

Marquette Greenway Trail

Sub - Area Plan



Summary Report

june 2009

Acknowledgement

Burns Harbor Town Council

Jim McGee, President
Toni Biancardi, Vice-President
Louis Bain II
T. Clifford Fleming
Robert M. Perrine

Burns Harbor Clerk-Treasurer

Jane Jordan

Burns Harbor Plan Commission

Jeff Freeze, President
Terry Swanson, Vice-President
Louis Bain II
Virginia Bain
T. Clifford Fleming
Jim McGee
Jim Meeks

Stakeholders

Indiana Dunes National Lakeshore

Costa Dillon, Superintendent
Garry Traynham, Assistant Superintendent
Eric Ehn, Landscape Architect

Indiana Department of Natural Resources

Mike Molnar
Jenny Orsburn
Sergio Mendoza
Joe Exl

Northwestern Indiana Regional Planning Commission (NIRPC)

John Swanson, Executive Director
Mitch Barloga, Planner

City of Portage

Joe Csikos, Director – Community Planning and Development
Clarke Johnson, Superintendent –Parks and Recreation
Craig Hendrix, Director – Public Works

Town of Porter

Mike Genger, Councilman
Bruce Snyder, Porter Redevelopment Commission

Holladay Properties

Tim Healy, Vice-President
Mike Micka

American Planning Association – Indiana

Bob Thompson, Secretary - APA - IN and Executive Director - Porter County Plan Commission

The Consultant Team:

JJR, LLC
Short Elliott Hendrickson, Inc
Context
Professional Procurement Services

Special Thanks

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Introduction



The vision of a greenway link between the east and west units of the Indiana Dunes National Lakeshore has been a dream of Northwest Indiana's communities and public officials at the federal, state and municipal level for decades. Multiple studies have been complete by various parties and yet today this vision remains un-realized despite these valuable efforts. With the development of the Marquette Plan in 2005 and the subsequent Phase 2 process in 2008, this dream moved one step closer to reality. These documents included holistic, multi-community concepts and sub-area specific recommendations that stressed this initiative as a short-term catalytic project critical to one of the key tenets of the Marquette Plan – a continuous trail network in Northwest Indiana that connects Indiana to its lakefront neighbors in Illinois and Michigan. The development and broad support of the Marquette Plan ultimately led the Northwest Indiana Regional Development Authority (RDA), charged with the funding of key shoreline initiatives consistent with the Marquette Plan, to fund this feasibility study as an important first step in scoping and ultimately building this key greenway segment as part of the broader state-to-state trail under development by the Northwest Indiana Regional Planning Commission (NIRPC). The RDA serves the communities in Lake and Porter counties in northwest Indiana and provides funding for the Gary/Chicago International Airport, Commuter Rail Transportation, a regional bus system, the Lake Michigan Shoreline Development and other economic development projects.

This effort is being completed for the Town of Burns Harbor, is a model of regional cooperation that involves representatives from the adjacent communities of Portage and Porter, Porter County, Indiana Department of Natural Resources, National Park Service, adjacent business and industry and other vested stakeholders critical in the planning of this multi-community capital project. With the completion of the Marquette Plan and this feasibility study for a key component of it, the time has come to stand behind a single compelling vision and start building a greenway that connects these communities to their heritage and each other in the spirit of the Marquette Plan. This summary document outlines the process the community followed to develop the Marquette Greenway Trail plan, highlights key analysis and design considerations, components of the design and "trail experience" visitors will encounter, market analysis associated with the trail's role in community development and implementation strategies to finally realize this long-sought vision.

Introduction



The Purpose

Create A Trail Corridor Vision

- Explore opportunities to connect existing trails
- Satisfy needs of the residents and recreational users
- Work with the residents and stakeholders to determine desired trail character & route
- Integrate existing transportation/infrastructure

Guide future development

- Strengthen the neighborhoods and region with desired land uses and development character
- Emphasize & capitalize on trails as a medium for economic growth for the region
- Preserve the existing natural resources

The study area for this effort spans a roughly five-mile corridor from IN 249 in Portage on the west to Mineral Spring Road in Porter on the east with the majority of the land within the corporate limits of the Town of Burns Harbor. It also includes portions of the adjacent communities of Portage and Porter to complete the connection between the east and west units of Indiana Dunes National Lakeshore. The majority of the study area lines the Little Calumet River riparian corridor while also encompassing key natural and built linkages to it such as Salt Creek and smaller tributaries, utility corridors, existing trail corridors and roadways that have adequate right of way to accommodate the trail standards as identified in this study. Adjacent uses include large scale industrial areas such as the Port of Indiana and Arcelor Mittal Steel, residential, commercial, agricultural and undeveloped natural areas both within and outside the boundaries of Indiana Dunes National Lakeshore.

Process

During the course of the planning process, existing reports, field and pertinent Geographic Information Systems (GIS) data was assessed to develop project opportunities and constraints to guide decision-making. A project vision and guiding principles were also developed and reviewed with project stakeholders and the general public at a one day open workshop on March 19, 2009 along with a series of plan alternative based on the following trail typologies:

- 1) Main line/trunk – a single, predominantly point A to point B scenic thruway trail contained primarily in within the boundaries of the Indiana Dunes National Lakeshore.
- 2) Dendritic – an east-west movement reflecting a larger river and connecting tributaries composed of a main line/trunk trail with a series of regional trail feeders such as the Brickyard, Calumet and Prairie Duneland trails.
- 3) Braided/loops – an east-west movement that mimics a braided stream with primary and secondary channels composed of a series of trail loops that provide long and short journeys that encompass special features and adjacent or nearby developments or community attractions.
- 4) Hybrid – A combination of the mainline/trunk, dendritic and braided/loops.

Based on feedback during the March 19, 2009 charrette a preferred alternative was selected for further development as the Marquette Greenway Trail as illustrated later in this document.

It should be noted that past trail and greenway studies for proposed east-west unit linkages were carefully evaluated during this effort, including recent efforts by members of NIRPC and National Park Service that field verified a viable trail alignment within National Park Service land. This effort provided much of the alignment illustrated in the “mainline/trunk” alternative design that has been incorporated into the preferred alternative as the “nature” sections as outlined later in this document.



March 9, 2009 Kick-Off Meeting with Town of Burns Harbor

March 19, 2009 Design Workshop

March 19, 2009 Public Open House

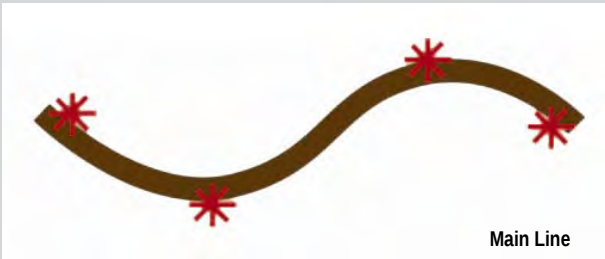
May 4, 2009 Presentation to Burns Harbor Plan Commission

