

Overview of Multi-Modal Trails Case Studies | Miami-Dade County

Final Report



Table of Contents

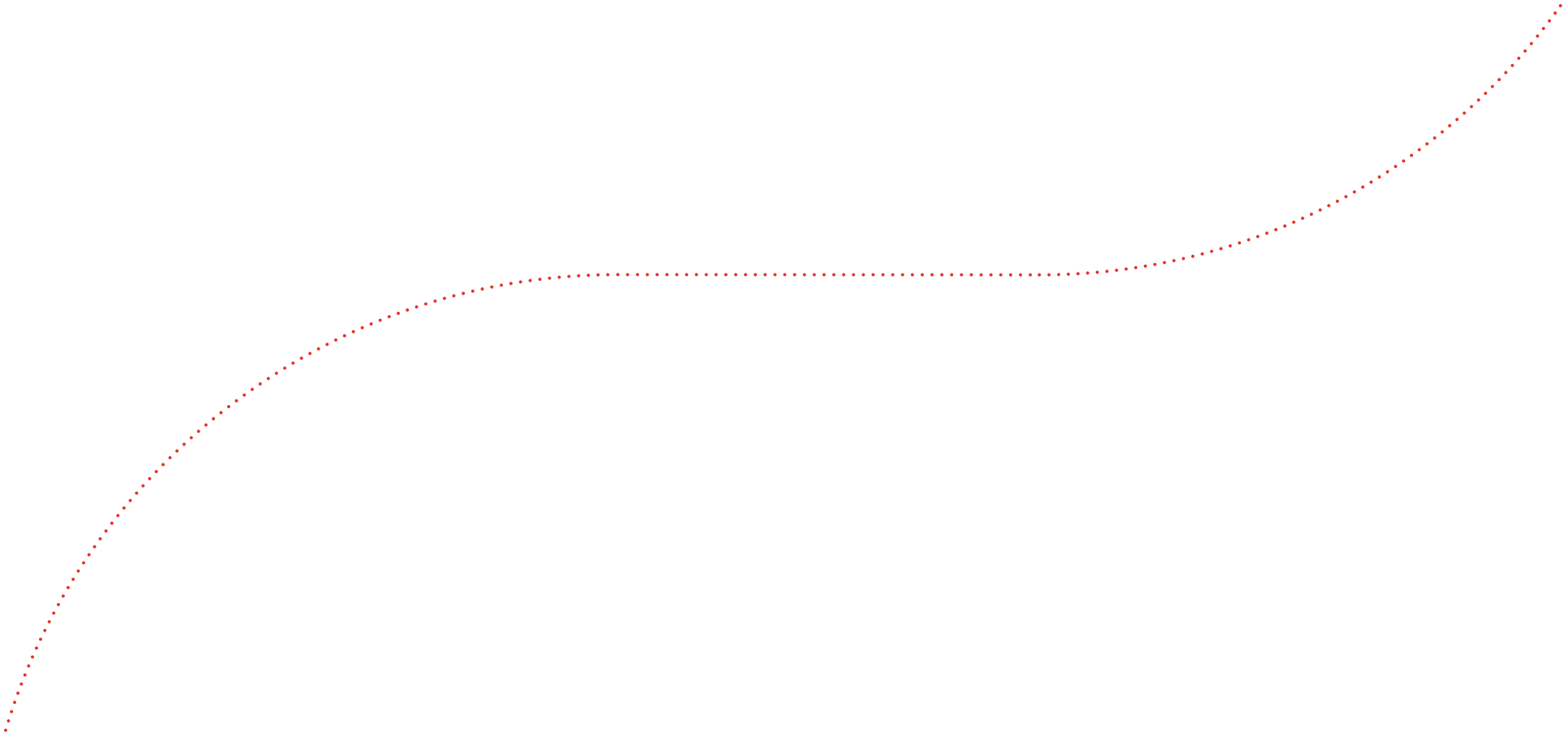
1. Overview
2. The Underline
3. Snake Creek Trail
4. Snapper Creek Trail
5. Krome Path
6. Overall Key Findings and Recommendations
7. Bibliography





1

Overview



Overview (1 of 2)

- ▶ Multimodal paths and pedestrian trails are growing in importance in Miami-Dade County (MDC).
- ▶ OCITT is interested in seeking more information on the funding available to build, operate, and maintain bicycle path and trail assets.
- ▶ In order to showcase the associated funding opportunities and costs of building and maintaining trails, this report includes four case studies of the following trial projects:

The Underline

Snake Creek Trail

**Snapper Creek
Trail**

Krome Path

- ▶ For each case study, this report provides:
 - ▶ An overview of the project (i.e., background, main features, timeline); and
 - ▶ Cost estimates for capital expenditures (Capex) and operations and maintenance expenditures (O&M or Opex), as well as identified funding sources.
- ▶ The report also provides an overview of potential options to fill O&M funding gaps for the four trails, which includes an assessment of these potential funding sources' magnitude, frequency, political feasibility, and examples of trails in Florida and other jurisdictions that leveraged them.
- ▶ The report also provides an overview of O&M funding models worldwide and in the US and concludes with key takeaways and general (and, in some cases, tailored) recommendations regarding funding of the case study trails' O&M costs.

Overview (2 of 2)

The characteristics of the four case study trails vary significantly and represent the socioeconomic and geographic diversity of MDC.

Krome Path

- Length: 18.5 miles
- Geographic Location: Western Miami Dade County, parallel to Krome Avenue
- Type: Suburban trail
- Surface: Asphalt
- Amenities: Limited amenities

Snake Creek Trail

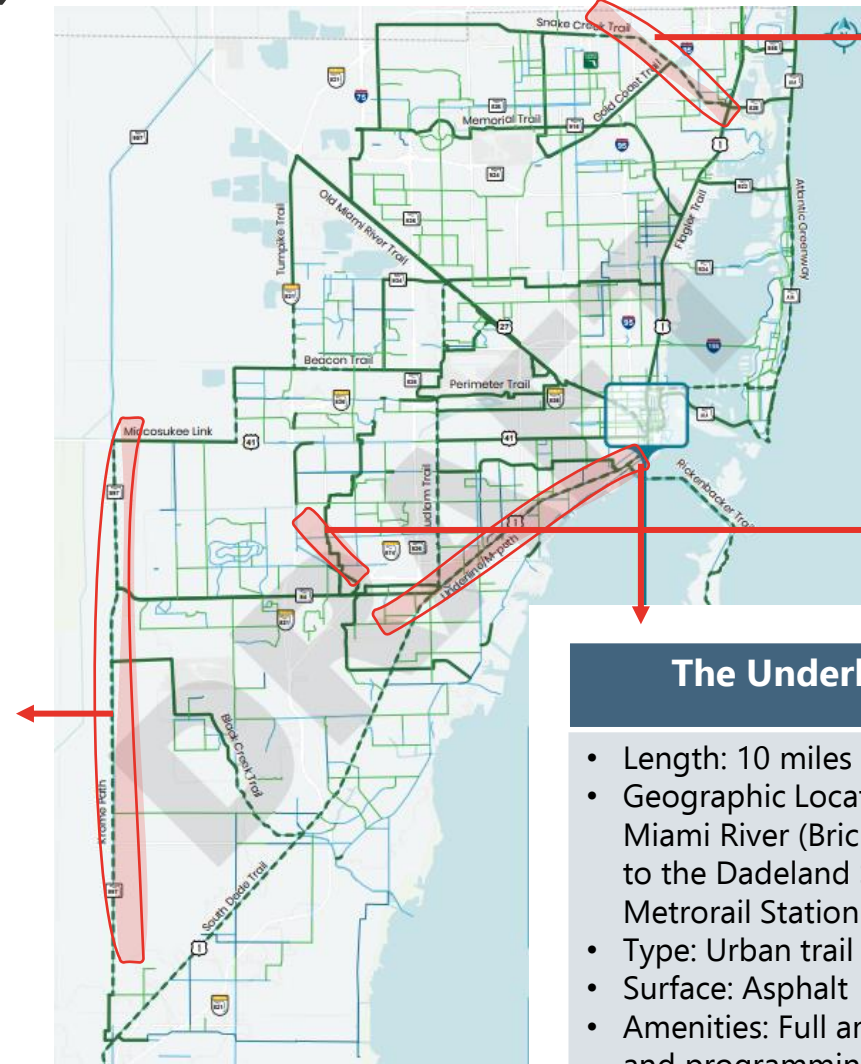
- Length: 6.5 miles
- Geographic Location: North Miami Beach
- Type: Greenway/Non-Rail-Trail
- Surface: Asphalt
- Amenities: Limited amenities

Snapper Creek Trail

- Length: 5.2 miles
- Geographic Location: Kendall
- Type: Suburban trail
- Surface: Asphalt
- Amenities: Limited amenities

The Underline

- Length: 10 miles
- Geographic Location: Miami River (Brickell area) to the Dadeland South Metrorail Station
- Type: Urban trail
- Surface: Asphalt
- Amenities: Full amenities and programming





2

The Underline:

Project Overview

Cost Estimates (Capex, Opex)

Funding Sources



Project Overview – Background and Objectives

The Underline is a partnership between the Department of Transportation and Public Works (DTPW), the Parks, Recreation, and Open Spaces (PROS) Department, and Friends of The Underline, aimed at “transforming the land below Miami’s Metrorail, from the Miami River (Brickell area) to the Dadeland South Metrorail Station, into a world-class, multimodal urban trail”. In 2020, The Underline Conservancy was created to manage, maintain, operate, and program the Underline.

With an expected completion date in 2025, The Underline will be MDC’s first mobility corridor (with bike and pedestrian paths) connecting all modes of transportation and providing accessibility to eight Metrorail stations along its neighboring communities.

The Underline will serve +250K residents within a 10-minute walk or bike ride and provide access to public transportation to schools, hospitals, a university, care facilities, malls, and businesses.



