



AGENDA
CHARTER TOWNSHIP OF MERIDIAN
MERIDIAN TRANSPORTATION COMMISSION
September 22, 2022 (Special Meeting) 6:00
p.m.

1. CALL MEETING TO ORDER

2. APPROVAL OF AGENDA

3. APPROVAL OF MINUTES
A. June 16, 2022

4. COMMUNICATIONS

5. PUBLIC REMARKS

6. COMMISSION DISCUSSION

- A. Lake Lansing Road Non-motorized Improvement Project (Presentation)
- B. Bicycle Friendly Community update (Staff)
- C. Redi Ride Relocation Discussion (Discussion)
- D. General Commission Comments

7. PROJECT UPDATES

- A. MDOT M-43 Project update (Staff)
- B. Okemos Road Project update (Staff)
- C. Local Roads and Other Construction Projects update (Discussion)
- D. Railroad Quiet Zone update (Discussion)

8. REPORTS / ANNOUNCEMENTS

- A. Township Board
- B. Planning Commission
- C. Chair
- D. Staff

9. NEXT MEETING DATES

- A. Township Board Meeting September 20, 2022
- B. Transportation Commission Meeting November 17, 2022

10. ADJOURNMENT

IN PERSON MEETING

Town Hall Room

5151 Marsh Road



Charter Township of Meridian
Meridian Transportation Commission
5151 Marsh Road, Okemos, MI 48864
Thursday, June 16, 2022 – Minutes – DRAFT

Members Present: Vice-Chair Lovell, Commissioner Hudson (via Zoom), Commissioner Potter, and Trustee Sundland

Members Absent: Chair Vagnozzi, Commissioner Robertson, Commissioner Van Coevering

Others Present: Senior Planner Brian Shorkey, Director of Public Works Dan Opsommer, Planning Commissioner Bill McConnell

1. CALL MEETING TO ORDER

Vice-Chair Lovell called the meeting to order at 6:15 PM

2. APPROVAL OF THE AGENDA

MOTION BY COMMISSIONER POTTER TO APPROVE THE AGENDA. SUPPORTED BY TRUSTEE SUNDLAND. MOTION PASSES 4-0.

3. APPROVAL OF THE MINUTES – February 17, 2022

AFTER DISCUSSION, MINUTES APPROVED AS WRITTEN BY PROCLAMATION OF VICE-CHAIR LOVELL.

4. COMMUNICATIONS

No communications were received since the last meeting.

5. PUBLIC REMARKS

None.

6. COMMISSION DISCUSSION

A. Township Funded Road Projects

Director of Public Works Dan Opsommer presented maps showing 2019 and 2021 PASER data and 2021 and 2022 local road projects. Discussion about township and county projects in 2022 and 2023. Discussion about the Towar Avenue and Lake Lansing Road project.

Director of Public Works Dan Opsommer said that road project bids are up 45% per mile in 2022 versus 2021 and that the Board has appropriated \$1.3 million in recover funds to road projects. Discussion of Okemos Road bridge and Grand River projects. Director of Public Works Dan Opsommer said that police enforcing local traffic only in Indian Hills. Director of Public Works Dan Opsommer said that the MSU to Lake Lansing trail project is going to bid next week. It is using a TAP grant and tree clearing has begun. Engineering is being done for Phase II from Grand River to Okemos.

B. Bicycle Friendly Community discussion

Senior Planner Shorkey summarized the Bicycle Friendly Community application in the packet and offered to begin the application process on behalf of the Commission. Senior Planner Shorkey said that he would bring the draft application to the Commission at their next meeting so that they could review it before submittal. After further discussion, Commissioner Potter moved to pursue the Bicycle Friendly Community status, seconded by Trustee Sundland. Motion approved 4-0.

C. Traffic Impact Study Draft Ordinance

Senior Planner Shorkey summarized the draft traffic impact study ordinance and asked the Commission if they had any comments. He said that the Planning Commission had received the ordinance favorably and that at the public hearing, Staff was asked to send it to the Transportation Commission for review. Commissioner Potter asked if the draft ordinance discussed bike or pedestrian traffic. Senior Planner Shorkey said that it did not, but that there were other ordinances that addressed non-motorized transportation. The Commission generally reviewed the draft ordinance favorably. After discussion, Commissioner Potter suggested that the Transportation Commission might have greater input on projects in the future.

D. General Commission Comments

Commissioner Potter discussed the Kinawa and Chippewa schools' Safe Routes to School projects and updated Commission on the status of their applications.

Vice-Chair Lovell commented on the sidewalk on Newton Road and pointed out that it stops short of the township parking lot by about 50 feet. Director of Public Works Dan Opsommer brought up the area on Google Maps and discussed. Director of Public Works Dan Opsommer said that the northern end of the sidewalk would be closed with a boardwalk when Sierra Ridge III is constructed. After further discussion, Senior Planner Shorkey said that he would look into the sidewalk gap between Rite Aid and Costco.

7. PROJECT UPDATES

No further comments.

8. REPORTS/ANNOUNCEMENTS

A. Township Board

Trustee Sundland updated the Commission the Township Board's activities.

B. Planning Commission

Planning Commissioner McConnell updated the Commission on the Planning Commission's recent work and the potential ordinance amendments that are being worked on. Planning Commissioner McConnell spoke about the Environmental Commission's Climate Change plan update and said that the transportation element was being updated.

C. Chair

Vice-Chair Lovell spoke very highly of the late Supervisor Styka.

D. Staff

Senior Planner Shorkey had no update.

9. NEXT MEETING DATES

The next meeting of the Commission is scheduled for July 21, 2022. Commissioner Potter asked about the Transportation Commission's meeting schedule. Senior Planner Shorkey confirmed that the Transportation Commission meets every other month and that the next meeting is in July and that the Transportation Commission would be back on schedule.

10. ADJOURNMENT

Vice-Chair Lovell adjourned the meeting at 7:48 p.m.

Form: 21747

Meridian Charter Township

Started at: 7/1/2022 03:40 PM - Finalized at: N/A

Page: Application Tips

- **A word version of this application is available for download, at <https://bit.ly/BFCapp2022> (<https://bit.ly/BFCapp2022>)** - that document highlights all new and updated questions on the application since the previous round, and can also be useful to review all the dependent fields that are hidden on the online application until their corresponding parent answer option is selected.
- Find a Glossary of Terms used in the BFC Application here (<https://docs.google.com/spreadsheets/d/1K31XfewKWUCVr6BuLJvooO8A7jKfUziGBj0hzxqXjE/edit#gid=0>). If you come across a term on the application that is not listed on the glossary that you have questions about, please email bfa@bikeleaeu.org.
- **The Bicycle Friendly Community online application now allows multiple user accounts to collaborate** on a single application! To add a collaborator, click on "Manage Collaborators" in the upper right-hand corner of your online application. Learn more on our Application Portal FAQs (<https://bicyclefriendly.secure-platform.com/a/page/FAQs>).
- The application will refer to your type of jurisdiction as 'community' throughout the application, for a lack of a better term. So when the application asks about bicycle amenities, services and other resources in your community, **please only list what is provided within your jurisdiction's boundaries**. However, if there is a significant bicycle amenity or activity close by that benefits your community, you can tell us about it in the bonus point question at the end of the appropriate 'E' section.
- The application is designed for **communities of all sizes**. The conditions that make your community unique -- size, type, location, climate, demographics -- are important when determining how to best encourage and support bicycling, and will be taken into consideration when we review your application.
- **It is not necessary to be able to check every box on this application to earn a BFC designation**. We've provided a comprehensive menu of all the ways a community can be bicycle-friendly, and some options are more valuable than others, or more relevant to some communities than others, but we don't expect any community to do everything on the list.
- Unless a question specifically asks about plans for the future, **only check boxes for things that are already being done**. So if several improvements for bicyclists are still in the planning stage, you can either wait a year or two before you apply to increase your chances to receive an award, or you can apply now to benchmark and watch your community move up in award levels in the future (which can be a powerful way to show the impact of investments).
- If your community is doing something that isn't listed in the checkboxes, or that goes above and beyond any of the check box options, please tell us about it! Check "other" on the appropriate question, or **use the bonus point questions at the end of each 'E' section and the 'Final Overview' section at the end of the application to give us more details**. This not only helps us to better understand your community, it also helps improve the program by identifying new trends and best practices.
- If you would like to share any documents such as a community bike map or a file with photos with the reviewers, **please include a link or upload the file** either under the relevant question (if possible) or in the designated space at the end of the Final Overview section. Applicants can compile several photos into a single zip file to save space on their application.
- Don't be shy to **tell us about your community's weaknesses**. This gives us a more accurate snapshot of your community, and displays that you are critically evaluating the community's internal efforts, which is an important component of the final 'E', Evaluation & Planning.
- **A note about the impact of the COVID-19 Pandemic:** We recognize that many communities had to cancel or severely alter their in-person classes and events due to the COVID-19 pandemic over the last several years. On questions that ask about in-person activities that happen "at least annually" you can check the box for activities that typically happened annually before the pandemic, and that have resumed or are planned to be resumed when it is safe to do so.
- If you need help with the online application, visit our Application Portal FAQs page here (<https://bicyclefriendly.secure-platform.com/a/page/FAQs>) or contact us at bfa@bikeleaeu.org.

Page: Application Intro

Community Name:

Meridian Charter Township

Has the community applied to the Bicycle Friendly Community program before?

First-Time Application

If awarded, the following links will appear on your BFA Award Profile on the League's Connect Locally Map (<http://bikeleague.org/bfa/search/map?bfa=>) and used to promote your community through League social media channels.

Community Website:

meridian.mi.us (<http://meridian.mi.us>)

Community's Twitter URL:

@meridiantwp (<http://@meridiantwp>)

Community's Facebook URL:

www.facebook.com/MeridianTownship (<http://www.facebook.com/MeridianTownship>)

Community's Instagram URL:

meridiantownship (<http://meridiantownship>)

Community's Flickr or other public photo sharing URL:

Page: Contact Information

Applicant First Name

Brian

Applicant Last Name

Shorkey

Job Title

Senior Planner

Department

Community Planning & Development

Employer

Meridian Charter Township

Street Address (No PO Box, please)

5151 Marsh Road

City

Okemos

State

Michigan

Zip

48864

Phone #

5178534576

Applicant Email Address

shorkey@meridian.mi.us

Did you work with any other local government agencies, departments, or city staff on this application?

Yes

Please list up to 10 additional government agency contacts.

Agency Contacts

Younes Ishraidi
Department of Public Works
Chief Engineer
ishraidi@meridian.mi.us

Ken Plaga
Police Department
Chief of Police
plaga@meridian.mi.us

Andrea Smiley
Communications/HOMTV
Marketing & Public Relations
smiley@meridian.mi.us

LeRoy Harvey
Department of Public Works
Environmental Programs Coordinator
harvey@meridian.mi.us

Did you work with any local advocacy organizations or citizen volunteers on this application?

No

Are there other local bicycle, active transportation, or transportation equity advocacy groups in your community not already identified?

(For internal use only.)

Name:

Patricia Herring Jackson

Title:

Supervisor

Email:

Street Address

5151 Marsh Road

City

Okemos

State

Michigan

Zip

48864

Page: Community Profile pt. 1

Please note: The application will refer to your type of jurisdiction as 'community' throughout the application, which should not include any bicycle amenities, services and other resources outside your boundaries.

A1. Name of Community:

Meridian Township

A2. Name of County/Borough/Parish:

Ingham

A3. State:

Michigan

A4. Link to map of community boundaries:

<https://www.google.com/maps/place/Meridian+Charter+Township,+MI/@42.7264521,-84.4586879,13z/data=!3m1!4b1!4m5!3m4!1s0x8822dd52129022eb:0xb67c3fb370762da!8m2!3d42.7265389!4d-84.4150644>
(<https://www.google.com/maps/place/Meridian+Charter+Township,+MI/@42.7264521,-84.4586879,13z/data=!3m1!4b1!4m5!3m4!1s0x8822dd52129022eb:0xb67c3fb370762da!8m2!3d42.7265389!4d-84.4150644>)

A5. Type of Jurisdiction

Town/City/Municipality

A6. Size of community

30.49

A7. Total Population:

43916

A8. Population Density:

1440.34

For definitions, see FHWA Bikeway Selection Guide (page 20)
(https://safety.fhwa.dot.gov/ped_bike/tools_solve/docs/fhwasa18077.pdf).