May 21, 2009 Presentation (Public Hearing) to Burns Harbor Plan Commissions

June 10, 2009 Presentation to Burns Harbor Town Council

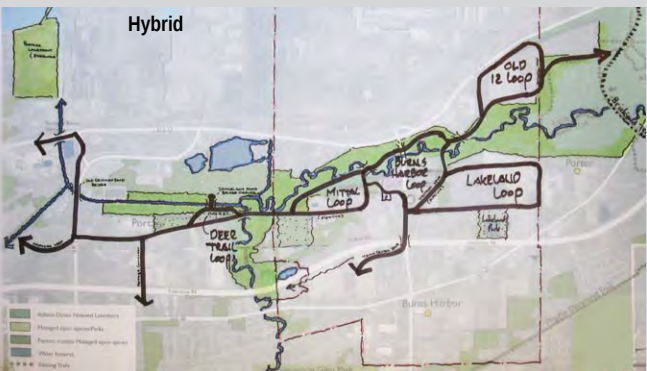
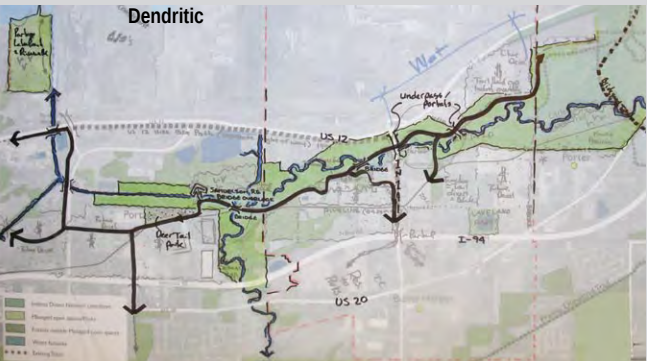


Trail Typologies



Process

Draft Alternatives



Background
The Marquette Vision



As stated previously, the concept of a greenway connection between the east and west units of the Indiana Dunes National Lakeshore has been long in study but lacked needed momentum and funding for implementation until the combination of the Marquette Plan, RDA's mission to help implement components of it and Burns Harbor's desire to spearhead this effort aligned. This project is a key element of the Porter County West sub-area, alternative transportation and green infrastructure frameworks as well as community-specific recommendations in Burns Harbor, Porter and Portage contained in the Marquette Plan. In addition, the concept of making this connection more than a trail is also in alignment with the Marquette Plan which calls for greenways with other community and economic benefits as part of a the larger lakefront reinvestment strategy.

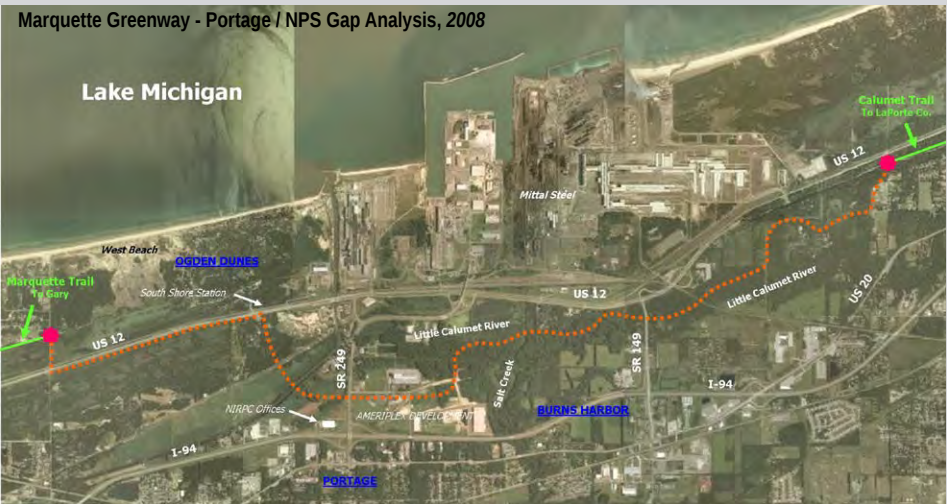


3 Connect existing trails as envisioned in NIRPC's "2005 Ped and Pedal Plan." Connect the east and west units of the Indiana Dunes National Lakeshore.



Background
Prior Studies

The illustrations on this page highlight prior studies to create an east-west trail and greenway linkage in this area.



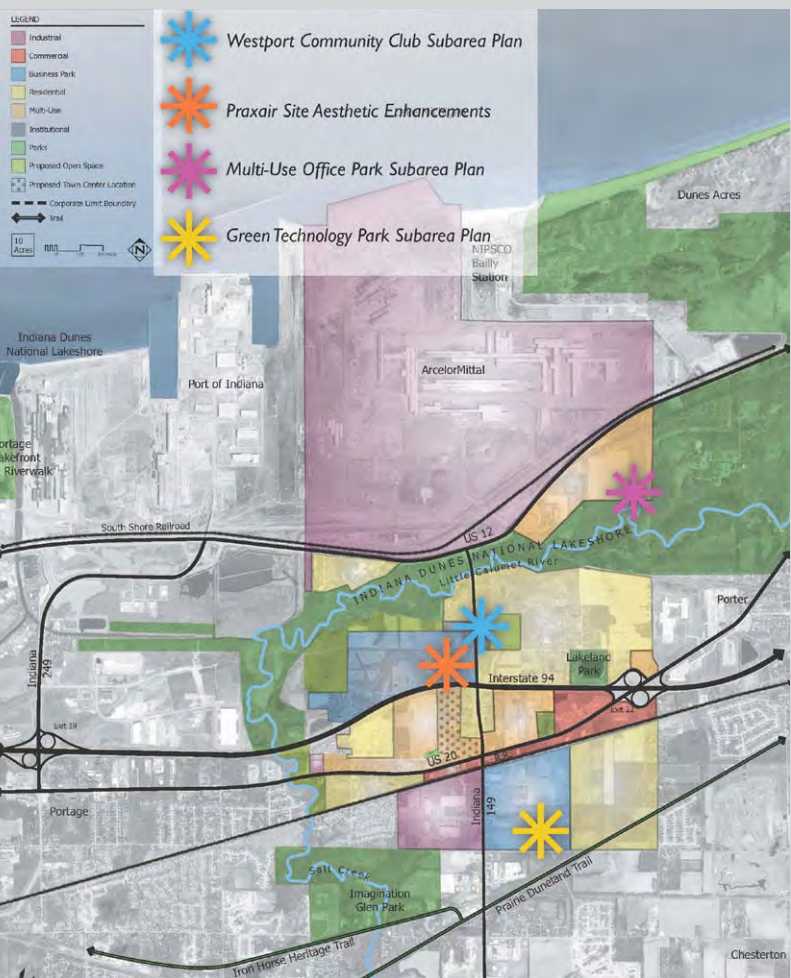
Background

Ongoing Initiatives

This feasibility study is a component of a larger Comprehensive Plan being developed by the Town of Burns Harbor which looks at community-wide land-use and zoning as well more detailed as sub-area planning for the Town Center and Marquette Greenway Trail areas and potential key development parcels. These documents are designed to complement each other and guide community decision making in the long and short term. Highlights of these studies are included on these pages for context.



