ThreeRivers PARK DISTRICT

Active Transportation Network

Connecting Greater Minneapolis Communities through Sustainability, Equity, and Mobility

MERIT CRITERIA



2023 Rebuilding American Infrastructure with Sustainability and Equity (RAISE) Program

Project Name : Three Rivers Park District Active Transportation Network: Connecting Greater Minneapolis Communities through Sustainability, Equity, and Mobility

Total Project Cost : $30.05M

2022 RAISE Funds Requested : $24.04M

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Supporting Information can be found at: https://www.srfconsulting.com/trpd-raise/

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MERIT CRITERIA

SAFETY

The Project will improve safety through protected facilities, connected routes, and removal of barrier crossings. Hennepin County and Three Rivers' 2040 Bicycle Transportation Plan establishes a safety vision to "decrease the risk of crashes by reducing gaps and adding more separation from motor vehicles through more interconnected networks". The Project will support this vision by expanding the regional network of off-road trail facilities, providing safe crossings over documented barriers for people walking, cycling, rolling, or using transit, and protecting the trail network's most vulnerable and historically disadvantaged users.

New north-south connections will create direct, continuous, and protected routes supporting longer trips and eliminating the need for users to jump between or piece together fragmented local facilities and facility types, some of which may not provide the desired level of separation from motorized vehicles. Additionally, improved trail crossings will protect all modes of transportation and new routes will carry trail users safely over six regionally significant bicycle barrier crossing areas.

A motorist is less likely to collide with a person walking and bicycling if more people walk or bicycle. Constructing facilities that increase the numbers of people walking and bicycling appear to be an effective strategy to improving the safety of people walking and bicycling (Safety in numbers). Expanding and improving bicycle and pedestrian infrastructure means ensuring that a network of infrastructure is in place to make bicycling or walking viable modes of travel (US Department of Transportation).

By improving existing and providing new off-road multiuse trails, the Project will reduce the risk of fatalities and serious injuries for underserved, overburdened, and disadvantaged communities. The Project's off-road multiuse trails are the safest facilities for cyclists and pedestrians and the most appropriate for its urban context, relative to other on-road facilities.

Improve safety for non-motorized travelers through protected facilities

On the Project's current alignments and adjacent roadways, there were 29 bicycle and pedestrian crashes in the last ten years, including six serious injuries (Figure 1). Cyclists and pedestrians are extremely over-represented in fatalities and injuries from motor vehicle crashes in Minnesota. According to MnDOT data, from 2017-2021, 5.3 percent of pedestrian crashes and 1.4 percent of bicycle crashes were fatal, compared to 0.5 percent of total crashes. Ninety-six percent of pedestrian crashes and 91 percent of bicycle crashes resulted in injury, compared to 2.6 percent of total crashes. Overall, the Minneapolis-St. Paul-Bloomington, MN-WI metro area has seen a 17 percent increase in pedestrian deaths (comparing deaths in 2011-15 vs 2016-20). The 2040 Hennepin County Bicycle Plan documented that 53 percent of people are interested in cycling but concerned due to safety concerns. The Project addresses this finding by providing protected facilities and serve the greatest number of potential users.

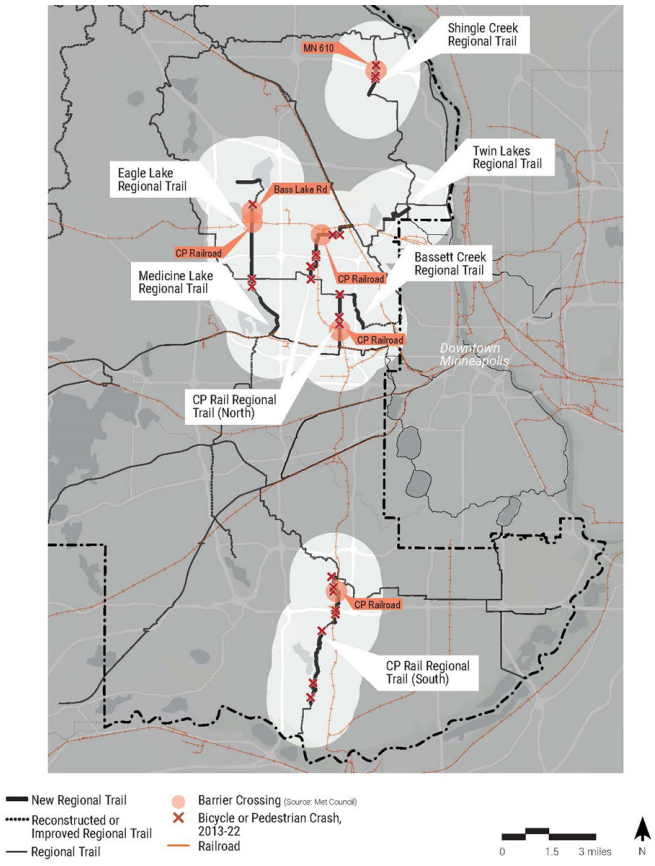

Figure 1 Known Safety Problems

The Project's off-road, multiuse trails are the safest facilities for bicyclists and pedestrians and are the most appropriate for its urban context, relative to other on-road facilities. Eighty-five to 95 percent of bicycle and pedestrian crashes in the state of Minnesota occur within urban areas with populations over 5,000. For routes with more than 6,000 average daily traffic (ADT) or speeds over 30mph, the FHWA Bikeway Selection Guide recommends off-road bicycle facilities that are physically separated from motor vehicle traffic. The Project will implement or reconstruct protected, off-road facilities along roadway segments meeting these requirements on CP Rail (both north and south segments), Eagle Lake, Shingle Creek, and Twin Lakes Regional Trails.

While bicyclists have the same rights as motor vehicles, they are more vulnerable to injury and death from collisions. In Minnesota in 2021, 38 percent of cyclists killed, and 22 percent of cyclists injured in motor vehicle crashes were legally cycling with traffic using bike lanes, traffic lanes, and shoulders on existing roadways but were physically unprotected. Separated facilities, like those proposed by the Project, reduce cyclist road deaths by 44 percent.

Removing documented barriers to walking, cycling, rolling, or using transit

The Metropolitan Council Regional Bicycle Barriers Study identifies major physical barriers to bicycle transportation in the Twin Cities region and prioritizes locations where new crossings would provide the most impact the regional trail network. The study considers proximity to bicycle and pedestrian crashes, population and employment density, and safety concerns identified through community outreach. The Project will construct protected trail crossings at six of these priority crossing areas: Canadian Pacific Railroad (four locations), Bass Lake Road, and MN Highway 610 (Figure 1). The Project will create a safer, more connected and useful regional trail network that invites more people by removing these barriers to walking, cycling, rolling, or using transit. The Project will improve a total of 89 trail crossings throughout the regional trail network, reducing the risk of bicycle-vehicle and pedestrian-vehicle collisions and improving access to the regional trail network for all potential users.