Fact Sheet

Expected completion date: 2025-26

Length: 10 miles

Surface type: Asphalt

Geographic location: Miami River (Brickell area) to the Dadeland South Metrorail Station

Project Overview - Features

The 10-mile corridor includes the following features:

- Urban biking and walking paths
- Improvements to more than 30 intersections
- Access to public transportation and 1st and last mile connections
- Basketball, volleyball, and soccer court; outdoor gym
- Gathering spaces and programmable areas for numerous public events and programs
- Resting areas and hydration stations
- Playgrounds
- Butterfly gardens; dog parks
- Mobility hub
- Public art
- Free WiFi

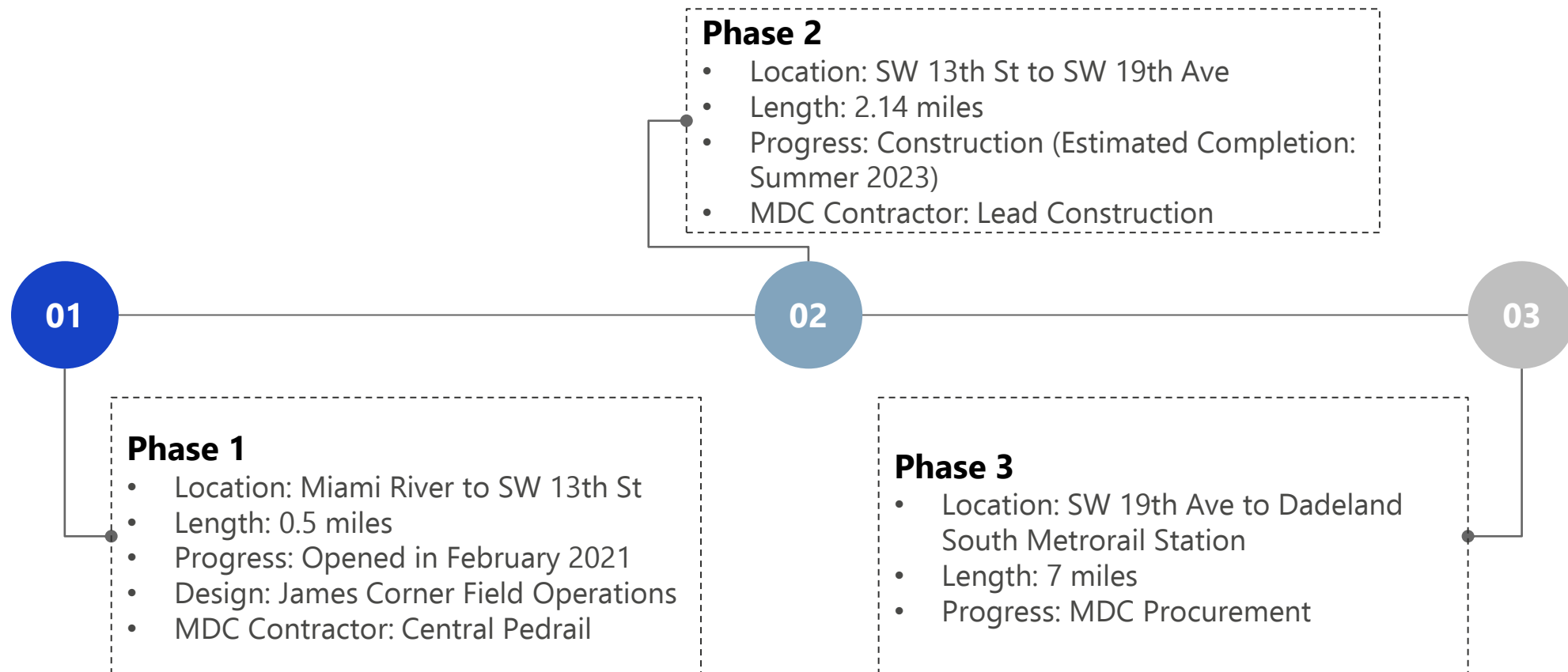
Transportation
components

Recreational
elements



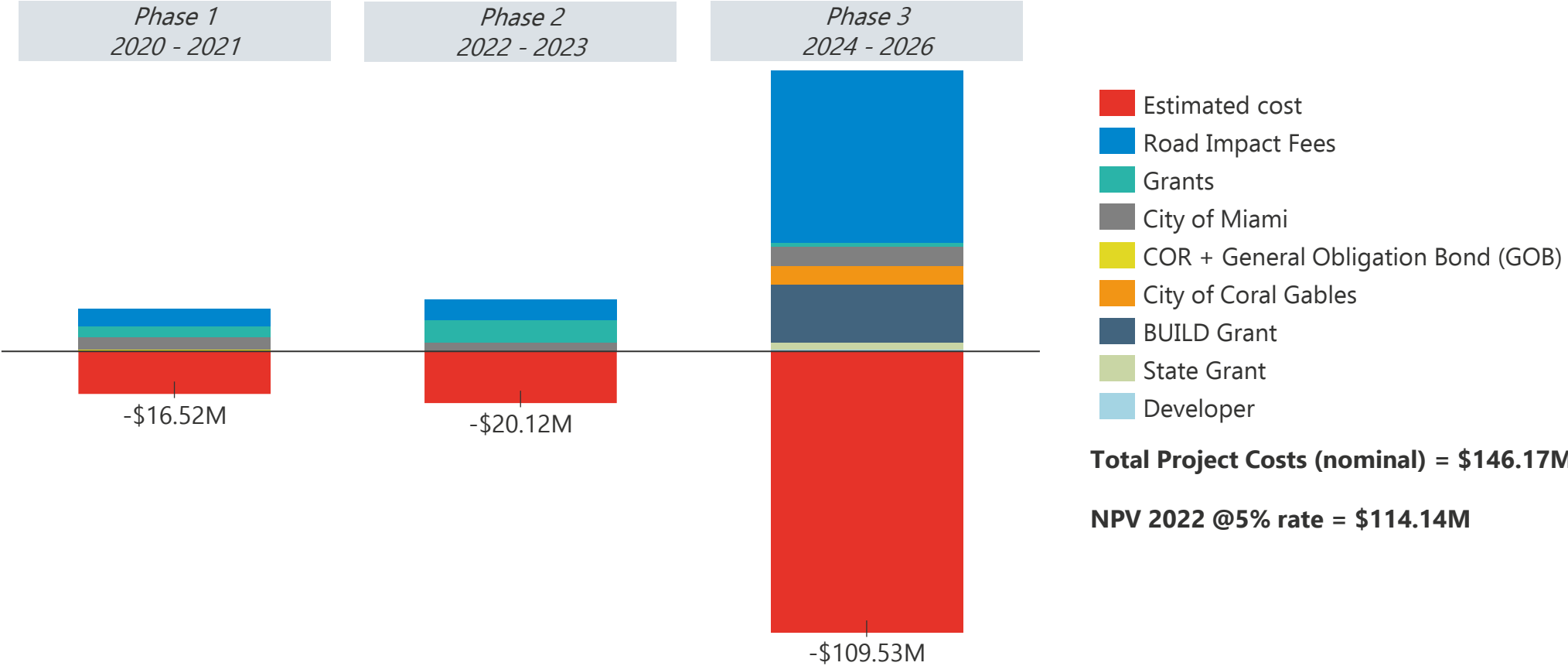
Project Overview - Timeline

The Underline will be built in three phases. As shown below, Phase 1 opened to the public in February of 2021, Phase 2 is currently under construction, and Phase 3 is under MDC procurement.



Cost Estimates & Funding Sources

Overall Capex & funding sources for The Underline



Note 1: Timelines of cost drawdowns are estimates and may be subject to change.
 Note 2: Total costs include planning, design, permits, and construction.
 Note 3: Developer contributions represent less than 1% of the total funding for Phase 3. Therefore, it is not visible in the graph.



Cost Estimates & Funding Sources Phase 1

Construction period: 2020 – 2021. Miles: 0.5

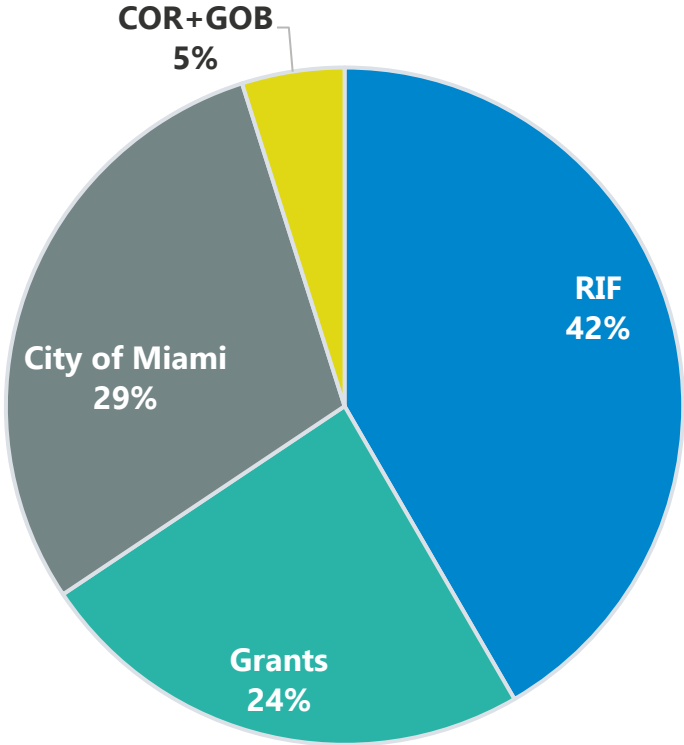
Costs

\$16.5M
Total Construction Cost*



Funding Sources

- \$6,879,866**
Roadway Impact Fee (RIF)
- \$3,963,708**
Grants
- \$4,871,690**
City of Miami
- \$808,869**
COR + General
Obligation Bond (GOB)



*Total costs include planning, design, permits, and construction.



Cost Estimates & Funding Sources Phase 2

Construction period: 2022 – 2023. Miles: 2.1

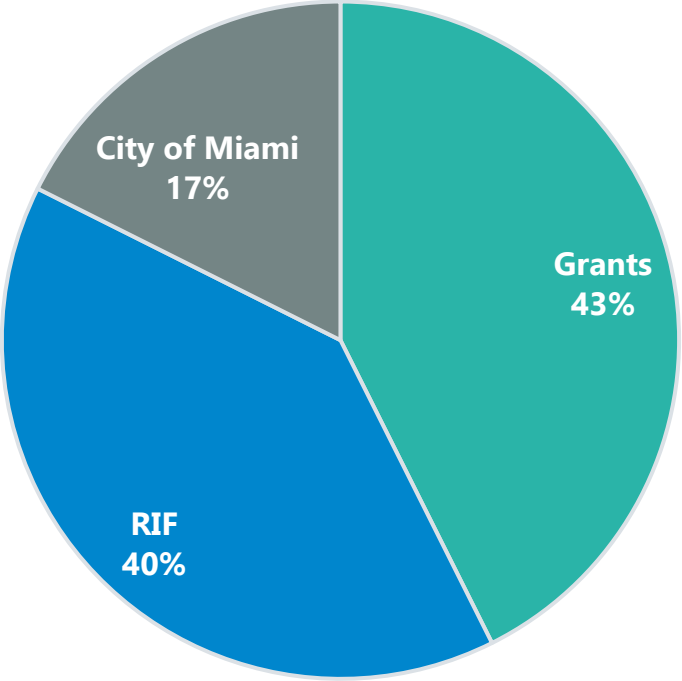
Costs

\$20.1M
Total Construction Cost*



Funding Sources

- \$8,572,243**
Grants
- \$8,000,000**
Roadway Impact Fee
- \$3,542,867**
City of Miami



*Total costs include planning, design, permits, and construction.