Burns Harbor Comprehensive Plan



Background

Burns Harbor Town Center



Plan View Town Center

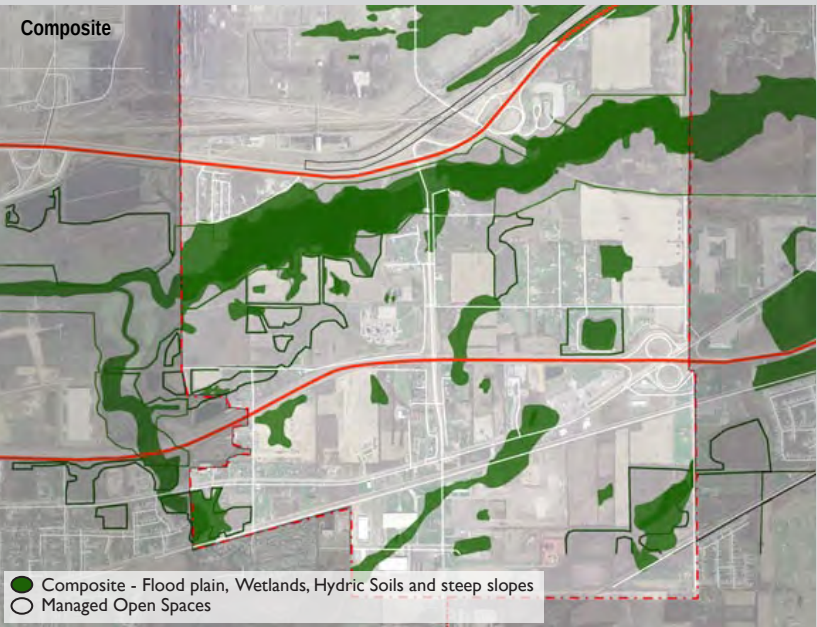
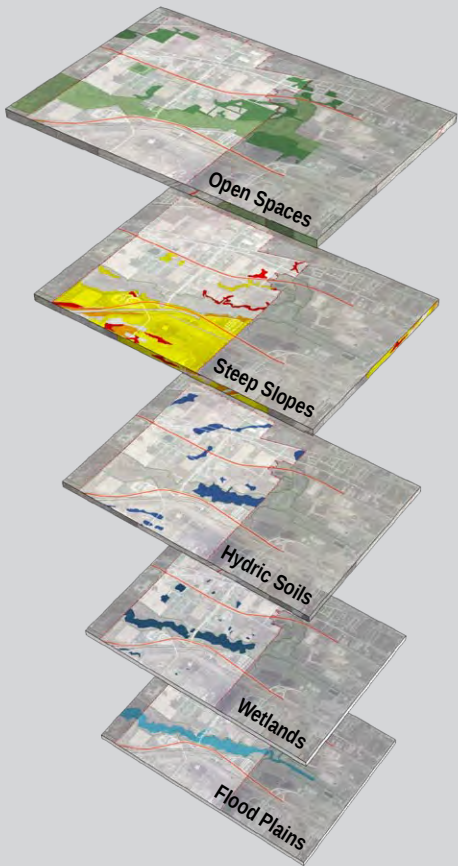


Bird's Eye View of the Town Center - Looking North

Issues / Opportunities

Suitability Analysis

An important piece of this feasibility study was to evaluate the physical characteristics of the study area in order to develop trail alignments that were technically feasible and environmentally sensitive. This is also intended to minimize the costs and negative impacts of inappropriate development within floodplain and other sensitive and developmentally challenging areas. GIS was a valuable tool in this analysis, layering pertinent data such as floodplain, hydric soils, wetlands, steep slopes and ownership. These were evaluated along with field analysis and other data such as attractions and destinations, transportation and development patterns projected in the concurrent Burns Harbor Comprehensive Plan to develop a Suitability Analysis diagram as illustrated on this page. This was helpful in identifying preferred alignments as well as barriers that needed to be overcome such as limited access roadways, railroads and difficult to cross segments of the river.



Issues / Opportunities

Issues / Opportunities

Market Analysis

Market Review for the Marquette Planning Area included the quantitative review of the proposed developments that could occur concurrent with the trail investment. Based on the illustrative master plan, figure 1 is an estimate of building and structures that could be place on the property.

As discussed in the master plan, Professional Services Management Journal (PSMJ) resources points to several factors that have and will continue to impact development opportunities within our communities. The key factors that will have an impact on Burns Harbor as related to economic development include the following:

Tighter Lending Policies. As lenders attempt to rebound from the recession, lending policies have been tightened where by in previous years, loans for commercial and residential development may have been made at an 80% (loan) to 20% (equity) or better, this trend has moved toward 60% to 40%, which places higher capital requirements on the private sector and thus limiting those markets that were not of the highest priority.



BURNS HARBOR - Multi-Use Development Park-Marquette Trail							
Porter County, Indiana							
Proposed Land / Building Area Summary							
Building No.	Use	Ground Floor Sq. Footage	Stories / Floors	Total Bldg. Square Footage	Parking Area (S.F.)	Remaining Lot Area (S.F.)	Total Lot Area (S.F.)
O-1	Office	65,000	3	195,000	60,000	63,750	318,750
O-2	Office	48,000	3	144,000	60,000	51,000	255,000
O-3	Office	48,000	3	144,000	60,000	51,000	255,000
O-4	Office	48,000	3	144,000	110,000	63,500	317,500
O-5	Office	48,000	3	144,000	110,000	63,500	317,500
Office Sub-Totals				771,000	400,000	292,750	1,463,750
R-1	Restaurant / Retail	6,500	1	6,500	15,000	5,375	26,875
H-1	Hotel	44,400	3	133,200	35,000	42,050	210,250
Restaurant / Hotel Sub-Totals				139,700	50,000	47,425	237,125
TOTAL				910,700	450,000	340,175	1,700,875

Figure 1

Additional information provided by the Certified Commercial Investment Member (CCIM) Institute, states that “industrial development-based companies that have focused on market fundamentals will be well positioned to accelerate out of the downturn with long-term earnings potential enhanced. Such fundamentals include focusing on critical locations in the global supply chain and predominantly infill submarket locations within those trade hubs.”

Federal and State Budget difficulties. This factor also applies to local budgets as with the implementation of property tax caps; competition for limited resources will continue necessitating generation of additional sources and or decrease in cost.

However, as we utilized the above building types and sizes as the basis with a 20 year build-out, the total projected investment in this type of development could exceed \$90M and generate additional tax base of \$2.8M. In keeping with the theme proceeding with development with the acknowledgement of what the cost of services are, this development could provide downward pressure of the tax paid by the residential sector in the Town.

Issues / Opportunities

Along with the quantifiable economic impact of development (investment amounts, square footage, and projected property taxes) as listed above, along with the generally accepted believe that parks and recreation are of benefit to the quality of life to the residents, the development of green space recreational component(s) in a community can have a positive impact on adjoining property values. The process of Hedonic modeling to evaluate the impact of green space on housing prices is a common technique used to evaluate the tax base impact that various type of green space can have in a community. Information compiled by the National Recreation and Park Association, siting various previous studies completed including a case study from Indianapolis indicate the following:

“Recent analyses suggest that open spaces may have substantial positive impacts on surrounding property values and hence, the property tax base, providing open space advocates with convincing arguments in favor of open space designation and preservation that can be backed up with actual, dollar impacts. In some cases, the increase in property tax from housing in close proximity to green spaces may equal or even exceed the costs of maintaining them, representing a welcome net gain to a city's coffers.”

In keeping with the Comprehensive Plan discussion having an understanding of the cost of services, working/open space as indicated by the America Farmland Trust points to this type of development as providing move value that the cost. It is our recommendation that moving forward with the trail components, that significant attention to ancillary development opportunities be pursued in an effort to further diversify the tax base while providing additional communities amenities.

