10% design phase.

PHASE 10B:

BICYCLE/PEDESTRIAN UNDERPASS (0.6 MILES)

This section of the trail will be located north of the Wolf River, starting between the Highway 14/Jackson Avenue on-ramp and the Huntington Hills Apartments to the south of James Road. The trail will head south, crossing Highway 14/ Jackson Avenue using a bicycle/pedestrian underpass; this will provide a much safer and more comfortable alternative to using the existing crosswalks to cross four Highway 14 ramps, which are particularly dangerous for people walking and biking. The greenway will then turn north, following Raleigh-Lagrange Road until it connects with the existing greenway trailhead at Kennedy Park. This section of the greenway is currently in the concept phase.



Figure 1. Phase 6A Concept

- Existing Wolf River Greenway
- --- Future Wolf River Greenway



Figure 2. Phase 10B Concept

PROJECT LOCATION

The Wolf River Greenway is located in the City of Memphis in Shelby County, Tennessee. The partially completed 26-mile trail route travels primarily within census tracts that have been identified as Areas of Persistent Poverty, with all four of the census tracts surrounding the RCN grant projects qualifying for the designation. This project would represent a significant investment into communities that have experienced decades of underinvestment and help the USDOT meet its goals of addressing equity and environmental justice and removing transportation related disparities in these areas.

The Wolf River Greenway is envisioned as a vibrant active transportation spine winding through the heart of Memphis and preserving a protected corridor of green space along the Wolf River as a

public natural resource. Nearly 200,000 people live within a 20-minute walk of the planned trail, and 20 miles (76%) of the greenway pass through communities that have been identified as Areas of Persistent Poverty, Historically Disadvantaged Communities, or both. Adjacent census tracts also have significant populations of people without reliable access to a motor vehicle; crucially, the trail will serve these populations by facilitating essential transportation connections to 171 Memphis Area Transit Area (MATA) bus stops within 0.25 miles of the greenway, and the 11 bus lines that directly intersect the trail.

WOLF RIVER GREENWAY BY THE NUMBERS:

25 MILES completed or funded to date

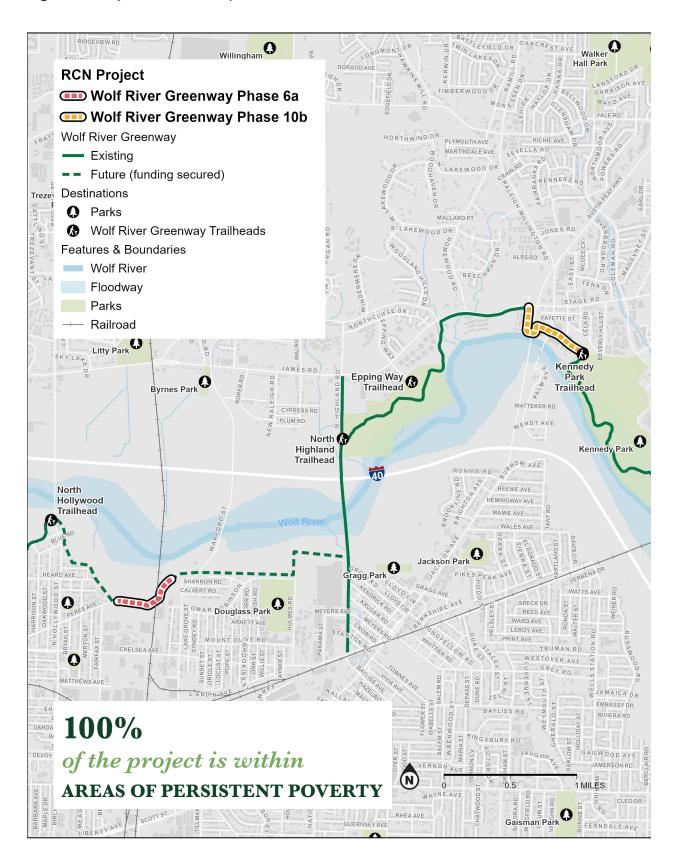
22 NEIGHBORHOODS served by the greenway

200,000 PEOPLE live within a 20-min walk

171 MATA BUS STOPS within 1/4 mile

850 ACRES of greenspace preserved

Figure 3. Project Location Map



RESPONSE TO MERIT CRITERIA

Table 5. Merit Criteria Summary

Merit Criteria	Project Benefits				
Equity and Environmental Justice	 Addresses health-related inequities by facilitating physical activity, mental health, and reductions in pollution. Provides economic opportunity through increased property values, job creation, and revitalization. Improves bicycle and pedestrian safety by separating more vulnerable road users from vehicle traffic. 				
Access	 Increases transportation choices by creating a safe corridor for walking, biking, and connecting to transit to reach daily destinations. Completes a 26-mile regional connection from downtown Memphis to Germantown that provides access to greenspace for 22 neighborhoods along the trail. 				
Facility Suitability	 Creates safe and convenient crossings of two physical barriers: a railroad and a complex interchange. Reduces socioeconomic barriers to health and quality of life by reducing pollution, increasing physical activity, and expanding affordable access to jobs, parks, and other destinations. 				
Community Engagement and Community- based Stewardship, Management, and Partnerships	 Responds to robust public engagement conducted in 2015 regarding trail alignment preferences. Is the result of continued partnerships between public and private entities, including the City of Memphis, Shelby County, and the Wolf River Conservancy. 				
Equitable Development	 Is being implemented in conjunction with policies to maintain housing affordability and ensure that disadvantaged communities experience development-related benefits. Creates a unique community asset and increases access to greenspace in underserved communities. 				
Climate and Environment	Provides high-quality choices for low-carbon, low-pollution transportation to facilitate walking, biking, and taking transit.				
Workforce Development and Economic Opportunity	 Will increase property values and spur development, including mixed-use development and affordable housing. Will be implemented following the City of Memphis' DBE/WBE/MBE hiring guidelines, ensuring that construction contracts will be awarded equitably. 				

1. Equity and Environmental Justice

EXISTING INEQUITIES

All four census tracts in the project area are all considered disadvantaged because they experience disproportionate levels of social and economic burdens compared to the rest of the country. As the table below shows, the project area includes some of the lowest-income areas in the entire country, compounded by burdens related to poor health, poverty, unemployment, climate change risk, and high costs of housing and energy.

These existing inequities reflect past policies that targeted these communities. For example, in the mid-1900s, redlining

formalized the practice of excluding minorities from homeownership by explicitly discouraging mortgage lenders from giving loans in areas with high populations of minorities. The 1940 Home Owners' Loan Corporation map of Memphis graded the majority-Black neighborhoods north of downtown as "C: Definitely Declining" and "D: Hazardous." The Hollywood neighborhood, which includes the two most heavily burdened tracts in the project area (8 and 111), was rated "C." Today, the majority of people living in tracts 8 and 111 do not own their own homes; 69.7% and 55.6% of the available housing units are

Table 6. Burden in Disadvantaged Census Tracts in Project Area

Burden	Indicator	Percentile (out of all census tracts in US)			
		Tract 8	Tract 111	Tract 205.42	Tract 205.43*
		(Phase 6A)	(Phase 6A)	(Phase 10B)	(Phase 10B)
Low Income		98th	98th	95th	88th
Climate Change	Expected Building Loss Rate	81st	88th	97th	97th
Energy	Energy Cost	99th	98th	89th	91st
	Asthma	98th	97th	93rd	94th
I I IAI-	Diabetes	99th	99th	76th	95th
Health	Heart Disease	99th	99th	25th	75th
	Low life expectancy	99th	99th	89th	91st
Legacy Pollution	Proximity to Risk Management Plan Facilities	96th	99th	37th	68th
Housing	Housing Cost	87th	93rd	98th	93rd
	Low Median Income	98th	98th	90th	89th
Workforce Development	Poverty	99th	98th	90th	92nd
Bevelopment	Unemployment	90th	98th	45th	73rd
		Above 75th Percentile		Above 90th Percentile	