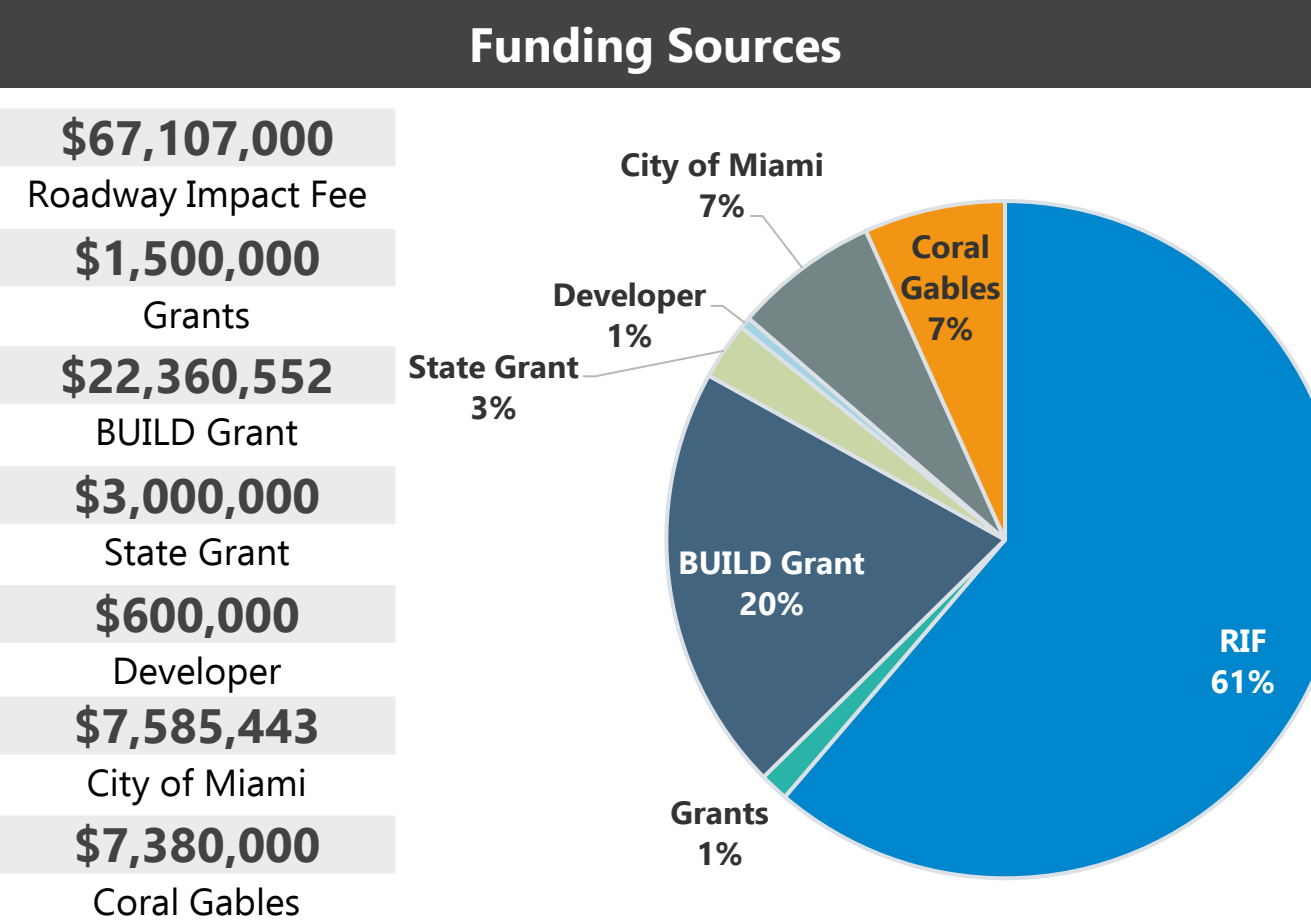


Cost Estimates & Funding Sources Phase 3

Construction period: 2022 – 2023. Miles: 7.0

Costs

\$109.5M
Total Construction Cost*



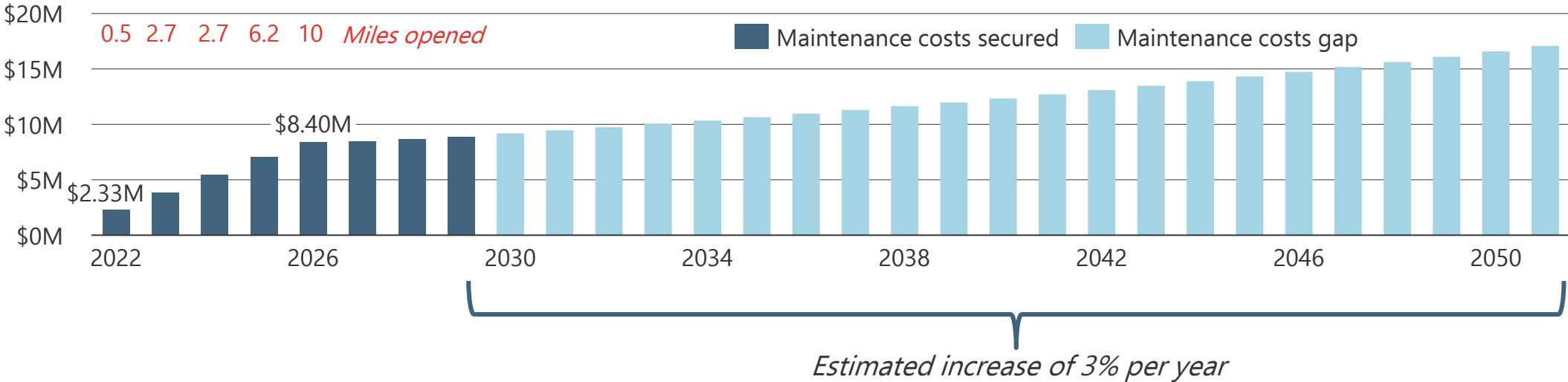
*Total costs include planning, design, permits, and construction.



Cost Estimates & Funding Sources

Operations and Maintenance Costs

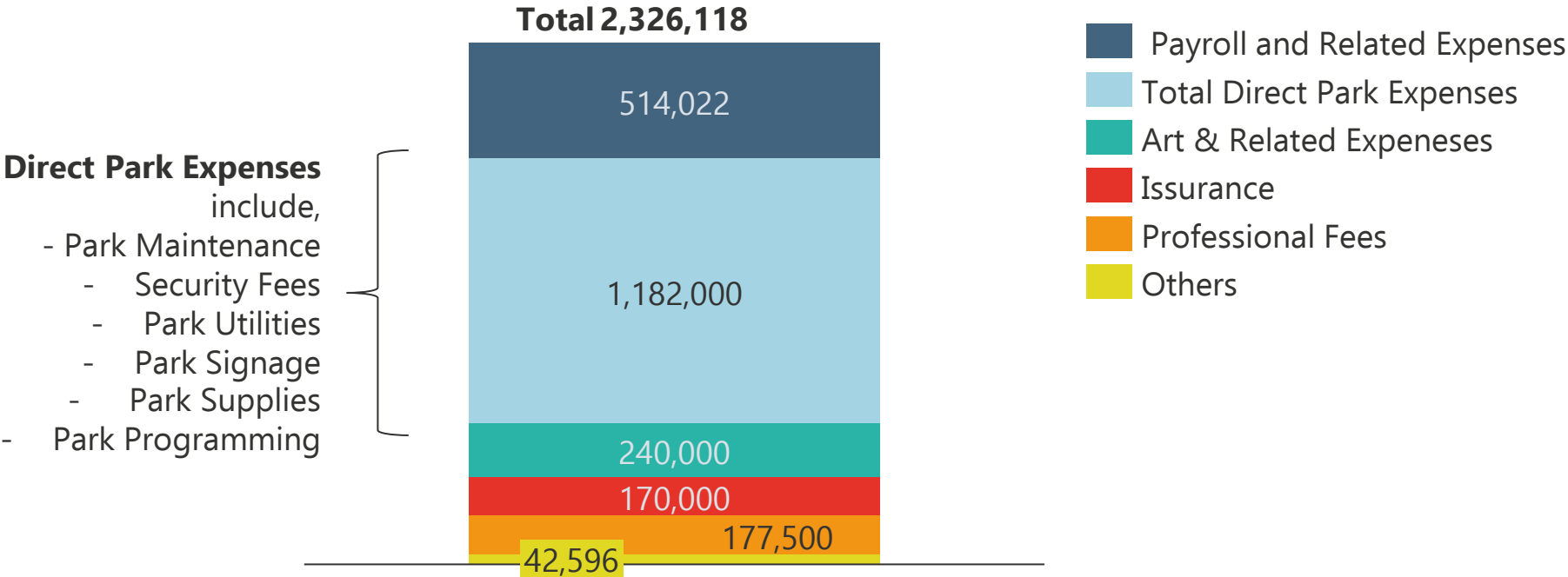
The figure below illustrates the total estimated O&M costs over the life of the project (FY 2022 - FY 2050), including payroll and related expenses, direct park expenses (i.e., park maintenance, security fees, utilities, signage, supplies, programming) and other expenses.



Cost Estimates & Funding Sources

Operations and Maintenance Costs – FY 2022

Based on The Underline Conservancy budget summary, the graph below showcases the breakdown of the projected O&M costs of the project for fiscal year 2022, corresponding to the first 0.5 miles.



Payroll and Related Expenses, Park Maintenance, Security Fees, and Park Programming represent 76% of the O&M budget for FY 2022.



Key Takeaways

- ▶ As shown in the project overview, The Underline includes more than 10 amenity spaces throughout the 10-mile linear park. Therefore, the project is inherently more expensive to operate and maintain compared to other trails in MDC.
- ▶ While MDC agreed to partially fund the project, The Underline would be responsible for O&M with MDC contributing \$350,000 against the total projected \$8+ million annual budget when built out at the full 10 miles.
- ▶ Recommendations on funding sources to cover the O&M funding gap are provided in Section 7.



3

Snake Creek Trail

Project Overview

Cost Estimates (Capex, Opex)

Funding Sources



Project Overview – Background

Snake Creek Trail is a paved 6.5-mile route connecting North Miami Beach and Miami Gardens. Although the Trail is not a rail-trail, it “offers a similar easy and level riding experience” along the Snake Creek Canal. The 100-foot width of the Canal’s right-of-way enabled the enhancement of the trail by allowing additional space for parks and other amenities.

Snake Creek Trail is located along a mix of commercial and residential areas. Therefore, while the trail helps to meet the demand for recreational facilities, it also provides opportunities for “practical trips” for commuters due to its location near shopping areas, workplaces, schools, and restaurants. According to the Miami-Dade TPO, trail counts are higher on weekdays than weekends.*

The trail is managed by the Miami-Dade Parks, Recreation and Open Spaces Department.