A9a. Rural

1-24%

A9b. Rural Town

25-49%

A9c. Suburban

50-75%

A9d. Urban

0%

A9e. Urban Core

0%

A10. What is the street network density of the community?

5.1-10.0

A11. What is the average intersection density?

Fewer than 60

A12. Do any of the following significant physical barriers to cycling exist in your community?

Major highways or divided arterials with no or limited crossings, Extreme cold/heavy snow, Other seasonal or weather challenges, Large body of water (e.g. river), Railroad corridors

Page: Community Profile pt. 2

Find the following information for your community at: <https://data.census.gov/cedsci/> (<https://data.census.gov/cedsci/>)

Click here for detailed instructions to find answers to each question below:

A13. Census Profile link:

<https://data.census.gov/cedsci/all?q=Meridian%20charter%20township,%20Ingham%20County,%20Michigan> (<https://data.census.gov/cedsci/all?q=Meridian%20charter%20township,%20Ingham%20County,%20Michigan>)

A14a. Under 5 years:

5.6

A14b. Under 18 years:

20.6

A14c. 18 years and over:

79.4

A14d. 65 years and over:

16.5

A15. Percent of the Population that Speaks a Language Other Than English at Home:

20.3

A16. Percent of population that is Foreign Born:

7657

A17. Median Household Income:

72156

A18. Poverty Rate:

12.1

Enter numbers only - answer must be in ##.## format.

A19a. Total Bicycle Commuters:

0.7

A19b. Male Bicycle Commuters:

1.2

A19c. Female Bicycle Commuters:

0.3

A20. Percent of Household with No Vehicles Available:

3.5

***Note:** The League recognizes that not every disability is visible to others, and that not every person with a permanent or temporary mobility or accessibility need identifies as 'disabled'. Whether from a cognitive, sensory, or physical disability, or from age, temporary illness, or injury, there are people in every community who face a range of mobility challenges for whom a bike or cycle may open a world of possibilities to increase accessibility.

For examples, see "Disabled People Ride Bikes (and Trikes, and Tandems and Recumbents)!"

(<https://rootedinrights.org/video/disabled-bikers/>) a short film produced by Rooted in Rights (<https://rootedinrights.org/>).

We invite BFC applicants to consider what visible and invisible disabilities and other mobility needs may exist in your community, and if you aren't already, to use the BFC application as a starting place to engage directly with people with disabilities and other mobility needs in your community to ensure that your bicycle network, classes, events, and rides are inclusive and accessible to all.

A21a. Total percent of "Disabled Population":

9

A21b. Percent of population with a hearing difficulty:

1.8

A21c. Percent of population with a vision difficulty:

2.2

A21d. Percent of population with a cognitive difficulty:

2.2

A21e. Percent of population with an ambulatory difficulty:

3.6

Enter numbers only - answers must be in ##.## format.

A22a. White:

31169

A22b. Black or African American:

2159

A22c. American Indian and Alaska Native:

204

A22d. Asian:

6742

A22e. Native Hawaiian and Other Pacific Islander:

0

A22f. Some other race:

285

A22g. Two or more races:

2294

A22h. Hispanic or Latino (of any race):

1829

A23. If you have any other socioeconomic or demographic data from your community that you feel is significant for the BFC review team to better understand your community, please use this space to describe.

The eastern quarter of our township is outside of our designated Urban Services Boundary (USB). As such, there is a drastic drop off in density, parcels tend to be larger, and land uses are dominated by large lot residential and open space. Because of this, fewer pathways and sidewalks are found in the eastern quarter.

B1. Does your community currently have any of the following policies in place? Check all that apply.

Local Complete Streets ordinance

B1a. What year was the local Complete Streets ordinance adopted?

2012

B1b. Please provide a link to the local Complete Streets ordinance.

<https://ecode360.com/28777708> (<https://ecode360.com/28777708>)

B1c. Since the adoption of the Complete Streets ordinance, what percentage of the implemented road projects (where bicycle facilities were considered) have included bicycle facilities?

More than 75%

B2. Does your community have bicycle facility selection criteria that increases separation and protection of bicyclists based on levels of motor vehicle speed and volume?

No

B3. Has your community adopted a design manual or guidelines that establishes minimum standards for the design of safe, comfortable, and accessible bicycle facilities?

No

Bicycle Facility Design Guidelines are an important resource to ensure that new bike lanes, trails, side paths, and other bike facilities adhere to national safety guidelines and are accessible to cyclists of all ages and abilities, including disabled cyclists.

If your community does not have the capacity to develop its own local guidelines, consider instead adopting an existing Design Guide as the formal standard for your community instead, such as the FHWA Bikeway Selection Guide (https://safety.fhwa.dot.gov/ped_bike/tools_solve/docs/fhwasa18077.pdf) or NACTO Urban Bikeway Design Guide (<https://nacto.org/publication/urban-bikeway-design-guide/>), or if your community is small and/or rural, the FHWA Small Town and Rural Multimodal Network Guide (<https://ruraldesignguide.com/>) (see PDF version. (https://www.fhwa.dot.gov/environment/bicycle_pedestrian/publications/small_towns/fhwahep17024_lg.pdf))

If your community is considering developing your own local design guide or standards, we strongly encourage you to adopt accessibility standards that specifically address accommodating adaptive cycles and cyclists with disabilities (https://wheelsforwellbeing.org.uk/wp-content/uploads/2020/12/FC_WFW-Inclusive-Guide_FINAL_V03.pdf), and to incorporate Universal Design principles to the needs of all users and mobility types in public rights-of-way (<https://walksf.org/wp-content/uploads/2019/12/getting-to-the-curb-report-final-walk-sf-2019.pdf>).

Additional resources include:

- NACTO's Guide for Designing for All Ages & Abilities (https://nacto.org/wp-content/uploads/2017/12/NACTO_Designing-for-All-Ages-Abilities.pdf)
- NACTO's Urban Street Design Guide (<https://nacto.org/publication/urban-street-design-guide/>)
- AASHTO's Guide for the Development of Bicycle Facilities, 4th Edition (https://nacto.org/wp-content/uploads/2015/04/AASHTO_Bicycle-Facilities-Guide_2012-toc.pdf)

B4. Does your community currently have any of the following land use or development policies in place that promote shorter distances between homes and destinations?

Mixed-use zoning or incentives, Planned Unit Development zoning

B5. Does your community currently have any of the following policies or ordinances in place related to motor vehicle parking or traffic?

Shared-parking allowances

B6. Does your community have any of the following additional policies or standards that support the development of bicycle infrastructure?

None of the above

B7. Does your community have any of the following other policies, standards, or other barriers that limit the development of bicycle infrastructure?

None of the above

B8. What policies or programs are in place to ensure that high quality bike parking is available throughout the community?

Bike parking ordinance for all new developments specifying amount and location , Incentives or requirements for developers, property management companies, and/or employers to provide secure bike parking and other end-of-trip facilities for cyclists, Ordinance that allows bike parking to substitute for car parking

B9. Does your community have bicycle parking design standards that establish minimum requirements for the quality, security, and design of bike parking?

Yes

B9a. Please provide a link to your community's bicycle parking design standards.

<https://ecode360.com/28784097> (<https://ecode360.com/28784097>)

B9b. Do your community's bicycle parking design standards meet any of the following?

Conform with APBP guidelines

B10. What percentage of public and private bike racks conform with APBP guidelines?

More than 75%

B11. What, if any, end-of-trip facilities are available to the general public in your community?

Public bicycle repair or fix-it stations, Public air pumps, Public uncovered bike racks

B12. Has your community taken any of the following steps to increase the accessibility and equitable distribution of end-of-trip facilities, including bike parking?

None of the above

The Bicycle Friendly Community program has updated our questions around on- and off-street bicycle facilities with the goal of encouraging communities to focus on building cohesive, connected bicycle networks, as opposed to piecemeal bike facilities. This update reflects the Safe System Approach (https://safety.fhwa.dot.gov/zerodeaths/docs/FHWA_SafeSystem_Brochure_V9_508_200717.pdf) and emphasizes slow design speed and the importance of building safe, low-stress bicycle networks that are comfortable, equitable, and accessible to all cyclists.

The following section has been developed using national guidance and standards such as FHWA's Bikeway Design Guide (https://safety.fhwa.dot.gov/ped_bike/tools_solve/docs/fhwasa18077.pdf) and Small Town and Rural Design Guide (https://www.fhwa.dot.gov/environment/bicycle_pedestrian/publications/small_towns/fhwahep17024_lg.pdf), as well as NACTO's Designing for All Ages and Abilities contextual guide (https://nacto.org/wp-content/uploads/2017/12/NACTO_Designing-for-All-Ages-Abilities.pdf) and Urban Bikeway Design Guide (<https://nacto.org/publication/urban-bikeway-design-guide/>).

As guidance and best practices continue to advance around building safe, accessible, and equitable facilities for cycling, we will continue to follow data-driven standards and encourage every Bicycle Friendly Community to do the same.

We also strive to encourage and support every BFC applicant community to better inventory and document their current and planned bikeway facilities to help facilitate future growth in and investments of the network. For more information, see the League's 2022 report, Benchmarking Bike Networks (<https://bikeleague.org/sites/default/files/Benchmarking-Bike-Networks-Report-final.pdf>).

B13. Please provide a map to show your community's current bicycle network, including all current on- and off-street bike facilities.

I would like to upload a PDF map

B13a. Bicycle Network Map PDF:

2021 Pathway Master Plan

Download File (<https://vo-general.s3.amazonaws.com/3096d3c2-dad9-4951-9567-9fa52068cd98/1406e981-7207-46ae-8991-8d6a53b871c9?AWSAccessKeyId=AKIAJ4PRWO26HAX3IOCA&Expires=1749498626&response-content-disposition=inline%3B%20filename%3D%222021%20Pathway%20Master%20Plan%20-%20CMS%20ROW%20Easements%20to%204.26.22%20Brd%20mtg.pdf%22&response-content-type=application%2Fpdf&Signature=fluxM6x9MnFhqc7xJ0zfiVw7254%3D>)

B13b. Secondary Bicycle Network Map PDF:

No File Uploaded

B14. Bicycle Network Worksheet

No File Uploaded

The following answers for B15a-e should be copied from the "Summary" tab of your completed BFC Bicycle Network Worksheet (see question B14 above).

B15a. Total current Roadway Network:

B15b. Percentage of Roadway Network that is high-speed:

B15c. Percentage of Roadway Network that is low-speed:

B15d. Percentage of Roadway Network where speed limit is unknown:

The following answers for B16a-h should be copied from the "Summary" tab of your completed BFC Bicycle Network Worksheet (see question B14 above). The worksheet also includes explanations for how these numbers are calculated (for example, what counts as "low-stress").

B16a. Total current mileage of on-street bike facilities:

30

B16b. Total current mileage of off-street bike facilities:

100

B16c. Total current mileage of Bicycle Network (ALL on-street and off-street facilities):

B16d. Total current mileage of other markings and features:

B16e. Ratio of Total Current Bicycle Network to Roadway Network:

B16f. Percentage of Roads with ANY on-street bike facilities:

B16g. Percentage of Roads with LOW-STRESS on-street bike facilities

B16h. Percentage of Total Bicycle Network that is Low-Stress:

B17. Within the last five years, has your community ever removed a bicycle facility without an improved replacement?

No

The following answers for B18a-f should be copied from the "Summary" tab of your completed BFC Bicycle Network Worksheet (see question B14 above). The worksheet also includes explanations for how these numbers are calculated (for example, what counts as "low-stress").

B18a. Planned On-Road Bike Facilities:

B18b. Planned Off-Road Bike Facilities:

B18c. Planned LOW-STRESS Bike Facilities:

B18d. Planned other markings & features:

B18e. Plans to upgrade any existing bike facilities:

We are currently constructing the MSU Connector, which will link our pathways to the Lansing River Trail system.

B18f. Plans to lower speed limits or design speeds of any existing roads:

There is a Lake Lansing Road redesign underway.

B19. Which of the following features are provided to improve safety for bicyclists and pedestrians at off-street and side path crossings of roads with motor vehicle traffic?