 $Data\ source: Council\ on\ Environmental\ Quality's\ Climate\ and\ Economic\ Justice\ Screening\ Tool\ (CEJST).$

^{*}Note: Tract 205.43 was created in 2020 when tract 205.12 was divided into multiple tracts. CEJST Version 2.0 uses census tract boundaries from 2010, so data for the new tract 205.43 is not available. The data from the parent tract, 205.12, was used in the table and is assumed to be comparable to that of the new tract.

renter-occupied, respectively (compared to 33.7% for the entire state).¹ Redlining and similar concurrent practices by federal housing agencies have been acknowledged as perpetuating "racial segregation, intergenerational poverty, and the continued wealth gap between white Americans and most other groups in the U.S."²

Tracts 8 and 111 are both above 95th percentile for legacy pollution due to the presence of chemical plants, remnants from the area's manufacturing past. Several of the tracts in the project area are also above 90th percentile for ozone, asthma, diabetes, heart disease, and low life expectancy.

PROJECT BENEFITS

When complete, the Wolf River Greenway will provide benefits to the entire North Memphis area as well as the neighborhoods where Phases 6A and 10B are located, which will help reduce existing inequities. Investment in greenways and trails often yields returns through economic revitalization, recreational tourism, increased property values, small business

opportunities, and construction jobs.

As a conservation-driven project, the Wolf River Greenway will preserve 850 acres of land along the river, much of it in the floodplain, and create a 26-mile linear park for Memphis residents. Protecting riparian areas improves water quality, preserves wetlands and other habitats, and reduces flood-related property loss.

Access to green spaces and parks also has many proven benefits to mental and physical health for adults and children. In particular, bridging the gaps in Phase 6A and 10B will connect two major City parks (the newly renovated Rodney Baber Park and John F. Kennedy Park) and Epping Way, a 120-acre property consisting of trails and a lake, which was bought and restored by the Wolf River Conservancy for free public use.

CONSTRUCTION IMPACTS

No construction-related displacement is anticipated as a part of this project. While there may be temporary disruptions to local streets during construction, the long-term economic, social, and transportation benefits of the greenway will far outweigh any construction impacts.



¹ U.S. Census Bureau, 5-Year American Community Survey, 2017-2021 Estimates

² Mapping Inequality: Redlining in New Deal America. https://dsl.richmond.edu/panorama/redlining/

2. Access

Completion of the Wolf River Greenway will improve system-wide connectivity for pedestrians and bicyclists by creating a seamless active transportation connection to transit routes, micromobility stations at either end of the trail, and main arterials and commercial areas in the northern area of the city. The creation of these new connections will improve safety and help reduce physical and socioeconomic

barriers for individuals in the surrounding communities.

The improvement of the City's overall active transportation network connectivity has been a key priority in transportation planning at the City and MPO/regional level for many years now. A summary of recent adopted plans and ongoing City/County initiatives appears in the table below:

Table 7. Completed Plans that Support Active Transportation in Memphis

Plan Name	Year	Summary of Relevant Details
TDOT Making Connections: Actions to Improve Walking, Bicycling, and Rolling in Tennessee	2021	Plan goals are for a statewide active transportation network that is safe, equitable, integral, connected, and comfortable. Construction of the Wolf River Greenway is a step towards improving the safety and equity of the pedestrian & bicycle network in Memphis.
Walk & Roll Memphis Region Pedestrian and Bicycle Master Plan	2020	Plan highlighted Wolf River Greenway as a marquee example of progress made for walking and biking in Memphis since the adoption of the 2014 Regional Bicycle and Pedestrian Plan.
Livability 2050 Regional Transportation Plan	2019	Plan identified focus areas for ped/bike infrastructure projects-results were used in the 2020 Master Plan.
Bicycle and Pedestrian Report	2017	Report contains updates on regional progress since 2014 plan, including agency updates from TDOT, MDOT, and MATA, as well as safety & bike/ped counter program updates. WRG Phases 4, 5 & 15 identified in the 2017-20 TIP project list.
Pedestrian & School Safety Action Plan	2015	Plan identifies and prioritizes improvements to Memphis' network of pedestrian facilities, focusing in particular on improvements (new sidewalks, improved crosswalks) located near schools.
Greenprint 2040	2015	Plan establishes a comprehensive vision to enhance sustainability for the Greater Memphis Area through a region-wide network of green space areas that will support long-term goals related to housing and land use, conservation, health and wellness, transportation, economic development, equity, and more. The Wolf River Greenway is a key project for preservation of urban green space and trail access.
Regional Bicycle & Pedestrian Plan	2014	Update of the 2011 plan; further updated in 2020. Included goal to prioritize pedestrian projects in higher risk areas.
Wolf River Design Charrette	2014	During this week-long effort, designers and engineers from the Wolf River Conservancy, City of Memphis, and consultant team explored route and alignment options in detail.
Wolf River Greenway Master Plan	2007	The original feasibility study for the Wolf River Greenway was completed in 2003 and updated in 2007.

The Wolf River Greenway has been envisioned since its inception as a way to ensure the safety of people walking and biking in the north part of Memphis. The existing active transportation network is incomplete and disconnected in north Memphis, especially north of Interstate 40. According to the 2021 edition of Smart Growth America's Dangerous by Design report, Memphis is the third-most dangerous metro area in the country for pedestrians, with an average of 3.93 pedestrian deaths per 100,000 people between 2016 and 2020; the pedestrian fatality rate has only increased since the beginning of the COVID-19 pandemic.

Within a half mile of the whole Wolf River Greenway corridor, 90 crashes involving bicyclists and pedestrians occurred between 2020 and 2022. Of these, 19 were fatal, a fatality rate of over 20%. Within a half mile of Phase

6A, there were 20 bicycle or pedestrianinvolved crashes during the same time period, with three resulting in a fatality. Six of these crashes occurred on Chelsea Avenue within 0.2 miles of the planned greenway, and eight occurred on North Hollywood Avenue, also within 0.2 miles of the greenway. Seven bicyclist/ pedestrian crashes occurred within a half mile of Phase 10B, including two deaths. Three of these occurred along the Stage Rd/James Rd corridor, and another three occurred along the Raleigh-Lagrange Rd/ Coleman Rd corridor, both within 0.2 miles of the proposed trail. The fact that so many pedestrian and bicyclist fatalities have occurred within such a short distance of the trail indicates a crucial need for safe alternative routes for pedestrians and bicyclists in north Memphis.

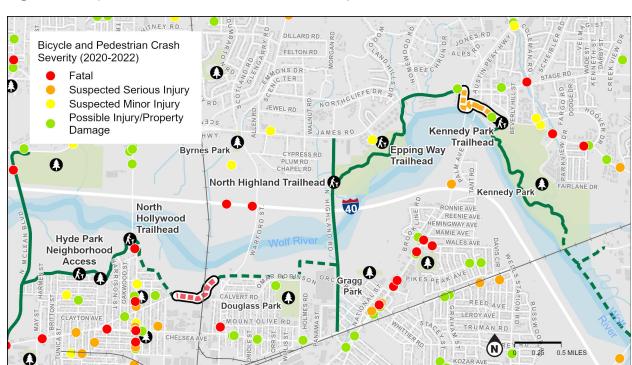


Figure 4. Bicycle and Pedestrian Crashes in the Project Area (2020-2022)

3. Facility Suitability

Completing the gaps in the Wolf River Greenway will remove or reduce several physical and socioeconomic barriers in north Memphis by creating safe, accessible transportation routes and reducing environmental impacts of transportation.

BARRIER

A five-track wide Canadian National Railway line divides the Hollywood neighborhood from the Douglass neighborhood. The two existing at-grade crossings in the vicinity are not designed for people walking and biking.