BURNS HARBOR - Multi-Use Development Park-Marquette Trail			
Porter County, Indiana			
Economic Impact Analysis			
Tax Year	2030		
Gross Tax Rate	Office / Commercial / Light Industrial	\$3.0000	(per \$100 of assessed value)
Taxing District	Porter County		
PROPOSED ASSUMPTIONS			
Multi-Use Development Park	Bldg. Area (s.f.)	Lot Area (Acres)	
Office	771,000	35.5	
Hotel	44,400	6.1	
Restaurant	6,500	0.6	
Total	821,900	42.2	
CALCULATIONS		NOTES	
Office / Flex-Office	771,000 s.f.	Combined total sq. footage	
Fair Market Value per Sq. Foot	\$140	RS Means construction cost data	
Total Assessed Value (80%)	\$86,352,000	Conservatively assumed 80% of value	
Current Assessed Value of Land	\$1,564,000	\$20,000 per acre	
Site Development Costs	\$2,346,000	\$30,000 per acre	
Total Projected New Assessed Value	\$90,262,000	Line items 2+3+4	
Annual Realized Tax Revenue	\$2,707,860	In Year 2030 upon complete build out	
Hotel	44,400 s.f.		
Fair Market Value per Sq. Foot (includes parking)	\$125	RS Means construction cost data	
Total Assessed Value (80%)	\$4,440,000	Assumed 80% of value	
Current Assessed Value of Land	\$122,000	\$20,000 per acre	
Site Development Costs	\$183,000	\$30,000 per acre	
Total Projected New Assessed Value	\$4,745,000	Line items 20+21+22	
Annual Realized Tax Revenue	\$142,350	In Year 2030 upon complete build out	
Restaurant	6,500 s.f.		
Fair Market Value per Sq. Foot (includes parking)	\$200	RS Means construction cost data	
Total Assessed Value (80%)	\$1,040,000	Assumed 80% of value	
Current Assessed Value of Land	\$12,000	\$20,000 per acre	
Site Development Costs	\$18,000	\$30,000 per acre	
Total Projected New Assessed Value	\$1,070,000	Line items 26+27+28	
Annual Realized Tax Revenue	\$32,100	In Year 2030 upon complete build out	
Total Annual Realized Tax Revenue	\$2,882,310		



Preferred Plan

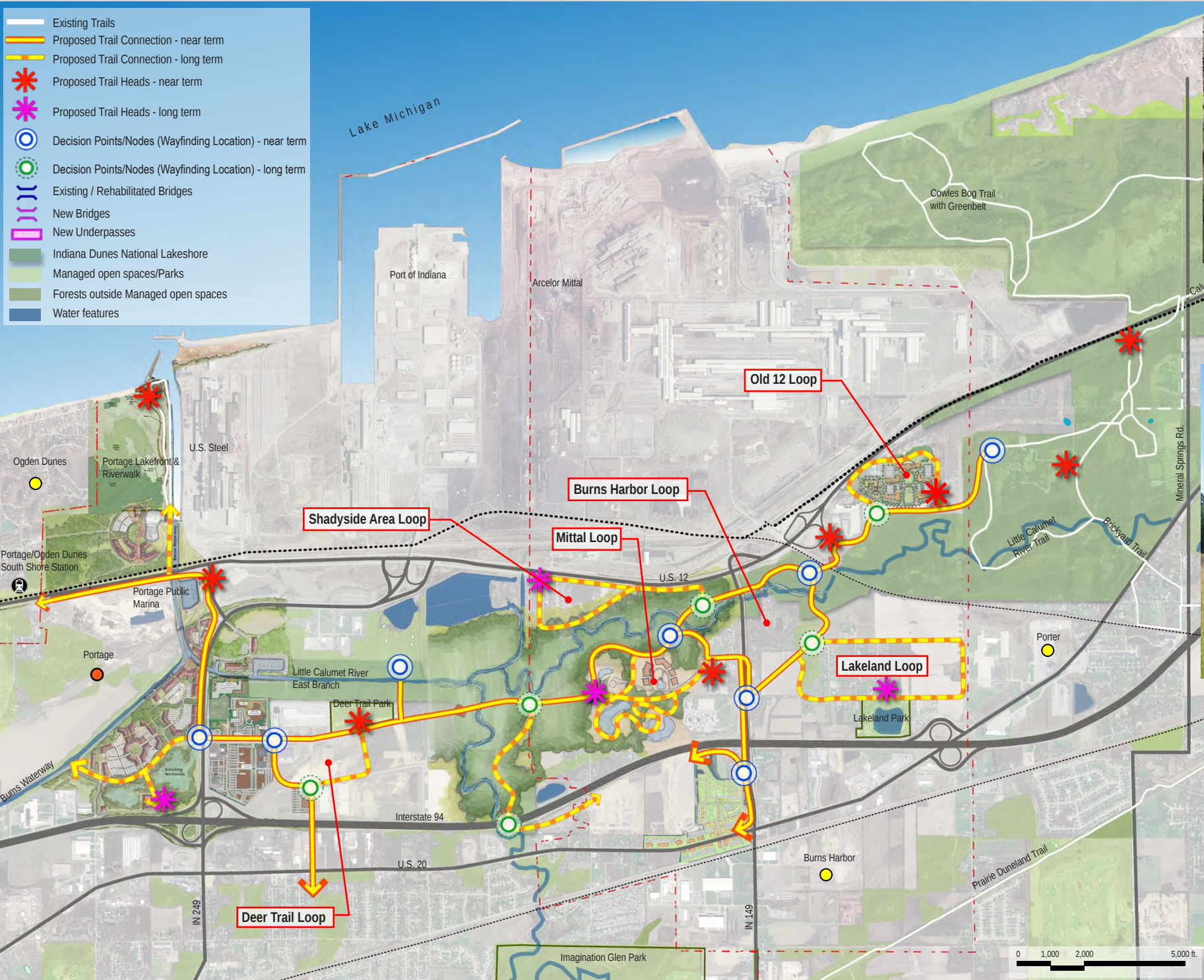
Based on the input from project stakeholders and the general public, a preferred alternative was identified and further developed as the plan illustrated on these pages. It provides a diverse mainline/trunk connection from east to west with a series of trail feeders from adjacent areas that form a system of thematic loops that provide key community linkages. These can be built in a phased approach in step with the pace of community growth outlined in the Comprehensive Plan. These loops also accommodate long and short distance recreational experiences that cater to different users and duration of use. In order to give the reader a sense of the character, qualities and features of the corridor, this section is divided into three components with accompanying character imagery:

- 1) Trail Experience
- 2) Bridges and Underpasses
- 3) Trailheads and Nodes

Guiding Principles

- Emphasize the desired route of the Marquette Greenway Trail as a destination
- Ensure connectivity between existing trails and desired trail route
- Integrate and connect surrounding attractions/destinations
- Integrate desired land uses along the trails catering to residents/recreational users
- Emphasize a development character that complements existing natural resources
- Establish links to alternative transportation modes (South Shore rail, etc)
- Emphasize a system that is a model of sustainable design and accessibility
- Separate incompatible modes for safety and user experience
- Prioritize experience based on “family” as a primary target user
- Base decisions on an implementation strategy that maximizes flexibility, cost effectiveness and ease of phasing

Master Plan



Preferred Plan

Trail Experience

Trail Character Zones



Based on the vision, principles and purpose of this project, the Marquette Greenway Trail is intended to provide a variety of recreational experiences while also acting as a community development and economic catalyst as outlined in the Marquette Plan. For this reason, the trail's alignment meanders between natural areas of the National Lakeshore and more developed areas of the communities to achieve the above goal and maximize the trail experience for its users. Based on the diagram on this page, the trail is divided into three categories with suggested character and amenities.