Signalized crossings, Stop signs for vehicle traffic

B20. How has your community worked to calm traffic and slow down motor vehicles to increase safety for all roadway users?

Designed new roads with slow speeds, complete streets, and/or Safe System Approach principles, Physically altered the road layout or appearance of existing roads to lower their design speeds for motor vehicles (e.g. road diet, installing chicanes or curb bump-outs)

B21. In what other ways has your community improved connectivity and riding conditions for bicyclists?

None of the above

B22. How has your community incorporated principles of safety, comfort & attractiveness in the development of your bicycle network?

Street lighting on most arterials, Historical or cultural information

B22b. Please describe any efforts to incorporate historical or cultural information in your community's bicycle network.

Our municipal campus includes the Meridian Historical Village where historic buildings around the area were moved into an historical context. Our township's trail system connects to the Village. Information plates appear on the buildings. Once a biker leaves the Village, kiosks line the trail to describe the natural features.

There is an historical marker that commemorates Chief Okemos in our downtown Okemos area. Our sidewalk system runs by it and there is a public park with benches where bikers can stop and rest.

B22b. Optional File Upload:

No File Uploaded

B23. Are there any signalized intersections in your community?

Yes

B23a. Which of the following accommodations are available at signalized intersections to improve conditions for bicyclists?

Push-buttons that are accessible from the road or trail/side path, Timed signals, Refuge islands

B24. Has your community taken any of the following actions to make bicycle infrastructure more inclusive and accessible to cyclists of all ages and abilities, including people with physical or cognitive disabilities?

None of the above

B25. Which of the following mechanisms are in place for bicyclists to identify problem areas or hazards to the appropriate department (public works, transportation, etc.)?

Contact staff directly via call/voicemail/email/text

B26. Does your community have any of the following policies, standards, or mechanisms to ensure the ongoing maintenance of bike facilities?

Established funding or or capital budget line item for routine maintenance of bike facilities, such as repainting bike lanes, Other, None of the above

B26d. If other, please describe what policies, standards or mechanism are currently in place to support the ongoing maintenance of bicycle facilities.

The Township and county both have dedicated trail millages.

B27. Does your community have a rail transit, bus, or other public transportation system?

Yes

B27a. Which of the following types of public transportation are offered in your community?

Public buses

What percentage of your community's public buses are equipped with bike racks?

75-99%

Are bikes allowed inside public buses?

None of the above

What percentage of bus stops are equipped with secure and convenient bike parking?

10% or less

B27b. Has your community made specific bicycle infrastructure investments around major transit stops or stations to improve multi-modal mobility options?

Yes

B27b1. Please describe any bicycle infrastructure investments around major transit stops that have improved multi-modal mobility options.

Transit in the Township are under the jurisdiction of the Capital Area Transit Authority (CATA). As bus stops have been updated, improvements have been made for bikes.

B27c. How are residents and visitors encouraged to combine cycling and public transportation?

None of the above

Exclude any private bike sharing systems that are limited to employees of a certain business or students of a certain university.

B28. Does your community currently have a community-wide bike sharing program that is open to the general public?

No

Bike share programs are becoming popular and can contribute to making it possible for more people to choose to bike more often. In many communities bike share programs are large investments and it is important that they are sustainable in order to provide a dependable system for people in the community. While bike share programs are important and encouraged, having one is not essential to receiving a Bicycle Friendly Community award, particularly for smaller communities or non-urban communities.

B29. Which of the following permanent recreational or educational bicycling facilities are available within your community boundaries?

Gravel riding park, Pump tracks, Signed loop route(s) around the community

B30. Please list all communities or jurisdictions that directly border your community, and their current BFC status.

East Lansing - Bronze Level; Lansing - Bronze Level; Michigan State University - Gold Level; Bath Charter Township, Williamston Township, Alaiedon Township - No BFC Status

B31. How, if at all, is your community coordinating with neighboring communities and other local jurisdictions (neighboring cities or towns, and/or the surrounding county or MPO/RPO) to ensure that people traveling by bike between jurisdictions will find a connected, cohesive network?

On the northern end of our township, our Pathway Master Plan shows that we are connecting a trail on Saginaw Highway (M-78) with a trail constructed in Bath Township north of us. The trail is a shared use path and is proposed to be filled in when development occurs on Saginaw Highway. The gap between existing segments is 2,457 feet.

B32. Has your community partnered with any neighboring jurisdictions or other local communities in support of legislative policies at the state, county, or regional level?

No

B33. Describe any other policies, amenities, infrastructure improvements or maintenance programs that your community provides or requires that create a comfortable and attractive bicycling environment for bicyclists of all ages and abilities.

1. Our township requires bicycle parking for any new building. The ordinance applies to all land uses except for one- or two-family residential homes. One bicycle space is required for every 10 auto parking spaces, with a minimum of 2 and a maximum of 50 bicycle spaces. See supplemental materials for the full ordinance.

2. Meridian Township has three Planned Unit Development (PUD) ordinances. Sec. 86-439 addresses residential developments. Sec. 86-444 applies to commercial developments. Sec. 86-440 regulates mixed uses and was updated this year. We have two developments under the Mixed Use PUD (MUPUD) ordinance that are being reviewed right now, and two more under development. Once these are completed, several new bike parking facilities will be built, including an upgraded trailhead on the Interurban Trail.

Page: Education

C1. Do any public or private elementary schools offer regular bicycle education to students?

Yes

C1a. What percentage of your public and private elementary schools offer bicycle education?

1-25%

C1b. What kinds of bike education/curriculum is offered in elementary schools? Check all that apply.

Learn to ride, Bike handling skills

C1c. Are there any on-bike learning opportunities for students at these elementary schools?

Yes

C1c1. What type of on-bike cycling education is offered?

Optional on-bike education

C1c2. Approximately how many elementary school students receive on-bike education annually?

20

C1c3. Are bicycles provided to elementary school students by the school district, municipality, non-profit or other entity to allow every student the opportunity to participate in on-bike instruction?

Yes, a limited number of bicycles are available for students in need

C1c3a. If yes, does the fleet include adaptive bikes for elementary school students with disabilities?

No

C1d. What actions, if any, have been taken to ensure this bike education is open, equitable, and accessible to all elementary school students?

Chippewa Middle School and Kinawa Elementary schools in the Okemos school district received an Outride grant during the pandemic. Okemos Schools are starting the program in Kinawa Elementary and hope to expand it to Chippewa Middle.

C2. Do any public or private middle schools offer regular bicycle education to students?

Yes

C2a. What percentage of your public and private middle schools offer bicycle education?

1-25%

C2b. What kinds of bike education/curriculum is offered in middle schools? Check all that apply.

Learn to ride, Bike handling skills

C2c. Are there any on-bike learning opportunities for students at these middle schools?

Yes

C2c1. What type of on-bike cycling education is offered?

Optional on-bike education

C2c2. Approximately how many middle school students receive on-bike education annually?

20

C2c3. Are bicycles provided to middle school students by the school district, municipality, non-profit or other entity to allow every student the opportunity to participate in on-bike instruction?

Yes, a limited number of bicycles are available for students in need

C2c3a. Does the fleet include adaptive bikes for middle school students with physical or cognitive disabilities?

No

C2d. What actions, if any, have been taken to ensure this bike education is open, equitable, and accessible to all middle school students?

Chippewa Middle School and Kinawa Elementary schools in the Okemos school district received an Outride grant during the pandemic.

C3. Do any public or private high schools offer regular bicycle education to students?

No

Offering bicycle education to students is extremely important to receiving a Bicycle Friendly Community award. If your community does not currently offer bicycle education opportunities to at least some students other portions of your application will need to be exceptional in order to receive an award. In order to receive higher award levels it is expected that bicycle education is available to some students at all education levels.

C4. Outside of schools, how are children and youth taught safe cycling skills? Check all that apply.

None of the above

C4a. Please estimate how many total children and youth are reached annually in your community through these out-of-school efforts?

30

C5. Are bicycle safety or riding skills-related classes or hands-on instruction offered to adults in your community?

No

Offering bicycle education to adults is extremely important to receiving a Bicycle Friendly Community award. If your community does not currently offer bicycle education opportunities to at least some adults other portions of your application will need to be exceptional in order to receive an award. In order to receive higher award levels it is expected that bicycle education is available to adults in a variety of formats.

C6. Which of the following communications methods are used to share bicycle information with adults in your community, at least annually?

Community maps (print or digital)

C7. Which of the following information is shared using the methods checked above? Check all that apply.

None of the above

C8. In what ways are motorists in your community educated on sharing the road safely with bicyclists, at least annually?

None of the above

C9. Which of the following groups of professional drivers in your community routinely receive Bicycle Friendly Driver training or similar?

None of the above

C10. Are any of the following educational materials provided to community residents and/or businesses?

None of the above

C11. How many League Cycling Instructors (LCIs) are active (have taught a class in the last year) in your community?

0

C12. When was the last time your community hosted a LCI seminar to bring on new instructors?

Never

C13. Are there any professional development opportunities, requirements, or incentives, for city agency staff to pursue bicycling safety education?

None of the above

C14. Do any of the above educational classes, resources, or programs for adults specifically focus on reaching any of the following historically-underrepresented groups?

People of Color, None of the above

C14b. Please provide an example or describe how educational efforts have focused on reaching people of color.

Okemos School District received a Riding for Focus grant from Outride, a non-profit organization. According to their website, Outride is a 501c3 non-profit and anti-racist organization.

C15. Is any demographic or socioeconomic data collected about the participants/students and/or instructors/providers of any of the above learning opportunities offered in the community?

No

C16. What, if any, efforts has your community made to increase the diversity and representation of LCIs or other credentialed bike safety instructors in your community in the last 5 years?

C17. Do any of your community's LCIs or other bike safety instructors have any of the following additional trainings or certifications?

None of the above

C18. How else is the community working to make bike education more equitable, accessible, and inclusive to all members of the community?

None of the above

C19. Describe any other education efforts in your community that promote safe cycling.

There are two school districts in our Township. As noted, the Okemos School District received an Outride grant for Chippewa Middle and Kinawa Elementary. The other district is the Haslett School District. We have received confirmation from Haslett Schools that they do not have any bicycle education classes, but they do have student who ride their bikes back and forth and they do speak to the student about bike safety and the importance of wearing helmets.

Page: Encouragement

D1. Which of the following community-wide bicycle encouragement programs or policies exist in your community?

Other

D1b. If other, please describe.

The Township has a program where employees can check out bicycles and helmets for overnight or weekend trips. The bikes are displayed in the front bike rack and the service is free. The bike-sharing program is listed as a strategy in the Township's Climate Sustainability Plan (Page 12-13).

D1c. If applicable, please provide a link to other program or policy.

D2. What other groups actively promote bicycling in the community? Check all that apply.

Downtown Business Association/Business District, Other civic associations (e.g. Rotary, Lion's Club, etc.), None of the above

D3. Does your community actively promote the League of American Bicyclists' Bicycle Friendly Business (BFB) or Bicycle Friendly University (BFU) programs in your community?

No

The Bicycle Friendly Business (<https://bikeleague.org/business>) and Bicycle Friendly University (<https://bikeleague.org/university>) programs can be great tools to increase ridership in your community. Learn more and find resources to help you promote these programs at bikeleague.org/bfa/toolkit (<https://bikeleague.org/bfa/toolkit>).

D4. What up-to-date mapping and route-finding information is available for your community? Check all that apply.

Printed/digital bicycle network map , Printed/digital greenways and trails map

D5. How is bicycling typically promoted in your community at least annually or regularly throughout the year?

Bike to Work Day(s), Bike commuter events

D6. How does the municipality sponsor or actively support bicycle events in the community? Check all that apply.

Organize event(s)

D7. Do any of the above events or encouragement efforts specifically focus on reaching any of the following historically-underrepresented groups?

None of the above

D8. How else is the community working to make bike encouragement efforts more equitable, accessible, and inclusive to all members of the community?

None of the above

D9. Are there any organized social or recreational cycling clubs or groups for adults in your community?

Yes

D9a. Please provide details for each cycling club, group, or team that is active in your community.