Reduce risk to underserved communities and equity populations, including:

Women: The proportion of female bicyclists using a trail system is considered a key indicator of its safety. Protected Bike Lanes are an Equity Issue documents that if you provide safe facilities more women will bike. Cycling by women increased 4 to 6 percent on roadways where there are protected bike lanes, further bolstering previous findings that dangerous streets are a prime cause of the gender gap in cycling. One third of bicycle commuters in Hennepin County are women. The proposed improvements address the gender gap in cycling by growing the network of protected facilities and increasing connectivity between existing facilities.

Seniors and people with disabilities: In community outreach, listening sessions, and surveys, seniors in Three Rivers' service area express feeling unsafe around motorized traffic and prefer off-street routes. The Project will provide continuous protected facilities that are comfortable to navigate mobility devices. Americans with Disabilities Act (ADA)-compliant curb cuts (over 100) are being installed, along with clear striping, signage, and accessible pedestrian signals (APS) are being installed at ten intersections. These improvements will help protect trail users who need extra time at intersections.

Low-income households: Seven percent of households in the Project area do not have access to a personal vehicle (source: 2015-2019 American Community Survey 5-year estimates). Safe pedestrian and bicycle facilities support the mobility of these households. The Project will better serve these users by providing protected bicycle and pedestrian facilities which directly connect to transit and other desired destinations (i.e. jobs, parks, schools, retail, places of worship, medical services, etc.). More than 90 percent of transit trips are combined with considerable walking to reach a destination and for those accessing transit via bike, all LRT and Metro Transit buses are equipped with bike racks/storage. The Project will enable 'last mile' trips by foot, expanding access to 85 bus stops and transit service areas.

Take a proactive approach to implementing safer roads

The Project is in line with departmental actions to enable safer roads in the Department's National Roadway Safety Strategy (Safe System Approach principal, p10). The Project takes a proactive approach to address safety issues in the regional trail network and overall transportation system by implementing Complete Streets best practices in planning, community engagement, and design. More information on Complete Streets can be found in Section 4, Mobility and Community Connectivity.

The Project will implement context-sensitive roadway design through updating and maintaining the improvements with the latest safety features. One example is narrowing some of the roads (lanes or shoulders). This practice has been proven to reduce traffic speeds and encourage attentive driving resulting in safer conditions for motorists and people walking, cycling, rolling, or using transit. The Project will develop two CP Rail trail crossings and improve several other existing rail crossings to meet CP Rail crossing guidance. The railroad crossings will be designed with sufficient infrastructure to limit the possibility of collision between trains and trail users (Figures 2 and 3).

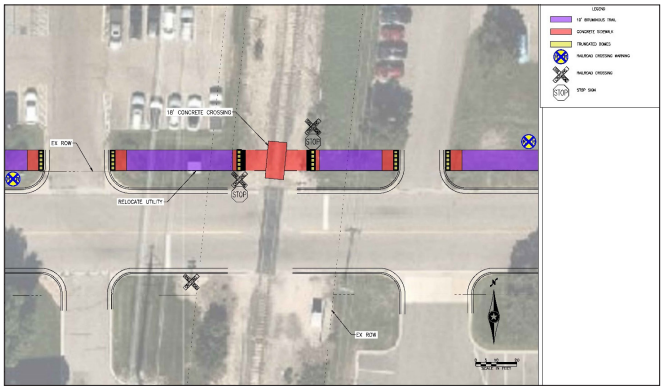

Figure 2 Dewy Hill Road Railroad Crossing

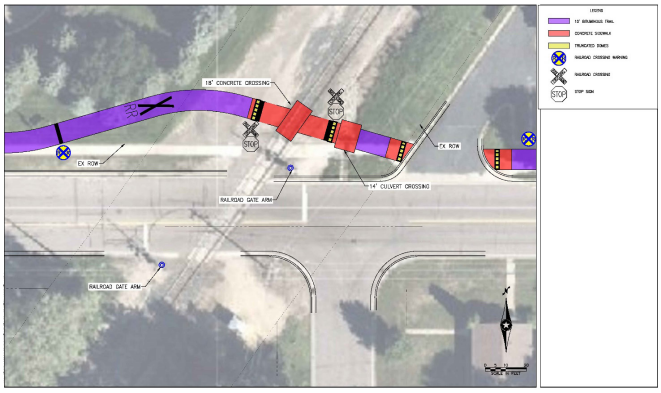

Figure 3 49th Avenue N Railroad Crossing

ENVIRONMENTAL SUSTAINABILITY

The Project will improve air quality, develop resilient infrastructure and support efficient land use and transportation systems and carbon free transportation. The Project will do so equitably, with a focus on addressing the disproportionate negative environmental impacts of transportation on underserved, overburdened and disadvantaged communities and on strategies to combat climate change.

In addition to supporting walking, rolling, and cycling, the Project will link to transit and promote mixed-use, location-efficient, and fiscally responsible land use.

Reduction in vehicle miles traveled

The Project will play a role in Hennepin County's Climate Action Plan, which aims to reduce vehicle miles traveled 26 percent by 2050 and supports the Minnesota Climate Action Plan goal of a 20 percent reduction in VMT per capita by 2025 (Mn Milestone for VMT Reduction.) The proposed regional trail facilities will provide a safe and attractive alternative to driving, reducing vehicle emissions while enabling active transportation. By converting driving trips to walking, cycling, rolling, or using transit, the Project will result in 6.7 million fewer vehicle miles traveled by 2050. This is projected to reduce CO2 emissions by 2,112 metric tons, NOx by 1,517 kilograms, and eliminate 5 kilograms of SO2 and 39 kilograms of PM2.5.

Areas of persistent poverty/Environmental justice communities

The Project will serve five APP, two HDC and Environmental Justice Communities identified by the Minnesota Pollution Control Agency. These neighborhoods have historically borne a disproportionate share of the metro area's pollution. As shown in Figure 4, these communities are overrepresented in the service areas of Shingle Creek, Twin Lakes, CP Rail (north segment) and Bassett Creek Regional Trails. By improving trail access for state Environmental Justice communities, the Project is projected to convert 1.5 million vehicle trips to walking, cycling, rolling, or using transit, reducing air pollution and promoting overall public health.

