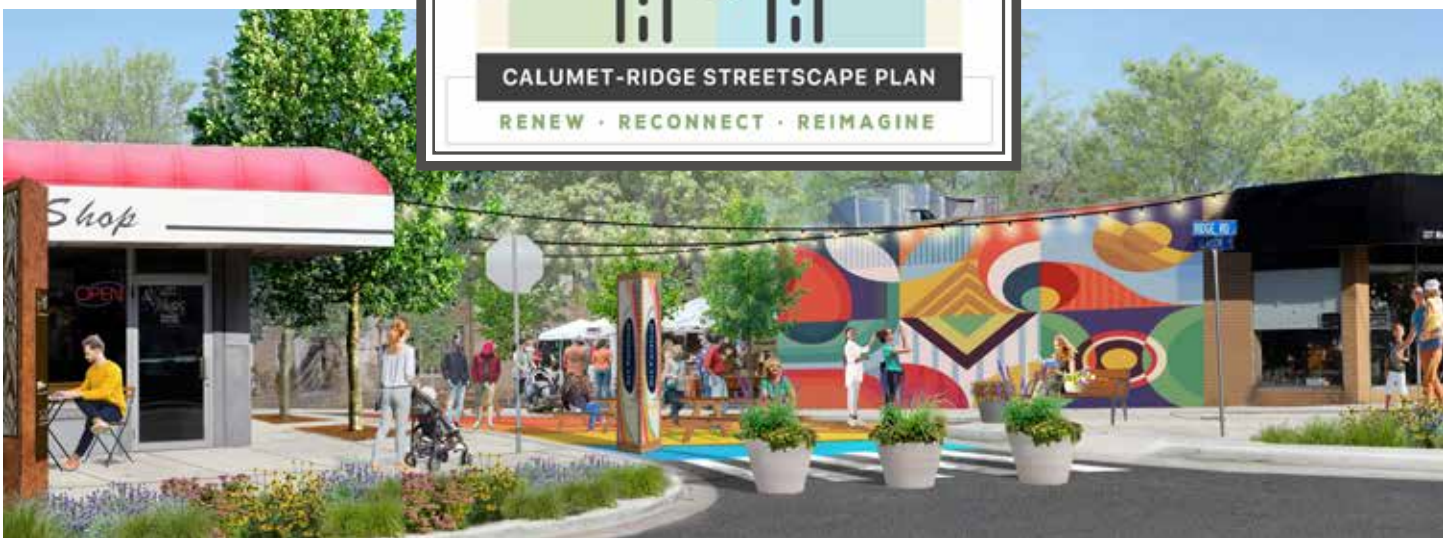
TOWN OF MUNSTER
INDIANA

CALUMET-RIDGE STREETSCAPE PLAN

RENEW · RECONNECT · REIMAGINE



TOWN OF MUNSTER

RIDGE ROAD COMPLETE STREET

RAISE Grant Application

The Ridge Road Complete Street project will provide people with more direct access to destinations along Ridge Road and to the future train station. It will achieve the project's priorities of non-motorized travel, stormwater capture, tree cover, and plantings and provide increased economic activity by transitioning the corridor to become a distinct, walkable place.

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PROJECT DESCRIPTION

The Ridge Road Complete Street Project will be a transformational streetscape improvement project for the Town of Munster, Indiana. The project will be complementary to upcoming commuter rail service via the Northern Indiana Commuter Transportation District's (NICTD) new West Lake Corridor in shaping the future of Munster.

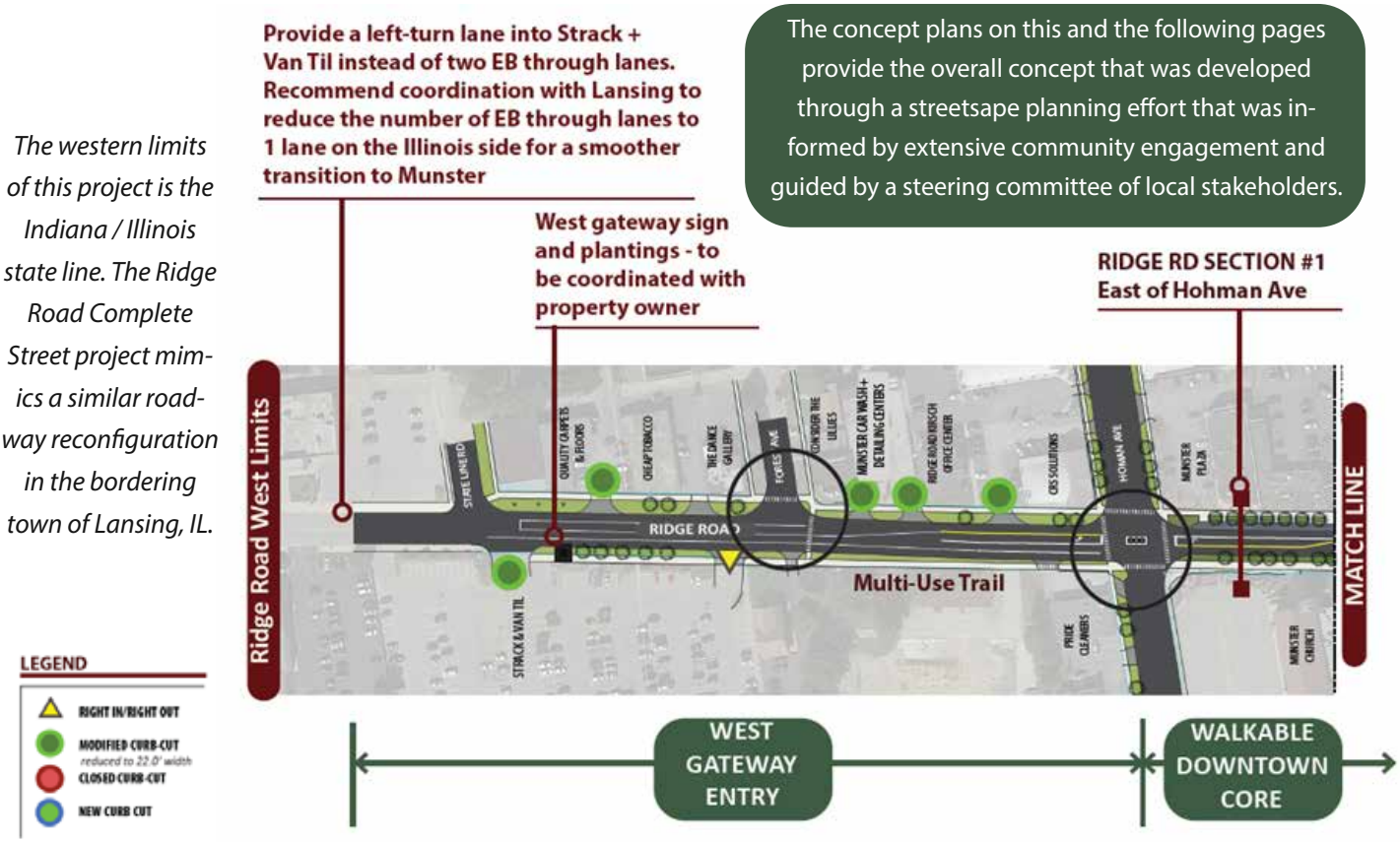
The 1.3-mile project consists of reconfiguring traffic lanes on Ridge Road from five lanes to three, the addition of a 10' wide multi-use path on the south side of the street, planting 255 trees, and amenities including landscaping, gateway and wayfinding signage, pedestrian seating, and other decorative features. To improve pedestrian safety, curb bump outs will be installed at several locations, drastically reducing the crossing distance in some cases from 55' to 22' and significantly reducing pedestrian exposure. The tree planting and landscaping elements will take the right of way from 0% impervious surfaces to 25%. These improvements will be made possible and enhanced by overhead utility relocation.

The project is strongly tied to the West Lake Corridor, a major expansion of NICTD's commuter rail service within Northwest Indiana providing service to downtown Chicago. This rail expansion is in early phases of construction. The $890M project includes 7.8 miles of new commuter rail with daily ridership estimates at 10,000 by 2037. The Munster Ridge Station will be built 300' north of Ridge Road at grade with direct access from the road. It is one of four

Figure1: Munster Ridge Station Concept, NICTD

The western limits of this project is the Indiana / Illinois state line. The Ridge Road Complete Street project mimics a similar roadway reconfiguration in the bordering town of Lansing, IL.

The concept plans on this and the following pages provide the overall concept that was developed through a streetsape planning effort that was informed by extensive community engagement and guided by a steering committee of local stakeholders.



Figures 2-7: Munster Calumet Ridge Streetscape Plan, Town of Munster

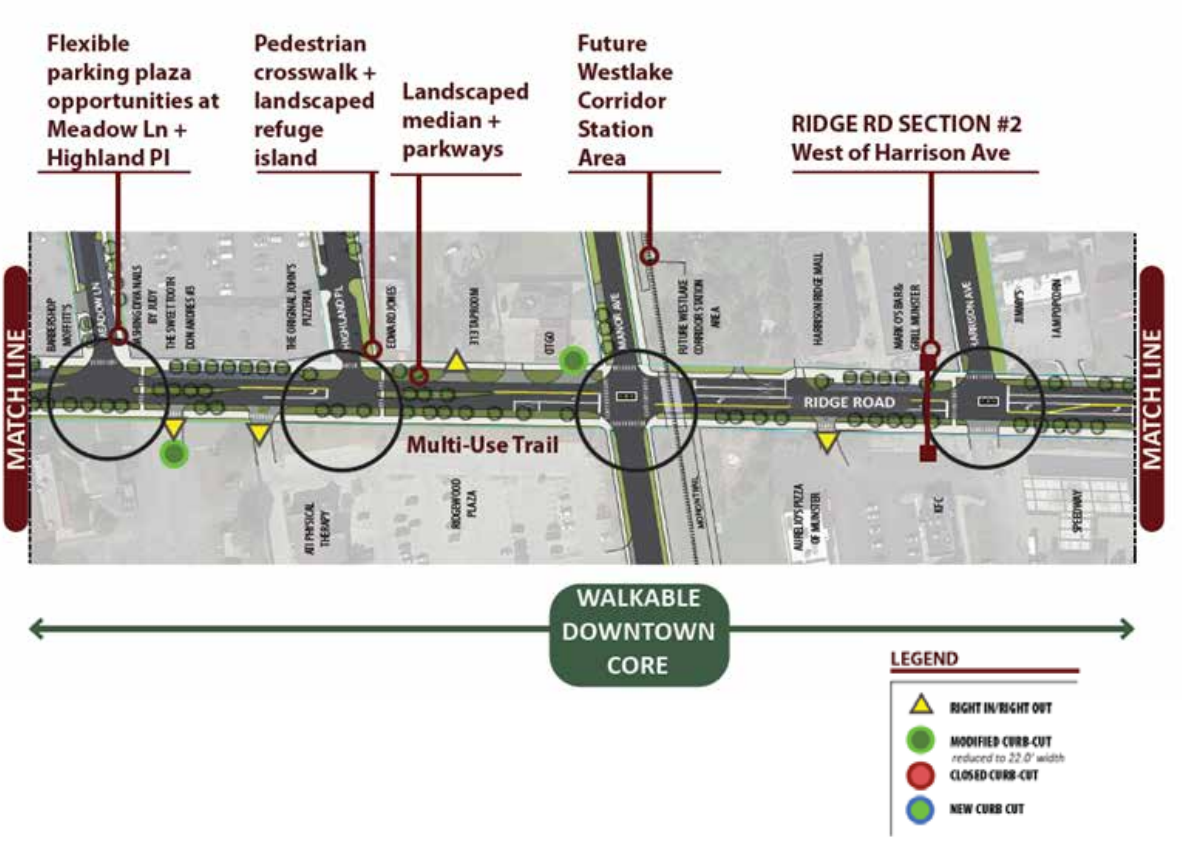
new stations along the historic rail corridor. The West Lake Corridor is expected to be a major economic boost for the region through a new transit connection to the employment opportunities of downtown Chicago.