Social or Recreational Clubs or Groups

Tri-County Bicycle Association

<https://www.biketcba.org/>

Type: Recreational bike club, Mountain bike club, Slow ride group, Touring or bike travel group or club, Bike advocacy or activist group

Contact:

Patrick

Kelley

president@biketcba.org

Friends of Lansing Regional Trails

<https://www.lansingtrails.org/>

Type: Other Membership-based non-profit that encourages and supports maintenance, repair, and expansion of the Lansing area trail system. Not specific to bikes, but bikes are part of the trail community.

Contact:

info@lansingtrails.org

D9b. Is there anything else you would like to share about the social or recreational cycling clubs or groups that are active in your community?

Every year, the Okemos Masonic Lodge hosts a Bikes for Books program. Students in grades 3 through 6 in both Okemos and Haslett school districts are able to participate. Last year, seven elementary schools participated and 31 bikes and helmets were awarded. For more information, we've attached a newsletter from Haslett Schools (Ralya Newsletter 2021_1-28-22) that describes the program.

D10. Does your community have any of the following youth programs centered on encouraging cycling for children and youth?

Safe Routes to School program

D11. What public or private programs are in place to provide youth and/or adult bicyclists with necessary equipment and accessories?

Bike light giveaways or subsidy program

D12. What programs or services does your community use to reduce the risk of bicycle theft, beyond providing secure bike parking?

None of the above

D13. What is the ratio of for-profit specialty bicycle retailers (shops dedicated primarily to selling bikes and bike-related equipment) to population within your community's boundaries?

1 shop for every 15,001-30,000 residents

D14. Is there at least one bike co-op or non-profit community bike shop within the community's boundaries?

No

D15. Has the community taken any steps to reduce vehicle miles traveled or to encourage biking among its own employees conducting work-related trips?

Public or departmental bike share available for employees free-of-charge for work-related trips, There are dedicated on-bike service/response units (e.g. EMT, police, fire, maintenance, etc.)

D16. Describe any other events, programs or policies your community has to encourage and promote bicycling.

In regards to D6, the Meridian Green Team hosts bicycle recycling events a couple times a year in conjunction with MSU Bikes. The latest was held on July 23, 2022 (<https://www.meridian.mi.us/Home/Components/Calendar/Event/10137/1301?npage=2>). Old bikes, bike parts, and other bike related items are accepted at these events and volunteers are on hand to answer bike maintenance questions. The event is held in conjunction with the weekly farmer's market, held at Marketplace on the Green, and is easily bike accessible.

Page: Evaluation & Planning

E1. Is there a paid bike program manager position or similar primary point of contact for bicycling issues at your local government?

No primary bike program manager, but bike responsibilities are in multiple employees' job descriptions

E2. Is there a Safe Routes to School Coordinator position?

Yes, there are one or more part-time, paid position(s) (can include a FT employee with SRTS as partial responsibility)

E3. How many paid government employees (including the Bicycle Program Manager and the Safe Routes to Schools Coordinator), expressed in full-time equivalents (FTE), work on bicycle issues in your community?

3.1

Please download the FTE worksheet by clicking here (https://bit.ly/BFC_E3_FALL22) to find guidance on what roles to include, how to calculate the estimates for each role, and how to tally your total FTE estimate. When you are finished, please save your worksheet with the naming convention "BFC_Fall 2022_E3 FTE Worksheet_ YOUR COMMUNITY NAME.xlsx" and upload the worksheet below. If you have any questions, please contact bfa@bikeleague.org.

E3a. Please upload your completed FTE worksheet here:

Download File (https://vo-general.s3.amazonaws.com/3096d3c2-dad9-4951-9567-9fa52068cd98/8ad6ff2b-318d-4572-a1a8-584620659e69?AWSAccessKeyId=AKIAJ4PRWO26HAX3IOCA&Expires=1749498626&response-content-disposition=inline%3B%20filename%3D%22BFC_Fall%202022_E3%20FTE%20Worksheet_Meridian%20Township.xlsx%22&response-content-type=application%2Fvnd.openxmlformats-officedocument.spreadsheetml.sheet&Signature=0Lr3Ou%2BGgaQ4gWtOuHpL%2BspjNuc%3D)

E4. Does your local government provide or cover the cost of any of the following professional development opportunities for employees who have bicycle-related responsibilities?

Gender/LGBTQIA+ Equity or cultural competency training

E4b2. Please list or describe the Gender/LGBTQIA+ Equity or cultural competency training(s) received, and how it has informed bicycling efforts in the community, if at all.

As a member of LGBTQ in Planning, a division from the American Planning Association, I am allowed to attend webinars. Although they aren't directly related to bicycling, I will say that we discuss the erasing of spaces and making inclusive spaces. This relates to bicycling because frequently, members of the LGBTQ community are underpaid and frequent bike riders. However, as historic LBGTQ spaces are lost, members of the community are forced to move further away from city centers and less likely to be able to bike.

E5. Does your community have an officially-recognized Bicycle Advisory Committee?

Yes

E5a. How often does the committee meet?

Every two months

E5b. First Name:

Steven

E5b. Last Name:

Vagnozzi

E5b. Email:

svagnozzi@comcast.net

E5c. Which of the following groups are represented on the Bicycle Advisory Committee?

Local bike advocacy organization or citizen advocate(s), Planning Department, Law Enforcement

E5d. Please describe what, if any, efforts the community has made to ensure that your Bicycle Advisory Committee is inclusive and representative of the full range of cyclists in your community?

Openings on the Commission are made available to the entire community when they open up. They are advertised on our township's website.

E6. What tools or systems are in place to inform, consult, involve, collaborate, and/or empower citizens in your community to be engaged in the bicycle planning process?

None of the above

E7. How does your community actively seek public input and engage local residents throughout the ongoing planning process for bicycle infrastructure improvements?

Public Meetings , On-site user surveys , Online surveys

E8. How have these engagement opportunities been made more accessible and inclusive to increase the diversity and representation of opinions and perspectives heard?

Public meetings are offered both virtually and in-person, Public meetings are recorded and made available on the community's website, Sign language interpreters and/or captioning is/are made available upon request

E9. Does your community have a comprehensive bicycle master plan or similar section in another document?

No

Communities choose to plan for improvements in a variety of ways. To create better conditions for bicycling those plans should involve plans to improve bicycling. Often this is done through a comprehensive bicycle master plan, but we recognize that some communities choose to integrate bicycle-related planning into other plans. Please answer this question affirmatively if your community has a planning document that incorporates improvements for bicycling. If your community has not yet begun planning to improve bicycling then we hope that this application is useful to you so that you can learn about the variety of ways to improve conditions for bicyclists. However, it is difficult to receive a Bicycle Friendly Community award without a current plan to improve conditions for people who bike.

E9a. How does your community currently make decisions around bike infrastructure (e.g. where and what to build, how to prioritize projects, etc.)?

1. We have a Pathway Master Plan that consists of a map. That guides the development of pathways in the township and is enforced when new developments are built.
2. Meridian Township has recently adopted the 2022-2026 Parks and Recreation Master Plan. Township trails and pathways are inventoried in that document.
3. Pedestrian/Bicycle Pathways is its own section in the 2017 Meridian Township Master Plan and Goal 6, Objective D is to "Expand and improve the Pedestrian/Bicycle Pathway Plan". This is then followed by six strategies. This will get reevaluated and updated in our upcoming Master Plan update.

E9b. What are the top 1-3 challenges or barriers keeping your community from developing a dedicated bike plan, and what resources or guidance could make it more feasible for your community to develop one in the future?

1. Lack of staff to be able to dedicate time to a single large project.

E10. Does your community pass a budget on a regular basis? (e.g. annual capital budget, operating budget, etc.)

Yes

E10a. If yes, please provide a brief description and link(s) to the most recent budget(s) passed.

The General Fund is the mechanism to pay for core essential services such as police, fire, tax collection, assessing, elections, cemeteries, parks and recreation. In 2013, the Township Board directed the administration to maintain a \$5,250,000 general fund balance.

The Township Board approves the Township budget on an annual basis.

<https://www.meridian.mi.us/about-us/departments/finance-accounting/township-budget>

E10b. Please upload the most recent transportation budget for your community.

Download File (<https://vo-general.s3.amazonaws.com/3096d3c2-dad9-4951-9567-9fa52068cd98/0e2ffba8-4746-4737-b94c-e5998cd53911?AWSAccessKeyId=AKIAJ4PRWO26HAX3IOCA&Expires=1749498626&response-content-disposition=inline%3B%20filename%3D%22Ped%20and%20Bike%20Path%20Budget.pdf%22&response-content-type=application%2Fpdf&Signature=yp%2B867kfZE79AYGFcuqkUQZEkcE%3D>)

E10c. On average, over the last 5 years, what percentage of your community's total annual transportation budget was invested in bicycle projects?

14%

E10d. Optional: Please tell us how you calculated this answer or what you included in the calculation?

I divided the pathway/trail line item by the total expenditure number.

E11. Is bicycle-related funding consistently specifically allocated to historically underinvested or underrepresented areas of your community?

No

E12. Has your community conducted any kind of connectivity analysis for the bicycle network?

No

E13. Does your community have a performance measurement program for biking or active transportation infrastructure?

No

E14. How does your community collect information on bicycle usage? Check all that apply.

None of the above

Additional files may be uploaded at the end of the application.

E14a. Utilitarian ridership data collected locally (e.g. bicycle trips for commuting, running errands, transportation, etc.)

No File Uploaded

E14b. Recreational ridership data collected locally (e.g. rides solely for exercise or fun.)

No File Uploaded

E14c. Demographic ridership data collected locally (e.g. rider age, race, gender, etc.)

No File Uploaded

E14d. School ridership data collected locally (e.g. rides by or with K-12 or younger children – either riding on their own or being carried in a child seat, trailer, etc.)

No File Uploaded

E14e. Other ridership data (e.g. any other bicycle ridership data collected locally that doesn't fall under the above categories.)

No File Uploaded

E15. What is your best estimate for your community's current bicycle mode share?

unknown

E16. Does your community establish target goals for bicycle use? (e.g. a certain level of bicycle mode share)

No

E17. Does your community collect and track bicyclist crash data?

Yes

E17a. On average over the past five calendar years, how many bicyclists have been in a crash involving a motor vehicle annually?

0.2

E18. Does your community collect and track bicyclist "near misses"?

No

E19. On average over the past five calendar years, how many bicyclists have died due to a crash involving a motor vehicle annually?

0

E20. Has your community conducted any kind of analysis to identify High Injury Networks or to prioritize infrastructure investments based on bicycle crash data?

No

E21. Has the community set a goal or established a policy or plan to eliminate traffic fatalities within the next 20 years or less?

No

E22. Are there any local or statewide traffic ordinances or laws in place designed to improve bicyclists' safety in your community?

It is illegal to park or drive in a bike lane (intersections excepted), Ban on cell phone use while driving , Ban on texting while driving, Safe passing distance law

E23. Do any of the following local ordinances or enforcement practices exist in your community that place restrictions on cyclists or criminalize cycling?

None of the above

E24. Please describe any efforts in place to evaluate how equitably and effectively any of the laws, ordinances, or enforcement practices describe above are currently applied in the community.

E25. Have there been any efforts in the last 5 years to repeal or amend any local laws, ordinances, or enforcement practices that place(d) restrictions on cyclists or criminalize(d) any aspect of cycling or walking in your community?

No

E26. What kind of data is currently collected around traffic law enforcement stops, citations and/or arrests in your community?

Officials are required to report all traffic enforcement stops made of motor vehicle drivers

E27. How is the data described above shared or made available to increase transparency and accountability around traffic law enforcement stops, citations, and arrests?

Data summaries, analysis, or reports are published and made available to the public on a regular basis

E28. What, if any, policies or practices does your community have in place to measure and eliminate racial bias in traffic law enforcement, including in-person and automated enforcement practices?

E29. Besides the Bicycle Friendly Community program, what other national programs does your community participate in to improve bicycling?

Other

E29a. If other, please describe.

Redevelopment Ready Community

E30. Describe any other efforts by your community to evaluate and/or plan for bicycle improvements that have not already been covered.

It is anticipated that non-motorized planning will be included in our Master Plan update that officially launched in August 2022. Our Master Plan update will include bicycle planning and bike route evaluations.

Regarding E13 - Our complete streets ordinance says that the Township shall collect data to measure categories of users at each revision period of the Pathway Plan. That analysis should occur during our next Master Plan update, which will launch later in 2022.