SOLUTION

Phase 6A will create a bicycle/pedestrian bridge over the railroad tracks at Peres Avenue/Calvert Avenue to separate rail traffic from people walking and biking. Grade separation will improve pedestrian and bicycle safety.

BARRIER

The complex interchange crossing at Highway 14/Jackson Avenue makes it difficult and dangerous for people to walk or bike from residential areas west of the highway to John F. Kennedy Park and commercial areas east of the highway.

SOLUTION

Phase 10B will create a bicycle/pedestrian underpass that completely separates non-motorized travel from vehicles, reducing conflict points and simplifying the crossing to improve accessibility for people with disabilities.

BARRIER

Due to low vehicle ownership rates and high transportation cost burden in the project area, many people walk and bike to reach their daily destinations on local roadways that lack adequate bicycle and pedestrian infrastructure.

SOLUTION

The project will provide high-quality facilities for more affordable modes of transportation (walking, biking, rolling, and transit) and create a continuous route from downtown Memphis to Germantown that connects to 171 bus stops and 11 bus routes.

BARRIER

Communities in the project area are subject to high levels of the greenhouse gas (GHG) ozone and rates of asthma above the 90th percentile. Ozone exposure is strongly linked to incidence and severity of asthma.¹

SOLUTION

Creating attractive and safe infrastructure for walking and biking will entice more people to choose this option, even if they have access to a vehicle. More than a quarter of all daily trips in the United States are one mile or less—equivalent to a 6-minute bike ride or 20-minute walk.² If more of these trips were made without cars, it would reduce GHGs and improve air quality.

¹ United States Environmental Protection Agency. https://www.epa.gov/ground-level-ozone-pollution/health-effects-ozone-pollution

² United States Bureau of Transportation Statistics. https://data.bts.gov/Research-and-Statistics/Trips-by-Distance/w96p-f2qv

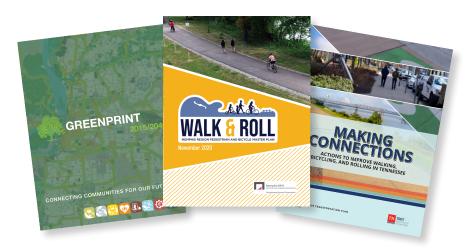
4. Community Engagement and Communitybased Stewardship, Management, and Partnerships

Community involvement and partnership has been a cornerstone of the Wolf River Conservancy's mission from the very beginning, and the greenway planning process has been no exception. Public engagement regarding the Wolf River Greenway's future alignment and phasing took place from summer 2015 to February 2016. This process included a total of 22 events, with 88 neighborhood, community, church, and homeowner associations receiving direct invitations to participate. Various avenues for participation were offered, including stakeholder meetings, community meetings, open house workshops, and public community events; throughout the process, the Conservancy was able to reach about 1.200 residents and community leaders directly.

The Conservancy conducted two separate surveys, as well: the first, designed to gauge general interest, support, and concerns regarding the greenway, was completed by 175 residents and received generally positive responses. The second

survey was completed by 232 residents and was related to the potential routing of one segment of the greenway. A critical public response to the potential alignment led to the amending of this portion of the planned trail, demonstrating the seriousness with which the Conservancy regarded public support and buy-in for the project.

Public engagement was also a key part of the plan development process for all recent local and regional plans discussed under the Access criterion. Of particular relevance is the engagement that took place around the Greenprint 2040 Plan. The Greenprint planning process was guided by the Mid-South Regional Greenprint Consortium, which is made up of 82 organizations representing municipalities, institutions, nonprofits, businesses, and residents, as well as 300 individual community leaders. The Consortium was led by an Executive Committee consisting of 25 members who represented the geographic and racial



Public engagement has consistently shown strong support for the Wolf River Greenway as a project that supports local priorities: improving walking and biking facilities, providing green space, and connecting communities.

diversity of the region. Public outreach included over 20 neighborhood meetings, five public forums, booths at public events, presentations to over 40 churches and civic organizations, and online outreach including social media, surveys, and an online mapping tool. Over 3,000 residents were reached throughout the engagement process, and key priorities that emerged as a result included a need to increase and improve walking and biking facilities, the importance of green space and better access to parks, and the need to develop connections across communities.