Along a parallel alignment, the Monon Trail is a popular off-street shared use path that intersects Ridge Road in the middle of the project study area. The Trail is a 4.5-mile trail connecting Munster to neighboring towns and is part of a broader interstate regional trail system that continues to expand. The shared use path along Ridge Road will provide better access between the trail and local businesses and residents.

In addition to its future role of linking the area to commuter rail and the Monon Trail, Ridge Road now accommodates a wide range of functions within a relatively narrow area: driving, walking, biking, conveying utilities, shopping, dining, meeting, gathering, and landscaping. The corridor has a combination of shallow and deep lots and developments, no on-street parking, and businesses positioned at various setbacks from the right of way, many with dedicated off-street parking. The corridor also conveys overhead electrical distribution wires, which impact the aesthetic quality of the street. This project will re-organize the spaces within the public right of way so that they can better meet the street's needs and the community vision. The road is under local control and the entire extent of the project site is within the Town of Munster.

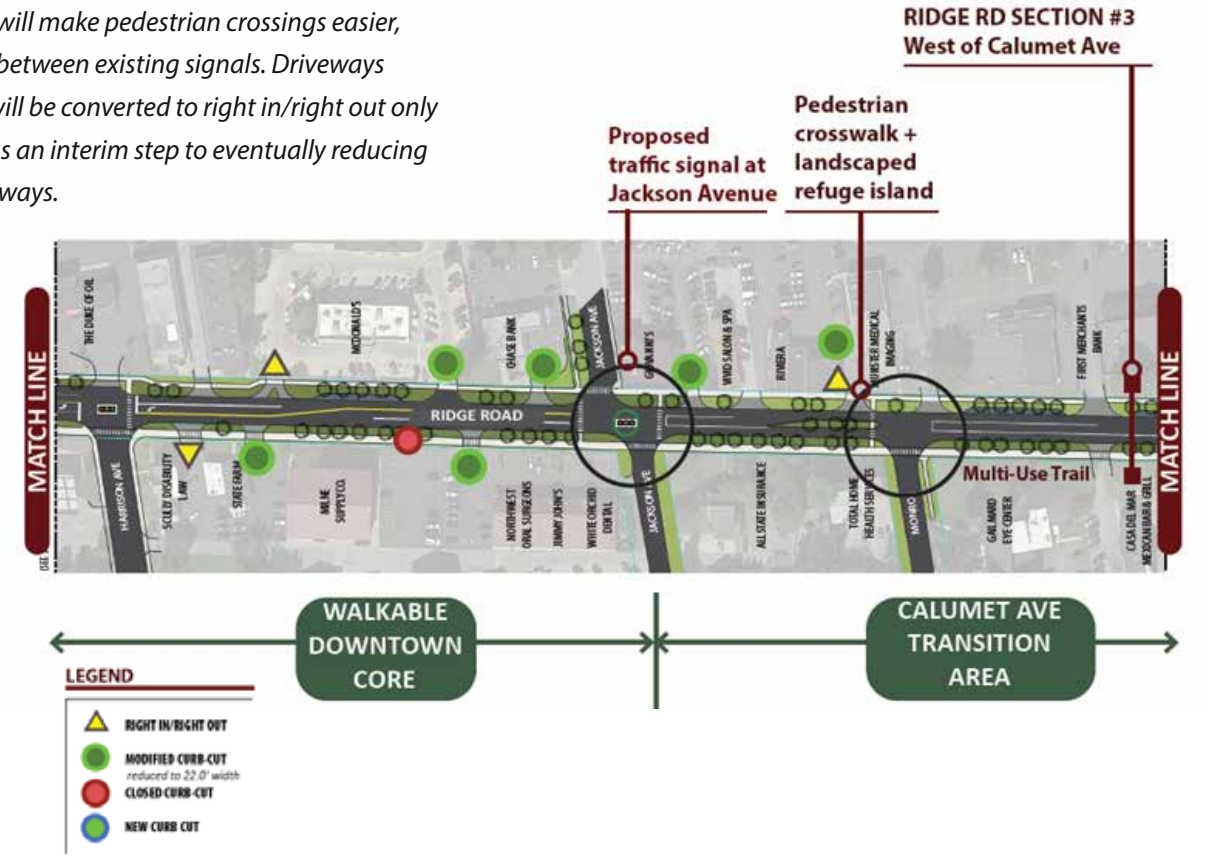
The Ridge Road Complete Street project will provide people with more direct access to destinations along Ridge Road and to the future train station. It will achieve the project's priorities of safe and comfortable non-motorized travel, stormwater capture, tree cover, and plantings and provide increased economic activity by transitioning the corridor to become a distinct, walkable place.

These concepts presented on these pages will guide the design engineering of this project.

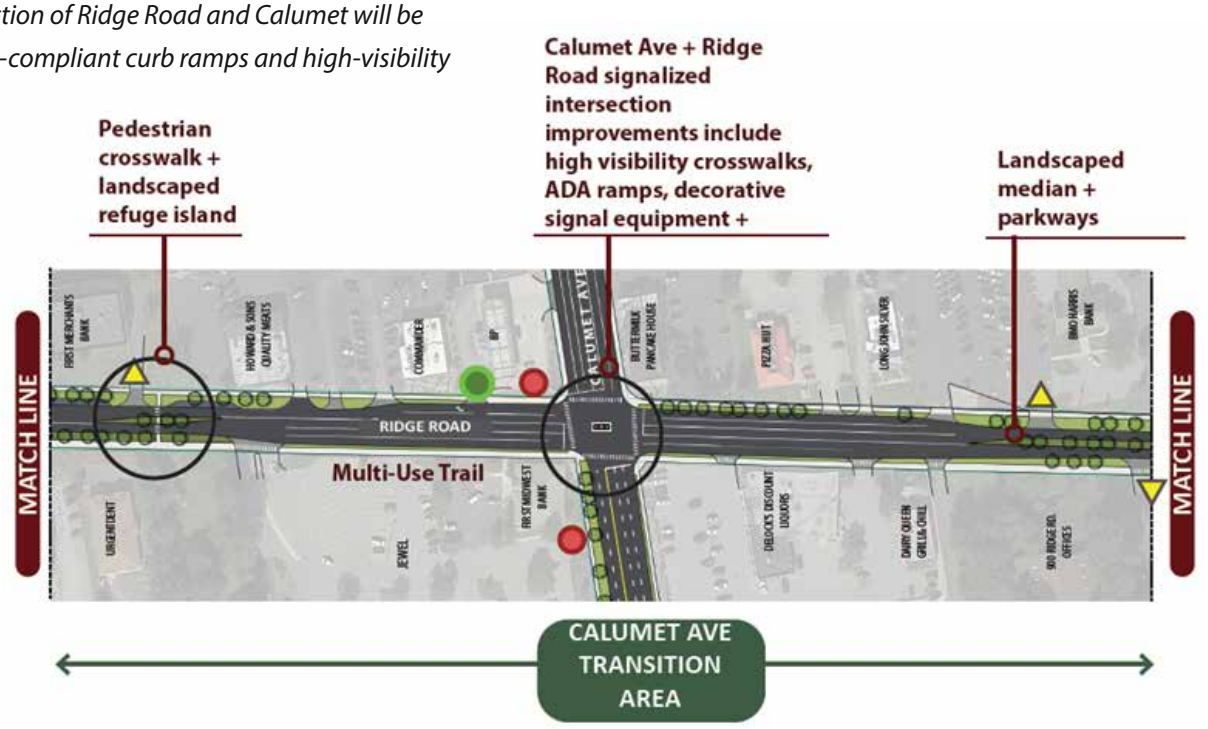


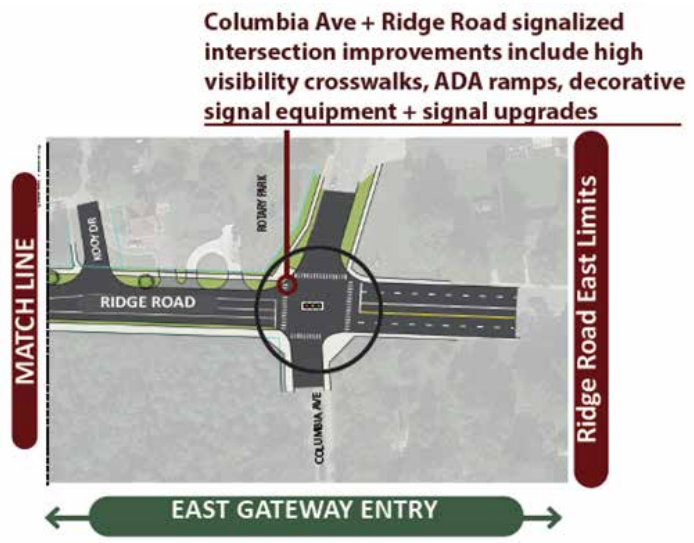
A concentration of pedestrian safety and placemaking features in the vicinity of the future West Lake train station aim to create a walkable district to serve and be supported by transit users. This section is where Ridge Road connects to the Monon Trail.

The core walkable district extends to Jackson Avenue, where a new traffic signal will make pedestrian crossings easier, closing a large gap between existing signals. Driveways along the corridor will be converted to right in/right out only to reduce conflicts as an interim step to eventually reducing the number of driveways.



The Ridge Road concept includes pedestrian refuge islands at several locations, making pedestrian crossings safer between signals. The intersection of Ridge Road and Calumet will be upgraded with ADA-compliant curb ramps and high-visibility crosswalks.





The eastern end of the corridor serves as a gateway to the Ridge Road Complete Street. Like the others, this segement is characterized by better pedestrian crossings, more landscaping and beautification. Importantly, there is also the potential to connect to a public park, Community Park and middle and high school campuses. The Ridge Road Complete Street will improve access to these community institutions for residents living north of Ridge Road and will provide a walkable, bikable connecection to the Ridge Road commercial district, the Monon Trail, and the future train station.

In 2020-21, a comprehensive streetscape plan for Ridge Road and the intersecting Calumet Avenue was conducted by The Town of Munster and its consultant team.[1] The plan was unanimously adopted by resolution by the Town Council in June 2021 which paved way for this project. Technical analysis and robust community engagement guided the plan's recommended features and improvements to the public right of way. Key feedback about the corridor from community was:

Key Community Concerns
- Businesses are not supported by the environment
- Does not invite people to walk or bike here
- Lacks a sense of place
- Needs greening and landscaping
Top Improvement Preferences
- Flexible plaza space
- Landscaped medians
- Multi-use trail
- Landscaped parkways

Community insights identified through the plan's outreach have been integrated into this project's goals and final design. This includes incorporating the community's top improvement preferences and strong efforts to address each of the key concerns.

The project also strongly aligns with the NWI 2050 Plan, a comprehensive regional plan from the Northwestern Indiana Regional Planning Commission (NIRPC). NWI 2050 Plan action items include complete streets and multi-modal path investment programs, both of which are being fulfilled by this project. The Ridge Road Complete Street project also includes other specific "Tier 1" project types including improved ADA access to transit, stormwater management, traffic calming, and roadway safety, among others. The plan used a three-tiered priority system and Tier 1 projects represent the highest priority for funding based on impact on sixteen critical paths to reach the region's 2050 vision. [2]

The Benefits-Cost Analysis shows a Benefit Cost Ratio of 2.0. The project will start with design in 2023 and complete construction in 2026, at the time that the West Lake Corridor is scheduled to be complete.