Trail Experience

Reach One – Portage Northside/Ogden Dunes

This segment connects with the west unit of the National Lakeshore along U.S. 12 on the west and crosses Salt Creek on the east. The majority of this segment travels south of the Little Calumet River through the adjacent Portage Northside Development, including Ameriplex and Deer Trail Park, and utilizes existing utility corridors, IN 249 R.O.W. and underutilized bridge infrastructure. Key features of this segment include:

- Re-utilization of the Old IN 249 steel bridge over the Little Calumet River for a mainline trail linkage and Old Samuelson Road Bridge as an interpretive overlook.
- Trailheads at Portage Marina, Deer Trail Park and Portage Lakefront and Riverwalk
- Commuter rail link at Portage-Ogden Dunes South Shore station

Reach Two – Burns Harbor Edge

This segment starts at the Burns Harbor corporate limits and remains south of the river, traveling along the riparian edge between the bluff and the adjacent edge development proposed on the 187-acre Arcelor Mittal property outlined later in this document. Key features of this segment include:

- Mainline trunk trail and recreational loops as part of proposed edge development
- Trailheads at Burns Harbor Public Fishing site and potential park at Arcelor Mittal property
- Improved accessibility to Burns Harbor Public Fishing area.

Reach Three–Central Loop

This segment provides a large trail loop through one of the most environmentally sensitive and physically challenging segments of the corridor, with boardwalks and a dramatic underpass at the Norfolk Southern rail trestle as well as connections to the future Burns Harbor Town Center to the south. Key features of this segment include:

- Large-scale trail loop with a variety of experiences
- Utilization of IN 149 R.O.W. and utility corridors to connect developments to the south with the river and mainline trunk trail.
- Trailheads at Burns Harbor Public Fishing site and Arcelor Mittal Steel corporate campus through a potential partnership arrangement that could provide public access utilizing existing private parking.

Reach Four –Old U.S. 12/Porter

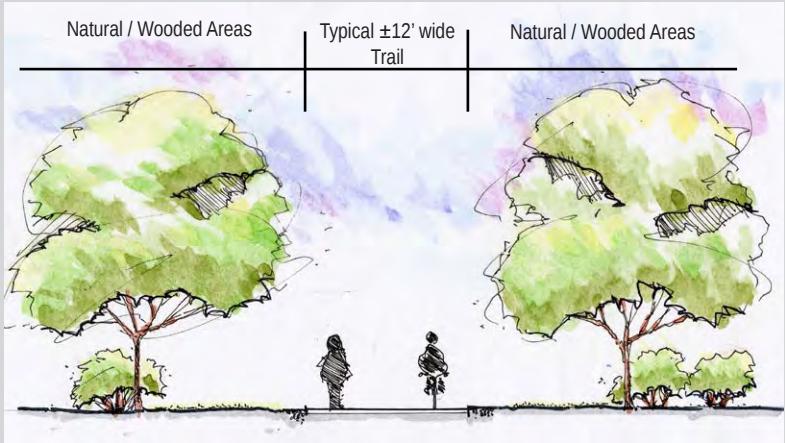
This segment completes the eastern leg of the journey and links with existing trails in the east unit of the National Lakeshore, including the Brickyard and Calumet Trails. It travels east along the north side of the Little Calumet River through a dramatic portal formed by the overhead Norfolk Southern rail trestle and follows the bluff on high ground, linking to existing and potential new edge developments. Key features of this segment include:

- Dramatic high ground views of the river valley
- Mainline trunk trail and loops as part of proposed Old U.S. 12 edge development
- Trailheads at Arcelor Mittal corporate headquarters, potential Old U.S. 12 edge development and existing trailheads within the National Lakeshore.

Trail Experience

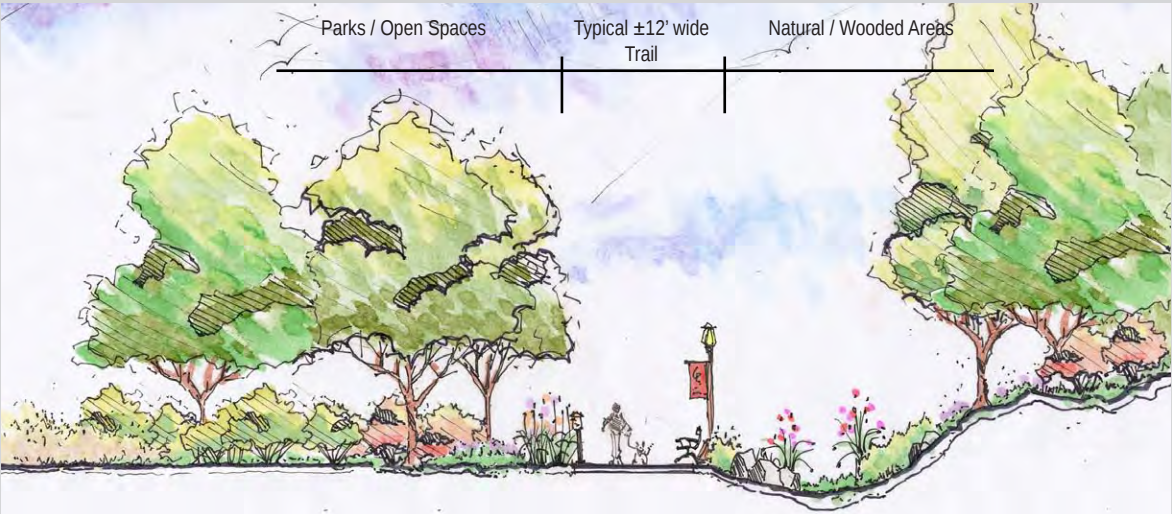


Indiana Dunes National Lakeshore contains one of the nation's richest mosaics of natural communities and is lined by a diverse series of built landscapes including industrial properties of awe-inspiring scale as well as large and small communities. In alignment with the Marquette Plan, this greenway corridor is envisioned to reflect this natural and built diversity rather than simply follow the river, giving users an authentic cross section of Indiana's South Shore including natural areas such as riparian forests, open meadows, river overlooks, views of prominent built features such as adjacent industry and community elements such as business districts, parks, trailheads and other exciting experiences as highlighted on the following pages.