Page: Equity & Accessibility

The League defines (<https://bikeleague.org/content/equity-initiative>) "**Equity**" as the just and fair inclusion into a society in which everyone can participate and prosper. The goals of equity must be to create conditions that allow all to reach their full potential, by erasing disparities in race, income, ability, geography, age, gender and sexual orientation.

The principle of equity acknowledges that there are historically underserved and underrepresented populations, and that fairness regarding these unbalanced conditions is needed to assist equality in the provision of effective opportunities to all groups.

"**Accessibility**" refers to improving and increasing access and mobility options for everyone, including, and in particular, for people with disabilities. The League recognizes that not every disability is visible to others, and that not every person with a permanent or temporary mobility or accessibility need identifies as 'disabled'. Whether from a cognitive, sensory, or physical disability, or from age, temporary illness, or injury, there are people in every community who face a range of mobility challenges for whom a bike or cycle may open a world of possibilities to increase accessibility (<https://rootedinrights.org/video/disabled-bikers/>).

We firmly believe that *Equity & Accessibility* are the essential lenses through which all other BFC work must be viewed in order to achieve a Bicycle Friendly America for everyone.

As such, you will find questions and answer options related to improving equity & accessibility throughout the BFC application in each previous "E" section, in addition to this new dedicated "Equity & Accessibility" section.

These Equity & Accessibility updates have been developed thanks to the input and participation of hundreds of communities and local advocates with a wide range of lived experiences and areas of expertise, to whom we are very grateful.

The League presents this new section with the recognition that our work to listen, learn, and engage on the topics of Equity & Accessibility in the BFC program is not yet finished, and never will be. Equity is an ongoing practice and the League will continue to engage with partners, local advocates, and communities in the BFC program to incorporate new ideas, reflect new challenges, and continue to grow and learn. If you have questions, comments, or feedback about the updated BFC application, please email us at bfa@bikeleague.org.

Thank you for continuing to learn and engage in this work along with us.

-Amelia Neptune, Bicycle Friendly America program director
June 2022

F1. Does your local government have an internal Diversity, Equity, and Inclusion (DEI) or similar initiative, department, or position?

No

F2. Does your community have an officially-recognized DEI or Transportation Equity Committee or similar equity-related advisory committee or working group focused on equity or mobility justice issues?

No

F3. Does your local government have a dedicated Disability Services Department, Office of Disability Rights, or similar department(s) or role(s) dedicated to supporting and advocating for residents with disabilities?

No

If your local governmental agency has 50 or more employees (full-time, part-time, or seasonal), it is required by federal law to have a designated ADA coordinator.

While your community may not have a Disability Services or Disability Rights office or department, the ADA coordinator may be someone to connect with during the bike planning process.

If your agency is that large or larger, who is the ADA coordinator?

Abby Tithof, Human Resources Director

F4. What types of partnerships has the community established to reach new audiences and increase representation and inclusion in your education, encouragement, outreach and/or engagement processes?

Local independent bike shop, School District and/or public or private K-12 schools, Parks and recreation agency or similar

F4a. For EACH category checked in F4, please list the partner group(s) and briefly describe or summarize the activity or partnership involving that group.

1. Denny's Central Park Bicycles - Participation at 2022 Green Fair held at the Marketplace on the Green
2. Meridian Township Parks & Recreation - Trail maintenance, Farmers Market organization
3. Okemos School District - Consultation with the school and assistance with their Safe Route 2 Schools projects

F5. Does your community collect or track any other bicycle-related data with socioeconomic and/or demographic details that hasn't already been mentioned elsewhere on this application?

No

F6. Has your community established any specific and measurable equity-related goals or performance measures that relate to bicycling?

No

F7. Has your community conducted any equity-centered analysis (e.g., social vulnerability assessment, equity matrix, index, or similar effort) as part of a community Bicycle Master Plan, Vision Zero Action Plan, Safe Routes to School Plan, ADA Transition Plan, or other similar planning effort or document?

No

F8. Does your community regularly incorporate any of the following socioeconomic or demographic variables into any planning or decision-making processes for the development or prioritization of bike infrastructure projects?

None of the above

F8b. For any variable selected above in F8, please describe how the variable(s) have informed decision-making or prioritization around bicycle investments and project implementation. Please include any relevant links, if applicable, that could help us to better understand your methodology, and inspire other BFC applicants to learn from your community's process.

F9. Has your community adopted any of the following types of equity-related action plans?

Climate Equity Plan

F9e. Has the Climate Equity Plan or similar plan impacted or influenced bicycling planning efforts in your community?

Yes

F9e1. If yes, please describe.

Objective d.1 says to encourage employee and citizen participation in Smart Commute competitions and encourage Township employees and citizens to be smart commuters year round.

F9e2. Provide a link to the Climate Equity Plan or similar plan:

chrome-extension://efaidnbmnnnibpcajpcglclefindmkaj/https://www.meridian.mi.us/home/showpublisheddocument/11695/636542091195000000 (chrome-extension://efaidnbmnnnibpcajpcglclefindmkaj/https://www.meridian.mi.us/home/showpublisheddocument/11695/636542091195000000)

F10. Has the community developed any anti-displacement programs or strategies that relate to transportation investments?

None of the above

The following fields (F11 & F12) are optional but can earn additional points toward a community's Equity & Accessibility score. Communities are encouraged to use these spaces to describe any efforts that have not already been covered on the application, and/or to provide additional details, links, or information about a corresponding checkbox elsewhere on the application.

F11. Are there any other innovative strategies, programs, facilities, or initiatives in place to specifically support cyclists with any vision, hearing, mobility, and/or cognitive needs in your community, that have not already been covered on your BFC application?

F12. Are there any other innovative strategies programs, facilities or initiatives in place to make cycling more equitable and inclusive for any historically underrepresented or marginalized groups or individuals in your community, including women, people of color, non-English speakers, people with disabilities, non-drivers, young children, and/or seniors?

Page: Final Overview

G1. What are the top three reasons your community has made bicycling a priority?

Improved quality of life, Improving public health, Climate change/environmental stewardship concerns

G2. Briefly describe the most positive outcome of your community's support for bicycling.

Our Township's support for bicycling has led several people to take advantage of the alternate mode of transportation. This has had the effect of lowering the amount of automobile traffic on our roads and led to an active community of bicyclists.

G3. How is the local government specifically educating the community about how the benefits of biking align with the broader goals of the community?

G4. What are your community's greatest achievements in the last 12 months in the work to become more bicycle-friendly?

Our Transportation Commission advocated for a pathway to remain open during a large 18-month road project being undertaken by our state's DOT. The state pushed back, but the Transportation Commission continued advocating. The DOT relented and erected a mile long wall out of moveable barricades and kept the pathway open.

G5. What could be done differently in order to make bicycling safer, more enjoyable and/or more convenient in your community?

G6. What are the greatest challenges or barriers your community faces in taking action toward the efforts described in your response to G5?

G7. What specific bicycle-related improvements are planned in the next 12 months that directly affect your community?

1. Signaled crosswalks are being installed on the MDOT Grand River project.
2. The Okemos Road bridge over the Red Cedar River is being reconstructed with separated non-motorized walkways.
3. The MSU to Lake Lansing Trail Phase I and II is scheduled to be complete by the end of 2022. This is shown on the attached Pathway Master Plan map.

G8. Optional: What other communities do you look to as peers or comparable role models for your community?

East Lansing, Michigan; Lansing, Michigan; Michigan State University

G9. We often get requests for example BFC applications from aspiring communities. Are you willing to share your application?

Yes

G10. How did you hear about the Bicycle Friendly Community program?

We have several active bicyclists on our township's Transportation Commission that brought this to our Staff's attention.

Page: Supplementary Materials

Optional: If you would like to share any supplemental materials to support your application, please upload your files here.

The League wants to showcase the places, organizations, and individuals working to build a Bicycle Friendly America for everyone. By sharing photos of your bicycling programs, community outreach efforts, or people biking in your community, you'll help us highlight your community's commitment to making bicycling better.

By submitting photos here, you are granting the League of American Bicyclists the right to use your images to promote bicycling.

File 1

Bike maintenance facility at a trailhead on the Township campus

Download File (<https://vo-general.s3.amazonaws.com/3096d3c2-dad9-4951-9567-9fa52068cd98/5fda690f-c295-4954-86ee-b1956c337616?AWSAccessKeyId=AKIAJ4PRWO26HAX3IOCA&Expires=1749498626&response-content-disposition=inline%3B%20filename%3D%22Twp%20Bike%20Maintenance%20Facility.jpg%22&response-content-type=image%2Fjpeg&Signature=975%2Fct4zsVHwkfnkoruIfjQfzKI%3D>)

File 2

Haslett school newsletter, Bikes for Books is discussed on page 2

Download File (https://vo-general.s3.amazonaws.com/3096d3c2-dad9-4951-9567-9fa52068cd98/46dc5af3-d4ad-4a57-bc5d-e6afaca16c3b?AWSAccessKeyId=AKIAJ4PRWO26HAX3IOCA&Expires=1749498626&response-content-disposition=inline%3B%20filename%3D%22Ralya_Newsletter_2021_-1-28-22.pdf%22&response-content-type=application%2Fpdf&Signature=s4N0b9HHFqCXG79ipSTjN3WHhM%3D)

File 3

Meridian Township's Bicycle Parking Ordinance

Download File (<https://vo-general.s3.amazonaws.com/3096d3c2-dad9-4951-9567-9fa52068cd98/41134110-b808-46a2-bb72-e9b5251e7354?AWSAccessKeyId=AKIAJ4PRWO26HAX3IOCA&Expires=1749498626&response-content-disposition=inline%3B%20filename%3D%22Sec%2086-760%20-%20Bicycle%20Parking.pdf%22&response-content-type=application%2Fpdf&Signature=WbIZAKo6O4wavjiqhv10BwGpXso%3D>)

File 4

Township Bike Lending Program information

Download File (<https://vo-general.s3.amazonaws.com/3096d3c2-dad9-4951-9567-9fa52068cd98/9a421c31-9be9-411d-b909-bc10e7375611?AWSAccessKeyId=AKIAJ4PRWO26HAX3IOCA&Expires=1749498626&response-content-disposition=inline%3B%20filename%3D%22Twp%20Bike%20Lending%20Program.pdf%22&response-content-type=application%2Fpdf&Signature=AUJ8XYmOLQ32BoZINRj2Fw9DZIk%3D>)

File 5

Meridian Township's Climate Sustainability Plan

Download File (<https://vo-general.s3.amazonaws.com/3096d3c2-dad9-4951-9567-9fa52068cd98/d3c5087f-6b88-49d7-8820-9b0b3044d521?AWSAccessKeyId=AKIAJ4PRWO26HAX3IOCA&Expires=1749498626&response-content-disposition=inline%3B%20filename%3D%22MeridianClimatePlan10-24-17.pdf%22&response-content-type=application%2Fpdf&Signature=oN0%2FQJZt33KFTpcmVJSw2SICZis%3D>)

alias4afa849251284f4dacf48dbbf86ca422

Upload additional files

File 6

Goad 6 from the 2017 Master Plan; Object D addresses our Pedestrian/Bicycle Pathway Plan

Download File (<https://vo-general.s3.amazonaws.com/3096d3c2-dad9-4951-9567-9fa52068cd98/09716a35-f781-4068-b26b-da8db9e23306?AWSAccessKeyId=AKIAJ4PRWO26HAX3IOCA&Expires=1749498626&response-content-disposition=inline%3B%20filename%3D%22Goal%206%20from%20Master%20Plan.pdf%22&response-content-type=application%2Fpdf&Signature=azjsug2R8tJ9irb7b%2BaZCIhR8s%3D>)

File 7

No File Uploaded

File 8

No File Uploaded

File 9

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File 10

No File Uploaded

Optional:**Page: Funding Resources**

This page is designed to help your community identify potential funding sources to help pay for bicycle infrastructure and programming needs in your community. The League is also interested in better understanding how familiar communities currently are with their funding opportunities, so that we can develop the resources and guidance needed to fill those knowledge gaps.

This page will be updated more frequently than the rest of the BFC application, as funding opportunities or grant periods open/close. We encourage you to use the links on this page to learn more (<https://bikeleague.org/content/federal-funding-resources>), and to use the final question below to describe any challenges, questions, or barriers that your community faces when it comes to funding for bicycling. Please contact bfa@bikeleague.org (mailto:bfa@bikeleague.org) with any questions.