Figure 8: Ridge Road current state

Figure 9: Ridge Road future concept

PROJECT LOCATION

Munster is a thriving Northwest Indiana community known for its well-kept neighborhoods, quality schools, attractive parks, and municipal services. Yet for the tens of thousands of residents and visitors who traverse Ridge Road daily, Munster's attractive features are generally masked by the auto-oriented corridors that lack welcoming entrances, safe and comfortable pedestrian and bike routes, greening, sustainable practices, and a sense of place.

The commercial core of Ridge Road is characterized by a mixture of locally and nationally owned businesses. Several important regional bike routes, the Little Calumet River Trail, the Monon Trail, and the Pennsy Greenway traverse the town. The Monon Trail intersects with Ridge Road within the project area and connects to both the Little Calumet River Trail and the Pennsy Greenway. The Town also has access to natural areas such as the Little Calumet River, Bieker Woods, and Centennial Park.

Ridge Road provides a direct connection to many of the Town's key destinations. These include many businesses, government services, the Monon Trail, grocery stores, places of worship, the municipal complex, and a performing arts venue. Once the West Lake Corridor is complete, Ridge Road will provide the primary connection to the Munster Ridge Station for the surrounding area. It also provides an important connection for residents in neighboring Lansing, IL to the train station and east to the north-south running Calumet Avenue.

This project is set to benefit vulnerable populations of the region, especially those who do not have a car or rely on transit for access to economic opportunity. Ridge Road provides the main connection between Munster and Lansing, IL, an economically disadvantaged and transportation disadvantaged community as determined by the USDOT.[3] Lansing currently has poor transit access to job centers in Northwest Indiana and Chicago, but the West Lake Corridor and this project will work together to provide better access to affordable transportation to those who need it most.

Ridge Road is also an important historic location with significant landscape features in Munster. It is the location of Munster's earliest settlements, prior to which, Ridge Road was the location of the Calumet Shoreline, an ancient shoreline of Lake Michigan located in the Lake Michigan Basin. This ridge is visible in the form of topographical ridges at the south side of Ridge Road. From Ridge Road, the elevation descends until it reaches the Little Calumet River. This feature will be preserved or even enhanced through the Ridge Road Complete Street project by reducing vehicle miles traveled and wear on the road as well as stormwater runoff.

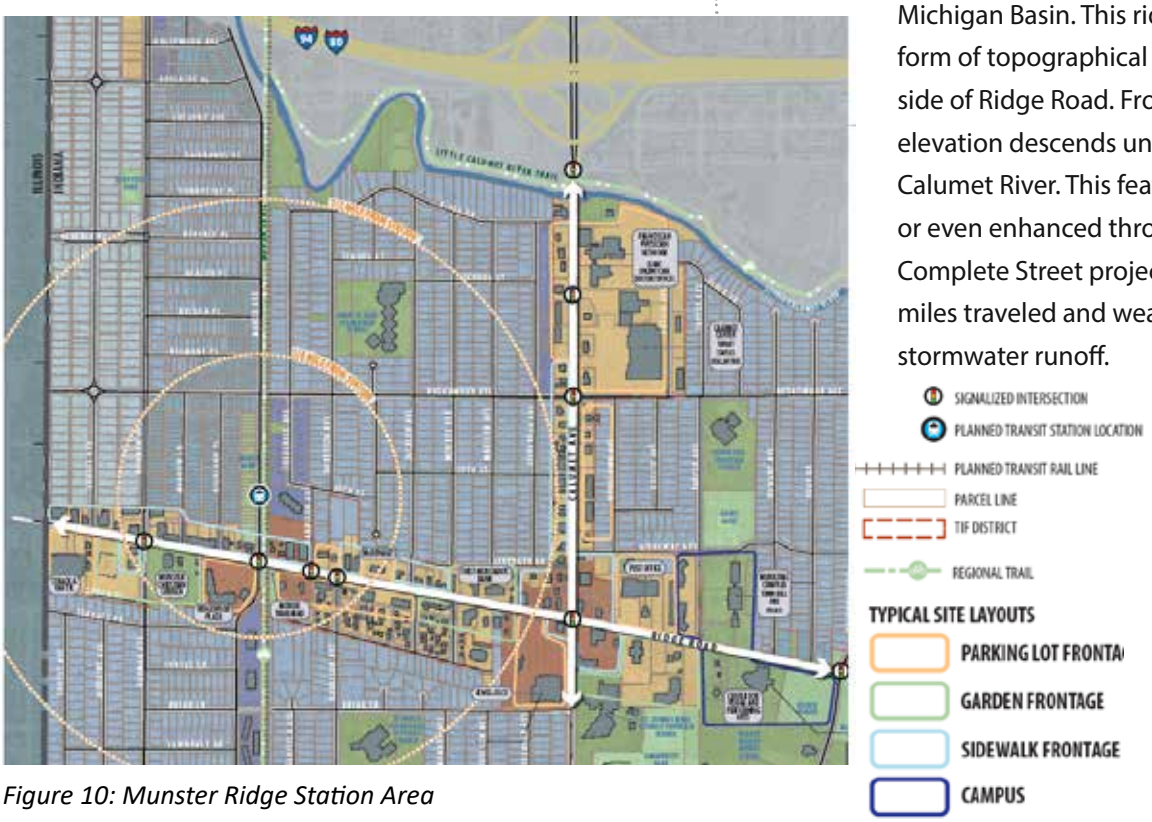


Figure 10: Munster Ridge Station Area

GRANT FUNDS, SOURCES AND USES OF ALL PROJECT FUNDING

The total cost of the Ridge Road Complete Street Project is estimated at $21,429,151, including engineering. The RAISE Grant amount requested is $17,143,321, which is 80% of estimated project costs.

The cost breakdown below reflects the construction and design costs with a more detailed analysis of specific construction activities. The RAISE grant would be applied to design and construction activities. All other funding sources for this project are non-Federal. Local sources of funding are readily available through tax increment finance receipts by the Town of Munster.

Project Activity	Total Cost	RAISE Amount	%	Non-Federal Amount	%
Construction Total (77.5%)	**$16,611,745**	**$13,289,396**	**80%**	**$3,322,349**	**20%**
Utility Removal + Relocate	$3,150,000				
Demo, Roadway + Signalization	$9,105,295				
Hardscape	$758,275				
Site Furnishings	$176,000				
Lighting	$1,480,000				
Gateway + Wayfinding Signage	$371,000				
Plantings	$1,571,175				
Non-Construction Total (22.5%)	**$4,817,406**	**$3,853,925**	**80%**	**$963,481**	**20%**
Maintenance of Traffic + Mobilization	$1,495,057				
Design Engineering Phases 1-3	$3,322,349				
Project Total Cost	**$21,429,151**	**$17,143,321**	**80%**	**$4,285,830**	**20%**

Figure 11: Project Budget

MERIT CRITERIA

SAFETY

The safety improvements for all users of Ridge Road, regardless of mode, is a major benefit for the community from this project. The multi-use path will provide greater separation from vehicles for those biking, rolling, or walking along the corridor through additional space and landscaping. Other features like bump outs and reduced curb cuts will reduce the opportunity for conflict between people traveling with different modes.

From 2016 to 2020, there were over 600 crashes on Ridge Road, among the highest of any corridor in Munster. See the below map with crash locations. Eighty-one of these crashes resulted in serious injuries to at least 124 individuals. Even more unfortunate, one of the crashes led to a fatality in 2020. Of all the crashes, six involved a vehicle crashing into a bicyclist or pedestrian. The remaining crashes involved non-serious injury or property damage only (PDO).

Roadway configurations from four lanes to three which reduce travel in each direction from two lanes to one, similar to this project, have been found to reduce crashes by 19-47%.[4]

The new design of Ridge Road aims to:

- Reduce right-angle crashes as side street motorists cross three versus five travel lanes
- Reduce the number of lanes for pedestrians to cross with more features to alert drivers of crossings
- Provide traffic calming such are narrower lanes, to encourage more consistent speeds
- Reduce crashes due to lane changes
- Provide a clearly marked and buffered space for biking and walking on the multi-use path

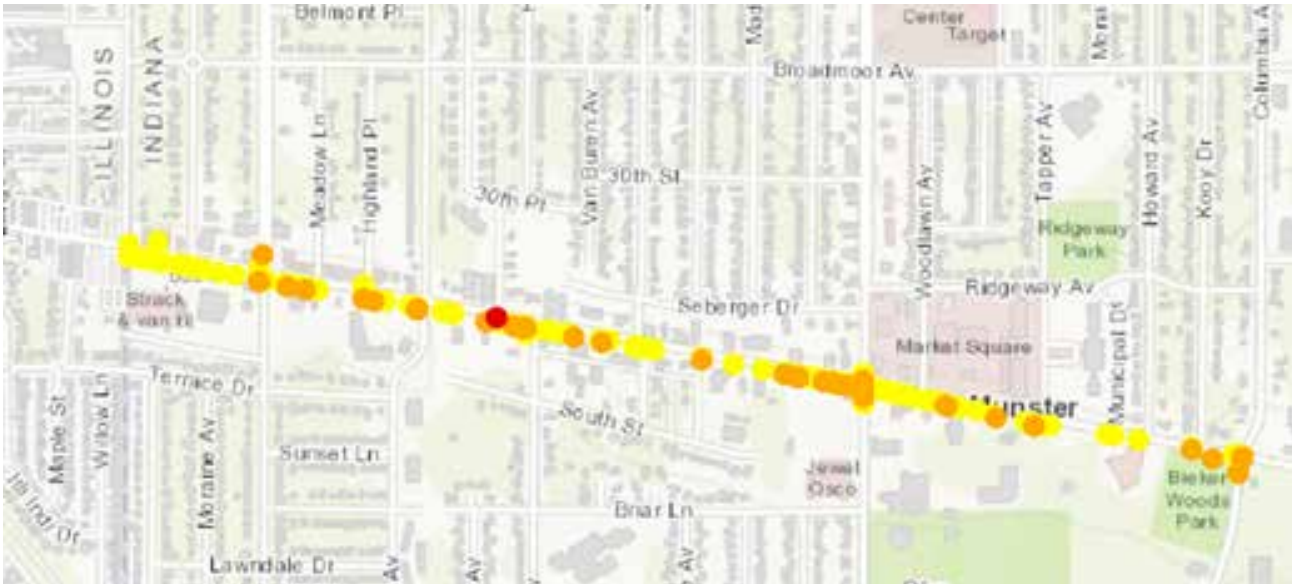


Figure 12: Ridge Road Crash data, ARIES database 2016-2020

Legend

Fatality | Serious Injury | Non-Serious Injury or PDO

Source: ARIES 2016-2020

This project also aligns with the National Roadway Safety Strategy objective of providing safer roads throughout the country and the NWI 2050 objective to prioritize projects with design features to improve safety. These objective includes support for the application of Complete Streets principles found in this project.

The Ridge Road Complete Street project will prioritize safety, comfort, and connectivity to destinations for all users, especially pedestrians, bicyclists, those who use wheelchairs and mobility devices, transit riders, micro-mobility users. The body of research shows that such designs benefit community health outcomes such as lower BMI and heart disease, ultimately leading to lower mortality rates.[56]

SUSTAINABILITY

Sustainability and environmental stewardship have been key elements to this project since its inception. The 2020-2021 planning process was funded through the National Oceanic and Atmospheric Administration and the Indiana Department of Natural Resources, Lake Michigan Coastal Program. This program requires that projects enhance natural, cultural, and historic coastal resources near Lake Michigan.[7]

The Ridge Road Complete Street project will have the additional benefit of supporting no-emission trips to destinations along and nearby Ridge Road and to the upcoming train station. The project's focus on improving multi-modal access for pedestrians and bicyclists will create a more welcoming environment for them so that some short vehicle trips are converted to no-emission modes. Also, the project will install a new signal and modify signal timing aimed to increase vehicle travel efficiency and reduce vehicle idle time and improve pedestrian access. Both outcomes will reduce emissions

Traffic Counts and VMT Reduction Figures					
	Baseline Traffic Count (ADT)	Project Build Traffic Counts (ADT)	Delta	Project Area (miles)	VMT reduced (Annual)
Westbound	13,054	10,368	2,686	1.31	1,284,311
Eastbound	10,746	8,989	1,757	1.31	840,110
Total (Annual)					2,124,420

Figure 13: March 2022 traffic counts and project projections

responsible for climate change and environmental damage.