*Data collected from a Trail Modeling and Assessment Platform (T-MAP) counter on the trail’s east end. Trail count refers to the volume of trail users (i.e., number of cyclists using a trail).



Fact Sheet

Stage of development: Operational

Length: 6.5 miles

Surface type: Asphalt

Trail end points: Florida’s Turnpike (Miami Gardens) to NE 19th Ave. (North Miami Beach)

Project Overview - Amenities

The 6.5-mile trail includes the following amenities:

Transportation
components

- Biking and pedestrian path
- Access to bus routes

Recreational
elements

- Small parks
- Picnic shelters
- Fitness stations
- Access to the Snake Creek Canal (mainly for flood control, but also used for fishing, canoeing, jet skiing, and kayaking)



Project Overview – Strategic Importance

- The Snake Creek Trail provides a critical connection between the greenway trails (described below) along the Snake Creek Canal.
 - In the 1970s, MDC built a bike/ped path between Sierra Park and the I-95 corridor (shaded in yellow in the map).
 - In the 1990s, the City of North Miami Beach constructed Snake Creek Park, a linear park with a bike/ped trail along the south area of the Canal (shaded in red in the map).
 - In the 2000s, the United States Army Corps of Engineers (USACE) and the South Florida Water Management District (SFWMD) proposed a plan including environmental restoration activities and bike/ped trails from NW 37th Avenue to Florida's Turnpike (shaded in blue in the map).
 - In 2005, MDC developed a feasibility study for a bike trail along the Canal ROW from Florida's Turnpike in the west to NE Miami Gardens Drive. This segment (shaded in green in the map) is crucial as it connects the planned USACE/SFWMD greenway trail with the existing greenway trails southeast of NE Miami Gardens Drive within Snake Creek Park in North Miami Beach.



Cost Estimates & Funding Sources

Capital Costs & Funding Sources – 3.4 miles of Snake Creek Trail

The following cost estimates are based on the Opinion of Probable Cost (OPC) provided in the “Snake Creek Bike Trail Planning and Feasibility Study (2005)”. The OPC provides data for 3.4 miles of the trail along the south side of the Snake Creek Canal.

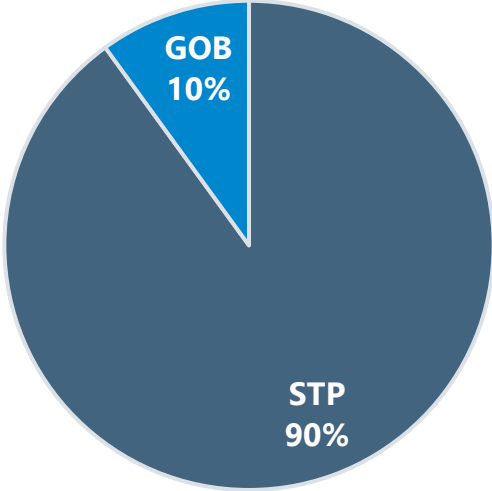
Costs

\$2.5M
Total Construction Cost*



Funding Sources

- \$2,241,450**
Surface Transportation Program (STP)
- \$249,050**
General Obligation Bond (as a non-Federal match for STB grant)



Funding Source	Amount	Percentage
Surface Transportation Program (STP)	\$2,241,450	90%
General Obligation Bond (GOB)	\$249,050	10%

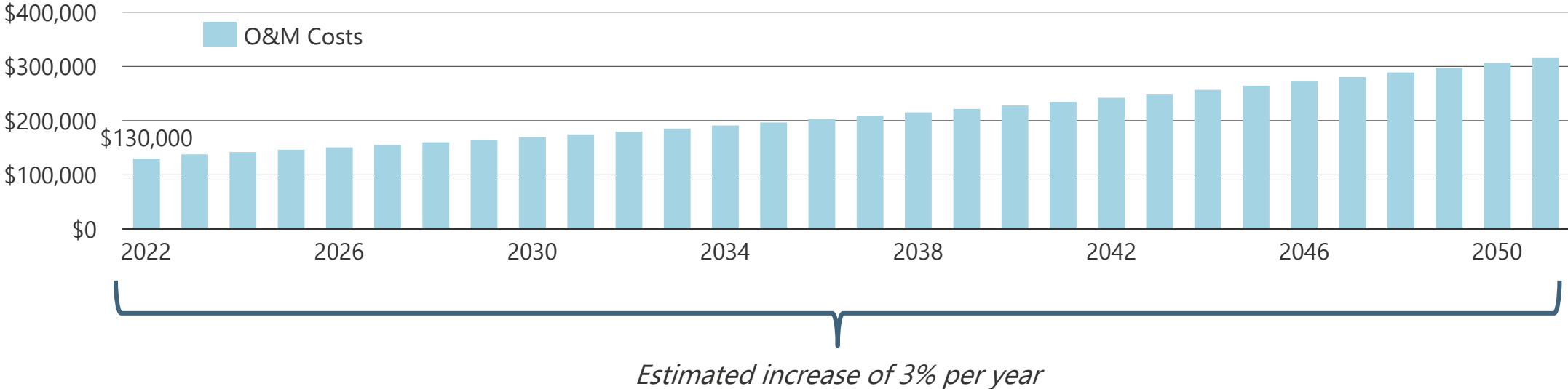
*Total costs include planning, design, permits, and construction.



Cost Estimates & Funding Sources

Operations and Maintenance Costs

The figure below illustrates the total estimated O&M costs over the life of the 3.4-mile segment of the Snake Creek Trail, including labor, equipment, chemicals, fertilizer, landscaping replacement, and other miscellaneous items.*



*The "Snake Creek Bike Trail Planning and Feasibility Study" provides an estimate of the trail maintenance costs based on the costs incurred by a similar trail (Biscayne Trail). This estimation is presented above in 2022 US dollars.





4

Snapper Creek Trail

Project Overview

Cost Estimates (Capex, Opex)

Funding Sources



Project Overview – Background and Objectives

Snapper Creek Trail is a non-motorized trail located mainly within the Snapper Creek (C-2) Canal right-of-way. The objective of the project is “to improve facilities for safe bicycling and walking, provide effective alternatives to short auto travel, improve connectivity to Metrorail and Metrobus, promote healthier lifestyles, and provide mobility options”.

The long-term vision is to develop a 10-mile greenway corridor in the west-central area of the County. However, for planning purposes, the Trail has been divided into two segments:

- Segment A was proposed as a 5.6-mile multi-use trail aimed at providing a travel route from the C-4 Canal near Florida International University to Kendall Drive. The trail runs parallel to the C-2, with some segments deviating through neighborhood streets.
- Segment B was proposed as a 5-mile trail in suburban west-central Miami-Dade County that connects the eastern end of Segment A to the Red Road Linear Park along the east side of SW 57 Avenue at SW 88 Street.



Fact Sheet

Stage of development: Operational

Length: Section A 5.6 miles; Section B 5 miles

Surface type: Asphalt

Trail end points: SW 117th at 41st Terrace and Snapper Creek Drive near 107th Ave.

Project Overview - Features

For planning purposes, Snapper Creek Trail is divided in two segments, described below.

Segment A

- Length: 5.6 miles
- Location: Between the FIU Modesto A. Maidique Campus to K-Land Park

Amenities:

- Benches, rest stops, and shelters;
- Interpretative signs and information kiosks;
- Connections with peripheral facilities including existing trails and parks (i.e., Concord Park, Tamiami Park);
- Access to schools (i.e., Dr. Carlos J. Finlay Elementary School); and
- Access to public transportation, including Miami-Dade Transit Metrobus routes.



Segment B

- Length: 5 miles
- Location: Between K-Land Park to Dante Fascell Park

Amenities:

- Connections with peripheral facilities including existing trails (i.e., The Underline, South Dade Trail, etc.) and parks (i.e., Kendalwood Park, Fuchs Park, Red Road Linear Park);
- Access to local facilities (i.e., Baptist Hospital of Miami, Dadeland Mall, etc.); and
- Access to Metrorail connections.

Cost Estimates & Funding Sources

Capital Costs & Funding Sources – Segment A and B of Snapper Creek Trail

The following cost estimates are based on the Opinion of Probable Cost (OPC) provided in the “Snapper Creek Trail Segment A Planning and Feasibility Study (2008)” and the “Snapper Creek Trail Segment B Planning and Feasibility Study (2016)”.

Costs	Funding Sources
<p>\$5.7M</p> <p>Total Construction Cost Segment A *</p>	<p>According to the feasibility studies and an MDC Memorandum**, the following funds have been allocated for the construction of Snapper Creek Trail:</p> <ul style="list-style-type: none"> • General Obligation Bond: \$500,000 • Building Better Communities Bond: \$500,000 • TAP Grant: \$500,000 • TAP Grant: \$519,740 <p style="text-align: right;">} Segment A</p> <p style="text-align: right;">} Segment B</p>
<p>\$4.2M</p> <p>Total Construction Cost Segment B *</p>	

It remains unclear what other sources of funding have been allocated to the construction of Segments A and B.

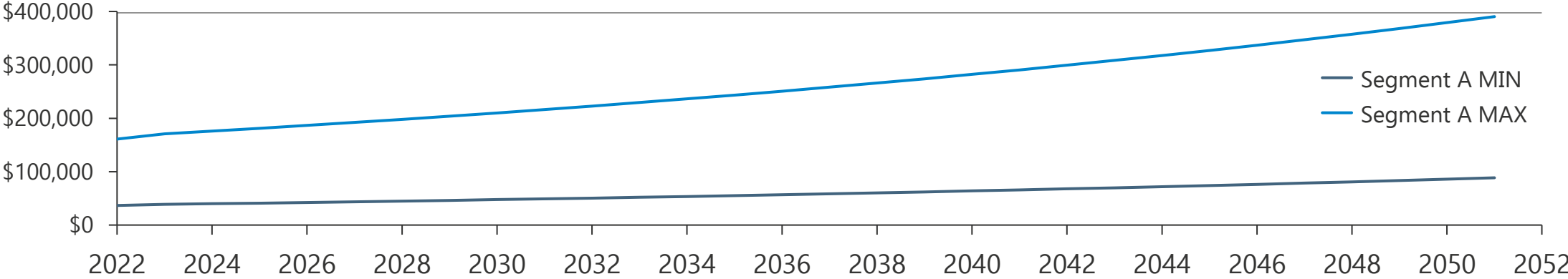
*Total costs include planning, design, permits, and construction.
 ** MDC Memorandum available [here](#).