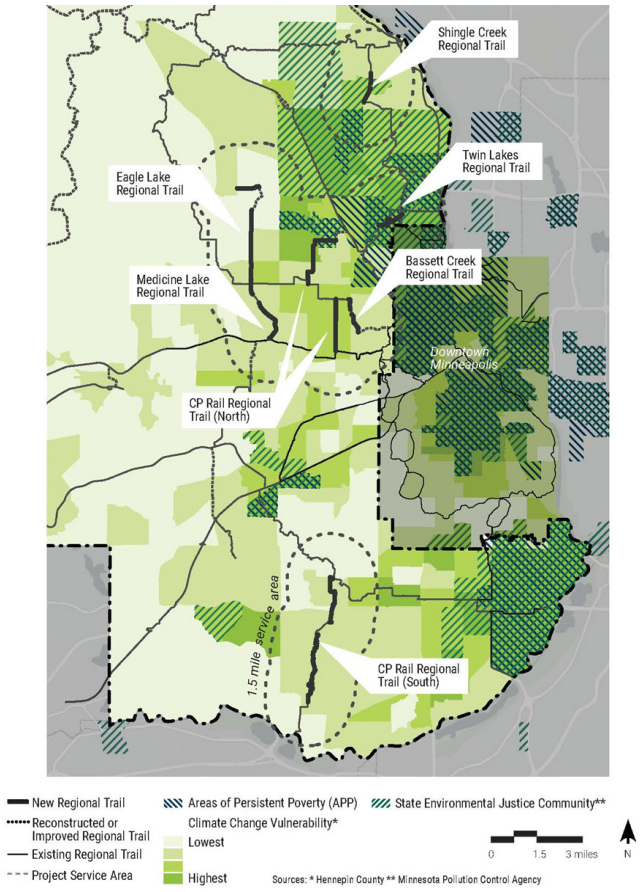

Figure 4: Environmental Justice

Figure 4 Environmental Justice

Resiliency in response to climate change

Environmental sustainability and stewardship are at the core of Three Rivers' mission. The Project will be developed using natural resources management and environmental best practices to increase resiliency and ensure our collective ability to adapt and thrive in response to our current climate crisis. The following list provides environmental best practices that Three Rivers will include in the Project, as well as for their entire system, to make a positive response to climate change.

- Implement Stormwater BMPs to capture and treat stormwater runoff from impervious surfaces
- Create tree inventories to catalog and prioritize existing tree canopies, minimize impacts to existing canopies, and address loss / expand canopies where applicable
- Install native plantings to build habitats, improve biodiversity, and lower resource-intensive maintenance costs and to encourage regionally appropriate plant selection and maintenance practices
- Utilize local materials to lower carbon costs of transportation and to encourage regionally appropriate material selection and maintenance practices; durable and recyclable materials, to increase longevity and to promote sustainability; and low carbon materials, to lower carbon costs and to promote greener building materials where applicable

The Project is designed to be used year-round which helps reduce VMT and GHG on a year-round basis and not just in the summer. Additionally, year-round use continues to increase due in part to warmer weather in the winter, better winter gear and safe, protected routes. As referenced in the State of Good Repair section, increased flooding due to climate change is projected to close existing segments of Bassett Creek Regional Trail. Flood closures create gaps in trail service and continuity, reducing safety and discouraging less-experienced riders. The Project will realign trail segments at risk of climate change-related floods, ensuring that the regional trail network will function fully in years to come. The Project demonstrates commitment to environmental justice by focusing on at-risk infrastructure in equity communities.

Fiscally responsible land use and transportation efficient design

The Project results in the creation and maintenance of high-quality facilities for people to walk and bike. In turn, the Project contributes to more compact and integrated communities, more space-efficient transportation networks, and more efficient and fiscally responsible land use patterns that produce places to live, work, and play. The 17 miles of regional trail constructed, reconstructed, or improved as part of the Project will be in developed communities seeking opportunities to create more efficient land use patterns and transportation networks which are not solely focus on the personal vehicle as the only means for transportation. The Project supports these efforts by encouraging non-motorized transportation creating more walkable and bikeable communities.

The latest Intergovernmental Panel on Climate Change (IPCC) mitigation report underscores the importance of the Project impacts. The report identifies supporting walking, cycling, rolling, or using transit as strategies to achieve large GHG emission reductions and avoid further climate catastrophe. In addition to supporting and increasing walking, cycling, rolling, or using transit, the Project will support coordinated land use decisions and promote more connected, mixed-use urban form, which the IPCC identifies as critical mitigation strategies. A specific example is the CP Rail (south segment) Regional Trail where adjacent properties are ripe for redevelopment and the community is evaluating mix-use land uses with future trail and transit connectivity. Additionally, the CP Rail (north segment) creates efficient land use by adding or improving safe walking and biking routes through more urban and higher density residential areas with major biking and walking destinations such as the New Hope YMCA and Crystal Community Center and pool.

In the Twin Cities region, about half of trips are 3 miles or less, and about one quarter of trips are one mile or less, according to the **Metropolitan Council's** 2019 Travel Behavior Inventory Household Survey. Short vehicle trips emit a disproportionate amount of air pollution. Research by Washington State University and the Utah Department of Environmental Quality shows that 75 percent of harmful emissions including precursors to ozone and fine particulate matter are generated during the first three minutes after ignition. Through increased access and connectivity, the Project will enable more short trips by bicycle and foot on the regional trail network and significantly reduce disproportionately polluting short vehicle trips. This is especially likely on the Twin Lakes, Bassett Creek, CP Rail (north and south), and Shingle Creek Regional Trails where the trails have greater connectivity local and regional transportation destinations. The Project supports the growth of ebike usage which help extend the length of bike trips and make it easier to complete trips typically done by car. About nine percent of American adults, or 23 million people, do not own a car, and that percent is considerably higher in many urban areas. For lower-income families, even if they own a car the cost of maintaining it is getting increasingly difficult. Most car trips in urban areas are for short-distance errands that could easily be managed on an e-bike.

QUALITY OF LIFE

The Project will improve the quality of life for those who live and work nearby. Its components will increase accessibility, remove barriers to opportunity, address health equity, and create stronger, more affordable communities. Underserved, overburdened, and disadvantaged communities (equity communities) were key partners in identifying Project components. This population will be overrepresented among recipients of direct Project benefits, relative to the Three Rivers service area. The Project provides direct benefits to five APP and two HDC communities (Figure 5).

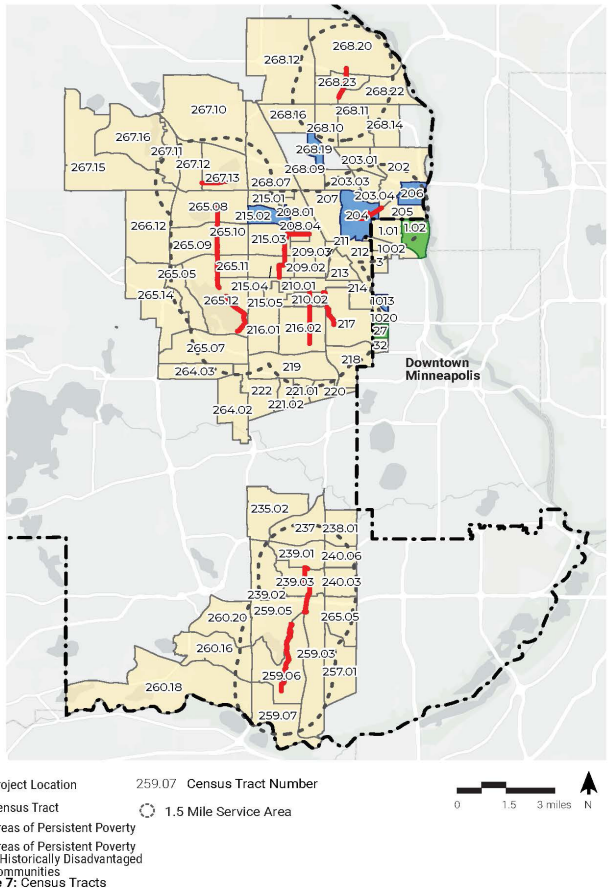

Figure 7: Census Tracts

Figure 5 Census Tracts

The communities Three Rivers serves are changing, and to remain relevant, Three Rivers 2040 System Plan calls for the trail system to be welcoming and convenient to all people. Of significance importance are typically underrepresented community groups which are overrepresented in the Project area relative to suburban Hennepin County, the extent of Three Rivers' service area. By extending the trail