The Conservancy plans to continue to engage local community members in the Wolf River Greenway planning process, especially with regards to land acquisition and the incorporation of equity and safety concerns into the implementation of the greenway's final phases.

Awards of construction contracts for the remaining phases of the Wolf River Greenway will follow the City of Memphis' guidelines for fair competition opportunities for minority-owned, womanowned, and small businesses.

COMMITMENT FROM PARTNERS

This application itself is a result of the close public-private partnership between Wolf River Conservancy and the City of Memphis. Over \$50 million has already been raised for the project so far, half from public sources and half from private. Shelby County was the recipient of a \$60 million HUD grant to continue to promote fair housing goals within the context of long-term plans for flood resilience, and \$9 million of HUD funds were approved to be used toward the construction of the Wolf River Greenway as a key part of the implementation of the Greenprint 2040 Plan.

The City of Memphis has committed a \$1 million local match to complete the Walking (and Biking) in Memphis project.

In addition, letters of support from the Memphis community are available at: https://memphisparks.com/park/wolf-river-greenway/



5. Equitable Development

EXISTING POLICIES & PROGRAMS

Proximity to trails can raise property values and benefit existing property owners; however, gentrification can make it difficult for low-income residents to live in these desirable, walkable areas. The City of Memphis has taken the proactive step of encouraging the construction of affordable housing within walking distance of the greenway: one example is the Wolf River Bluffs development in the Frayser neighborhood, which comprises 34 singlefamily homes and abuts Phase 5B of the trail. A new library will be constructed close to the new development, helping spur further interest in development along the greenway corridor. The greenway also connects to the newly renovated Rodney Baber Park, providing direct access to Frayser residents.

The City of Memphis also operates several programs that incentivize developers to create affordable housing through redevelopment or new construction. The Affordable Homebuild Partnership Program and Affordable Rental Housing Partnership Program provide incentives for developers to create affordable single-family homes and rental housing, respectively.

Lastly, the City of Memphis' zoning code and land use policies support increased housing density in urban areas and encourage walkable and bikeable development. Of all residential land in Memphis, 27% allows duplexes and accessory dwelling units and 22% allows triplexes/quadruplexes. Many multifamily housing zones are concentrated around the project area and along the Wolf River Greenway (see Figure 5).

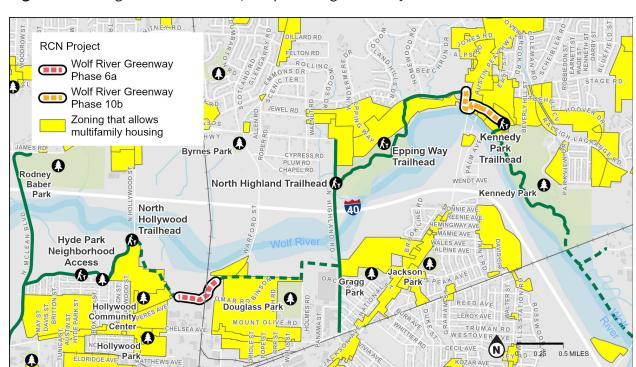


Figure 5. Zoning that Allows Multifamily Housing Near Project Area

PLACEMAKING

The Wolf River Conservancy is dedicated to using innovative placemaking techniques to make the greenway a unique public space for Memphis. The Conservancy has collaborated with Memphis' Urban Art Commission on two projects to install public art along the greenway, one of which is a large outdoor classroom in the shape of the river that can be used to teach school groups about hydrology and the water cycle. In addition, the Conservancy has worked with the Lynching Sites Project of Memphis to include a short greenway spur off of Phase 12B for the purpose of placing commemorative artwork at this previously inaccessible site of the lynching of Ell Persons in 1917.