Typical section along Natural/Wooded Areas

Trail Experience



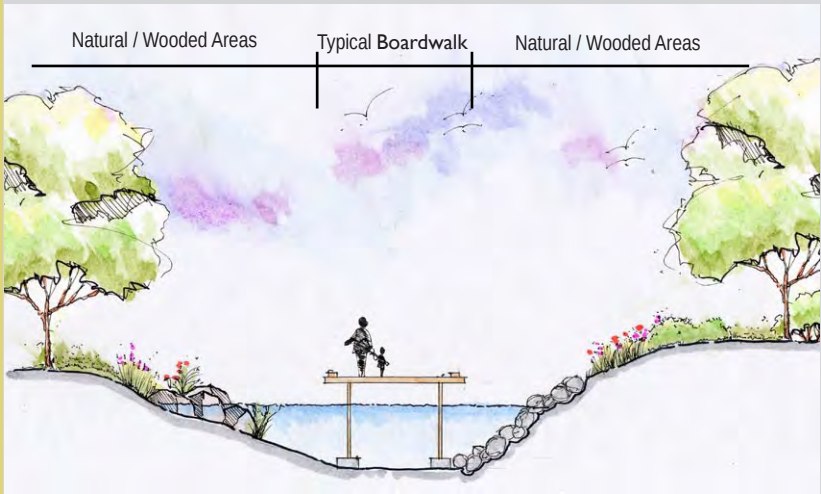
Typical section along Natural/Wooded Areas

Trail Experience



Bridges & Underpasses

The Marquette Greenway Trail is a complex corridor which requires selected bridges, underpasses and boardwalks to overcome existing barriers such as railroads, major roadways, environmentally sensitive areas, steep topography and waterways such as the Little Calumet River. These will be designed to meet the minimum width standards for the mainline trail and be designed to maximize the enjoyment of these sensitive areas, including overlooks, interpretive materials, fishing opportunities and the like as illustrated on the following pages. Each of these special segments and elements will become unique features and highlights for greenway visitors.



Typical section - Mainline Boardwalk

Trail Experience

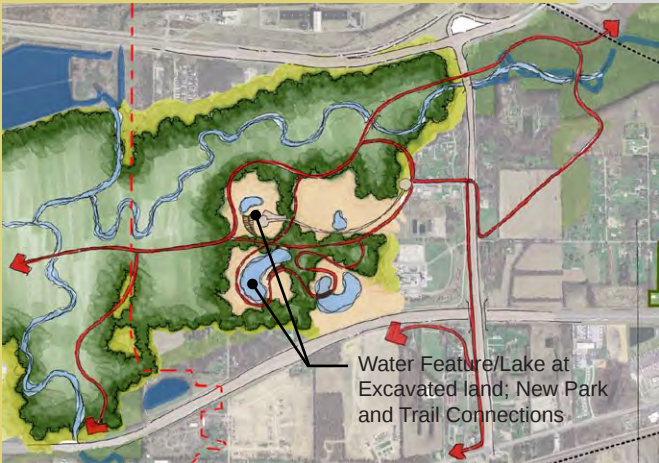


Trail Experience

Edge Development



Step 1: Excavation Management / Resource Protection



Step 2: Park & Trail Integration

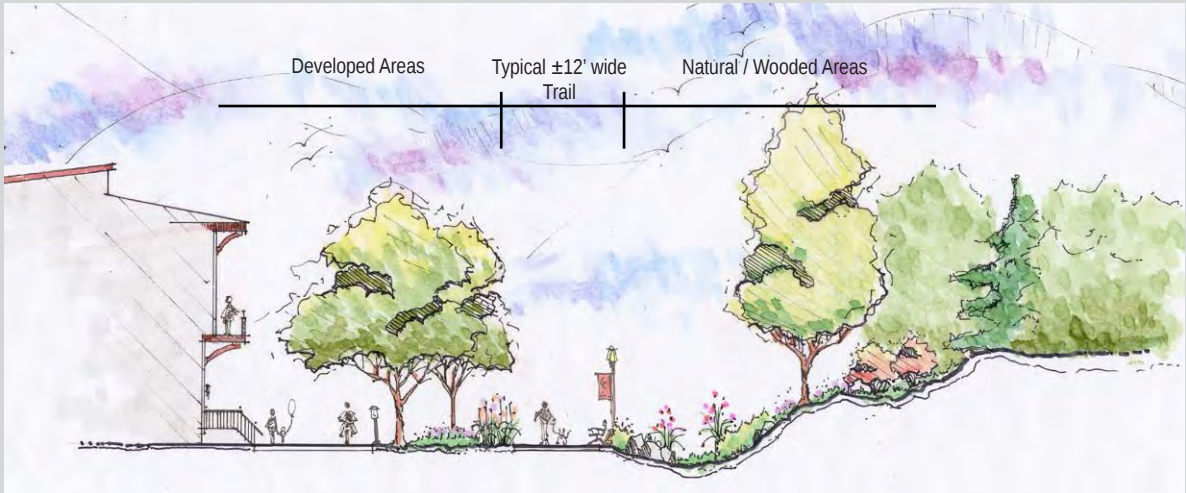


Step 3: Mixed-use Development

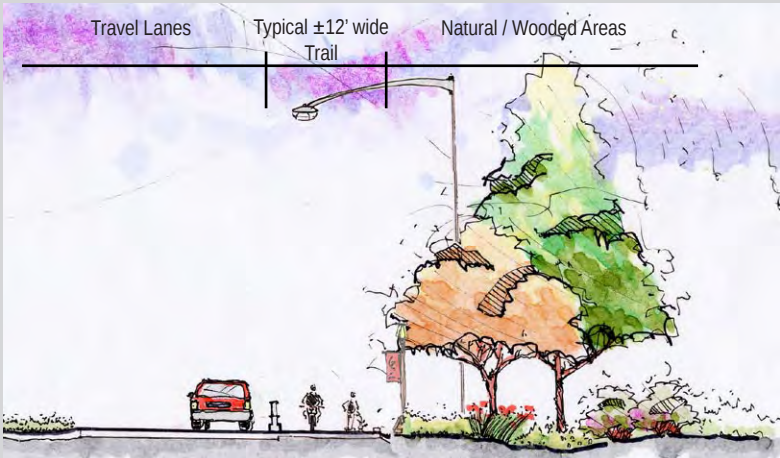
The greenway alignment illustrated in this document contains a series of “edge” segments that abut or travel through adjacent development parcels that have been outlined in the Burns Harbor Comprehensive Plan. One of these parcels is a 187-acre parcel owned by Arcelor Mittal Steel that may have future re-use opportunities through voluntary land transfer. It is a site adjacent to the Indiana Dunes National Lakeshore with roughly 60-acres of high quality woodlands that would be ideal for the desired “edge” trail condition where the greenway connects with adjacent development as part of community economic development strategies. Arcelor Mittal has stated a short term need to excavate clay materials from the site to cap an off-site land fill but may be willing to sell the parcel at a later date which would open it for adaptive re-use alternatives.

The graphics on this page illustrate the potential steps for the needed excavation to occur in a managed fashion that protects the most sensitive wooded areas and guides the excavation in a manner consistent with a longer-term strategy of mixed-use development and public open space that capitalizes on the excavated areas for stormwater and recreational water features as part of a larger park. This would be envisioned along the line of Portage Lakefront and Riverwalk with passive areas, reclaimed “working landscapes”, trails, vehicular access and parking and a public pavilion to support the park and provide a formal trailhead facility to the greenway with shelter and toilets, wayfinding, vending/concessions and other amenities as appropriate. This park would complement the existing public fishing area and trail head on Navajo Trail Road in Burns Harbor and complete important trail loops as part of the broader greenway plan.