network to these targeted equity communities and reconstructing substandard trails currently serving these populations, the Project will address historic disparities in transportation cost burden, public health, and access to opportunity.

Addressing racial equity and other disparities

The Twin Cities metropolitan region, and Minnesota as a whole, have some of the worst racial disparities in the nation in terms of health, poverty, unemployment, transportation, education, and other factors crucial to quality of life. The Project considered these disparities at a system level, increasing and improving trail connections to equity communities throughout its service area.

Community members experiencing poverty, with limited English proficiency (LEP), with disabilities, Black, Indigenous and People of Color (BIPOC), and zero-vehicle households are all overrepresented in the Project service area relative to suburban Hennepin County, the overall Three Rivers service area (Figure 6). The Project will serve 28 percent of residents living in Three Rivers' overall service area, an average of 38 percent of service area BIPOC residents, and an average of 17 percent of service area residents experiencing poverty.

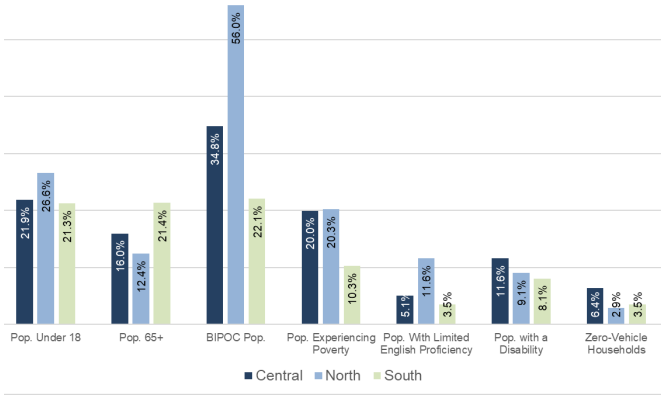

Figure 6 Population Living Within Project Area (Source: Minnesota Department of Education, ESRI)

Removing barriers and increasing access to opportunities

The Project will increase access to opportunities for walking, cycling, rolling or using transit. As referenced in Project History, the Project leverages the existing hub and spoke regional trail system by overlaying a grid design. The grid will make direct connections between suburban communities and fill or improve critical north-south gaps in the regional trail network. The Shingle Creek, Eagle Lake, CP Rail (both segments) and Medicine Lake Regional Trails are all examples of critical north-south corridors that remove major barriers, help connect users to local and regional destinations, and improve access to the regional trail system to more people.

The Project will remove barriers to active transportation. As described in the Safety criterion, six of trail crossings included in the Project are identified as priority barrier crossing areas in the Metropolitan Council Regional Bicycle Barriers Study. The study used four evaluation factors to prioritize barrier crossing areas: social equity, network connectivity, bicycling demand, and safety/existing conditions. It refined its priority crossing areas with a list of regionally significant origin and destination points. As shown in Figure 7: Access to Opportunities map, the Project's service area contains 13 of these points, including eight job centers, two high schools, and three regional parks.

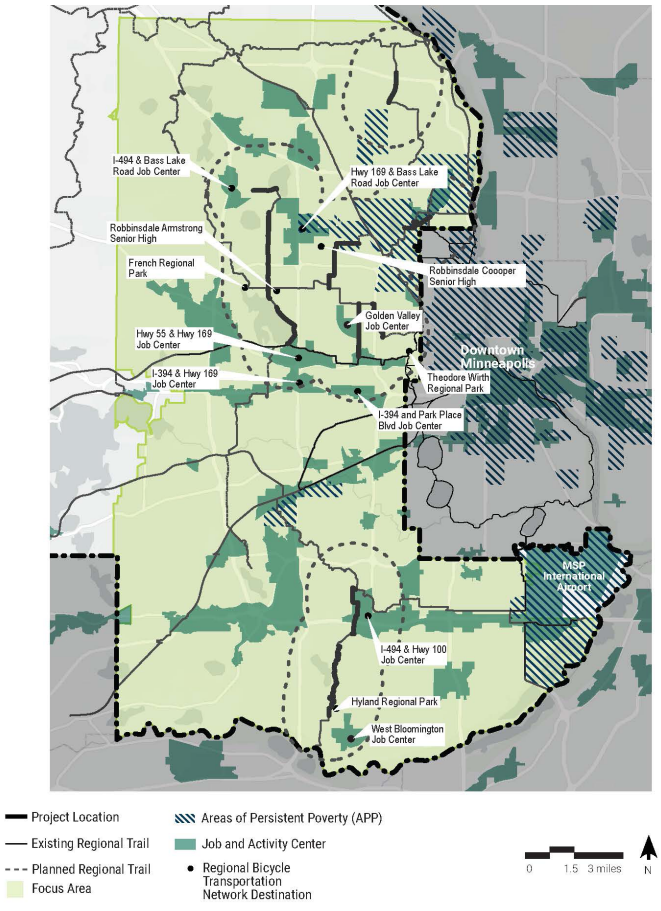

Figure 7 Access to Opportunities

The Metropolitan Council identifies locations of concentrated jobs benefiting from existing infrastructure investment as Job

and Activity Centers. The Council encourages continued development and investment in these centers. Five of the seven major project elements construct or improve regional trails to directly serve eight Job and Activity Centers, creating new connections to over 50,000 jobs across nearly 2,000 worksites. The Project's total service area includes 26 Job and Activity Centers, representing 220,000 jobs in 7,700 worksites. As referenced in State of Good Repair, the Project will ensure safe and equitable access to these opportunities.

Supporting strong communities and location affordability

The Project will enhance existing underserved, overburdened, or disadvantaged communities, support transit-oriented development, and reduce transportation and housing cost burdens. Multi-use trails are community amenities that create public spaces for people. Safe walking and cycling facilities attract people into the public realm, increasing neighborhood safety and sense of community. A recent study found that people who walk more as part of their daily lives, and those that live in more walkable neighborhoods felt more connected to their communities (as summarized in this report). In fact, recent regional trail routes, like in the case of CP Rail (north segment) Regional Trail was purposefully routed to connect affordable housing and lower to moderate income neighborhoods to destinations that community members indicated they wanted to be able to walk or bike to.