Even more, overall traffic volume on Ridge Road is expected to be reduced because of this project, creating an increased benefit for local air quality. See Figure 13 for traffic count projections.

Because of the effects of climate change, Northwest Indiana may see the number of 90-degree days during the summer triple and will likely have an increase of heavy rain events.[8] This project will help mitigate these by dramatically increasing the amount of green infrastructure along the corridor.

Green infrastructure including several native plant species have been identified for the landscape plantings. These will require fewer resources to maintain and capture more stormwater before it reaches gray infrastructure. Likewise, the project will plant 255 trees that are native and tolerant to urban conditions. These will also contribute to stormwater capture, support local wildlife, and reduce the urban heat effect of the surround area.

In addition, this project improves core infrastructure instead of expanding infrastructure at the peripheries of Munster or beyond. This, in turn, will encourage private investment at the core, and support the implementation of the West Lake TOD Plan, which was a multi-jurisdictional regional planning effort led by the Northwest Indiana Regional Development Authority, to plan and prepare for transit-oriented development (TOD) that will support ridership at the new rail stations and support economic development in the local communities. Northwest Indiana's growth over the last decades has concentrated on sprawling and more distant areas of the region, underscoring the need for more efficient investment in already-developed areas.[9]

QUALITY OF LIFE

The Ridge Road Complete Street project will provide significant quality of life benefits to those who use the corridor, particularly for those burdened by high transportation cost and car dependence. It will also help those in the community and nearby communities who will need access to the upcoming West Lake Corridor rail line without a car. The Lansing, IL border is a half mile along Ridge Road from the upcoming rail station and most directly accessed by the corridor. According to US Census 2019 ACS data, 7% of Lansing commuters depended on transit and 3% of households do not own a car.[10] Improvements on Ridge Road will provide better access to the Munster Ridge Station, thereby increasing access to downtown Chicago and other job centers and making an attractive commuter choice.

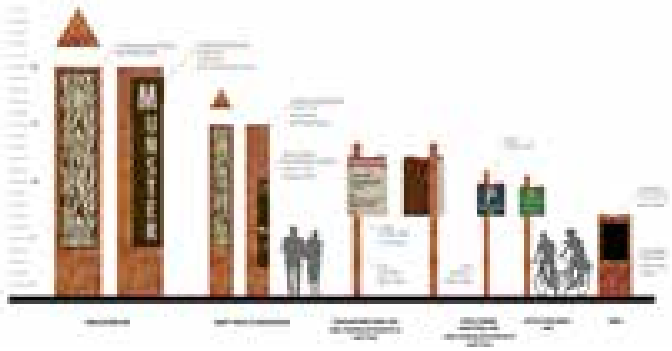


Figure 14: Concepts for placemaking signage, Munster Calumet Ridge Streetscape Plan, Town of Munster

Creating Livable Centers Program:

In 2013, NIRPC produced an in-depth report entitled Creating Livable Communities, which identified many community centers, at various sizes, that employ the following characteristics:

1. Livable Centers support existing communities, leveraging public investment to encourage an efficient pattern of population and employment growth.

2. Livable Centers promote non-motorized transportation options.

3. Livable Centers provide a mix of land uses.

4. Livable Centers promote connectivity between other centers.

5. Livable Centers endorse planning for transit access.

Figure 15: Ridge Road and Meadow Lane current state

Figure 16: Ridge Road and Meadow Lane future concept

The Livable Centers Program identified Ridge Road and Calumet Avenue as a neighborhood center within the Town of Munster.[11] As part of a regional effort to increase livability in Northwest Indiana, it recognized the neighborhood as having potential to improve in the above qualities, especially considering the Munster Ridge station. The improvements will provide transit users with a safer and more comfortable experience walking to and from the upcoming station.

Other improvements will improve quality of life by defining a sense of place and encouraging social cohesion. A flexible parking plaza along Meadow Lane will allow for community festivals and events, which the community expressed a high level of interest in during outreach. Other placemaking improvements include relocation of overhead utilities, new overhead string lighting, movable planters, gateway and other signage, furnishings, and a painted roadway mural. These features will encourage people to linger and interact within public space, where there is very limited reason to do so along Ridge Road today.

The new multi-use trail and its connection to the Monon Trail will also be a substantial quality of life benefit by providing a way for community members to walk and bike more easily. Academic research has shown that the availability of trails increases the likelihood of the local population to use active transportation and get more physical activity. This including segments of the population at highest risk for inactivity, particularly women and people in lower socioeconomic groups.[12][13]

MOBILITY AND COMMUNITY CONNECTIVITY

The Ridge Road Complete Street project will bring better mobility options along Ridge Road and to access the upcoming rail station. The project's emphasis on walking and biking modes will encourage people to use active transportation for everyday trips to destinations along Ridge Road. Similarly, it will make walking, biking, or rolling to transit more attractive with its connection

to the Munster Ridge station. This will be accomplished with features including the new multi-use path, a new signal and crossing, wider sidewalks, a reduced number of curb cuts, narrowing some existing curb cuts, and reduced roadway width for crossings.

With consideration for influences on future travel behaviors, two future traffic models were created during planning: one that assumed no major physical changes to Ridge Road and one integrating a road diet. The results of these future traffic models—both of which assumed a reduced 30 MPH posted speed limit on Ridge Road — supported the opportunity to right-size Ridge Road with a three-lane cross-section without major disruption to vehicle travel times.

Encouraging commuter rail riders to walk or bike to stations has been a challenge in Northwest Indiana. In its latest 5-year passenger survey (2018), NICTD found that only 6% of riders reported walking to access stations and less than 1% biked. Personal auto has been the preferred mode of access and increased 5% between the 2013 and 2018 surveys.[14] This project will challenge this trend by providing a better option to access the station without a car.

Figure 17: TOD Plan, Munster Calumet Ridge Streetscape Plan, Town of Munster

The project will also provide better access to members of the community to destinations such as downtown Chicago for those in the with mobility challenges with a safer pathway. The station and trails will be wheelchair accessible. And Ridge Road improvements will exceed ADA requirements for infrastructure and provide a more comfortable to use for those with disabilities.

Outside of the strong benefits to transit access this project provides, it will also support increased biking in the area. The Monon Trail connects to a broader trail network of Northwest Indiana and intersects Ridge Road near the center of the project area and adjacent to the new rail station. The most recent trail counts show an average daily bike usage of 113 riders.[15] Because of the new multi-use path along Ridge Road, this project will likely increase the number of riders and also provide a safer and more convenient connection for riders to the destinations along the road.

ECONOMIC COMPETITIVENESS AND OPPORTUNITY

The Ridge Road improvements will provide greater access to job centers in Chicago including downtown and Northwest Indiana. The Munster Ridge station is planned for the area near the intersection of Ridge Avenue with Manor Avenue, adjacent to the Monon Trail. This provides Munster with an opportunity to create a Transit Oriented District (TOD) close to the historic crossroads of Town. Development models under consideration include walkable mixed-use developments, landscaped rowhomes and compact high-density housing. As new development takes shape, the surrounding streets and open spaces will be charged to adapt to a more welcoming and walkable environment. Those without car ownership or with mobility impairments will especially have greater access to job centers.

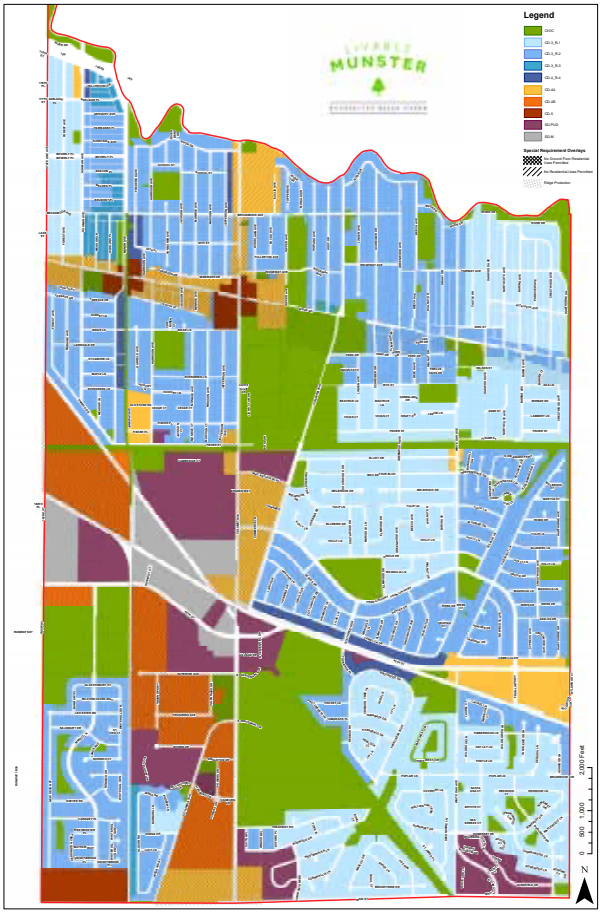


Figure 18: Ridge Road and Meadow Lane current state

The Ridge Road Complete Street strongly supports potential for investment in a TOD by providing a safer and more attractive public right of way along Ridge. Other roadway improvements adjacent to Ridge have been planned for greater connectivity to the rail station along with a toolbox of traffic calming toolbox and street typologies have also been identified for future improvement by the Town. Adopted in 2019, the Livable Munster Character-Based Code allows for Urban Center Character District type-development adjacent to the rail station and at the intersection of Calumet Avenue. Along the rest of Ridge Road, it allows for General Urban District development and Civic Zone.

Another way this project will change the right of way and its adjacent land uses is by adding approximately 58 new parking spaces to Ridge Road. This not only will slow traffic speeds on the road, but also free future development from pressure to provide surface parking lots for visitors and local business customers. The on-street parking with the Character-Based Code will create a more walkable, urban environment along the corridor.

This project will also increase economic opportunities in the area because the Town of Munster employs local hiring practices for construction projects. For example, the 45th Street Grade Separation and Intersection Realignment ($24 million) was constructed using local union labor and expertise in 2020. And maintenance of the newly improved Ridge Road will be by Town employees.

STATE OF GOOD REPAIR

Ridge Road is a key corridor for Munster and surrounding communities. With 2021 traffic data showing between 16,000 and 18,500 annual average daily traffic, it carries the second highest volumes in the town.[16] Only Calumet Avenue, which intersects Ridge Road within the project area carries more vehicles (around 35,000).

In addition, hundreds of Lansing residents are employed by businesses along and near Ridge Road and depend on its infrastructure to travel to and from their work. Improvements to the corridor will provide more options for transportation to workplaces and provide safer access to those already walking or biking along Ridge Road to reach workplaces.

Per 2019 travel modeling data, about 1,000 residents commute from Munster to downtown Chicago for work and only 3.2% do so by public transit. In neighboring Lasing, roughly 4,000 people commute into Chicago for work and 89% do so by private vehicle and about 7% commute via public transit. The percentage of people taking public transit from Munster and Lansing to Chicago is expected to rise once the West Lake Corridor is operational. Other nearby communities that already have convenient commuter rail access show a much higher use of public transit for travel to Chicago. For example, in the nearby villages of Flossmoor and Homewood, IL, which each having commuter rail stations, 16% and 22% of commutes to Chicago are made by public transit.[17]

The new Munster Ridge station will also increase access to employment in Chicago for those who do not have a private vehicle or currently do not have a convenient way to access transit to Chicago.