The Conservancy strives to activate the greenway by offering a variety of free presentations, outdoor events, workshops, and service projects. The Wolf River Conservancy also started a Greenway Ambassador Program that enrolls local volunteers to help patrol the greenway, hand out information, and inform the public. Most of these Ambassadors are residents within the neighborhood they serve, contributing to a sense of community ownership and pride in the greenway.





6. Climate and Environment

The Wolf River Conservancy was founded in 1985 after a group of local volunteers came together to successfully oppose the construction of a new gravel mine along the river. Since then, the Conservancy, operating as a non-profit local land trust, has been dedicated to the protection of the lands along the Wolf River as a public natural resource and the prevention of the degradation of the river as an important source of clean water for the city. 2015's Greenprint 2040 Plan, the final installment of the Mid-South Regional Greenprint and Sustainability Plan initiative, was funded by an award to Shelby County from the U.S. Department of Housing and Urban Development. The Greenprint plan lays out a long-term vision for sustainability and flood resilience in the county, addressing a wide range of issues including housing, land use, resource conservation and environmental protection, and transportation alternatives. The Wolf River Greenway appears in the plan as a key piece of a network of green space hubs linked by trails and greenways that improve and preserve community access to green space.

Since 1985, the Wolf River Conservancy has preserved

19,000 ACRES

of wildlife habitat and land that recharges the Memphis Sand Aquifer. Construction of earlier phases of the Greenway has incorporated important aspects of environmental sustainability, including the restoration of natural wetland areas; in addition, through the acquisition of land for the trail, the City and Conservancy have been able to clean up several sites previously used as illegal dumping grounds. Trail construction has also allowed for the removal of impervious surfaces, which can be a key step towards more resilient stormwater management practices.

Additionally, any project designed to increase the use of active transportation modes has the potential to reduce vehicle miles traveled (VMT), and thus emissions. A shift to low-carbon transportation modes and reduced reliance on motor vehicles has been identified as the top transportation-related goal of the Memphis Area Climate Action Plan. Greenhouse gas emissions are a key factor in global climate change, with local implications including an increase in the urban heat island effect and adverse weather events including flooding.

Completion of the Wolf River Greenway will also address environmental justice considerations and improve the health of the people living near the project. The four census tracts surrounding the project have been identified as overburdened based on the Council on Environmental Quality's Climate and Economic Justice Screening Tool. In particular, these tracts experience high rates of asthma, a chronic condition which is exacerbated by emissions from motor vehicles.

7. Workforce Development and Economic Opportunity

The Wolf River Greenway has potential to be transformative for the project area's economy. The 2014 report titled, "Memphis Gets Moving: Health & Economic Impacts of the Building the Wolf River Greenway," estimated that the Memphis region would gain over \$14 million in total benefits per year from the construction of the Wolf River Greenway. The report estimated that tourism spending and property value increases will add nearly \$3 million in tax revenue captured by local municipalities each year.

In terms of employment benefits, the report estimated that the construction of the Wolf River Greenway would lead to an influx of nearly \$45 million into the local economy, as well as the creation of almost 500 permanent and temporary construction jobs. Construction jobs created as a result of the Wolf River Greenway will be subject to the City's **Equal Business Opportunity and Small** Business Enterprise programs, ensuring that woman- and minority-owned businesses, as well as small businesses, will have a fair chance at receiving construction contracts. The City's DBE requirement can be set anywhere above 8% for the two RCN grant sections of the trail, and the Conservancy is looking at setting it as high as 20%.

Moving beyond the immediate employment impacts of trail construction. numerous studies have demonstrated the impact that increased foot traffic has on local business revenues in the medium- and long-term. This will be a major incentive for new commercial and residential development in areas surrounding the greenway, resulting in a significant investment in economic competitiveness in the low-income communities located adjacent to the trail alignment. Memphis and Shelby County have taken proactive steps to help residents take advantage of these opportunities. In 2020, the Shelby County Nonprofit Committee brought together 46 local and regional nonprofits to come up with a strategy to increase community awareness about available workforce services; the result was a public-facing interactive online tool (NextSteps901.org) that helps connect residents to resources for finding employment, changing careers, and furthering their education.