Last updated 6/30/22.

H1. Is your community part of a Metropolitan Planning Organization (MPO) that serves an area with a population over 200,000?

Yes

H1a. Does your MPO designate funding for bicycling and walking in their long-range plan?

Yes

H1b. Does the MPO's Transportation Improvement Plan (TIP) include bicycling and walking projects?

Yes

H1b1. If yes, has your community advocated for getting priority bicycling projects into the TIP?

Yes

H2. States must prioritize projects that benefit high need communities. Is your community defined as a high need community by your state?

No

H3. States now have funding to provide technical assistance to Transportation Alternatives Program (TAP) applicants.**H3a. Has your community requested technical assistance from your state DOT to help with TAP projects?****H3b. Has your community received technical assistance from your state DOT to help with TAP projects?****H4. What sources of funding do you use to pay for bicycle infrastructure and programming in your community?**

Local Government Agency Funding, Corporate partnerships

What sources of Local Government Funding are used?

Other Local Agency Funding

If other Local Agency Funding source, please list.

Township general funds, Township non-motorized millage

H5. If there is anything else you would like to share with the BFC review team about your community's budget or other funding made available for bike infrastructure development, please describe here.



To: Meridian Township Transportation Commission

**From: Dan Opsommer, Assistant Township Manager
Director of Public Works and Engineering**

Date: September 22, 2022

Re: Update on the CN Railroad Quiet Zone from Okemos Rd to Green Rd

In 2017, implementation of Railroad Quiet Zones (RRQZ) throughout Meridian Township was formally included in the Board's annual goals. This idea originated from the Meridian Transportation Commission.

In response to this goal, the Department of Public Works first worked with Abonmarche, an engineering consulting firm, to prepare and provide an initial study on the feasibility of implementing RRQZ in Meridian Township. This study examined the both of the railroad lines that traverse the Township: the CN and CSX railroad lines. The Township then contracted two years later with OHM, a civil engineering firm, to further examine the previous report and determine next steps.

The biggest hurdle we had to clear was installation of the Positive Train Control (PTC), which is a technology capable of automatically controlling train speeds and movements, should a train operator fail to take appropriate action in the prevailing conditions. This technology is required for a RRQZ. Federal law required PTC to be installed on all Amtrak railroad lines by the end of 2021. Installation of PTC was completed last year on the CN railroad line in accordance with federal law. The CSX railroad line is not an Amtrak line, which is why PTC is not expected to be installed. This means that the CSX railroad line is not viable as a quiet zone as the cost to install PTC is far more than the Township could afford. Our estimate in 2019 was \$2.05 million to \$2.25 million for the PTC and constant warning time circuitry alone. This would cost \$3-\$4 million today. We are working with Rep. Elissa Slotkin's office to determine if there are any discussions at the federal level that could require PTC to be installed on a railroad like CSX. We are currently waiting for additional information from Rep. Slotkin's office.

At the October 12, 2021 Township Board meeting, former Deputy Township Manager Derek Perry presented the report generated by OHM. The report confirmed that the CN line was the only ideal line in Meridian Township to implement a RRQZ for the reasons outlined above. Mr. Perry also outlined that then-Trustee Opsommer was able to confirm through the Michigan Railroad Association and CN that the PTC technology has been installed on this segment of the CN railroad line. The segment of the CN railroad line in Meridian Township is approximately 5.9 miles and typically services 17 trains per day and one per night. Meridian Township has crossings on the CN railroad line located on Hagadorn Rd, Okemos Rd, Haslett Rd, Carlton St and Green Rd.

The report indicated that the next steps to take would be to meet with both the City of East Lansing and Michigan State University (MSU) to gauge their interest in including the crossings at

Memo to Transportation Commission

September 22, 2022

Re: Update on the CN Railroad Quiet Zone from Okemos Rd to Green Rd

both Bogue St and Hagadorn Rd. While Bogue St is not in Meridian Township, it would need to be included if Hagadorn Rd is included, as any crossings within a half mile of each other must be included. We have spoken to MSU and they are not supportive of implementing a RRQZ at the Bogue St crossing due to safety concerns. MSU is only supportive of RRQZ when there is a grade separation and they have no current plans to provide for a grade separation at this railroad crossing. A grade separation is when there is a bridge that moves pedestrians over the railroad tracks. This means we are unable to implement a RRQZ at the Hagadorn Rd crossing due to the half-mile requirement.

We also inquired with Williamstown Township to see if they would be interested in partnering with us for their crossing at Barry Rd, Shoeman Rd and Foster Rd just to the east of Meridian Township. The Williamstown Township Board discussed this last month and is also not interested in partnering with us.

At this point in time, we are work to implement the RRQZ at the Okemos Rd, Haslett Rd, Carlton St and Green Rd crossings in the Township. To achieve the RRQZ for these crossings, we must construct a curbed median or install a Qwick Kurb divider system, 100 feet north and south of the railroad gates at the Okemos Rd crossing. We've already assessed the feasibility of doing so and see no issues. OHM does not believe any other improvements are required to achieve the necessary safety points for a RRQZ on this section of the CN railroad line. Here are our current cost estimates for this improvement:

- Qwick Kurb: \$225,000-\$250,000.
- Raised Median: \$300,000-\$335,000.

These improvements are to prevent drivers from being able to go around the gates. Had we been able to include Hagadorn Rd and Bogue St in the RRQZ, we believe this improvement on Okemos Rd would not be necessary to achieve the safety points required for a RRQZ.

In addition to the median at the Okemos Rd crossing, we also plan to voluntarily install Z gates at the following crossings for pedestrian safety:

- Okemos Rd
- Haslett Rd
- Carlton Rd

There is no pedestrian crossing at Green Rd, so there is no need for Z gates there.

We will install Z gates on Carlton St when we construct the pathway on the west side of the road, which we are currently engineering and will then need to secure easements for.

We have retained OHM under contract again to help us work on the implementation of the quiet zone on the CN railroad line from Okemos Rd to Green Rd. The scope of their services with this contract will include two phases:

Memo to Transportation Commission

September 22, 2022

Re: Update on the CN Railroad Quiet Zone from Okemos Rd to Green Rd

Phase 1:

- Updating and analysis of potential crossing treatments with FRA Quiet Zone Calculator
- Organizing, facilitating and attending a Diagnostic Study Team Review (DSTR) with MDOT, CNRR, Meridian Township, Ingham County Rd Department and other required/interested parties
- Evaluation of recommended crossing treatments based on FRA Quiet Zone Calculator and DSTR meeting
 - Review proposed SSMs for feasibility with field conditions and estimate costs
 - Review costs for railroad providing items (relocate gates, if needed)
 - Review Costs for railroad fees (permits, flagging and inspection, cable locate fees)
- Meeting with Meridian Township to review alternatives and estimated costs
- Preparing the Notice of Intent – 60-day comment period

Phase 2:

- Design of crossing improvements, required signage, etc.
- Draft and negotiate agreement with CN RR for construction of RR improvements, if any
- Prepare bid package for improvements, bid/award recommendation
- Construction administration and inspection
- Prepare the Notice of Establishment

The schedule of this project will depend on the response time from CN Railroad, MDOT and the Ingham County Road Department, but OHM is anticipating Phase 1 to be approximately 6 months in duration. Phase 2 will be put into motion after Phase 1 determines the recommended improvement and staffing capabilities.

The services listed for Phase 1 will be performed for \$12,500, invoiced monthly to Meridian Township.

We have included funding in the 2023 budget for the Z gates on Okemos Rd, Haslett Rd and construction of the Carlton Rd pathway and Z gates (if we're able to build the Carlton pathway next year, it's still being engineered and easements will be required).

Attachments:

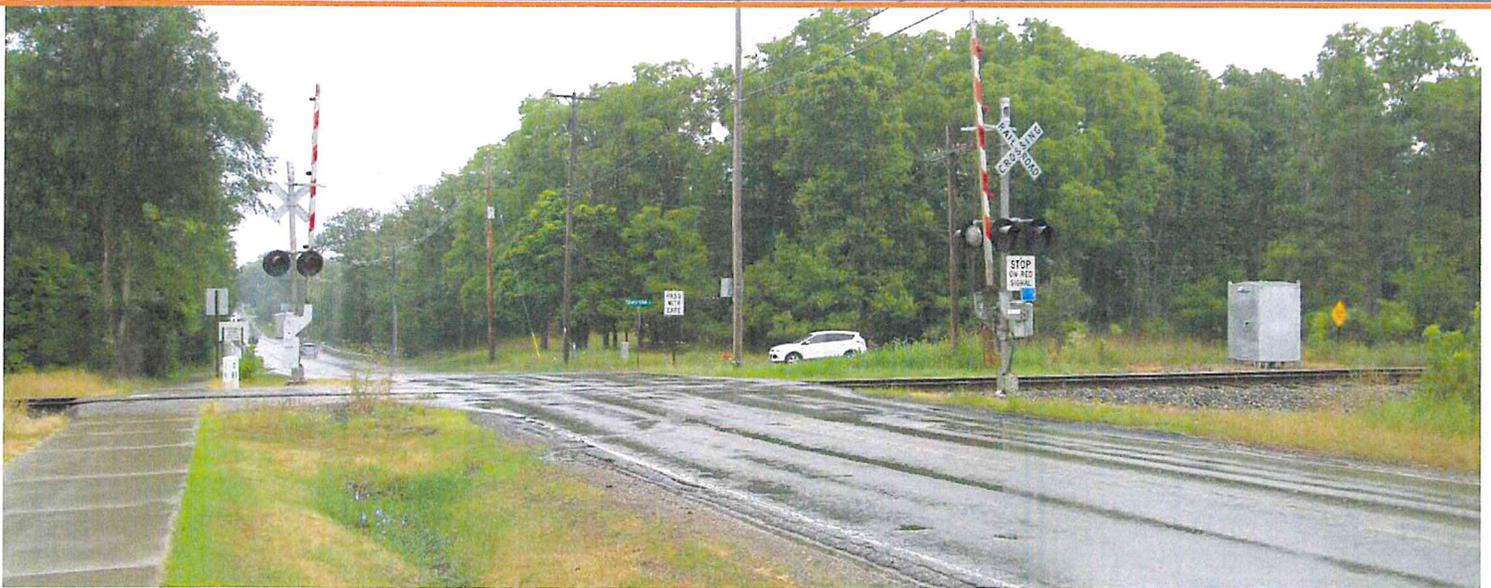
1. OHM Meridian Township Review of Preliminary Study: Railroad Quiet Zones
2. OHM Contract
3. 2022 Meridian Township Railroad Quiet Zone Map

MERIDIAN TOWNSHIP

REVIEW OF PRELIMINARY STUDY: RAILROAD QUIET ZONES



JANUARY 2019





The purpose of OHM Advisor's (OHM) review of the **Preliminary Study: Railroad Quiet Zones**, prepared by Abonmarche for Meridian Township, is to confirm the findings and recommendations contained therein, provide input on anticipated safety measures and associated installation costs, and to assist in determining the next steps for implementation of the two potential quiet zones. OHM was recommended to Meridian Township by the City of Battle Creek based on our work on their quiet zone project that was implemented in 2017. OHM's report offers comments, corrections, and supplemental information to the Preliminary Study. The objective is to provide an understanding of quiet zones and what is required for their implementation, approval, and continued acceptance. It is our intention that both technical and non-technical persons will benefit from the information presented in this report.

Summary of Findings and Recommendations

The main factor in determining the feasibility of implementing a quiet zone is the reduction of risk within the limits of the quiet zone. It is OHM's recommendation that the Quiet Zone Risk Index (QZRI) be reduced, by the installation of supplemental safety measures (SSMs), to below the Risk Index with Horns (RIWH). While it is permissible and will allow the implementation of a quiet zone to have the QZRI be below the Nationwide Significant Risk Threshold (NSRT), as presented in the Preliminary Study for CSX RR, OHM recommends sufficient safety measures be installed to reduce the Quiet Zone Risk Index to below the Risk Index with Horns. Doing this eliminates the need for an annual FRA review of the quiet zone and increases the likelihood of continued acceptance of the quiet zone.