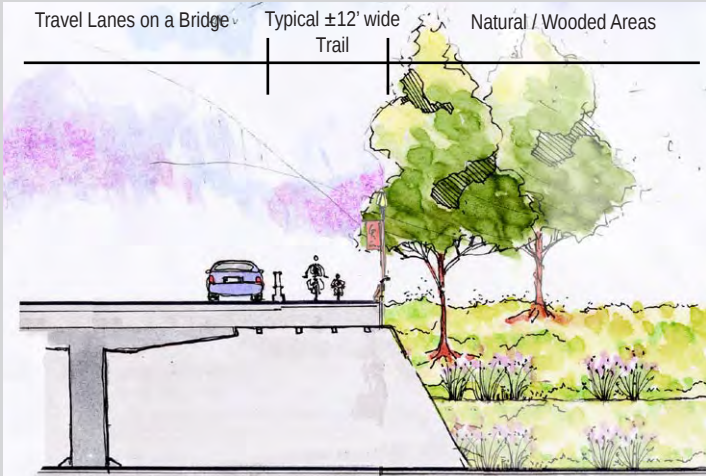
Trail Experience



Typical section through Edge Development



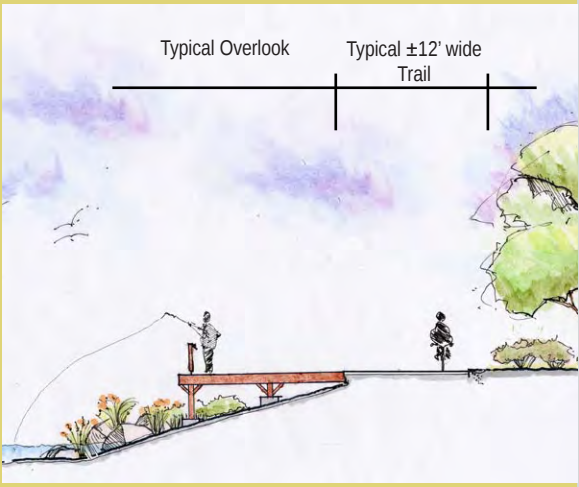
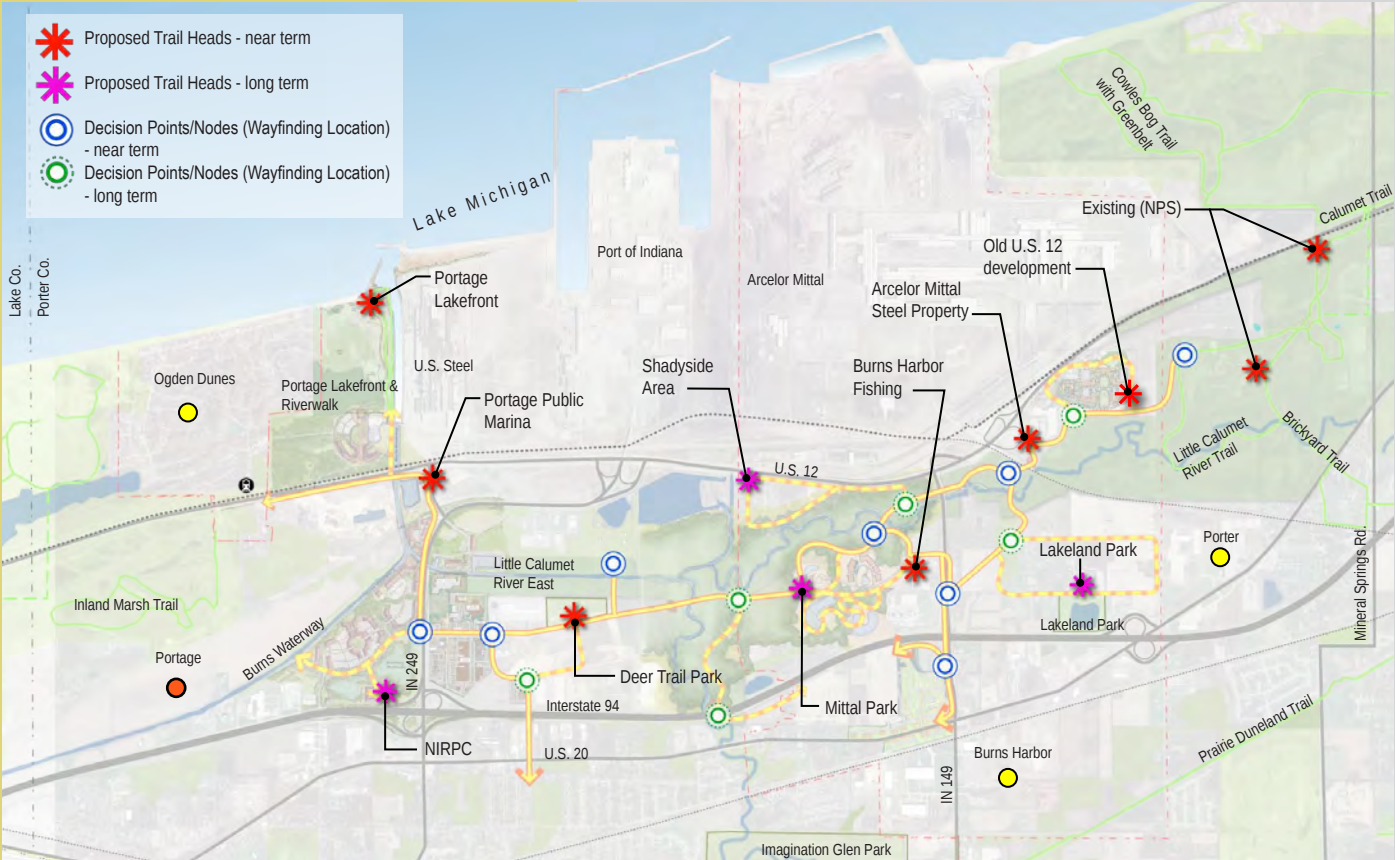
Typical section Looking South along IN 149



Typical section Looking South along IN 149 Bridge over I-94

Trail Experience

Trailheads & Nodes



It is important to recognize that a trail of this length must have well designed and located trailhead and support nodes for public enjoyment and safety. It is also important to understand that this trail will travel through many very remote and difficult to patrol areas and that improperly located and designed amenities will be subject to maintenance and vandalism challenges. With this said, the plan on this page illustrates a strategy for trailhead and wayfinding node placement that maximizes public benefit while capitalizing on more heavily traveled or visible locations to address operational and safety concerns. Where possible, these amenities are placed where they can be shared facilities with other community developments and at the intersection of trail loops or junctions with feeder trails. The illustrations on these pages highlight the typical amenity mix that should be considered, including shelter, public toilets, wayfinding and basic site furnishings such as benches, trash receptacles and drinking fountains along with lighting and vending where appropriate. The incorporation of security phones and discretely placed surveillance cameras where feasible is also encouraged.