Cost Estimates & Funding Sources

Operations and Maintenance Costs – Segment A Snapper Creek Trail

The figure below illustrates the total estimated O&M costs over the life of Segment A of the Snapper Creek Trail, including mowing, trimming, edging, pruning, weed control, tree care, trash removal, and miscellaneous repairs as needed.*



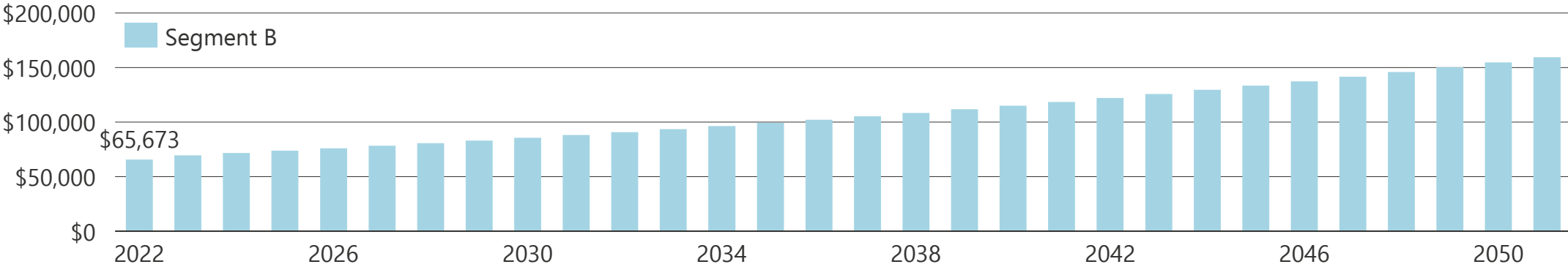
*The Segment A Snapper Creek Bike Trail Planning and Feasibility Study provides an estimate of the trail O&M costs based on the costs incurred by a similar trail (Biscayne Trail). The study uses a range estimate per mile, accounting for the uncertainty related to the frequency of maintenance, usage of the trail, and weather. Therefore, the information provided in the graph below includes a range in 2022 dollars.



Cost Estimates & Funding Sources

Operations and Maintenance Costs – Segment B Snapper Creek Trail

The figure below illustrates the total estimated O&M costs over the life of Segment B of the Snapper Creek Trail, including mowing, trimming, edging, pruning, weed control, tree care, trash removal, and miscellaneous repairs as needed.*



*The Segment B Snapper Creek Bike Trail Planning and Feasibility Study provides an estimate of the trail O&M costs based on the costs incurred by similar trails (i.e., Black Creek Trail Segment). Although these trails consist of a 10- foot shared-use path along a canal bank, it should be noted that they have a greater density of trees and shrubs than others. Therefore, maintenance costs may be higher. The estimates above are presented in 2022 US dollars.





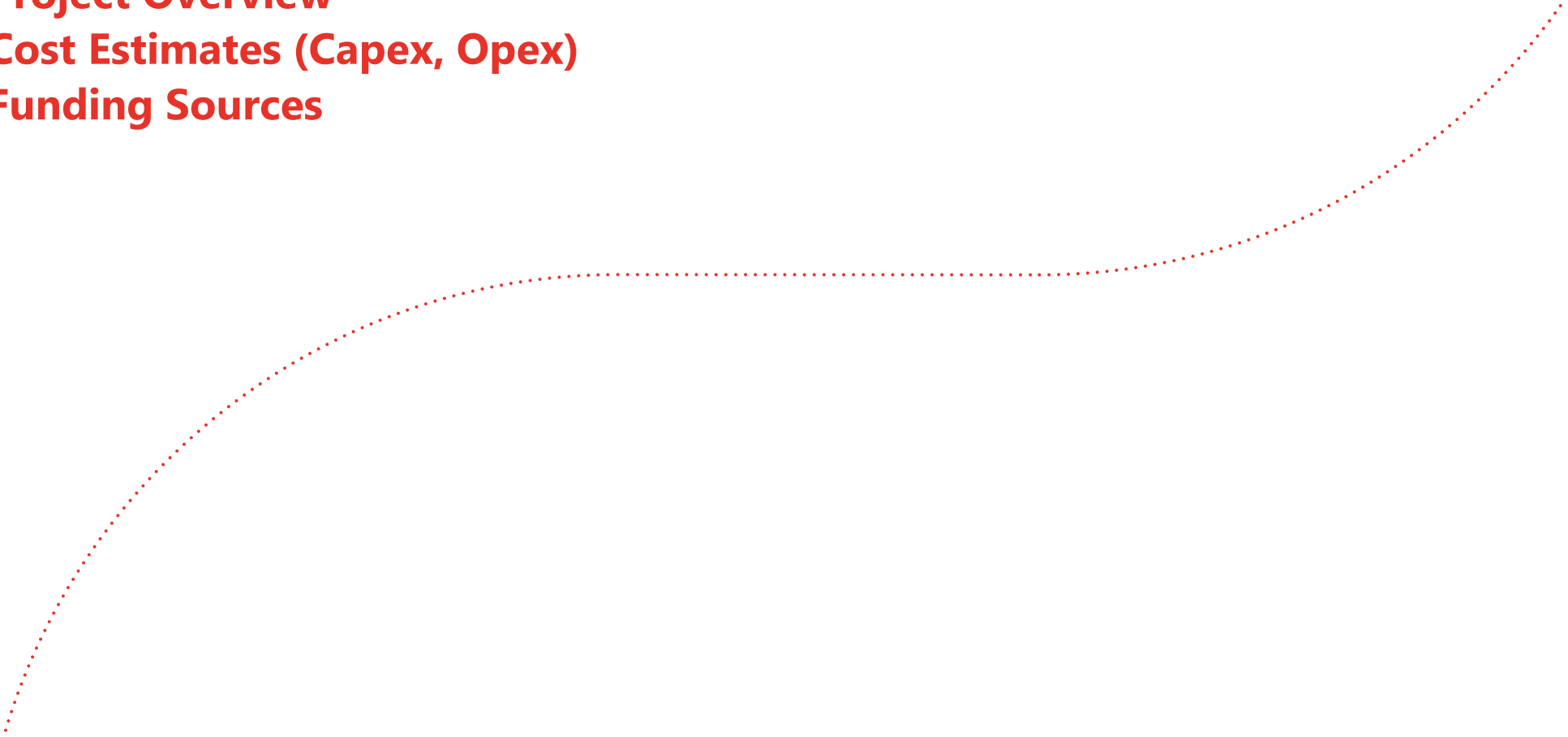
5

Krome Path

Project Overview

Cost Estimates (Capex, Opex)

Funding Sources



Project Overview – Background and Objectives

In 2021, FDOT completed a roadway construction project on State Road (SR) 977/Krome Avenue from SW 136 Street to SW 8 Street/Tamiami Trail in Miami-Dade County, which included the construction of Krome Path – an 18.5-mile, dedicated multi-use path on the east side of the roadway. Additionally, separated bike lanes were also constructed along Krome Ave.

The full scope of the project entailed reconstructing the existing two-lane undivided roadway into a four-lane divided roadway; building three new bridges, full inside and outside shoulders, a 40-foot median with guardrails, installing a self-contained drainage system and new lighting, and upgrading traffic signals and road signs. The project aimed to enhance mobility and reduce the number of fatalities along the avenue.

Krome Avenue is a critical travel, evacuation, and recovery route in MDC, and is part of the Florida Intrastate Highway System and the Strategic Intermodal System (SIS). Therefore, Krome Path provides an important north-south alternative for cyclists and pedestrians in MDC. Krome Path is part of the Miami Loop and the Florida Greenways and Trail Network.



Fact Sheet

Stage of development: Operational as of 2021

Length: 18.5 miles

Surface type: Asphalt

Trail end points: SW 8th Street / Tamiami Trail and SW 296th Street

Project Overview – Segments

Krome Path was constructed by segments, as detailed below:

- ▶ Segment 1: Krome Avenue between SW 292 Street and SW 232 Street;
- ▶ Segment 2: Krome Avenue between SW 232 Street and SW 136 Street;
- ▶ Segment 3: Krome Avenue between SW 136 Street and Kendall Avenue;
- ▶ Segment 4: Krome Avenue between Kendall Drive and SW 8 Street/Tamiami Trail; and
- ▶ Segment 5: Krome Avenue between SW 8 Street/Tamiami Trail and Okeechobee Road.

Krome Path has been identified as a priority trail by the Office of Greenways and Trails. The Path provides important connections to other trails, including the Biscayne Everglades Greenway, Snake Creek Trail, and the East Coast Greenway via the South Dade Trail.



Cost Estimates & Funding Sources

Capital Costs & Funding Sources – Krome Path

Costs

\$1.86M

Total Construction Cost*



Funding Sources

Stakeholders interviewed indicated the capital costs for Krome Path were covered by the Strategic Intermodal System (SIS). The SIS is the State's highest priority network of transportation facilities and a primary focus for implementing the Florida Transportation Plan (FTP). The SIS Funding Strategy identifies potential SIS Capacity Improvement projects in various stages of development.

The improvement of the Krome Avenue corridor provides an example of a roadway project under the SIS, which included the construction of a trail as part of the wider program, thereby unlocking a state funding source that is not typically used to build shared-used paths. The estimated overall cost of the Krome Avenue corridor improvements is \$82M or \$5.9M per mile.

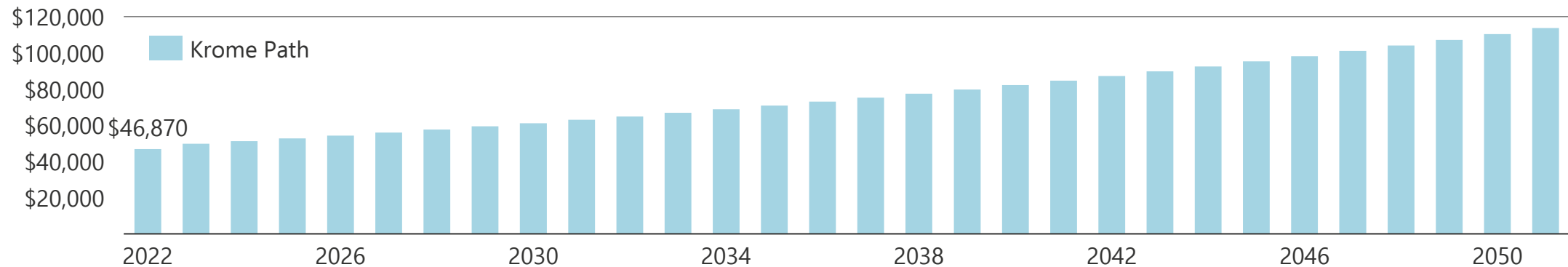
The exact amount of funding provided to Krome Path is uncertain.

*Total costs are calculated based on the cost per mile estimate of \$100,540 provided by [The Miami Bike Scene](#) for Krome Path.