In addition to our recommendation of lowering the QZRI to below the RIWH, our review of the Preliminary Study found that the calculated Risk Index with Horns (RIWH) for the **CSX Railroad** is lower than what is presented in the Preliminary Study (6,845.28 current vs. 10,949.98 study). This lower RIWH value ultimately results in our recommendation to install additional safety measures beyond what is recommended in the Preliminary Study.

While reviewing the Preliminary Study and preparing information for this report, OHM has discovered that positive train control and associated constant warning time circuitry are not planned for the CSX RR crossings, therefore to implement a quiet zone along the CSX RR the circuitry would need to be installed at the cost of the Township. Given the number of trains per day, the associated costs of installing the circuitry, and the necessity of installing gates at two crossings, it would be in the Township's and resident's best interest to evaluate the cost-benefit of a CSX RR quiet zone. The estimated cost to implement a quiet zone on the CSX RR from Mt Hope Road to Meridian Road ranges from approximately \$2.05 million to \$2.25 million, depending on options for the Ingham County Department of Roads to consider.

Regarding the CN RR, two quiet zone options were considered in the Preliminary Study, with one involving crossings within the campus of Michigan State University (at Bogue Street and Hagadorn Road). It is critical that early contact and communication begin with MSU to gauge their interest in the pursuit of a quiet zone involving these two crossings. Following the initial discussion(s) with MSU a request should be submitted by the Township to the Michigan Department of Transportation for a Diagnostic Study Team Review (DSTR) meeting of the CN RR crossings. Early communication in the process gives the opportunity to discuss the project with the stakeholders and incorporate request, comments, and/or suggestions before design plan production begins.

The estimated cost to implement a quiet zone on the CN RR varies greatly depending on the results of communication with MSU and the Ingham County Department of Roads. Should MSU and Ingham County



Department of Roads be in agreement with the pursuit of a quiet zone and concur that minimal work needs to be done to implement a quiet zone, the estimated cost is approximately \$20,000. This option considers a quiet zone from Bogue Street to Green Road. If the Hagadorn and Boque crossings are not included a shorter quiet zone from Okemos Road to Green Road would need to be considered, at an estimated cost of \$150,000 to \$200,000. The variable estimate accounts for options for the Ingham County Department of Roads to consider. OHM has discovered that positive train control and associated constant warning time circuitry are planned to be installed for the CN RR crossings by 2021, The pursuit of a quiet zone along the CN RR seems reasonable given the relatively low potential costs and likelihood of an improved quality of life for those that live near or within the influence of the train horns.

Preliminary Study Review – Results and Discussion Details

The specific areas shown with bold headers throughout this document identify particular items reviewed along with supplemental information for each item. Boxed paragraphs throughout this document highlight discrepancies between our review and the Preliminary Study and provide supplemental information to the Preliminary Study.

Review of crossing inventories, assumptions, and evaluation of each railroad's potential quiet zone (including calculation of risk numbers)

The creation of a quiet zone is based upon the ability to reduce risk to the motoring public at public highway-rail grade crossings. The Federal Rule *49 CFR Parts 222 and 229 Use of Locomotive Horns at Highway-Rail Grade Crossings* is included as a separate appendix to this report. In general, there are three risk indices that are generated and compared.

One of the risk indexes is the **Nationwide Significant Risk Threshold (NSRT)**. This is a number reflecting a measure of risk, calculated on a nationwide basis, which reflects the average level of risk to the motoring public at public highway-rail grade crossings equipped with flashing lights and gates and at which locomotive horns are sounded. For purposes of the federal rule, a risk level above the Nationwide Significant Risk Threshold represents a significant risk with respect to loss of life or serious personal injury. *The NSRT value of 14,723.00 as shown in the Preliminary Study is consistent with the current value at the time of this review.*

Another risk index is the **Risk Index With Horns (RIWH)** which is a measure of risk to the motoring public when locomotive horns are routinely sounded at every public highway-rail grade crossing within a quiet zone. The third risk index is the **Quiet Zone Risk Index (QZRI)** which is a measure of risk to the motoring public which reflects the crossing corridor risk index for a quiet zone, after adjustment to account for increased risk due to lack of locomotive horn use at the crossings within the quiet zone (if horns are presently sounded at the crossings) and reduced risk due to implementation, if any, of **Supplemental Safety Measures (SSMs)** and **Alternative Safety Measures (ASMs)** within the quiet zone.

There are two categories of safety measures that can be installed; supplemental safety measures (SSMs) and alternative safety measures (ASMs). Supplemental safety measures consist of installation of a four-quadrant gate system, gates with medians or channelizing devices for a specific distance from the gate arm, or permanent closure of the roadway. Wayside horns may be included as part of a quiet zone; however, they cannot be used to calculate risk reduction. ASMs are safety measures that are similar to SSMs with the exception that there are circumstances which prevent them from being fully compliant with all of the requirements of SSMs (i.e.: length of median or channelizing devices).



OHM utilized the FRA's online quiet zone calculator to verify the risk indices presented in the Preliminary Study for each railroad; CSX and CN. The calculated Risk Index with Horn (RIWH) for the **CSX Railroad** is lower than what is presented in the Preliminary Study (6,845.28 current vs. 10,949.98 study). A number of factors (bulleted below) are considered in the calculation of the RIWH. A majority if not all of these factors have not changed since the report. Additionally, the calculated Quiet Zone Risk Index (QZRI) is lower than what is presented in the Preliminary Study (11,417.93 current vs. 18,864.56 study).

- AADT
- the trains per day
- the number of day through trains
- the total switching trains per day
- the number of main tracks
- the number of other tracks
- if the crossing is in an urban or rural location
- if the roadway is paved or not
- the maximum train speed
- the number of roadway lanes
- the number of years of crash data
- the number of crashes in crash data years

OHM presented these discrepancies to the FRA in an effort to identify the reasoning for the differences. FRA utilized an independent calculation and verified the results of the online quiet zone calculator. The current calculated values (not those presented in the preliminary report) are used for comparison in this evaluation.

The Preliminary Study RIWH and QZRI values for the **CN Railroad** were verified using the online quiet zone calculator. The values listed in the Preliminary Study are consistent with what is currently calculated.

Field Review

OHM conducted a field review of several of the crossings along each railroad to determine the feasibility of proposed improvements. Site conditions, including lane and shoulder widths, along with driveway locations and their proximity to the gate arm or railroad tracks were observed and taken into account when evaluating proposed supplemental safety measures (SSMs) or alternative safety measures (ASMs).

Review of preliminary report proposed SSM's for feasibility with field conditions and costs.

The **Quiet Zone Risk Index (QZRI)** is the average of the risk indexes of all the public crossings in a quiet zone. It takes into consideration the absence of the horn sound and any safety measures that may have been installed.

As part of the establishment and implementation of a quiet zone, certain requirements are necessary to be reported to the Federal Railroad Administration. The frequency of these reports varies depending on the scenario in which the quiet zone was established.



If a quiet zone is qualified based on reference to the Nationwide Significant Risk Threshold then an **annual review** will be done by FRA to determine if the Quiet Zone Risk Index remains equal to, or less than, the Nationwide Significant Risk Threshold. Since the Nationwide Significant Risk Threshold and the Quiet Zone Risk Index may change from year to year, there is no guarantee that the quiet zone will remain qualified. The circumstances that cause the disqualification may not be subject to the control of the public authority. If the quiet zone is no longer qualified, then the public authority will have to take additional measures, and may incur additional costs that might not have been budgeted, to once again lower the Quiet Zone Risk Index to at least the Nationwide Significant Risk Threshold in order to retain the quiet zone. Therefore, while the initial cost to implement a quiet zone by reducing the QZRI below the NSRT may be the lowest cost option, this scenario also carries a degree of uncertainty about the quiet zone's continued existence.

Where supplemental safety measures (SSMs) are not installed at every crossing within the proposed quiet zone and the QZRI is below the RIWH, **periodic updates**, including updated inventory forms, must be submitted every **2.5-3 years** after the date of the quiet zone establishment, and between 2.5-3 years after the last affirmation. For the periodic updates the public authority must:

- 1) Affirm in writing to the FRA that all SSMs and ASMs implemented within the quiet zone continue to conform to the requirements of Appendices A (Approved Supplementary Safety Measures) and B (Alternative Safety Measures) of the federal regulation or the terms of the quiet zone approval. Copies of such notification must be provided to all railroads operating over the public highway-rail grade crossings within the quiet zone; the highway or traffic control or law enforcement authority having jurisdiction over vehicular traffic at grade crossings within the quiet zone; the landowner having control over any private highway-rail grade crossings within the quiet zone; the State agency responsible for highway and road safety; the State agency responsible for grade crossing safety; and the FRA Associate Administrator by certified mail, return receipt requested; and
- 2) Provide to the FRA Associate Administrator an up-to-date, accurate, and complete Grade Crossing Inventory Form for each public highway-rail grade crossing, private highway-rail grade crossing, and pedestrian grade crossing within the quiet zone.

Federal mandate requires the implementation of positive train control (PTC) on rail lines that carry intercity or commuter rail transportation, transport toxic or hazardous materials, or as prescribed by regulation or order. PTC is a system designed to prevent train-to-train collisions, derailments caused by excessive speeds, unauthorized train movements in work zones, and the movement of trains through switches left in the wrong position. PTC networks enable real-time information sharing between trains, rail wayside devices, and "back office" applications, regarding train movement, speed restrictions, train position and speed, and the state of signal and switch devices.

To implement PTC there must be constant warning time circuitry in place. Since constant warning time circuitry is also required for establishment of a quiet zone it is critical to the cost of implementation if the railroad is already obligated and scheduled to install the PTC.

CSX RR is not required to install PTC on this section of their rail, likely due to the volume of trains per day and cargo transported. CN RR is required to install PTC on their section of rail and will have their line equipped by 2021.



A **Diagnostic Study Team Review (DSTR)** meeting is required for any road projects that take place within 250 feet of a public at-grade railroad crossing. The DSTR consists of representatives from the Michigan Department of Transportation, the road authority (Ingham County Department of Roads), and the railroad. As part of the review meeting the DSTR reviews the railroad crossing configuration at each crossing location, including the surrounding roadway, and the road project specifics to determine if safety enhancements are warranted.

CSX RR

The Preliminary Study presented implementing a quiet zone by reducing the QZRI below the NSRT. The Preliminary Study included scenarios in which SSMs would be installed at strategic crossings to lower the QZRI.

While this is feasible, OHM strongly recommends establishing the quiet zone by implementing SSM's to reduce the QZRI **below** the RIWH and **avoid an annual review**.

Implementation of the scenarios as listed in the Preliminary Study will result in a QZRI less than the nationwide threshold but not below the RIWH. OHM created a separate scenario which reduces the QZRI below the RIWH. This proposed quiet zone scenario includes all of the crossings within the Township; from Mt Hope Road to Meridian Road. The work required to implement this scenario involves installation of the following SSMs at the highest risk crossings where feasible and results in a QZRI of 6616.03 versus a RIWH of 6845.28. The chosen crossings allow for the installation of SSMs. The crossings where SSMs are not included in this scenario have driveways or intersecting roadways in close proximity and do not allow for installation of SSMs without significant roadwork or reconfiguration.

Mt Hope Rd	SSM Code 12 (Mountable medians with reflective traffic channelization devices)*
Hulett Rd	SSM Code 12 (Mountable medians with reflective traffic channelization devices)*
Okemos Rd	SSM Code 13 (Non-Traversable curb medians with or without channelizing devices)
Vanatta Rd	SSM Code 12 (Mountable medians with reflective traffic channelization devices)*

* SSM Code 13 (Non-Traversable curb medians with or without channelizing devices) are feasible at these locations should a more permanent median be desired.



Proposed SSMs Coded 12 are anticipated to be Lane Separator Systems (Qwick Kurb) with installations of 100 foot lengths on each approach starting from the railroad gate arm. This type of installation does not require any road work and can be done in a short amount of time, typically one day per approach. Traffic would be affected during the installation but can be maintained by use of flagging or posted detour, if preferred and feasible. An example of this product installed in Battle Creek is shown here.



Qwick Kurb installation in Battle Creek

To implement a Quiet Zone, gates would need to be installed at Hulett Road and Meridian Road. Additionally, constant warning time circuitry needs to be installed at Hagadorn Road, Hulett Road, Dobie Road, and Vanatta Road. CSX RR is not required to install PTC and therefore the cost to install the circuitry at these crossings would need to be paid by the Township.