Trail Experience

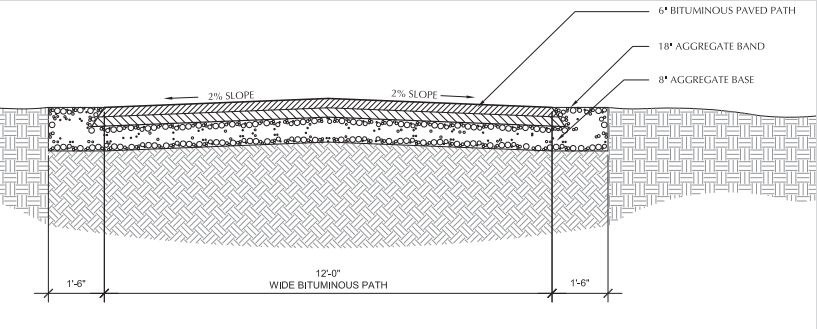


Typical section along Trailheads

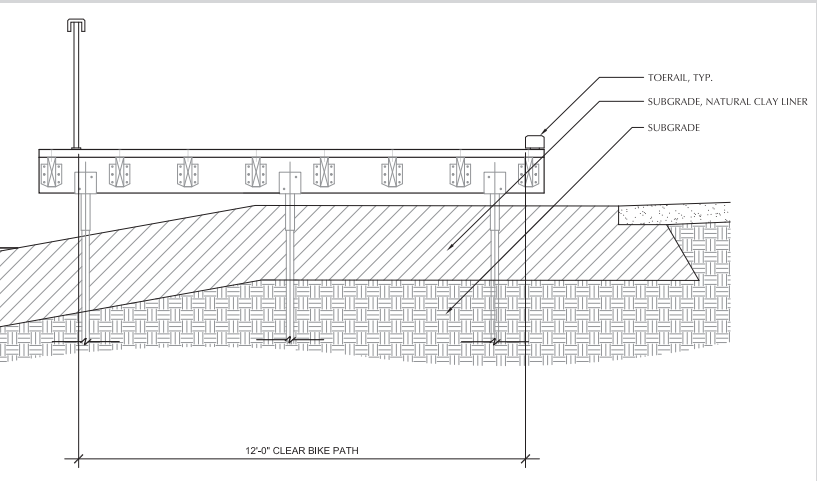
Trail Experience

Trail Standards

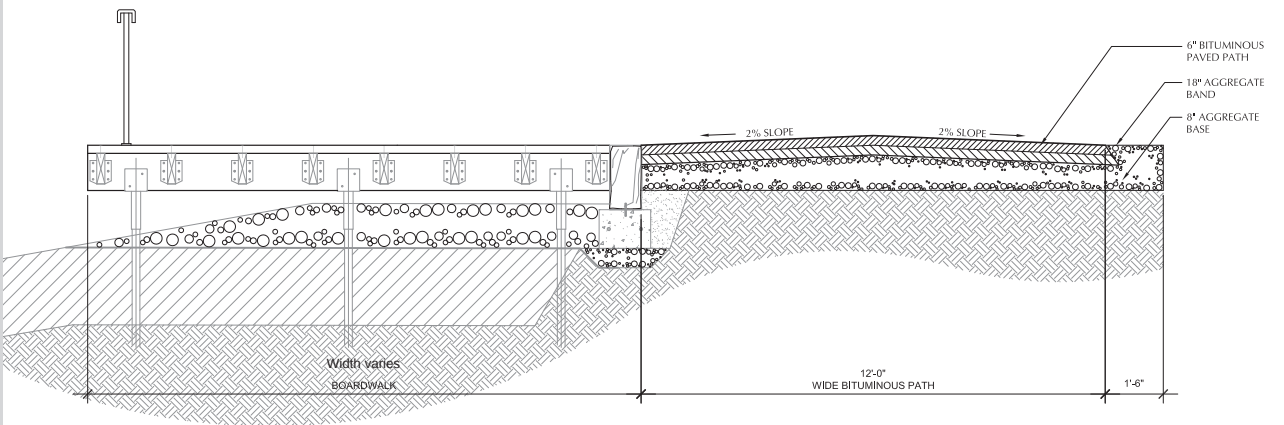
The Marquette Greenway Trail is a cross-state amenity that will ultimately link Indiana with its neighbors in Illinois and Michigan. It is important for such a trail to have a unified identify in terms of materials, width and other technical standards while reflecting local aesthetic diversity in adjacent landscapes, public art, architecture and other ancillary built elements. For this reason a series of trail standards have been developed as outlined on this page. The primary mainline or trunk will be a 12' wide bituminous surface with adjacent 18" crushed stone shoulders and in conformance with all ADA and ASHTO trail standards. This typical at-grade cross section will be utilized and located above the 100-year floodplain, wherever technically feasible to maintain consistency and reduce construction and maintenance costs over more costly solutions. It is recognized that some environmentally sensitive or physically challenging areas will require more costly "on structure" solutions such as pile supported boardwalks and bridges. These sections will also meet the minimum width and accessibility standards for the mainline trail and be designed to maximize the recreational experience. Secondary and tertiary feeders may chose to follow this standard or adapt to local needs with alternative width and materials as appropriate. Suggested cross sections for all of these conditions have been included in this section.



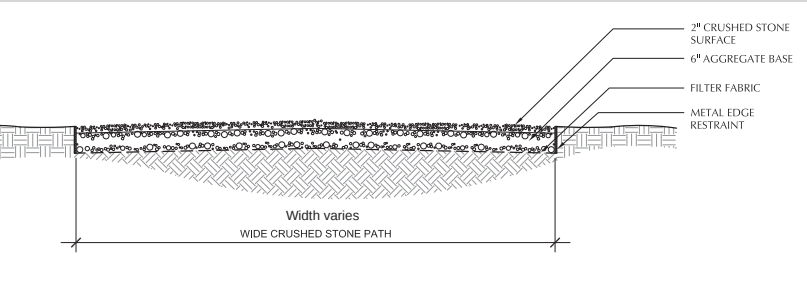
Typical section - Mainline Trail at Grade



Typical section - Mainline Trail Boardwalk



Typical section - Trail with Adjacent Overlook



Typical section - Rustic Ancillary Trail



Implementation

Potential Phasing



The plan recognize that the greenway outlined in this study will occur in a series of phases based on available funding as well as the pace of adjacent community and edge developments that will be linked to the mainline by the trail loops shown on the preferred plan. The graphic on this page illustrates a potential phasing scenario for the Marquette Greenway Trail, highlighting a comprehensive first phase and portions that could be added later.

Implementation

Next Steps



The development of the Marquette Greenway Trail will require the collaboration and commitment of federal, state and local public officials. Working together, the necessary monies can be secured to construct, operate, and maintain the trail corridor.

As a first step, it is recommended that the project stakeholders formalize their commitment to work together by entering into an Inter-Local Agreement, Cooperative Agreement or Memorandum of Understanding. Doing so, will pool the limited resources of the collective stakeholders and re-affirm the groups commitment to construct the Marquette Greenway Trail.

With the formalized agreement in place, the Marquette Greenway Trail group should develop a comprehensive funding matrix that identifies potential funding opportunities (federal, state, local, other), submittal dates, expected award dates and projected construction schedule. At this stage, it is also suggested that the group enter into discussions to evaluate ongoing operations and maintenance responsibilities associated with the trail corridor. Identifying required ongoing operations and maintenance funding sources will ensure long-term viability and success of this significant public investment.

The establishment of a formalized agreement, development of a funding matrix, and creation of an operations and maintenance plan can all occur within a few months. With the agreement, matrix, and plans in hand, accompanied by this Plan, the Marquette Greenway Trail group will be positioned to assist northwest Indiana communities realize their long-sought vision to create greenway link that connects the east and west units of the Indiana Dunes National Lakeshore.