PARTNERSHIP AND COLLABORATION

Because of the high impact of this project for many stakeholders and those in the public, the planning for this project was highly collaborative. During the project's planning, community outreach included three public workshops, eight advisory committee and town meetings, 4,400 website visits, and 1066 poll responses from community members.

Throughout the 10-month community engagement process, a wide variety of online and in-person outreach tools were used to provide ample opportunities for the community to share ideas. These included:

- Focus groups + stakeholder interviews
- Community meetings
- Pop-up idea booth
- Open house exhibit board presentation
- Print promotions
- Newsletters
- Dedicated project website: munster-streetscape.org

Partnership with the West Lake Corridor planning and design effort by NICTD is also a key element of the project. NICTD is expanding commuter rail service through an approximate eight-mile extension of the South Shore Line through three municipalities in Lake County, Indiana: Hammond, Munster and Dyer and connect via the Metra Electric District line to downtown Chicago at Millennium Station. This project's importance in increasing mobility and the opportunity for TOD development makes continued collaboration a must for this project.

Munster also uses the INDOT standard of 10% DBE participation in construction and labor forces are provided by local unions.

Stakeholder and Agency participation in planning
Town Council, Town of Munster
Northern Indiana Commuter Transportation District (NICTD)
NW Indiana Regional Planning Commission (NIRPC)
Little Calumet River Basin Development (LCRBD)
Indiana Department of Natural Resources (DNR)
Northern Indiana Public Service Company (NIPSCO)
Board of Zoning Appeals Members
Plan Commission Members
Council Members
South Shore Trails Advocacy Group
Local businesses
Local schools

INNOVATION

This project will use innovative ideas for the infrastructure it delivers to the community to increase economic impact, improve quality of life, and increase environmental sustainability. This includes building a new space that will improve the public realm in Munster by providing a new venue for community events. The project's flexible plaza along Meadow Lane, just north of Ridge Road, will accommodate regular traffic and parking for most of the time. But it will also provide simple set-up and a vibrant setting for events and festivals to bring community members together and support local businesses. The idea was brought to the community during the planning phase and received the highest amount of support when given a range of potential improvements.

Innovative approaches to managing increasing climate difficulties such as heavy rain events and increasing temperatures will be employed by this project. Changing painted medians to landscaped medians and incorporating permeable pavements, rain gardens, tree canopies, and native plantings will all provide more stormwater capture. Native trees and understory plantings introduced to the corridor will mitigate the effects of urban heat island and contributing to biodiversity.

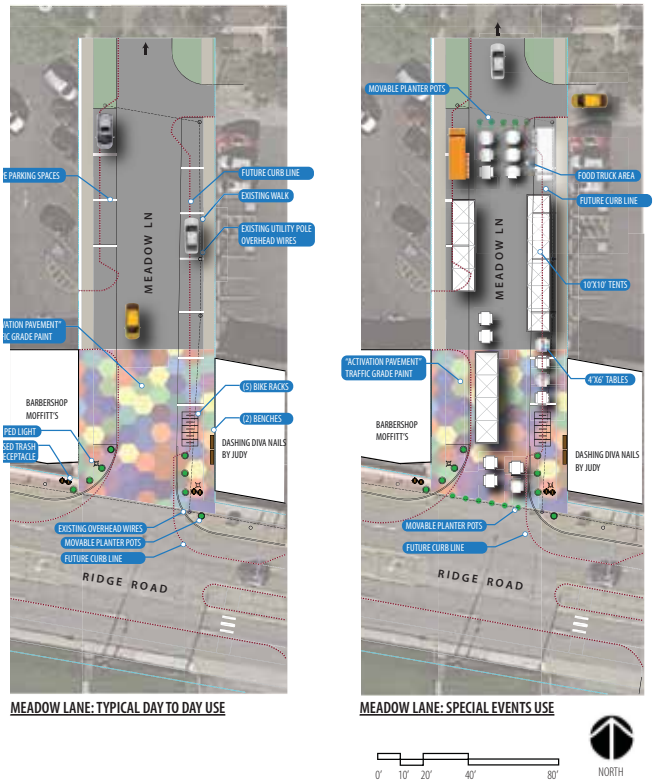


Figure 19: Flexible Plaza Concept, Munster Calumet Ridge Streetscape Plan, Town of Munster

PROJECT READINESS

This proposal demonstrates the technical, financial, and environmental feasibility of the project. The 2021 streetscape plan was adopted by the Town Council and included high levels of community engagement with feedback that was incorporated into the project. (See the Partnership and Collaboration section for details on public engagement.) Local match funding in available now and the project can proceed immediately, upon RAISE Grant award.

PROJECT SCHEDULE

The project schedule will meet RAISE grant deadlines and is planned to complete construction in 2026. Coordination with NICTD will continue as construction of the Muster Ridge station begins and then as the station becomes operational, as planned in 2026. With this planned schedule, RAISE grant funds will be obligated in comfortably in advance of the statutory deadline (June 30, 2026) and construction be completed well in advance of the deadline in 2031. See the table below for the details.

REQUIRED APPROVALS

Since the conceptual planning phase is complete, the project will be ready to immediately go into preliminary design and NEPA phases. The project is expected to require minimal environmental approvals including eligibility for a Categorial Exclusion.

The project is not significantly impacting existing cultural or natural resources, including waterways. In fact, the project will be a major asset to the surround community and a support for natural systems in the area. Public engagement drove key elements for the plan including better access for biking and walking, flexible gathering space, and increased landscaping. The large number of plantings and landscape features will increase environmental sustainability for the corridor and beyond. There is no ROW acquisition needed since all improvements will be within the existing ROW.

The Town will work with Indiana Department of Transportation Environmental Policy Office to ensure that the project complies with federal and state requirements for environmental documentation, including NEPA, the state Environmental Policy Act, and associated regulations. With careful management of this process, the project should not be at risk for elevation to a class of action documentation of an Environmental Assessment or Environmental Impact Statement.

Risks associated with real estate acquisition, sensitive natural areas, or significant negative impact to adjacent properties do not apply to this project. The project team intends on keeping the public engaged through the project design and construction.

Ridge Road Complete Street Project

Streetscape Plan ***Complete 2021***
Public Engagement ***Complete 2021***
Town Council Approval ***Compete 2021***

	2023				2024				2025				2026			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Consultant Selection																
Design Engineering																
NEPA CE Process																
Contractor Selection																
Utilities Relocations																
Roadway Construction																
Hard/Softscape Installs																
Project Complete																

Figure 20: Project schedule

Endnotes

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14 NICTD 2018 South Shore Line Survey, https://www.mysouthshoreline.com/images/FINAL-Report.pdf

15 2016-2021 Monon Trail counter data

16 INDOT Traffic Volume, https://indot.public.ms2soft.com/tcds/tsearch.asp?loc=Indot&mod

17 Replica trave demand model, Fall 2019

Appendix A: Benefit-Cost Analysis

Technical Memo: Ridge Road Complete Street Benefit-Cost Analysis

Table of Contents

Executive Summary

The Benefit-Cost Analysis (BCA) was prepared based on the guidance provided in the most recent USDOT RAISE Grant Notice of Funding Opportunity and the USDOT Benefit-Cost Analysis Guidance for Discretionary Grant Programs ("BCA Guidance"). The project is analyzed as part of a submission for a RAISE grant for a proposed road diet and complete street project on Ridge Road in Munster, Indiana. The proposed project would right-size Ridge Road from a five-lane cross-section to a three-lane cross-section with a multiuse path along the south side of the street, 58 new on-street parking spaces and space for amenities like landscaping, seating and other decorative features.

The BCA for the Ridge Road Complete Street project quantifies the capital costs of building out the proposed design elements, as well as ongoing operational and maintenance costs associated. The benefits include increased safety, travel time saved, emissions reduction, health benefits, noise reduction as well as pedestrian and cyclist amenities. Qualitative elements such as stormwater management and wildlife are also considered in the technical memo.

Figure 1- Total Benefit-Cost Analysis and Ratio

Summary Benefit Cost Analysis and Ratio

Costs	
Capital Costs (Non-Discounted)	$20,571,984.96
O&M Costs (Non-Discounted)	$806,200.00
Total Discounted Capital Costs (7% Discount)	$15,215,664.91
Benefits	
Safety (Non-Discounted)	$74,858,216.00
Travel Time Savings (Non-Discounted)	$365,930.35
Emissions Savings (NOx, SOx, PM2.5) (Non-Discounted)	$1,048,643.80
Amenities Bike and Pedestrian Facilities (Non-Discounted)	$169,661.40
Health Benefits (Non-Discounted)	$1,200,886.29
Noise Benefits (Non-Discounted)	$1,215,366.33
Total Benefit (7% Discount minus O&M)	$29,332,003.26
Total Carbon Benefit (3% Discount)	$1,362,509.22
Total Discounted Benefit	$30,694,512.48
Total Net Present Value and BCA Ratio	
Net Present Value	$15,478,847.56
Benefit-Cost Ratio	2.0

The BCA analysis found a positive 2.0 benefit cost ratio for the project with a net present value of $15,478,847.56 (Figure 1).

The BCA analysis considers current conditions and projected changes to traffic under a baseline "no build" and a project build scenario with projected vehicle miles traveled (VMT) reduction and induced pedestrian and cyclist trips for the Ridge Road Complete Street project benefits.

The BCA assumes four years of design and construction from 2023 to 2026, followed by a 20-year service life between 2027-2047. The 20-year service life was chosen as the project expands multimodal capacity and addresses operational rightsizing on Ridge Road (as recommended by the "BCA Guidance"). Based on the "BCA Guidance", all costs and benefits are discounted by 7% per year from a 2020 baseline, except for benefits from carbon emission reduction which are discounted at a 3% rate. All inputs sourced are adjusted for inflation to a 2020 baseline using the GDP Deflator.

Baseline and Project Build Projections

Tab colored in grey in the BCA Workbook

Vehicle Traffic Counts and Vehicle Miles Traveled Reduction

The road diet and additional multimodal amenities from the Ridge Road Complete Street project is forecasted to reduce VMT. Traffic counts on Ridge Road for a build and baseline scenario were calculated as part of the Calumet-Ridge Streetscape Plan, and are in the BCA Workbook "Baseline_Project Build" tab. Annual VMT reduced is calculated based on the delta between the modeled baseline and project build daily traffic counts on Ridge Road, multiplied by the project area on Ridge Road and annualized.

Figure 2- VMT Reduction from Project Build

Daily Traffic Counts and Annual VMT Reduction Figures					
	Baseline Traffic Count	Project Build Traffic Counts	Delta b/t Counts	Project Area (miles)	VMT reduced (Total Annual)
Westbound	13,054	10,368	2686	1.31	1,284,311
Eastbound	10,746	8,989	1757		840,110
Total					**2,124,420**

The split between truck traffic and passenger vehicle traffic on Ridge Road is derived from Highway Performance Monitoring System (HPMS) data. Data was pulled from both east and west of Calumet Road on Ridge Road. A weighted average is applied to these values based on the project mileage on either side of Calumet. The calculations for the split of truck and passenger vehicle trips are in the "Baseline_Project Build" tab.