Cost Estimates & Funding Sources

Operations and Maintenance Costs

The figure below illustrates the total estimated O&M costs over the life of the Krome Path project.*



*Due to data unavailability, the O&M costs for the Krome Path were calculated based on an estimate per mile yearly average cost provided by the [Rails-to-Trails Conservancy](#) (2015). The estimates above are presented in 2022 US dollars.



6

Overview of Potential Funding Sources for O&M



Funding Sources to fill O&M Funding Gaps



Overview

Funding Source	Type	Magnitude of Funding	Frequency	Political Feasibility
Recreational Trails Program	Federal	Up to \$500,000	●	●
SUN Trail	State	Data Unavailable	●	●
Special Tax District	Local	Millions	🔄	●
PTP Surtax Funds	Local	Thousands - Millions	🔄	●
Local Sales Tax (Non PTP)	Local	Millions	🔄	●
General Funds	Local	Millions	🔄	●
Gas Tax	Local	Millions	🔄	●
Naming Rights/Sponsorships	Local	Millions	●	●
Corporate Philanthropy	Local	Thousands – Millions	🔄	●
Private Donations	Local	Thousands	🔄	●

Ongoing funding = 🔄 One-time funding = ● | Political Feasibility = ● (most); ● (possible); ● (challenging)

Potential Funding Sources to Fill Funding Gaps

Recreational Trails Program (RTP)

What:	<p>RTP is a set-aside of the Transportation Alternatives (TA) program that provides funds to the states to develop and maintain recreational trails and trail-related facilities for both nonmotorized and motorized recreational trail uses. In Florida, RTP is only funding non-motorized trails.</p> <p>Recreational trail projects eligible under the RTP also are eligible under the Surface Transportation Block Grant (STBG) program and TA program.</p>	
Potential magnitude of funding:	<p>Maximum for nonmotorized single-use projects: \$400K Maximum for nonmotorized mixed-use projects: \$500K</p>	Up to \$500K
Frequency:	Payment per successful application; not an ongoing funding source.	
Political Feasibility:	<p>Not politically challenging; program is existing and requires submission of a successful application.</p> <p>Local match is required (50:50, 60:40, or 80:20 matching basis).</p>	

Example

Potential Funding Sources to Fill Funding Gaps

Recreational Trails Program (RTP) – Example of Ream Wilson Trail

- ▶ The Ream Wilson Trail is a nearly 4.5-mile, paved recreational trail located in Pinellas County, Florida.
- ▶ In 2012, Pinellas County received \$105K in RTP funds for the maintenance and restoration of the trail, including the replacement of existing six-foot wide bridge with a twelve-foot-wide bridge.



Applicability for the case studies >> As shown in this case, RTP funds can be used for trail maintenance and restoration; however, these funds are available on an annual basis (and for specific activities) and do not provide an ongoing source of funding for maintenance.



Ream Wilson Clearwater Trail



Potential Funding Sources to Fill Funding Gaps

Shared-Use Nonmotorized (SUN) Trail Program

What:	<p>The SUN Trail program provides funding for the development of a statewide system of interconnected paved multi-use trails (SUN Trail network) for bicyclists and pedestrians, physically separated from the road.</p> <p>SUN Trail legislation allows for the programming of funds to all phases of project development, including maintenance. However, there are no examples available to indicate that funding for O&M has been provided to trails since the program was created.</p>	
Potential magnitude of funding:	Data unavailable due to lack of an example.	N/A
Frequency:	Payment per successful "Request for Funding"; not an ongoing funding source.	
Political Feasibility:	Possible but somewhat challenging; conversations with stakeholders indicate the SUN Trail program is currently capped and whether it expands in the future remains uncertain.	

Potential Funding Sources to Fill Funding Gaps

Special Tax District/Assessment Districts

What:	Non-ad valorem assessment levied on property tax, potentially applicable for trails if they can be classified as “recreational facilities” or “deemed essential by the Board [of County Commissioners]”.*	
Potential magnitude of funding:	Millions per year of levy	\$M
Frequency:	Aligned with life of assessment; could be one time/ongoing per trail life	
Political Feasibility:	Challenging; requires petition signed by Mayor or by 50% of resident owners of property included within district.**	

See Miami-Dade County, Code of Ordinances Chapter 18,

*Sec 18.2 “Purposes for which districts are created.”

**Sec 18.3 “Proceedings for creation and establishment of districts”

Type

Local

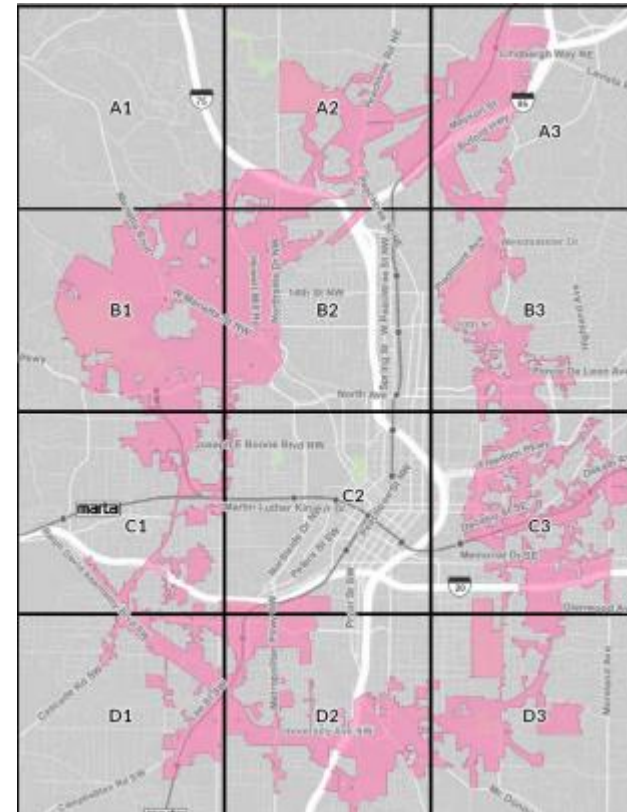
Example

Potential Funding Sources to Fill Funding Gaps

Special Tax District/Assessment District – Example of Atlanta BeltLine

- ▶ In 2021 City of Atlanta approved a special assessment district to raise \$100M to finalize trail acquisition, design, and construction of BeltLine trail.
- ▶ Within the district, multifamily and commercial real estate taxed additional 2-mill ad valorem levy on property over 30-year period.
- ▶ “No property value growth” scenario anticipates annual levy receipts of ~\$5.9M, which will service 2021 BeltLine Trail Completion Project Revenue Bonds.



Applicability for the case studies >> In this case special assessment revenues used for Capex; however, it demonstrates the magnitude of funding available on an annual basis. Possibly an adequate ongoing source of funding for O&M and refurbishment costs.



Atlanta BeltLine Special Taxing District Boundary
("Special Services District")

Potential Funding Sources to Fill Funding Gaps

People's Transportation Plan (PTP) Surtax Funds

What:	<p>In 2002, MDC voters approved a 1/2 percent local surtax to implement the PTP, which included a range of projects aimed at improving transportation. Although the State Legislature's House Bill 385 that will take effect in 10/2022 restricts Miami-Dade County's ability to use Surtax proceeds for bike paths, municipalities have greater flexibility in using Surtax funds for bike infrastructure projects. Cities can divert 80% of the funds to other city projects, including multimodal trail systems.</p>	
Potential magnitude of funding:	<p>For instance, The Underline passes through the cities of Miami, Coral Gables, and South Miami, which receive approximately \$20M of PTP funds per year combined, of which \$16M or 80% of the funds are eligible for funding.</p>	<p>Up-to a few \$M.</p>
Frequency:	<p>PTP funds are disbursed annually to cities. A city can use a portion of these funds to provide an ongoing funding source for trail O&M.</p>	
Political Feasibility:	<p>May require coordination between cities, project visibility and demonstrating economic and social benefits to cities (i.e., serves as first-and-last-mile connection, impact on CO2 emissions).</p>	

Type

Local

Example

Potential Funding Sources to Fill Funding Gaps



PTP Surtax Funds – Development, Restoration, and Upgrading

- ▶ Per Ordinance #02-116, municipalities reported the following in the FY 2022-2026 PTP Five-Year Implementation Plan Update:
 - ▶ \$320K in PTP funds would be allocated to upgrade a shared path in Park View Island Park. The path would provide shaded, off-road bicycle facility connecting neighborhoods in North Beach.
 - ▶ \$1M in PTP funds would be allocated to the development of Dade Boulevard Bike path, a recreational greenway connecting the Venetian Causeway Bike Path and the Beachwalk, as well as seawall restoration for the north bank of the canal.

Applicability for the case studies >> In this case, the PTP Surtax funds were used for the development, restoration, and upgrading of bike paths. However, given the flexibility provided to municipalities, they may also use these funds to cover O&M costs of trails.

Potential Funding Sources to Fill Funding Gaps

Local Sales Tax

What:	According to Florida legislation, the governing authority in each county may levy a discretionary "Local Government Infrastructure Surtax".	
Potential magnitude of funding:	0.5-1% local sales surtax; revenues in the millions of dollars (e.g., Pinellas County's 1% rate is forecasted to bring in \$2 billion from 2020-2030)	\$M
Frequency:	Just like other sales tax funds, revenues would be disbursed annually to the County and constituent cities (subject to any legislation).	
Political Feasibility:	As Miami-Dade does not currently use this local government surtax option, this would constitute a new tax that would need to be approved; this is likely to be politically challenging.	

Type

Local

Example

Potential Funding Sources to Fill Funding Gaps

Local Sales Tax



- ▶ The “Penny for Pinellas” surtax in Pinellas County has paid for portions of the Fred Marquis Pinellas Duke Energy trails.
- ▶ Originally approved by voters in 1989, this is a 1% sales surtax that funds local capital investment.
- ▶ Projects using proceeds are re-assessed annually as part of budget development process.
- ▶ Enabled by State legislation in Florida, but routine operations are NOT an allowed use of funds, only capital expenses.

Applicability for the case studies >> Miami-Dade does not currently utilize this surtax option; if enacted, though politically challenging, it could provide significant capital investment funding, including for trails projects.



Potential Funding Sources to Fill Funding Gaps

Local Government's General Funds

What:	General fund refers to the monies collected, mainly through ad valorem taxes, fees and transfers, that are used to account for the general operations of the County or municipal governments, as well as all transactions not included in other funds or account groups.	
Potential magnitude of funding:	Millions	\$M
Frequency:	General funds could be allocated in one-time budget earmarks or long-term commitments to fund projects (e.g., through maintenance agreements through a public department).	
Political Feasibility:	The competition for committed general funds is likely to be fierce, given that these are bedrock local revenues with maximum spending flexibility. However, it is important to note that many public projects receive general funds support not through a line-item commitment, but through departmental support that is partially funded by general funds.	