The Project will also support the development of walkable, transit-oriented communities by improving connections to planned and existing transit routes. It will create protected trail access to all planned and existing bus rapid transit (BRT) and light rail transit (LRT) lines in Hennepin County. The reconstructed Twin Lakes Regional Trail will improve connections to the Brooklyn Center Transit Center, which is served by the existing METRO C Line BRT, METRO D Line BRT, and a dozen other local and express bus routes operated by Metro Transit. Five APPs and two HDCs, and several Environmental Justice Communities within a mile of these Project segments will benefit from protected trail connections to transit.

According to data from HUD and DOT's Location Affordability Index, the typical moderate-income family living in the Project area spends 52 percent of their income on housing and transportation. In addition to supporting multimodal communities, the Project will connect areas with comparatively high transportation and housing (H+T) cost burdens to areas with concentrated employment and activity providing an additional transportation which is free and promotes a healthy lifestyle helping to improve overall public health especially to those communities which face the greatest health and wellness disparities.

Providing health benefits

The Project will increase use of the regional trail system network and produce subsequent health benefits. A 2017 MnDOT study found that commuting by foot or bike is associated with a significantly lower risk of cancer, cardiovascular disease, and overall mortality. Similarly, a literature review from the American Heart Association estimates that every $1 invested in building trails directly correlates with $3 in saved medical costs. At that rate, the Project will result in about $68 million in saved medical costs. USDOT Physical Activity From Transportation notes that activity accumulated in several bouts, a minimum of 10 minutes at a time, has health benefits. Walking or bicycling as a form of transportation or walking to public transportation stations, such as bus stops, also count toward meeting the daily physical activity recommendations. Overall, there is a significant 12 percent reduction in mortality associated with active transportation, and there is an 11 percent reduction in risk of cardiovascular disease associated with active transportation.

IMPROVES MOBILITY AND COMMUNITY CONNECTIVITY

As referenced under Safety, the 2040 Hennepin County Bicycle Plan (which was based on intensive engagement) identified north-south corridors as major gaps in the network and that over half of the community were interested but concerned about biking but wanted facilities separated from cars. On-street routes do not provide this separation/safety and are therefore gaps in the system. The Project creates a network of off-road facilities to fill those gaps.

The Project's trails will offer low-cost alternatives to driving, helping reduce transportation spending in the cost-burdened households served by the Project (as described in Project Location). The 2019 Travel Behavior Inventory Household Survey shows that suburban, low-income households spend

the most on gas (as a percentage of household income) in the Twin Cities region. The typical moderate-income family living in the Project area spends about 20 percent of their income on transportation, based on data from the Location Affordability Index. Both zero-vehicle and one-vehicle households are overrepresented in the Project area (Figure 8).

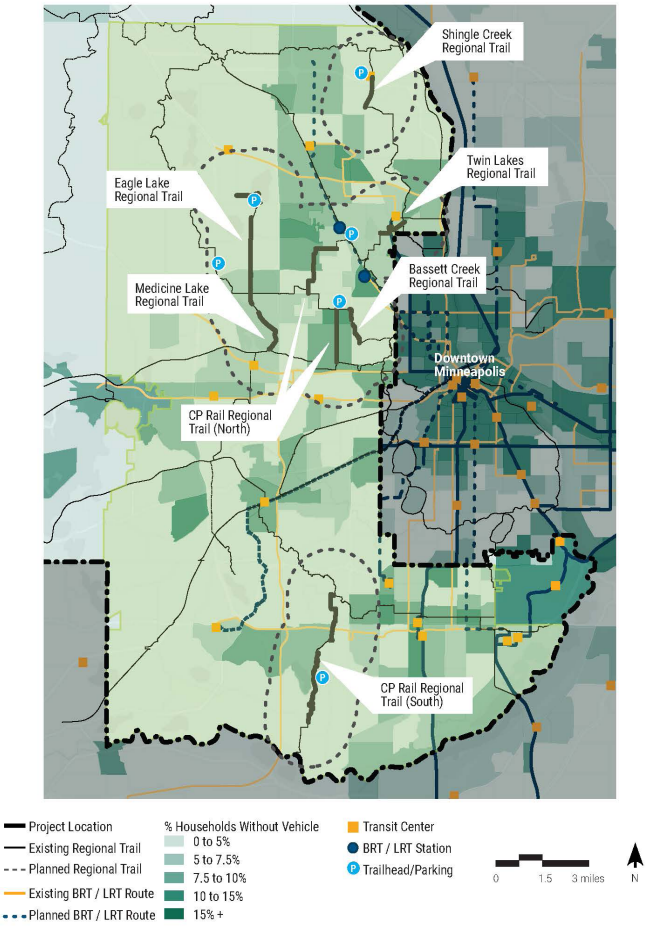

Figure 8 Mobility

Three Rivers Park District's existing 180-mile trail network saw 6,218,200 visits in 2021 and, based on a 2019 statistically significant survey, 23 percent of visitors use the trails for any transportation purpose and 9 percent specifically use the trails to commute to work or school. This is a significant increase in transportation use, whereas in 2001, only 7 percent of users surveyed said their trip was for transportation purposes. As the regional trail network expands and becomes even more connected to itself and local and regional destinations, the percent and number of trail users using regional trails for transportation is expected to continue to increase.

Increasing affordable transportation choices

The Project will create and improve access to transit stops and stations throughout its service area, increasing affordable transportation choices for underserved, overburdened, and disadvantaged communities. Leveraging investments in regional transit, the Project will support "last mile" trips by bike or foot, improving safety and increasing transit service areas. The Project is served by 85 transit routes within a half mile of the Project trail segments. To further increase connectivity to transit services, Three Rivers has reached out to Metro Transit (Twin Cities main transit service provider) to arrange a partnership where Three Rivers will include improvements to nine bus stops with an accessible landing as part of the Project (dashed line in Figure 9). Currently these stops only have a bus stop sign and transferring between walking, cycling, rolling and transit is difficult, if not impossible, especially during the winter. Metro Transit buses provide bike racks and these improved bus stops will increase the accessibility to multi-modes of transportation (Figure 10).

Figure 9 Proposed Metro Transit Bus Stop Improvements.

Figure 10 Metro Transit Bus with Bike Rack

Accessibility and universal design

The Project will increase accessibility for all Project users, particularly non-motorized travelers (those walking, cycling, rolling, or using transit) and those with disabilities. Universal design is fundamental to Three Rivers' infrastructure planning and management; and their facilities provide inclusive opportunities for people of all ages and abilities.