Figure 3 - VMT Split by Vehicle Type

VMT Split by Cars and Trucks		
	Value	Unit
Truck Traffic (Ridge Road, East of Calumet)	3.8%	Percent
Truck Traffic (Ridge Road, West of Calumet)	2.5%	Percent
Project mileage (East of Calumet)	0.4	Miles
Project mileage (West of Calumet)	0.91	Miles
Weight - East of Calumet	0.31	Weighting Factor
Weight - West of Calumet	0.69	Weighting Factor
Average Truck Traffic (Ridge Rd)	1.7%	Percent

VMT reduced Trucks (Annual)	**36,059**	**VMT/Year**
VMT reduced Cars (Annual)	**2,088,361**	**VMT/Year**
Source: Traffic Split Percentage from HPMS Data (2020 Dataset)		

An annual growth factor of VMT is derived from INDOT daily VMT data for Munster for all vehicle traffic. Due to unprecedented changes in traffic due to stay at home orders in response to the COVID-19 pandemic in 2020, VMT data from 2018 to 2019 are used instead to derive a recent growth factor in VMT for the region in the "Baseline_Project Build" tab.

Figure 4 - VMT Growth Rate

Growth Rate - VMT in Munster (Annual)			
Year	Daily VMT (all vehicles)	Growth Rate (All)	Growth Factor VMT
2018	567,523		
2019	571,612	0.007204994	**1.007204994**
Source: INDOT Travel by City, County, and Functional Class (2015-2020) Revised 6/16/2021			

For the emissions reduction and noise reduction benefits outlined below, VMT reduction is pulled from the values in Figure 3, and then adjusted annually using the VMT growth factor in Figure 4 to adjust for increasing traffic and population growth.

Bike Counts and Projected Project Impacted

The addition of the multiuse path along Ridge Road is anticipated to increase cycling traffic along the corridor. Daily bike counts from April 2022 are annualized in the "Count Data" tab to create a baseline of anticipated traffic. In the benefits tabs for bike amenities and health, the VMT growth factor calculated in the "Baseline_Project Build" tab is applied to annualized baseline bike count data to interpolate potential growth in cycling traffic over the service life of the facility in baseline counts and induced counts from the project build (explained further in the "Quantitative Benefits" section below).

Figure 5 - Bike Count Data Annualized

Bike Count Data (Daily Count on Ridge Road, April 2022)	
Count location	Number of Cyclists
Westbound AM	0
Westbound PM	3
Eastbound AM	0
Eastbound PM	1
Total	4
Annualized Count	**1,460**

Induced demand for cycling from the project build multiuse path is sourced from the "Quantifying Reduction in Vehicle Miles Traveled from New Bike Paths, Lanes, and Cycle Tracks" report from the California Air Resources Board, which reviewed research indicating percent change in counts from building cycling infrastructure. The research that mostly resembles the Ridge Road Complete Street Project is a road diet replacing a traffic lane with a cycle track for a project area of a little over one mile in length. The study found a 65% change in bike counts after the project build (page 33). This percent increase in counts is converted into a growth factor for project build induced demand in the "Baseline_Project Build" tab and highlighted in Figure 6.

Figure 6 - Bike Induced Demand Growth Factor

Percent Change in Bike Traffic from Build Scenario		
	Value	Source
Increase in Cycling trip (Percent)	0.65	Road diet replacing parking lane with cycle track in DC; ARB Research Report Pg. 33
Cycling Growth Factor	1.65	Applied to induced counts for the initial Project Build Year (2027)

This cycling growth factor is applied to the induced bike demand from the project for the first year of counts post-project completion (2027 in all the relevant benefits tabs). The growth factor derived from percent change in VMT is applied annually to bike counts for subsequent years for induced cycling trips as well as existing cycling trips.

Figure 7 - Summary Existing and Induced Cycling Counts

Summary of Existing and Induced Cycling Counts (2027-2047)		
	Existing	Induced
Cycling Counts	32,973	54,406

Pedestrian Counts and Projected Project Impacted

The pedestrian improvements along Ridge Road are projected to increase the walkability of the corridor. Daily pedestrian counts from April 2022 are annualized in the "Count Data" tab to create a baseline of anticipated traffic. In the benefits tabs, the VMT growth factor calculated in the "Baseline_Project Build" tab is applied to annualized baseline pedestrian count data to interpolate potential growth in existing pedestrian traffic over the service life of the facility in both baseline and build scenarios (explained further in the "Quantitative Benefits" section below).

Figure 8 - Pedestrian Count Data Annualized

Pedestrian Count Data (Daily Count on Ridge Road, April 2022)	
Time of Day	Pedestrian Counts
Westbound AM	5
Westbound PM	3
Eastbound AM	1
Eastbound PM	3
Total	12
Annualized Counts	**4,380**

Ridge Road's enhanced pedestrian infrastructure is projected to increase traffic from the nearby Monon Trail. Counts from the Monon Trail from 2016 to 2021 are averaged to project a baseline of trail usage in the initial post-construction year in 2027. The project build scenario assumes that the foot traffic on the Monon Trail parallel to Manor Avenue will be the primary driver of increased pedestrian demand on Ridge Road. The portion of Monon Trail that is along Manor Avenue is divided by the total trail length to derive the proportion of average annual trail counts that should be attributed to increased pedestrian traffic on Ridge Road. The baseline pedestrian counts are subtracted from this value to derive the anticipated increase in pedestrian traffic for the initial post-construction year in the benefits tabs (for the year 2027).

Figure 9 - Project Build Induced Pedestrian Demand

Project Build Annual Pedestrian Count Impact		
	Value	Notes/Unit
Average Monon Trail Counts (2016-2021)	38,305	Miles
Monon Trail Distance	2.83	Miles
Portion of Monon Trail along Manor Ave	1.01	Miles
Proportion on Manor Ave Trail	36%	Manor Road portion divided by the total trail mileage
Proportion of Project Build Increase in Pedestrian Traffic	13,671	Total average trail counts multiplied by the portion along manor road
Project Build Impact on Ridge	9,291	Existing annual baseline count subtracted

The growth factor derived from percent change in VMT is applied annually to pedestrian counts for subsequent years.

Figure 10 - Summary Existing and Induced Pedestrian Counts

Summary of Existing and Induced Pedestrian Counts (2027-2047)		
	Existing	Induced
Pedestrian Counts	98,920	209,826

Project Costs

Tab colored in yellow in the BCA Workbook

Capital costs as well as operational and maintenance costs for the Ridge Road Complete Street project come from traffic analysis conducted as part of the Calumet-Ridge Streetscape Plan, adopted in June 2021. Costs are adjusted to a 2020 baseline by comparing Q4 2020 (3.3%) and Q2 2021 (7.3%) percent change from preceding period in price for Gross Domestic Product for state and local expenditures per the Bureau of Economic Analysis. Costs were deflated by 4% to adjust for 2020 real dollars.

Costs are inputted in the "Cost - Inputs" tab. Costs are discounted by 7% in the final calculations done in the "BCA Overview" tab. Per the "BCA Guidance" only capital costs are included in the cost portion of the BCA (including design and construction). Operations and maintenance costs are subtracted from the overall benefit in the "BCA Overview" tab.

Figure 11 - Summary Project Costs

Project Costs $2020 Baseline (Non-Discounted 2022-2047)	
Capital Costs	$20,571,984.96
Operational and Maintenance Costs	$812,649.60

Project costs are discounted 7% annually in the "BCA Overview" tab.

Project Benefits

Quantitative Benefits

Tabs colored in green in the BCA Workbook

Safety Benefit

The proposed Ridge Road Complete Street project assumes that the safety benefit will primarily come from the road diet converting a five-lane cross-section to a three-lane cross-section. The monetized fatalities and injuries are derived from the "BCA Guidance" document. Crash data was gathered from Indiana ARIES crash data from 2016-2020. Crashes are counted on Ridge Road from the state line to Colombia Road with a ~50ft buffer and were validated through a scan of local news articles during that period to track fatalities. Crash data was adjusted to account for an assumed annual level (dividing five years of data into an annual rate).

The CMF Clearinghouse was used to evaluate the anticipated safety benefits of the road diet. The clearinghouse does not have a value for a five lane to three lane conversion. The CMF has a road diet metric from four lanes to three with a center turning lane. This was chosen as it is closest to the road diet proposed on Ridge Road. The CMF value is a conservative estimate of the road diet's impact in Munster, as the conversion proposed in the Ridge Road Complete Street project removes an additional lane of through traffic. Under the CMF Clearinghouse, there were three options converting four lanes to three with a center turn lane. CMF ID# 2841 was chosen due to

it having the highest score, referencing a more recent study, and applying to small urban and suburban areas relevant to Munster's streetscape context.

Figure 12 - Safety Benefit Inputs

Crash, Fatality, and Injury Data			
	Value	Unit	Sources
Crashes (PDO)	107.4	Per Year	Most recent Aries data of five years of crashes, validated through a scan of local news
Injury	16.2	Per Year	
Fatality	0.2	Per Year	
CMF	0.53	ID#: 2841	CMF Clearing House

The monetized safety benefit is calculated in the BCA workbook based on the formula provided in the "BCA Guidance" document of a crash modification factor calculation.

Figure 13 - Safety Benefit Calculation

Annual Reduction in Injury, Fatalities and Property Damage (Non-Discounted, 2027 to 2047)	
Baseline fatalities	0.2
Baseline injuries	16.2
Baseline PDO	107.4
Estimated Annual Lives Saved	0.1
Estimated Annual Injuries Prevented	7.6
Estimated Annual PDO Prevented	50.478
Safety Benefit (Fatalities)	$1,206,716
Safety Benefit (Injuries)	$2,303,996
Safety Benefit (PDO)	$232,199
Total Safety Benefit	**$3,742,911**

Monetization, crash data, and the CMF value were put in the "Safety - Inputs" tab. The calculation of annual safety benefit generated from the project follows the "BCA Guidance" and can be found in the "Safety Calc." tab. The total annualized safety benefit is discounted by 7% in the "BCA Overview" tab.

Emission Reduction Benefit

Reduction in VMT from the project build scenario provides a reduction in emissions from vehicle tailpipes. Emissions factors are sourced for the Department of Environmental Protection (EPA). Factors are pulled with the assumption that light-duty vehicles burn gasoline and medium and heavy-duty vehicles burn diesel.

Factors for CO_2 from vehicles are pulled from annual greenhouse gas emission factors most recently published in 2021. Factors for passenger cars as well as medium and heavy-duty trucks on a gram per vehicle mile basis in the BCA Workbook "Emission Factor Unit Conversion" tab.

Factors for NOx and PM 2.5 are sourced from the EPA MOVES estimated emission rate on a gram per mile per vehicle type basis, pulled for 2000 to 2030 from the Bureau of Transportation Statistics (BTS) webpage. NOx and PM factors are used for 2021 for consistency with the factors used for CO2. Factors are used for light-duty gasoline vehicles, light-duty gasoline light trucks (i.e., SUVs and pickups) and diesel heavy duty vehicles. The source factors for NOx and PM2.3 from the BTS webpage are in the "NOx + PM 2.5 Emission Factors" tab.

SOx factors are sourced from the EPA Webfire Emissions Factor Search Engine for internal combustion engines on a pounds per 1000 gallons of fuel burned for gasoline and diesel. The SOx factors sourced are in the "SOx Emissions Factor" tab" and were pulled from the webpage on March 28th of 2022.

Emission factors are inputted and converted to a standard unit across emissions in the "Emission Factor Unit Conversion" tab. For light-duty vehicles, an average is derived from passenger vehicles and light truck for a passenger vehicle (total) factor for NOx, PM 2.5 and CO2. The SOx value is converted to a per mile basis using the US Department of Energy Alternative Fuel Data Center average fuel economy by major vehicle category.