Type

Local

Example

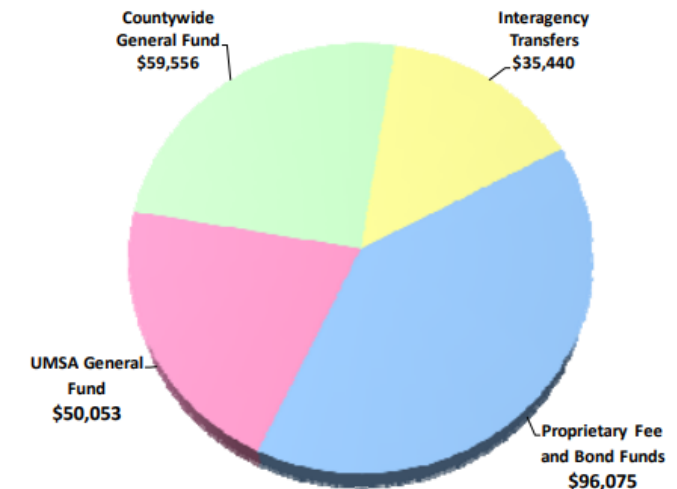
Potential Funding Sources to Fill Funding Gaps

Local Government's General Funds

- ▶ Although project-specific O&M is not typically listed as a budget line item, City and County departments are likely using general funds for trail maintenance as part of their operations.
- ▶ For example, the City of Miami committed to provide routine maintenance for the Miami River Greenway in a TAP funding application and MDPROS has provided data on the maintenance costs for trails including the Biscayne Trail, Black Creek Trail, and Snapper Creek Trail, implying that the department is likely bearing these costs.
- ▶ General funds are the top revenue source for both DTPW and PROS' operational budgets; it is highly likely that these departments would utilize general funds for maintenance.

Applicability for the case studies >> If a local department committed to contribute to trail construction or O&M, general funds could potentially be utilized. While a separate earmark is potentially possible, the competition for these funds makes this option unlikely.



Revenues by Source
(dollars in thousands)



Revenue categories from MDPROS' 2021-22 Operating Budget

Potential Funding Sources to Fill Funding Gaps

Gas Tax

What:	Motor fuel taxes are assessed at the Federal, State, and local level; in Miami-Dade County, there are at least six components to “local gas tax revenues”, each of which have different rates and allowable uses.	
Potential magnitude of funding:	Depending on the component of the gas tax being addressed and the rate charged, revenues could be quite significant.	\$M
Frequency:	Gas taxes provide ongoing, multi-year funding; allocations to specific projects may be one-time.	
Political Feasibility:	As gas taxes are key for most transportation-related uses, competition for these funds may be fierce; this is particularly true if funds are being “diverted” from road-related uses. Any increase in local gas taxes is likely to be highly politically controversial.	

Type

Local

Example

Potential Funding Sources to Fill Funding Gaps

Gas Tax

- ▶ In 2021, the Jacksonville City Council approved a six cent per gallon increase in the Local Option Gas Tax, while earmarking \$132 million of that revenue for the Emerald Trail.
- ▶ The Local Option Gas Tax (LOGT) is enabled by State legislation, which Miami-Dade has already acted upon; the LOGT is an important funding source for DTPW.
- ▶ Each component of the overall “gas tax” has different allowable uses; some allow relatively general “transportation-related” uses.

Applicability for the case studies >> Miami-Dade already uses significant gas tax revenues in the County budget. While tax rates could potentially be increased, it is more likely that a portion of revenues could be dedicated to bike/ped infrastructure.



Emerald Trail System

Potential Funding Sources to Fill Funding Gaps

Naming Rights

What:	In a naming rights transaction, an agency sells the rights to name infrastructure to a private company in exchange for upfront or annual payments.	
Potential magnitude of funding:	Millions	\$M
Frequency:	Naming rights typically involve multi-year, fixed-price deals; funds generally charged on an annual basis.	●
Political Feasibility:	<p>Naming rights are not considered a complex way to raise funds; however, these deals should involve a financial feasibility study prior to implementation, as to accurately gauge their potential revenues.</p> <p>Under a similar structure, The Underline has received funds from "sponsors". However, the Management Agreement with the County includes sponsorships above \$1M require approval by the BCC. Under the Agreement, the opportunity for sponsors to obtain exposure through signage along the trails is limited.</p>	●

Type

Local

Example

Potential Funding Sources to Fill Funding Gaps

Naming Rights/Sponsorships



- ▶ A \$15 million commitment as a lead gift enabled successful completion of the “Indianapolis Cultural Trail: A Legacy of Gene & Marilyn Glick”, an 8-mile urban bike and pedestrian trail in Indianapolis.
- ▶ As a part of this gift, the Glicks (local philanthropists) requested that a maintenance endowment be created for the future.
- ▶ This example of blending private philanthropy and naming rights provided a valuable base for the trail’s success.

Applicability for the case studies >> The Florida legislature has allowed for the public and private organization sponsorship (similar in concept to naming rights) of trails, though no major examples have been observed yet.



Potential Funding Sources to Fill Funding Gaps

Corporate Philanthropy

What:	Corporate philanthropy – investments and activities a company voluntarily undertakes to responsibly manage and account for its impact on society – are a potential funding source for multimodal trail systems. Private sources of funding can include donations, campaigns, trust funds, and foundation grants.	
Potential magnitude of funding:	Thousands – Millions	\$k - \$M
Frequency:	Funding typically comes in the form of one-time contributions / donations.	
Political Feasibility:	May be challenging to secure as, compared to other cities, the pool of corporate philanthropy resources that The Underline can pull from is limited.	

Type

Local

Example

Potential Funding Sources to Fill Funding Gaps

Corporate Philanthropy

- ▶ The City of Atlanta has secured philanthropic funds for the completion of the Beltline trail.
- ▶ For instance, the Atlanta Beltline Partnership, the sub-organization that raises funding and awareness for the Atlanta Beltline project, announced a:
 - ▶ \$30M donation from the James M. Cox Foundation, and
 - ▶ \$80M from the Robert W. Woodruff Foundation to complete the project.

Applicability for the case studies >> In this example, resources from corporate philanthropy are used for Capex; however, it demonstrates the magnitude of funding available. This may represent a complementary source of funding for O&M.



1 MILLION+ CONTRIBUTION

- The Arthur M. Blank Family Foundation
- The James M. Cox Foundation/Sarah and Jim Kennedy/PATH Foundation
- Robert W. Woodruff Foundation
- Kaiser Permanente
- The Coca-Cola Company
- The Home Depot Foundation
- Susan and Richard Anderson
- Wells Fargo
- Georgia Power Foundation, Inc.
- SunTrust now Truist Foundation and SunTrust Trusteed Foundations: Florence C. and Harry L. English Memorial Fund, Harriet McDaniel Marshall Trust, Walter H. and Marjory M. Rich Memorial Fund, Thomas Guy Woolford Charitable Trust, Nell Warren Elkin and William Simpson Elkin Foundation, Greene-Sawtell Foundation
- Mr. John C. Portman, Jr.
- Turner Broadcasting System, Inc.
- Ray Weeks, Jr. (The Weeks Foundation)
- The Keneda Fund

List of entities that have collectively provided +1M in contributions to the Atlanta Beltline

Potential Funding Sources to Fill Funding Gaps

Private Donations

What:	Private citizens or non-profit groups can contribute to the construction and maintenance of local projects in which they have an interest, often through a dedicated-purpose organization (e.g., "friends of the trail").	
Potential magnitude of funding:	Thousands	\$k
Frequency:	Funding can either come in the form of one-time donations or recurring (though variable) contributions through membership fees, fundraisers, or other mechanisms.	
Political Feasibility:	It is unlikely that there will be significant opposition to private donations as a supplement to support public infrastructure and services.	

Type

Local

Example

Potential Funding Sources to Fill Funding Gaps

Private Donations

- ▶ Friends of the Withlacoochee State Trail is a Citizen Support Organization (CSO) dedicated to promoting, supporting, and helping to maintain this 47-mile-long paved multi-use trail.
- ▶ This group holds fundraising events, sells merchandise, and provides volunteer support to the trail, as well as public education and outreach.
- ▶ In addition to donations, the group collects member dues to pay for maintenance, pavement patching, and amenities.

Applicability for the case studies >> While the magnitude of funds is unlikely to be large, ongoing citizen support can provide supplemental funding for O&M while encouraging public enthusiasm.





7

Overview of O&M funding models worldwide and in the US



Key takeaways on O&M funding models in the US

- ▶ O&M funding trends in the United States:
 - ▶ It is common for agencies to fund bike path maintenance out of their O&M budget. However, this support is generally not enough to provide for long-term preventive maintenance.
 - ▶ A review of non-profit parks, world-class recreational facilities, and trail systems across the US shows that, although O&M funding models vary widely, funding for O&M is typically covered by public sources.
 - ▶ Securing public funding can be challenging; therefore, some entities such as the Atlanta BeltLine are exploring other models (i.e., conservatorship model). The other path is to work towards a committed public funding solution, recognizing the public value of these assets.
- ▶ The following slides provide an overview of the O&M funding models used by different parks and bike/ped projects in the US.

Overview of O&M funding models in the US (1 of 2)

Project Name	Components	Funding model
Buffalo Bayou Park, Houston	Project that includes major destinations, natural landscaping, footpaths, trail lighting, water features and pedestrian bridges.	Buffalo Bayou Partnership maintains and operates the Park with: <ul style="list-style-type: none"> • Annual funding provided by the Downtown Tax Increment Reinvestment Zone (TIRZ #3); and • Funds from the Houston First Corporation (local government corporation) and Houston Park Boards (non-profit).
Governors Island, NYC	172-acre island in New York Harbor, which includes a 2.1-mile loop bike/ped trail.	The City of New York established The Trust for Governors Island as a nonprofit organization and instrumentality of the City of New York, charged with managing the Island's ongoing operations, planning and development. The Trust owns 150 acres of the island and has a contract with the City to operate and redevelop it.
East Bay Regional Park District, San Francisco Bay Area	A special district within the San Francisco Bay Area which maintains and operates a system of regional parks. It is the largest urban regional park district in the United States.	The East Bay Regional Park District in the San Francisco Bay Area manages over 100,000 acres in 65 parks, and 1,200 miles of trails. The District spans two counties and is funded by a special property tax applied to each property, which generates about 65% of the District's \$190M operating budget per year.