The Project will construct or reconstruct 17.3 miles of continuous protected trail facilities that are comfortable to navigate with mobility devices. Of these, 5.5 miles will fill gaps in the existing trail network, improving accessibility throughout the system. Eighty-nine improved crossings - with ADA-compliant curb cuts, clear striping and signage, and signals where appropriate – will help improve access to and through the regional trail network, especially for people with disabilities and those under 18 years of age which are overrepresented within the Project service area. APS systems are being installed at ten intersections. These improvements will help protect trail users who need extra time at intersections. Additionally, Three Rivers' pavement management reduce cracks and maintain a smooth barrier free surface to those with mobility and vision challenges. Through universal design, the Project will improve safety, enable independence, and increase social, recreational, and employment opportunities for all non-motorized travelers.

The Project provides complete streets across all project areas and is in line with Hennepin County's Complete Streets Policy, Living Streets Policy (City of Edina), Complete Streets Policy (City of Bloomington), and Complete Streets Policy (City of New Hope)

Thriving communities

The Project will encourage thriving communities for individuals to work, live, and play by creating opportunities to move freely without a car. In the Twin Cities region, 51 percent of household trips are for everyday activities like healthcare visits, shopping, errands, or picking up and dropping off family members, according to the Metropolitan Council's 2019 Travel Behavior Inventory Household Survey. The Project will enable non-motorized trips for many purposes and for entire households regardless of age and ability, including, but not limited to commuting for work.

Regional trails facilitate and encourage active transportation between and within communities. In addition to linking to Regional Job and Activity Centers served by the Project (see Quality of Life section), the Project's components will enable short trips to community amenities. The Project will directly connect to nearly 550 community resources and improve non-motorized access to thousands more via the regional trail network.

ECONOMIC COMPETITIVENESS AND OPPORTUNITY

Enabling greater participation in active transportation is key to the Twin Cities region's ability to prosper and there is great potential to do so by providing an integrated and connected of off-road trails linking residential, commercial, retail and job nodes and centers. In addition to the benefits related to safety, environmental sustainability, health, affordability, mobility, and community connectivity, regional trails contribute to our region's economic competitiveness, opportunity, and prosperity.

The Project will improve the economic strength of partner cities and our region; increasing system connectivity and access to opportunity, especially for equity communities; and expanding high-quality, good-paying jobs and training opportunities. The Project will provide connectivity to 37,000 jobs within the Project service area and support regional economic development by improving productivity, creating jobs, retaining talent, and creating equitable access to opportunities. This is due in part to trails increasing transportation system efficiency and improving labor productivity by promoting public health, businesses using the regional trail network to attract and retain a talented workforce, and investments in cycling and pedestrian infrastructure producing more jobs than other roadway capital projects.

Regional economic prosperity

Prosperity is fostered by investments in infrastructure and amenities that make our region competitive in attracting and retaining successful businesses, a talented workforce, and strong economic opportunities. The Project will make systems-level improvements to the regional trail network in support of our region's economic competitiveness strategy. Greater MSP, the Minneapolis-Saint Paul Regional

Economic Development Partnership, promotes the regional trail network when seeking to attract talent and considers efficient and reliable transportation an investment priority.

The economic benefits of walking and biking are numerous and well-documented. By shifting trips from driving to walking and biking, the Project will support economic development through increased transportation system efficiency (i.e., reduced traffic congestion, parking and auto ownership costs), labor access (i.e., access to education and employment, expanded labor pools), and labor productivity via improved health. As described in Quality of Life and Mobility and Community Connectivity sections, the Project will increase affordable transportation options, thus increasing economic mobility and resiliency for equity communities.

The Project will support local businesses and industries, including tourism. Lindsey et al. (2015) found that 20 percent of Central Ohio greenway and trail users spent $17-$18 when visiting trails, with cyclists more likely to spend money. However, as summarized by the Victoria Transport Policy Institute, bicycle tourists expect high-quality, safe, and comfortable facilities. The Project's purpose is to provide these types of high-quality trail facilities to our communities and region.

Connectivity and access to opportunity

As described in Quality of Life and Mobility and Community Connectivity sections, the Project will increase affordable transportation options, thus increasing economic mobility and resiliency for equity communities. It will close gaps in the regional trail network, connecting users to opportunities including employment, education, healthcare, public transit, and social services. For example, the Twin Lakes Regional Trail improvements will provide direct connectivity to future redevelopment of the vacated Brookdale Center Mall site and will also support an identified Opportunity Site in Brooklyn Center. The 16-acre redevelopment includes a 278-unit multi-family residential building, a 205-unit multi-family residential building, a 60-unit multi-family residential building, along with a daycare, conference center and entrepreneurial market plaza.

Employment and training

The Project will support high-quality, good-paying jobs. Constructing cycling and pedestrian infrastructure produces more jobs than other roadway capital projects. According to a 2011 study, for every $1 million in capital investment, off-street multiuse trails generate 9.6 jobs, while roadway projects without bicycle or pedestrian elements generate 7.8 jobs.

Three Rivers is an Equal Employment Opportunity Employer and encourages applications from women, racial and ethnic minorities, and other protected classes. In 2021 and still representative of 2022, Three Rivers employed over 2,300 people through full-time, part-time, or seasonal work, with cumulative annual gross wages totaling nearly $33 million. Most Three Rivers employees live in its service area. Nearly 70 percent of employees live in Hennepin County, contributing over $18 million in gross wages in 2021. Another 22 percent of employees live elsewhere in the seven-county region. Three Rivers offers comprehensive benefits to eligible employees. On average, Three Rivers paid $20,800 in benefits per eligible employee in 2021. Over 150 staff are represented by one of three unions: Teamsters Local 320, and LELS Locals 142 and 296.

Three Rivers' Pathways internship program offers paid internship opportunities for youth and young adults who face barriers to employment. The Three Rivers Park District Foundation enables participation through transportation scholarships to interns without reliable transportation. Information on Three Rivers' incorporation of private sector entities, including Disadvantaged Business Enterprise (DBE) firms, is listed in the Partnerships and Collaboration section.

STATE OF GOOD REPAIR

The Project is projected to support 3,976,500 trips per year by 2040. Ensuring the regional trail system remains in a state of good repair is critical to its usefulness. In addition to constructing new trails to fill gaps in the system, the Project will reconstruct 9.4 miles of existing trails and sidewalks and improve wayfinding and amenities along 2.4 miles of existing trail.

Address system vulnerabilities

Climate change is projected to increase the frequency and duration of flooding throughout Minnesota. The eastern segment of Bassett Creek Regional Trail experiences significant annual flooding, closing the trail to most users (Figure 11). Bassett Creek Regional Trail's service area

includes and provides a direct trail connect to one HDC and one APP. As referenced in the Quality of Life section, multi-use trails remove barriers to active transportation and increase access to opportunities. By realigning and reconstructing the trail segments that flood, the Project ensures that the regional trail network continues to serve these communities with high quality facilities in good working order on a year round basis.