Monetized values for SOx, PM 2.5 and NOx are derived from the "BCA Guidance". Social cost of carbon figures are sourced at a 3% and 7% discounted value per the "BCA Guidance". The 7% discounted values are sourced for 2015 to 2050 in 2016 dollars from the EPA Analysis of the Clean Power Plan. These values are adjusted using the GDP Deflator from the "BCA Guidance" to 2020 baseline values in the "Social Cost of Carbon Inputs" tab. Baseline 2020 monetized values at a 3% discount rate are sourced from the Executive Order 13990 technical support document. These values are also in the "Social Cost of Carbon Inputs" tab. The social cost of carbon is calculated at a 7% and 3% discount rate, but the 3% discount rate values are used in the final BCA calculation in the "BCA Overview" tab per the "BCA Guidance" recommendation.

The inputs are aggregated in the "Emission Inputs" tab. VMT reduction by passenger vehicles and trucks are derived using the method described in the "Baseline and Project Build Projections" section above. Metric tons of emission reduced for SOx, NOx, PM 2.5 and CO2 are calculated by multiplying annual VMT reduced by the relevant factors for passenger vehicles and trucks. The values for annual monetized emission reduction are also available in the "Emission Inputs" tab.

Monetized emission reduction benefits are calculated in the "Emissions Calc" tab pulling from the formulas outlined in the "BCA Guidance" (quantity of emissions reduced multiplied by the monetization value from the "Emissions Inputs" tab).

Figure 14 - Monetized Emission Reduction Benefit

Monetized Emission Benefits (2027 to 2047)

NOx Reduction Value	$271,335.18
SOx Reduction Value	$259,925.76
PM 2.5 Reduction Value	$248,232.52
Total non-discounted reduction value (NOx, SOX, PM 2.5)	$236,251.97
CO2 Reduction Value (3% discount)	$223,912.41
CO2 Reduction Value (7% discount)	$211,483.94

The values for NOx, SOx and PM 2.5 are discounted by 7% in the "BCA Overview" tab. The 3% discounted values for CO2 are also in the "BCA Overview" tab and included in the final ratio.

Noise Benefit

Transforming Ridge Road from a vehicular through street to a complete street that invites people to walk or bike is anticipated to reduce noise from vehicle traffic, providing a benefit to nearby businesses and residents. Using the VMT reduction figures derived using the methodology described in the "Baseline and Project Build Projections" section above, noise reduction is monetized as a project benefit. In the "Noise Calc" tab, the monetization reduction values for noise are pulled from the "BCA Guidance" and the noise benefit is calculated by multiplying the annual VMT reduction by vehicle type by the monetization value.

Figure 15 - Monetized Noise Reduction Benefit

Monetized Noise Benefits (Non-Discounted, 2027 to 2047)	
Passenger Vehicles	$1,226,273.28
Trucks	$54,563.12
Total Non-Discounted	$1,280,836.40

The total annualized noise benefit is discounted by 7% in the "BCA Overview" tab.

Pedestrian and Cycling Amenities Benefit

The extension of the sidewalk on the north side of Ridge Road and the addition of a multiuse trail along the south of Ridge Road adds amenities for pedestrians and cyclists.

The current sidewalk is 4 feet wide and will be extended by 2 to 4 feet along 1.3 miles through the project construction. Monetization of additional sidewalk width per person mile walked is sourced from the "BCA Guidance". The average additional width of sidewalk added is multiplied by the per person mile walked. The project length is lowered from 1.31 miles to 0.86 miles based on the maximum allowable distance that can be used to calculate this benefit per the "BCA Guidance". Considering that the project area is longer than this distance, this assumption is a conservative projection of impacts of the pedestrian amenity.

The added benefit from a new traffic signal at Jackson Avenue is not calculated as a pedestrian amenity since vehicle counts are lower than 13,000 per day on Ridge Road (however the traffic signal benefits are included in the Travel Time Savings benefit outlined below).

The inputs for pedestrian benefits are in the “Ped Amenities Inputs” tab of the BCA Workbook.

The multiuse trail is calculated as a benefit for cyclists using Ridge Road. Since the trail is buffered and entirely separated from traffic, the monetization value for a separate cycle track is used from the “BCA Guidance”. The mileage cap for cycling benefits in the “BCA Guidance” is 2.38 miles, higher than the 1.31 miles of project area. In the “Bike Amenities Inputs” tab, the full project area of 1.31 miles is multiplied by the separate cycle track monetization to derive a value of the multiuse path per cyclist.

Annual pedestrian and cyclist counts as well as induced pedestrian cycling counts from the project build are pulled using the methodology described in the “Baseline and Project Build Projections” section above. The counts are used to derive the monetized annual value of additional sidewalk width for pedestrians and the multi-use path for cyclists by multiplying the counts by their project specific monetized values in the “Ped & Bike Amenities Calc.” tab. The monetization of induced counts are adjusted using the ‘Rule of Half’ per the “BCA Guidance”.

Figure 16 - Monetized Amenities Benefit

Monetized Pedestrian and Cycling Amenities (Non-Discounted, 2027 to 2047)	
Sidewalk Width Benefit	$45,576.96
Multiuse Path Benefit	$133,223.86
Total Benefit	$178,800.82

The total amenity benefit is discounted by 7% in the “BCA Overview” tab.

Travel Time Savings

The new traffic signal at Jackson Avenue and Ridge Road saves travel time for pedestrians that would instead detour to Calumet Avenue or Harrison Avenue to cross. The detour distances between both alternate routes are calculated from a starting point at Jackson Avenue. The average detour distance is calculated between the two alternatives. The average pedestrian speed and hourly value of time from the “BCA Guidance”. Travel time savings are then annualized. All inputs are in the “Travel Time Savings Inputs” tab.

In the “Travel Time Savings Calc” tab, daily counts and induced pedestrian volumes from project build are pulled using the methodology described in the “Baseline and Project Build Projections” section above. Annual pedestrian time savings are calculated using the formula from the “BCA Guidance” (distance divided by average speed multiplied by the hourly value to time and annual counts). The annualization factor is not used in the formula as annual counts are used. Induced pedestrian trips are calculated using the “Rule of Half” per the “BCA Guidance”.

Figure 17 - Monetized Travel Time Savings Benefit

Travel Time Savings (Non-Discounted, 2027 to 2047)	
Existing Pedestrians Trip Savings	$187,151.70

Induced Pedestrian Trip Savings	$198,490.80
Total Benefit	$385,642.50

The total annualized travel time savings benefit is discounted by 7% in the "BCA Overview" tab.

Health Benefits

Health benefits are calculated assuming that all induced walking and cycling trips due to the project build are shifted from a non-active mode due to the lack of transit options in Munster to date. The monetization of benefit is pulled from the "BCA Guidance". Annual induced walking and cycling trips from the project are taken from the "Baseline_Project Build" and "Count Data" tab per the methodology outlined in the "Baseline and Project Build Projections" section above. The counts are adjusted to include only the percent of the population between the ages of 20 to 74 sourced for the 2020 US Census ACS estimates to follow the "BCA Guidance" monetization value criteria. The annual induced cycling and pedestrian counts adjusted for age are then multiplied by the appropriate monetized value in the "Health Benefit Calc." tab.

Figure 18 - Monetized Health Benefit

Health Benefits (Non-Discounted, 2027 to 2047)	
Cycling Trip Benefit	$237,563.95
Pedestrian Trip Benefit	$1,028,012.39
Total Health Benefit	$1,265,576.34

The total annualized health benefit is discounted by 7% in the "BCA Overview" tab.

Qualitative Benefits

Agglomeration Economies

This project will provide a right of way that can encourage TOD development in connection with the Munster Ridge station of the West Lake Corridor. Both the West Lake Corridor TOD study and Town of Munster Character Based Code recognizes Ridge Road as a place to densify development, including multistory mixed-use and residential buildings that front the right of way. The Town's code allows for Urban Center Character District type-development adjacent to the rail station and at the intersection of Calumet Avenue. Along the rest of Ridge Road, it allows for General Urban District development and Civic Zone.

The wider sidewalks, and multimodal facilities will make the corridor a more distinct, walkable place that will attract new businesses and create new jobs. The project will create on-street parking along Ridge Road which will free future development from pressure to provide surface parking lots for visitors and local business customers. This adds value to the adjacent land and

allows for denser development. Also, as more people can walk to the future Munster Ridge station, businesses will be able to cater to commuters who walk or bike to the station.

Stormwater management

The existing right of way relies solely on grey infrastructure for stormwater management and has no permeable surfaces. The project includes landscaping and plantings in medians and parkways will enhance the corridor's ability to absorb stormwater and reduce flooding.

Wildlife

From 2016-2020, there were two collisions with deer near a wooded area adjacent eastern edge of the project area. Slower traffic speed from the roadway reconfiguration may help prevent wildlife crashes in the future or make them less severe than they would have been otherwise.

Wildlife access will be enhanced through the plantings that result from this project. Currently the right of way has no trees or greenery. The 255 new trees and large amount of landscaping throughout the project area will dramatically increase pollinators in the area. The trees and shrubs planned for in this project include local varieties that directly support hummingbird, bee, moth, butterfly, and other insect populations.

Resiliency

Because of the effects of climate change, Northwest Indiana will see hotter temperatures in the summer and an increase of heavy rain events. This project will help mitigate these issues by dramatically increasing the amount of green infrastructure along the corridor.

Green infrastructure including the native species plantings have been identified for the landscape plantings. These will require less resources to maintain and capture more stormwater before it reaches grey infrastructure. In recent years, Munster has delt with flooding most usually associated with surges of the Little Calumet River to the north of the site. Capturing stormwater in the new green infrastructure will decrease the amount of run off exacerbating these flooding issues.

Appendix B: Letters of Support

TODD YOUNG
INDIANA

United States Senate
WASHINGTON, DC 20510

COMMITTEES
FINANCE
FOREIGN RELATIONS
COMMERCE
SMALL BUSINESS

April 12, 2022

The Honorable Pete Buttigieg
U.S. Department of Transportation
1200 New Jersey Avenue SE
Washington, DC 20590-0001

Dear Secretary Buttigieg,

I write in support of a proposal submitted by the Town of Munster, Indiana, for the consideration of funding offered through the Rebuilding American Infrastructure with Sustainability and Equity (RAISE) grant program.

This proposal seeks to improve Ridge Road in the Town of Munster, Indiana. The project will be complementary to upcoming commuter rail service via the Northern Indiana Commuter Transportation District's (NICTD) new West Lake Corridor in shaping the future of Munster.

As this proposal demonstrates a clear public benefit to the residents of Munster, Indiana, I know this proposal will receive the serious consideration it deserves, within applicable laws and regulations.

If I can provide you with any additional information, please contact my grants coordinator, Kevin Sulc. He can be reached by email, Kevin_Sulc@young.senate.gov. Thank you in advance for your assistance.

Sincerely,

Todd Young
United States Senator

WASHINGTON, D.C.
185 DIRKSEN SENATE OFFICE BUILDING
WASHINGTON, D.C. 20510
PHONE (202) 224–5623

INDIANAPOLIS
251 NORTH ILLINOIS STREET
SUITE 120
INDIANAPOLIS, IN 46204
PHONE (317) 226–6700

NEW ALBANY
3602 NORTHGATE COURT
SUITE 15
NEW ALBANY, IN 47150
PHONE (812) 542–4820

EVANSVILLE*
101 MARTIN LUTHER KING JR. BLVD.
SUITE 110
EVANSVILLE, IN 47708
PHONE (812) 465–6501

FORT WAYNE*
1300 SOUTH HARRISON STREET
SUITE #3161
FORT WAYNE, IN 46802
PHONE (260) 422–7397

young.senate.gov

* APPOINTMENTS ARE REQUIRED FOR SERVICE AT THIS LOCATION

FRANK J. MRVAN
1ST DISTRICT, INDIANA

1607 LONGWORTH
WASHINGTON, DC 20515-0007
(202) 225-2461

7895 BROADWAY, SUITE A
MERRILLVILLE, IN 46410
(219) 795-1844

http://mrvan.house.gov

Congress of the United States
House of Representatives

COMMITTEE ON VETERANS' AFFAIRS
SUBCOMMITTEES:
CHAIRMAN - TECHNOLOGY MODERNIZATION
HEALTH

EDUCATION AND LABOR COMMITTEE
SUBCOMMITTEES:
HEALTH, EMPLOYMENT, LABOR, AND PENSIONS
CIVIL RIGHTS AND HUMAN SERVICES

CO-CHAIRMAN - CONGRESSIONAL STEEL CAUCUS

CONGRESSIONAL LAW ENFORCEMENT CAUCUS

April 13, 2022

The Honorable Pete Buttigieg
Secretary of Transportation
U.S. Department of Transportation
1200 New Jersey Avenue Southeast
Washington, DC 20590-0001

Dear Secretary Buttigieg,

I write in strong support of a proposal submitted by the Town of Munster for the consideration of funding offered through the Rebuilding American Infrastructure with Sustainability and Equity (RAISE) grant program.