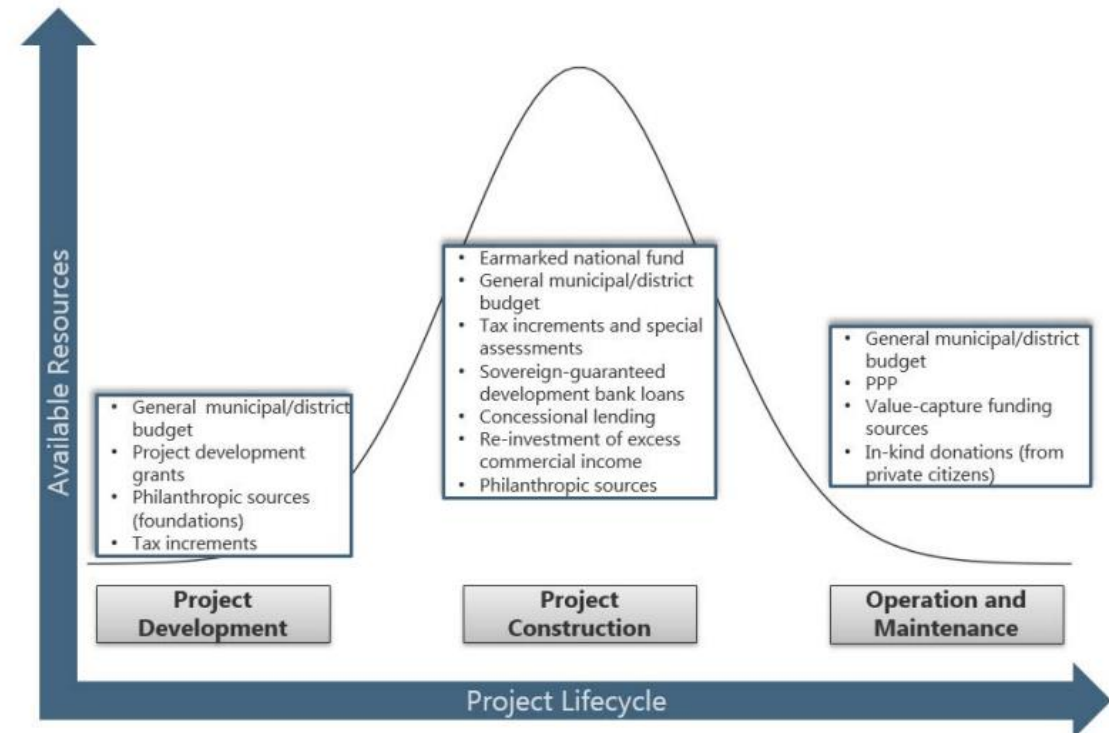
Overview of O&M funding models in the US (2 of 2)

Project Name	Components	Funding model
Atlanta BeltLine, Atlanta	A sustainable redevelopment project, which includes approximately 32 km of bike lanes and walking trails along linear park, adjacent to future streetcar.	Conversations with the Atlanta BeltLine stakeholders indicate that, theoretically, the City of Atlanta would cover the O&M of the corridor. However, given the city department that would be charged with this task is consistently understaffed and underfunded, the BeltLine is evaluating other models, such as the conservatorship model deployed in NYC's Central Park, whereby a non-profit entity was set up to manage and oversee operations for the public space in partnership with the public.

Key takeaways on O&M funding models worldwide

▶ O&M funding trends worldwide:

- ▶ Across the Global North and Global South, it is common to find that funds for ongoing operations and maintenance have often not been explicitly factored in for most projects. Bike/ped projects face challenges compared to motorized transportation projects, which typically have a dedicated O&M funding source (i.e., fuel taxes or tolls pay for capital, operating, and maintenance costs).
- ▶ As shown in the graph to the right, globally, one of the main sources used to cover O&M costs is the general municipal / district budget.



- ▶ The following slides provide an overview of the O&M funding models used by different parks and bike/ped projects across the globe, as well as important considerations on how these were structured.

Overview of O&M funding models across the globe

Project Name	Description	Funding model
Hart van Zuid, Rotterdam	An area development on the south bank of Rotterdam, which includes redesign of the public space to prioritize pedestrians and cyclists.	Hart van Zuid is an integrated public-private partnership (P3) where the private partner designs, finances, constructs, maintains, and operates walking and biking (W&C) infrastructure.
Pasig City, Metro Manila, Phillipines	22 km of protected bike lanes, bike parking, and critical intersections facilitating safe walking and cycling facilities that have become permanent infrastructure.	Although the cost of operations and maintenance are not yet factored into the investment cost, this is expected to come from the Pasig City budget.
MyCity Project, Cape Town	Non-Motorised Transport (NMT) programme, under which 36 projects have been completed (as of July 2021), with approximately 550km of new bike/ped infrastructure.	The operating costs of the MyCiti project were originally intended to be covered by fare revenue, but to date, there has been significant shortfall. The shortfall has been made up by the municipality, with the city's contributions generated through property taxes and a share of the fuel levy.



8

Key Takeaways and Recommendations



Key Takeaways

- ▶ Overall, the identified funding sources for O&M are generally applicable (in terms of eligibility) across different trails. However, it is possible that trails with unique features may be able to access specialized and innovative funding sources that have not been contemplated before.
- ▶ As shown in Section 6, dedicated programs that exist at the federal level and include O&M as an eligible activity (i.e., RTP) do not provide a significant amount of funding nor ongoing, multi-year funding (i.e., require yearly application).
- ▶ At the state level, guidance on the SUN Trail program indicates that it can be used to cover O&M costs. However, in practice, this may be challenging as the program is currently capped and its future expansion remains uncertain. Additionally, there are no specific examples of projects that have used SUN Trail monies to cover O&M costs.
- ▶ Therefore, a large majority of the monies to fill O&M funding gaps will have to come from local sources.
- ▶ As shown in Section 7, O&M funding for non-profit parks, world-class recreational facilities, and trail systems across the US is typically covered by public sources, including municipal and district budgets. This is also a reality for bike infrastructure across the world.

Recommendations (1 of 2)

- ▶ The trails should consider pursuing PTP Surtax Funds as an ongoing revenue source for O&M, particularly as municipalities have flexibility in using Surtax funds for bike infrastructure projects.
 - ▶ In the case of The Underline, as it passes through different cities, this will require coordination and political will.
 - ▶ Similarly, Snapper Creek Trail traverses several areas within the County (i.e., North Miami Beach and Miami Gardens). Therefore, MDC trails should leverage inter-local agreements between municipalities to unlock additional funding for maintenance along the corridor.
- ▶ Although politically challenging, trails should also consider strategies to pursue local general funds and gas tax revenues as ongoing sources of support for O&M expenditures.
- ▶ Trails should pursue private donations and philanthropic funds as complementary funding pathways to the local options described above.
 - ▶ The Underline is one of the projects that has already pursued private donations and philanthropic funds; it should continue to consider these options as a complement to local public funding.

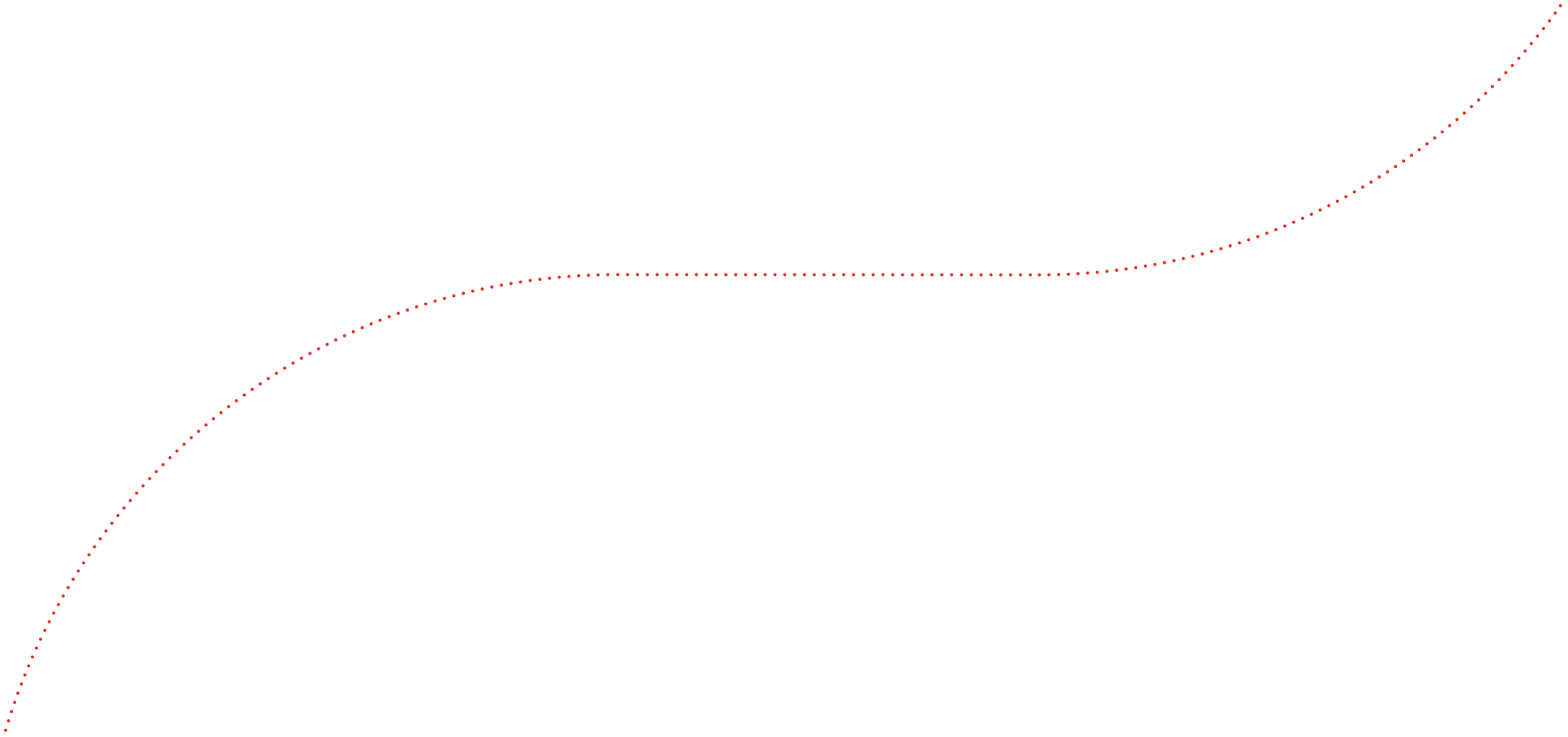
Recommendations (2 of 2)

- ▶ Studies by universities, local governments, and the Rails-to-Trails Conservancy indicate that, overall, landowners adjacent to bike trails typically feel the trail has no effect on or has increased the value of their property.
 - ▶ According to the feasibility study reviewed for this report, MDC properties along the trails have experienced property value increases.
 - ▶ This phenomenon provides a unique opportunity to leverage value capture funding techniques to fill O&M funding gaps, including special assessments. However, these strategies may be challenging given that they require a petition signed by the Mayor or by 50% of resident owners of property included within the district.
- ▶ Naming Rights, while modest in magnitude, may also represent a complementary source of bespoke funding.



9

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