Restore and modernize core infrastructure assets

The existing regional trail network has been built in segments since the 1970s, by various agencies with differing standards. Some segments are only 6' or 8' wide (rather than the minimum of 10' for safe two-way travel) and many fail to comply with ADA standards. Others are at the end of their useful life (Table 1). The Project will reconstruct 9.4 miles of existing trails and sidewalks on five regional trail routes, upgrading them to current regional trail design standards.

Figure 11 Bassett Creek Regional Trail Seasonal Flooding.

Table 1 Existing Condition of Trails Reconstruction Segments

Basset Creek Regional Trail	0.1 miles narrow sidewalk with substandard curb; 1 mile end-of-life local trail – pavement cracking, seasonal flooding, does not meet ADA
CP Rail Regional Trail	N/A
Eagle Lake Regional Trail	1.5 miles end-of-life local trail: substandard, 6-8' wide, does not meet ADA
Medicine Lake Regional Trail	2.3 miles end-of-life regional trail: 8' wide, pavement in poor condition
Shingle Creek Regional Trail	0.8 miles end-of-life concrete sidewalk: 6' wide, does not meet ADA
Twin Lakes Regional Trail	0.1 miles sidewalk replacement to trail; 0.4 miles end-of-life regional trail; does not meet ADA

The Project's seven trails support a combined 1,400,400 trips per year. Their service areas include two HDCs and five APPs. Reconstructing and upgrading these trail segments to current design standards will ensure they continue to provide safe, accessible routes for these communities. The Project's inclusion of trail reconstruction and improvements (rather than exclusively new trails) draws on field experience and user feedback (Figures 12 and 13: Existing Conditions). Three Rivers practices strong stewardship of its infrastructure to avoid deferred maintenance and trail closure. Its Capital Improvement Program (CIP) prioritizes preserving existing assets and preventing interruptions in trail service. About one-third of the Project addresses existing trail assets that are under control of Three Rivers or in the process of being conveyed to Three Rivers per the completed master plans.

Figure 12 Typical discontinuous surface on Three Rivers' trails

Figure 13 Typical cracking and pothole on Three Rivers' trails at the end of the useful life

Three Rivers extends the life of trail pavement by 50 percent, extending it from 20 years to 30 years, through pavement treatments in years 7, 14, and 21 (see Figure 14: Preventative Maintenance Plan). Three Rivers staff actively monitor all trails using PASER (University of Wisconsin-Madison), PAVEMENT View Plus (Cartegraph), and an in-house geospatial database, combined with annual field inspections and adjusts pavement management practices based on the assessments findings. These practices will be employed for all segments of the Project.

Three Rivers conducted one of the first studies on user satisfaction as it relates to trail surface condition. The study found that satisfaction levels are very high for a PASER rating of 5 or above, decline slightly from 5 to 3.5, and then drop into unacceptable levels for rating at or below 3.5. This data helps determine when trails are at end-of-life. Project components were identified in part based on this data.

Ongoing: Routine crack sealing and safety projects				
YEAR 0 Trail Constructed	YEAR 6-8 Microsurfacing*	YEAR 13-15 Microsurfacing*	YEAR 20-22 Microsurfacing*	YEAR 30 Reconstruction

**Includes pre-repair project to correct settlement, root damage, and seal cracks and general surface distortions*

Figure 14 Preventative Maintenance Plan

PARTNERSHIP AND COLLABORATION

The Project and all the community engagement and preplanning which led up to this point was developed through close coordination with local, county, regional, and state partners, with the understanding that transportation networks do not adhere to political boundaries. Agency partners include the MnDOT, CP Rail, Metropolitan Council/ Metro Transit, Hennepin County, nine cities (Bloomington, Brooklyn Park, Crystal, Edina, Golden Valley, Maple Grove, New Hope, Plymouth, and Brooklyn Center), and the Minneapolis Park and Recreation Board.

Ensuring equity considerations are meaningfully integrated

For each project, community feedback was instrumental in determining a community supported regional trail route, ensuring critical connections to community desired destinations (i.e., parks, schools, local retail, transit, and restaurants), and developing design concepts that balanced public benefit with potential private property impacts. For example, in the case of the CP Rail (north segment) Regional Trail, community members could vote on one of three potential routes and select their top destinations for walking and biking within their community. The adopted route

reflects both the community supported route and the route with most community defined destinations. In another example, multiple design options were developed, and community members were allowed to weigh in on whether they preferred options that eliminated parking or required small easements from private property owners. Community feedback has also been incorporated into the regional trail network in the following ways:

- Development of a system-wide kiosk/wayfinding plan, consistent design standards and support facilities (fix-it stations, bathrooms, benches, garbage, etc.) to address and alleviate concerns of getting lost and feeling comfortable and welcome on regional trails for new and underrepresented users.
- Purposeful connections to nature, as many BIPOC community members and community members from lower income households indicated a desire for routes through and to natural areas.
- Separating trail users from motor vehicles, as this is a strong preference by all community members.

For each of the regional trail master plans informing the Project, Three Rivers conducted extensive community outreach through events, surveys, focus groups, interactive mapping, and targeted listening sessions. In total, they engaged over 5,000 people at 50+ events while developing the regional master plans that inform the Project.

Additionally, Three Rivers has an official Community Engagement and Liaison Team, staff who work to engage and build relationships with underrepresented community groups. The team is purposefully reflective of these targeted groups and has strong ties within their communities. One of their tasks is to understand and remove barriers to trail use. The Project used feedback from this team to prioritize which interventions to apply where in the system.

Three Rivers' Parks to People master planning effort will identify how to best serve the communities surrounding Minneapolis which include many of the most racially and socio-economic diverse communities within Hennepin County. This effort includes robust community engagement of typically underrepresented community members in parks, trails and planning processes with the help of hired cultural/community liaisons. While this engagement is still underway, findings support this Project as many community members cite bicycling as a desired activity and indicated that proximately to offerings from their home matters. Three Rivers' 5-year CIP allocates $1 million per year for the outcomes of this planning effort in 2024, 2025 and 2026 and anticipates that a significant amount of this investment will be directly along the regional trail network.

Project coordination

The project includes work in nine different cities of which each is partner and opportunities for thoughtful collaboration. Some specific examples include:

- Basset Creek Regional Trail will be reconstructed to incorporate the findings and recommendations of a planned city study to address local flooding which is increasing in duration and frequency as part of climate change. This work will ensure the trail remains open year-round and with access to APP and HDC areas east of the project area.
- The Twin Lake Regional Trail project area directly connects to a new regional trail segment being built as a part of a redevelopment effort of a former mall site into light industrial/office uses within the next two years. The private investment and construction of the regional trail system is being done as a development condition imposed by the city. The combination of this Project and the developer's project will provide direct access to community members living within an APP area to a revitalized job node which has been vacant for several years.