As referenced in its proposal, Munster intends to advance its proposed Ridge Road Complete Streets Project, which will complement the South Shore Line's West Lake Corridor currently under construction. This unique and effective reimagining of Ridge Road, a legacy corridor in the region, into a vibrant pedestrian-friendly destination that effectively utilizes the new West Lake Corridor station that will be operational in 2025 and will be the access point not only to residents as it provides a direct rail connection to the City of Chicago, but also to visitors who are drawn to the town given the economic development proposed within the project corridor. The Town of Munster worked diligently with residents, businesses, and local, regional, and state partners to develop a vision for its primary east-west route through the community to develop the proposed Ridge Road Complete Streets Project which will facilitate private reinvestment, improve transit ridership, reduce accidents, improve air quality, and implement sustainable stormwater management practices while enhancing non-motorized connections for pedestrians and cyclists both locally and regionally with two regional trail systems.

For these reasons, which demonstrate a clear public benefit, I know this proposal will receive the serious consideration it deserves. If you are in need of any additional information, please do not hesitate to contact me or have the appropriate member of your staff contact Elizabeth Johnson, Director of Projects and Planning, in my Merrillville District Office at 219-795-1844.

Sincerely,

Frank J. Mrvan

Frank J. Mrvan
Member of Congress

FJM:ej

STATE OF INDIANA
HOUSE OF REPRESENTATIVES
THIRD FLOOR STATE HOUSE
INDIANAPOLIS, INDIANA 46204

REPRESENTATIVE MIKE ANDRADE
200 West Washington Street
Indianapolis, IN 46204

COMMITTEES:
COMMERCE, SMALL BUSINESS AND
ECONOMIC DEVELOPMENT
EMPLOYMENT, LABOR AND PENSIONS
VETERANS AFFAIRS AND PUBLIC SAFETY

The Honorable Pete Buttigieg
U.S. Department of Transportation
1200 New Jersey Avenue NE
Washington, D.C. 20590 – 0001

On behalf of Indiana House District 12, I am writing to express support for the Town of Munster's application for a RAISE grant through the United States Department of Transportation. Approval of this grant will allow for funding of the Ridge Road Complete Street Project, which would allow for the $21 million expansion and redevelopment of Munster's most heavily traveled corridor. This project will reconfigure traffic lanes on Ridge Road from five lanes to three lanes, addition of a 10' multi-use path on the south side of the street, planting 255 trees, and space for pedestrian seating.

This project will cultivate the creation of a new prosperous environment for the town of Munster, which is in desperate need of such a development. The Ridge Road project will allow for the $890 million redevelopment of the NICTD's commuter rail, with daily ridership estimates at 10,000 by 2037. Expansion of public transportation will benefit vulnerable populations of the region, especially those who do not have a car or rely on public transit to access economic opportunities.

Ridge Road is the main connection between Munster and Lansing, Illinois. Lansing is an economically disadvantaged community and lacks transportation options as determined by the USDOT. With this new construction, we can secure a higher quality of life for those who use the corridor, particularly for those burdened by the high cost of transportation and dependence on automobiles.

I also want to note that this project represents exactly the sort of transit-oriented development critical to the long-term success of our state's economic engine. The project will also provide better access to destinations such as downtown Chicago for those with mobility challenges. The Ridge Road project is something long hoped and dreamed for by the community of Muster. We are excited to see this plan come to fruition.

Thank you again for your consideration of this request. I want to reiterate my strong support for the approval of the Ridge Road Complete Street Project RAISE grant application that will provide the type of infrastructure that will benefit Munster and the surrounding areas well into the future.

Mike Andrade
State Representative
House District – 12

NORTHWESTERN INDIANA REGIONAL PLANNING COMMISSION

6100 Southport Road
Portage, Indiana 46368
(219) 763-6060
www.nirpc.org

April 13, 2022

The Honorable Pete Buttigieg
Office of the Secretary
U.S. Department of Transportation
1200 New Jersey Ave., SE
Washington, DC 20590

RE: RAISE Grant Application for Town of Munster, Indiana

Dear Secretary Buttigieg:

On behalf of the Northwestern Indiana Regional Planning Commission, please accept this letter as our strong support for the Town of Munster's RAISE grant application for their Ridge Road Complete Street Project.

As the Metropolitan Planning Organization for Lake, Porter and La Porte Counties in Indiana, NIRPC's *NWI 2050* plan points to a Connected vision for our Region where "NWI's people have accessible, safe, and equal opportunities for working, playing, living and learning." We believe Munster's bold streetscape concept for Ridge Road embraces this vision by aiming to improve multi-modal access near the location of a commuter rail station now under construction. Munster's proposed project will leverage the significant USDOT investment in the West Lake Corridor commuter rail expansion and provide "last mile," multi-modal opportunities for connection while supporting Transit Oriented Development at this location.

The proposed project provides additional benefits including green infrastructure improvements for stormwater capture, additional tree cover to reduce heat island effects, and native plantings throughout the corridor. Taken together these enhancements will substantially increase the level of safety and aesthetic quality for residents and visitors to Munster alike. This in turn will serve to improve the economic vitality of an older urban core, helping to retain and attract business and to enhance Munster's overall quality of place.

We commend Munster for the care that has gone into planning for this corridor and appreciate your strong consideration of Munster's outstanding proposal.

Sincerely,

Ty Warner, AICP
Executive Director

April 13, 2021

Via E-Mail

Dustin Anderson, Munster Town Manager
1005 Ridge Rd.
Munster, IN 46321

RE: Town of Munster RAISE Grant Application

Dear Mr. Anderson,

As the President of the Northwest Indiana Commuter Transportation District (NICTD), operator of the 90-mile South Shore Line commuter rail service, and soon to be operator of the West Lake Corridor commuter rail service, I am writing this letter to express my support of the Town of Munster's 2022 RAISE Grant Application. The Munster Ridge Road Complete Street Project identifies a number of improvements within the area of the soon to be constructed Munster Ridge Road station. The Ridge Road station is one of four new stations that will serve riders on the West Lake Corridor commuter rail line, a $943 million New Starts project funded through the Federal Transportation Administration's (FTA) Capital Investment Grant program that is scheduled to begin revenue service in May of 2026.

NICTD presently has a full funding grant agreement with the FTA to construct a 7.8-mile rail extension that will branch off of our mainline South Shore Line rail service that extends from north Hammond, Indiana to the border of the towns of Munster and Dyer, in Indiana. The project has forecasted ridership of 10,400 daily linked trips by the horizon year of 2040. As part of this project, the Munster Ridge Road Station will be equipped with high level boarding platforms promoting passenger safety and accessibility for our riders. High level boarding at this station will allow also allow for the expanded participation of commuters in NICTD's continually growing bikes on trains program. The adjacent and upgraded bike/pedestrian pathways to the station which are also connecting to the area's trail system, not only promotes greater non-motorized access to the station from local residents, but also opens up opportunities for people from the entire South Shore Line/West Lake Corridor service region to make the Ridge Road station a destination point to access this trail system.

NICTD currently is the sponsor agency of an FTA grant for Transit Oriented Development (TOD) in partnership with the Indiana Regional Development Authority. Munster is part of the TOD study efforts focused within the West Lake Corridor that will be further benefited by the opportunities contemplated in the Raise Grant proposal from Munster, and these opportunities are in line with the project efforts put forth under the TOD study. Safety is the number one priority on the NICTD commuter rail system, and we see the tremendous safety benefits that will be created by the project elements in this proposal. We cannot emphasize strongly enough the importance of this proposed projects enhancements to safety. Removal of barriers to accessing the commuter rail system are also priorities for NICTD, and this project enhances the ease of accessibility for our disabled riders and the promotes access for riders who have

non-motorized transportation. Another benefit that we see is the tie in with area recreational trails that will lend to the efforts of creating a multimodal accessible station as well as set up the community for the projected growth to support the Town's TOD vision. In summary, this project will facilitate and support the projected growth of the new commuter rail line by enhancing non-motorized, environmentally friendly, and accessible access to the Ridge Road station.

NICTD is in support of the efforts put forth by the Town of Munster and urges consideration of the proposed Munster Ridge Road Complete Street Project.

Sincerely,

Michael Noland
President
Northern Indiana Commuter Transportation District

VILLAGE OF LANSING

Patricia L. Eidam
Mayor

Office of the Village Administrator

Dan Podgorski
Village Administrator

April 13, 2022

RE: Town of Munster RAISE Grant Application

To whom it may concern,

My name is Dan Podgorski and I am the current Village Administrator for the Village of Lansing, Illinois.

I am writing today in support of the Town of Munster's 2022 RAISE Grant application. Munster is our immediate neighbor to the east and we share both Ridge Road and the Pennsy Greenway Trail as significant thoroughfares through our respective communities. The Village of Lansing and the Town of Munster have long enjoyed a close and collegial relationship, even though we are on opposite sides of the state line.

In 2008, our community made the choice to de-emphasize motorized transportation along Ridge Road by reengineering it to be a complete street. We found that this to be a worthwhile investment for the Village of Lansing. Our small businesses flourished while at the same time reducing traffic accidents and improving the environment for pedestrians and other non-motorized transportation.

We are very pleased to see our neighbors making a similar choice to prioritize active transportation and reinvestment in their legacy commercial corridor.

Our residents will be well served by the pedestrian and bike friendly connections between our communities – especially with the on-going construction of the West Lake Corridor that will come on-line in 2025.

Please do consider awarding grant funding to the Town of Munster's Ridge Road Complete Street Project.

Respectfully,

Dan Podgorski
Village Administrator
Village of Lansing, Illinois
(708) 895-7202
dpodgorski@villageoflansing.org

SCHOOL TOWN of MUNSTER

ADMINISTRATION
CENTER
8616 COLUMBIA AVENUE • MUNSTER, INDIANA 46321
PHONE: 219-836-9111 • FAX: 219-836-3215

DR. JEFFREY HENDRIX
SUPERINTENDENT

MR. STEVEN TRIPENFELDAS
ASSISTANT SUPERINTENDENT

MRS. COLLEEN BERGREN
ASSISTANT SUPERINTENDENT

MR. WILLIAM MELBY
DIRECTOR OF FINANCIAL OPERATIONS

April 12, 2022

To Whom It May Concern:

As the superintendent of the School Town of Munster, I am in support of the Town of Munster's proposed Ridge Road Complete Street Project. With the beautification of the town, and the major focus on pedestrian safety with shorter crosswalks, this project provides important safeguards for the children and parents of the School Town of Munster. Ridge road is a heavily traveled thoroughfare during the morning and afternoon hours of the day especially during the beginning and ending of our school hours when students, parents and staff travel to and from our schools using ridge road. This project provides an addition layer of security that is not currently in place.

I believe that this project is a major improvement to our community and to our schools. Please consider approving it for our community.

Sincerely,

Dr. Jeff Hendrix
Superintendent
School Town of Munster