Completion of the greenway could produce more than

\$14 MILLION

PER YEAR IN TOTAL BENEFITS

for the Memphis region.

PROJECT READINESS

TECHNICAL ASSESSMENT

The City of Memphis and its project partners have a demonstrated history of successfully planning and implementing significant federally funded infrastructure projects. The City has the capacity and experience to deliver this project to meet Federal requirements. The City will lead the administrative requirements of grant management and will conduct reviews during the design and construction submittal process. The City will also oversee the CEI process. For day-to-day management, a project manager will be assigned for all construction-related issues and a grant coordinator assigned for grantrelated tracking and compliance.

The City of Memphis is managing or has managed more than \$178 million in federal funds since 2016. In addition, the Wolf River Conservancy has experience with Federal projects through its involvement with Shelby County's \$60 million HUD Disaster Resilience Grant; the project includes \$9 million in funding for the Wolf River Greenway (phases 6, 7, 8, and 10A).

The Memphis MPO is committed to adding this project to its Metropolitan Transportation Plan and ultimately to the State of Tennessee TIP list prior to the award obligation (Please see the Memphis MPO letter of support).

FINANCIAL COMPLETENESS ASSESSMENT

The Walking (and Biking) in Memphis project is estimated to cost \$21,141,497.27. This proposal requests \$20,295,837.38 in RCN (NAE) grant funding to complete these two gaps in the Wolf River Greenway.

Cost estimates were developed, through conceptual design and a review of recent bid tabulations, by an engineering firm with extensive experience designing and overseeing roadway and trail infrastructure projects. Projected construction costs were calculated for this application process based on **2026** dollars in line with the anticipated construction timeline. Costs for administration, full design, permitting, construction, and CEI are provided with contingency and inflation factors.

Table 8. Federally-funded Projects Managed by City of Memphis

Project Name	Funding Source	Amount	Completion Year
MATA Bus Rapid Transit	BUILD and FTA	\$136M	Ongoing
Various Resurfacing Projects	FHWA MPO STBG Funds	\$14.7M	2022
50 Mile Bike/Ped Project	FHWA MPO STBG Funds	\$1M	2021
Brooks Road and Days Creek Bridge	FHWA MPO STBG Funds	\$727K	2019
Beale Street Landing	Earmarked	\$2.8M	2019
Poplar/Sweetbriar Interchange	FHWA MPO STBG Funds	\$1.6M	2018
Main to Main Trail	TIGER	\$19M	2016
Central Avenue	FHWA Enhancement Funds	\$1M	2016
ADA Curb Ramps (Various Locations)	FHWA MPO STBG Funds	\$1.9M	2016

Environmental Risk

PROJECT SCHEDULE

Assuming a notice of NAE award in early 2024, the schedule projects that design and permitting will be completed in early 2026, and construction completed in 2028.

REQUIRED APPROVALS AND PERMITS

It is anticipated that the project merits a Categorical Exclusion (CE), which will be completed alongside project design. Thus, no delay associated with NEPA is expected. The project is anticipated to require the following permits, with no delays:

- ACOE 401
- TDEC ARAP
- TDEC SWPPP
- CN Railroad Encroachment
- City of Memphis Floodplain Waiver
- Right-of-Way (ROW): Temporary and permanent easements will be required.

PUBLIC INVOLVEMENT

Public involvement has been key to the development of relevant plans and studies; more detail is provided in the Response to Merit Criteria sections "2. Access" and "4. Community Engagement."

RISKS AND RISK MITIGATION STRATEGIES

Minimal risks are anticipated with the project. Potential risks and their associated mitigation strategies are described below:

Right-of-Way (ROW) Acquisition: While parts of multiple parcels will need to be acquired, ROW acquisition is expected to be completed within a year of the initiation of the ROW acquisition process as part of the design phase.

Utility Conflicts: Utility conflicts are currently unknown at this time, but it is anticipated that any utility conflicts identified during the design phase will not affect the project timeline.

Table 9. Project Schedule