Research to best serve disadvantaged communities

Three Rivers incorporates feedback from disadvantaged communities within their service area into all trail design and planning efforts. Their engagement processes with these communities are innovative and thorough, ensuring that Project elements will improve safe and equitable trail access to underserved, overburdened, and disadvantaged communities.

For example, the Project improvements on Medicine Lake and Shingle Creek Regional Trails were identified through the Nine Regional Trails Master Plan – an innovative planning effort focused on increasing enjoyment, safety, and comfort for underrepresented and new users on existing regional trails.

Through a user survey on Medicine Lake Regional Trail, staff found that people under 18, over 75, black adults, and members of low-income households are underrepresented on the trail compared to their percentage of its service area population. Three Rivers then designed a comprehensive engagement plan to connect directly with these groups and better understand what they need and want from regional trails. Targeted engagement strategies included: resident meetings at mobile home, affordable housing, and retirement communities; a listening session with a senior walking group; and in-person tabling at community events close to the Project and well-attended by families with children, people of color, and low-income households. Staff heard that users under 18 and over 75 need smooth, stable trail surfaces, and accessible and safe roadway crossings. All underrepresented groups cited the fear of getting lost as a significant barrier to trail use.

The Project responds directly to this feedback by replacing degraded, narrow pavement with a contiguous 10' wide bituminous surface, improving trail crossings at roadway intersections, and improving wayfinding throughout Medicine Lake Regional Trail.

Three Rivers will continue to engage equity populations throughout design development and after construction through its five-year regional trail survey program, to make sure Project components are serving trail users as intended. This feedback loop of engagement is an innovative practice that exceeds industry standards to ensure that the Project achieves its quality of life, connectivity, and sustainability goals.

Advancing opportunities for disadvantaged business enterprises

Three Rivers is committed to advancing equitable opportunities for Disadvantaged Business Enterprise (DBE) firms, to ensure that those providing goods and services to Three Rivers are representative of the Three Rivers' communities. Most recently, when seeking professional firms for its consultant pool through a request for qualifications (RFQ) process, Three Rivers intentionally targeted DBE firms. Staff reached DBE firms with direct invitation, recruiting through the MN Black-Owned Business Directory, MN Minority Goods & Services Association (MMGSA), and via the networks of our public partners who serve our region's most diverse communities. The final pool has 34 percent DBE representation (goal 10 percent). Of the nearly 200 RFQ holders, 48 percent were DBE firms, up from 14 percent DBE firms five years prior.

INNOVATION

Three Rivers is intentional and innovative in meeting the needs of today while anticipating and protecting the needs of tomorrow. Staff embrace new ideas, think big, take risks, and learn from mistakes. This approach is essential to the Project, which will highlight innovation in design and maintenance with climate in mind, and monitoring trail usage and feedback through established research programs.

Today, Three Rivers incorporates several innovative elements and practices in their trail and park facilities and programs throughout the system, including: solar power generation, geothermal heating, rectangular rapid flashing beacons (RRFBs), permeable pavement (where conditions support it), adaptive programming and partnerships, among many others. Several innovative elements have been included in the Project based on Project goals, community engagement, and to highlight and inspire further innovation by our partner agencies at the state, regional, and local levels.

Monitoring use and feedback through research

Three Rivers has an internal research team to monitor use patterns, better understand its communities, identify needs and opportunities, and enable innovative practices. The Project leverages insights from this team.

The Project includes installation of 5 Eco Counter automatic trail counters at five of the project locations: CP Rail (south segment), Medicine Lake, Eagle Lake, Shingle Creek, and Bassett Creek Regional Trails. These automatic trail counters supplement the 3 existing counters that exist within Three Rivers' regional trail system annual visitation count program. Establishing accurate visitation counts is critical to Three Rivers' regional trail network, as the counts dictate the funding received from the State of Minnesota and the Metropolitan Council and help prioritize capital, operations, and maintenance investments.

Designing for a harsh and changing climate

The Project will implement innovative cold-weather pavement design to ensure that the regional rail network

remains functional year-round. While the Twin Cities are known for long, harsh winters, bicycle and pedestrian counts by MnDOT show that people both cycle and walk for transportation year-round. This is especially important as households in underserved, overburdened, and disadvantaged communities are more likely to rely on trails for transportation throughout the year.

Three Rivers' trails are designed for cold-weather climates, with robust pavement and adequate depth to withstand the freeze-thaw cycle for a 30-year lifespan, and grading to reduce icing over during the freeze/thaw cycle. The Project will implement this pavement design in all segments it constructs or reconstructs. In an average winter, 54 inches of snow falls on the Twin Cities region, and winter precipitation is projected to increase more than 20 percent due to climate change. Through innovative and site- and climate-specific engineering, the Project will provide safe and resilient routes for all residents, but especially underserved, overburdened, and disadvantaged communities in its service area.

Innovative technology

Low Carbon Materials and Additional Info

For the reconstructed trails, the Project will use recycled pavement to reduce carbon inputs. Three Rivers mixes the asphalt and aggregate base layers together which eliminates the trucking required to haul the asphalt away. The new aggregate base course is regraded, compacted, and then paved over. When reclaiming isn't used, the asphalt is hauled away from the site and recycled into new asphalt mixes. Typically, 20 percent of recycled asphalt is allowed in the asphalt mix, but sometimes can be more.

Enhance Environment for Electric Bikes

The Project is designed to accommodate ebikes and promote this form of transportation to replace shorter trips typically taken by car. To foster and support ebike use, the Project includes six e-charging stations at three locations along the Eagle Lake, Medicine Lake, and CP Rail (south segment) regional trails. Three Rivers is continually communicating with the partner cities, Metropolitan Council and Metro Transit to identify and support ebike supportive infrastructure.

User Input

Three Rivers conducted one of the first studies on user satisfaction as it relates to trail surface condition. The study found that satisfaction levels are very high for a PASER rating of 5 or above, decline slightly from 5 to 3.5, and then drop into unacceptable levels for rating at or below 3.5. This data helps determine when trails are at end-of-life. Project components were identified in part based on this data.

Innovative project delivery

Three Rivers intends to complete all predesign work under one contract and all final design under one contract for the full Project. Construction phasing of the Project components will be aligned with the expected end of useful life based on pazer findings (mentioned in detail above).

Three Rivers customizes regional trail design to complement and work in cohesion with the adjacent land uses. One way it does this is through creative design solutions developed in partnership with the community to minimize acquisition needs and potential property impacts while resulting in Complete Streets design. Examples include reducing land and shoulder width, moving curbs, and exploring trail and clear zone width.

Innovative financing

Three Rivers has a secured source of financing and although not innovative, it is very reliable and stable. Local funding from Three Rivers Park District is dedicated to the Project through its General Obligation Bonds or its other resources.

SUPPORTING DOCUMENTS

All supporting documents and the RAISE grant application narrative are also available to view at the following webpage:

https://www.srfconsulting.com/trpd-raise/