Curbed median installation in Battle Creek

The estimated cost of constructing these SSMs including the cost of gates and constant warning time circuitry is approximately \$2,050,000. The estimated cost of constructing non-traversable curbed medians (SSM Code 13) at all of these locations is approximately \$2,250,000. These costs include an estimated inflation rate of 3% until construction in 2022 (3 years), design fees, and construction engineering.

As mentioned in the Preliminary Study, the private crossing at Sylvan Glen Road would require additional signage at a minimum. The DSTR meeting would provide any additional direction needed for safety improvements at this crossing.



CN RR

The proposed option presented in the Preliminary Study for implementing a quiet zone along the CNRR from Bogue Street to Green Street is rather simple. The existing safety measure, consisting of a non-traversable curbed median at Hagadorn Road, is enough risk reduction to allow for implementation of a quiet zone along this railroad. However, several of the crossings need installation of constant warning time circuitry to satisfy FRA requirements for quiet zone installation. The QZRI is below the RIWH; therefore, the Township will only be required to provide periodic updates to FRA every 2.5-3 years (not annually).

As discussed in the Preliminary Study, the crossing at Bogue Street is located within the City of East Lansing and on Michigan State University's campus. Additionally, there is a pedestrian only crossing at MSU parking Lot 92, just west of Hagadorn Road. **The City and University will need to be engaged early in the process and involved in the diagnostic study team review meeting.** If Hagadorn Road is included in the quiet zone, Bogue Street must also be included due to it being less than 0.5 miles from Hagadorn Road. This is considered Option #1. If Hagadorn Road and Bogue Street are not included, then the quiet zone would extend from Okemos Road to Green Street and is labeled Option #2. In this option, the installation of a SSM at Okemos Road would be needed to provide enough risk reduction to put the QZRI below the RIWH. SSM Code 12 (Mountable medians with reflective traffic channelizing devices) (Quick Kurb) on each approach is recommended for this location. However, SSM Code 13 (Non-Traversable curb medians with or without channelizing devices) are feasible at this location should a more permanent median be desired.

OHM communication with CNRR has revealed that the railroad will implement positive train control at their crossings within the Township by 2021. As part of the positive train control installation, the required constant warning time circuitry will be installed as well. If the Township can wait until the railroad installs the positive train control, the cost of these items will not be at the expense of the Township.

Assuming the Township can wait until PTC is installed on the railroad, the estimated cost for implementing Option #1 is estimated to be \$20,000 for coordination and administrative costs, as well as sign installation. If the City of East Lansing and MSU and/or the diagnostic study team review meeting are not in support of including Bogue Street in the quiet zone, Option #2 could be implemented. The estimated cost for this implementation is approximately \$150,000 for lane separator system and approximately \$200,000 for installation of non-traversable curbed medians at Okemos Road. These costs include an estimated inflation rate of 3% until construction in 2022 (3 years), design fees, and construction engineering.

Review costs of railroad provided items (gates, flagging and inspection, constant warning time circuitry).

OHM has cost estimate information for railroad signal and gate arm installation that was done on the recent quiet zone project in Battle Creek. CN RR, which runs through Battle Creek, provided preliminary cost estimates to the City in advance of their project so the City could budget accordingly as the signal and gate arm work was at the City's expense. OHM was unable to obtain signal installation cost information from CSX RR but expect the signal install costs would be similar between CN RR and CSX RR. We feel that a conservative amount for signal work at the required crossing is expected to be approximately \$300,000 per crossing (two lane road, two signals). This cost is included in the CSX RR estimate at the crossings which require gate arms and signals. The Preliminary Study used a cost of \$400,000 per crossing.

Railroad flagging and inspection will be required when work is performed within close proximity to the tracks, typically within 25 feet. Of the latest information we were able to locate the daily costs charged by each railroad is \$1,500 per day (CSX RR) and \$1,300 per 10 hours (CN RR). Other costs include Right of Entry permit and Cable Locate fees.



The Preliminary Study estimated a cost for installation of constant warning time systems to be between \$20,000-\$150,000. Through consultation with a designer of railroad signal systems who has a vast amount of knowledge and experience, we feel a more appropriate cost for installation of a constant warning time system is better estimated at \$175,000 (per crossing) as a conservative amount. This cost can vary depending on the crossing and is dependent on the number of tracks, crossing geometry, type of operations, train speed, existing signal circuitry, etc. and can be adjusted by the operating railroad with **more information gathered from the diagnostics review process**. This unit cost is included in the CSX RR estimate at the crossings which do not yet have the constant warning time circuitry.

Although there is no initial cost to request a DSTR meeting, CSX RR requires an agreement and a fee of \$5,500 prior to discussing the project. This fee is included in the estimate.

Alternate Options (ASMs, wayside horn)

The scenarios as presented in the **Preliminary Study** are certainly viable. However, we feel the best approach to implement a quiet zone is by installing the most appropriate and effective supplemental safety measures (SSM's) at the best crossing locations to reduce the risk below the risk index with horns (RIWH).

As mentioned previously, ASMs can be installed at appropriate crossings to further reduce the risk within the limits of the quiet zone should additional risk reduction be needed in the future. Many of the crossing locations that cannot accommodate SSMs will accommodate ASMs due to the close proximity of driveways and/or intersecting roads. Median SSMs must extend at least 100 feet from the gate arm, or if there is an intersection within 100 feet of the gate, the median must extend at least 60 feet from the gate arm. Shorter length medians are allowed but are considered ASMs.

In the future, if additional risk reduction is necessary along the CSX RR to keep the quiet zone due to a decrease in the RIWH or NSRT, ASM's could be installed at the south approach at Hagadorn Road, the south approach at Dobie Road, and the south approach at Meridian Road. Due to the geometry of the roadways and proximity of driveways or intersecting side streets, OHM recommends the installation of mountable medians with reflective channelizing devices (Quick Kurb). The installation of the ASM's at these locations is estimated to be \$140,000. Furthermore, it may not be necessary to install ASM's at all of these locations, depending on how much additional risk reduction is needed.

In the future, if additional risk reduction is necessary along the CN RR to keep the Option #1 quiet zone, SSM's could be installed at Okemos Road and consist of mountable medians with reflective channelizing devices (Quick Kurb). Additional risk reduction for either scenario could be achieved with the installation of ASM's consisting of mountable medians with reflective channelizing devices (Quick Kurb) on the west approach at Haslett Road, both approaches at Carlton Street, and both approaches at Green Road. Installations at these crossings are considered ASM's because the length of medians that can be installed due to driveway or intersecting street locations being less than those needed for SSM's.

Wayside horns as mentioned in the Preliminary Study provide another option to silence train horns. A wayside horn is a stationary horn located at a highway rail grade crossing, designed to provide, upon the approach of a locomotive or train, audible warning to oncoming motorists of the approach of a train. While the installation of these devices allows for the trains to silence their horns the wayside horns still emit a noise that is similar in decibel level to a train horn only it is directionally focused along the approaching roadway. Moreover, the installation of a wayside horn at a crossing is not included in calculating the quiet zone risk reduction. A rough estimate of cost for the materials and installation of a wayside horn is



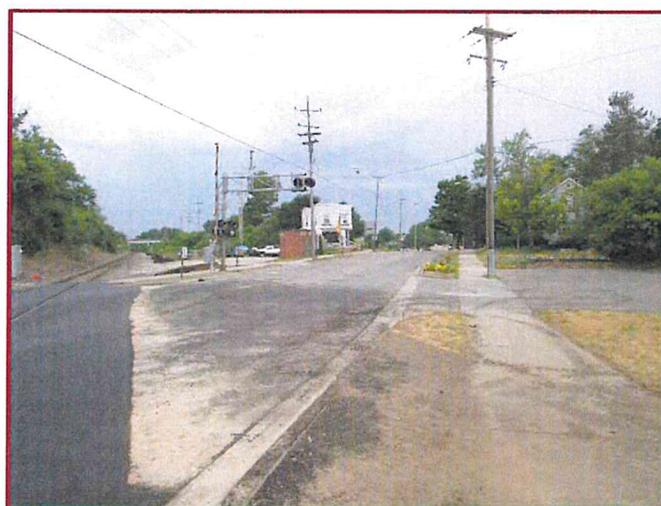
approximately \$80,000 per crossing. Maintenance costs for these installations are also significant. It has been reported that many municipalities have tried these horns and ended up removing them due to the maintenance and continued/redistributed noise concerns.

Other Considerations

OHM fully concurs with the Preliminary Study's recommendation to consider the impact of the quiet zone(s) on pedestrians. We strongly agree with the Preliminary Study recommendation of installing Z-gates at Haslett Road (CN RR) due to the proximity of schools.

We also recommend additional signage along the sidewalk pedestrian crossings on each approach for the CSX RR at Hagadorn Road (east side of road), Okemos Road (both sides of road) and Dobie Road (west side of road), and at the following CN RR crossings, Bogue Street (east side of road), Hagadorn Road (east side of road), Okemos Road (east side of road), and Haslett Road (both sides of road).

The Haslett Road crossing (CN RR) has a unique and difficult configuration due to the skew of the tracks relative to the roadway and the proximity and geometry of an intersecting street and driveways, particularly in the northwest quadrant. Safety measures are not required at this crossing; however, the DSTR meeting would allow for the opportunity to discuss this specific crossing and any potential safety improvements that could be implemented.



*Haslett Road (CN RR)
Driveway in NW Quad inside of gate arm*

In regard to the potential quiet zone on the CSX RR there are several things to consider. The cost to implement the quiet zone on this track is significant relative to the volume of train traffic. The cost to install signals, install constant warning time devices at several crossings, and the initial cost to discuss the project with CSX RR all need to be covered by the Township and are rather considerable. Perhaps it would serve the community best by holding on the pursuit of a quiet zone along the CSX RR and concentrate the effort to implementing a quiet zone on the CN RR.



Suggested Next Steps

The Preliminary Study provides a good outline for next steps; however, as one of the first steps we recommend discussions with MSU to gauge their interest pursuing a quiet zone which includes Hagadorn Road and Bogue Street. Following the discussion(s) with MSU the Ingham County Department of Roads needs to be contacted to gauge their interests and concerns. Once these discussion have taken place a DSTR meeting request should be submitted to MDOT. Requesting the DSTR meeting early in the process gives the opportunity to discuss the project with the stakeholders and incorporate request, comments, and/or suggestions before design plan production begins.

Following the DSTR meeting and taking into account the discussions from the meeting, a better evaluation of the interests, limits and costs of establishment of quiet zone can be determined.

Attachments

- Cost Estimates
- DSTR request form

Separate file

- FRA Final Rule
(49 CFR Parts 222 and 229 Use of Locomotive Horns at Highway- Rail Grade Crossings)

Engineer's Estimate of Cost
January 2019

CSX Railroad - Installation of:
SSM 13 at Mt Hope Road
SSM 13 at Hulett Road
SSM 13 at Okemos Road
SSM 13 at Vanatta Road

CSX RAILROAD

ITEM CODES	DESCRIPTION	UNIT	UNIT PRICES	SSM QTY	13 MT HOPE RD	13 HAGADORN RD	13 HULETT RD	13 OKEMOS RD	13 DOBIE RD	13 VANATTA RD	13 MERIDIAN RD
1500001	Mobilization, Max.	LS	\$15,000.00	4	1						
2040050	Pavt. Rem	Syd	\$25.00	547	100		75	287			85
3020001	Aggregate Base	Ton	\$35.00	287	33		24	180			29
5010002	Cold Milling HMA Surface	Syd	\$5.00	3320	2000		684				636
5010034	HMA, 36A	Ton	\$100.00	298	179		61				57
6020050	Conc Pavt, Misc, Nonreinf, 6 inch	Syd	\$40.00	382	73		54	191			64
8027001	Curb and Gutter, Conc, Det F4, Modified	Fl	\$50.00	478				478			
8027001	Curb, Conc, Det F4, Modified	Ft	\$80.00	780	300		220				260
8100340	Post Hole Through Conc for Steel Post	Ea	\$60.00	16	4		4				4
8100371	Post, Steel, 3 lb	Ft	\$8.00	240	60		60	60			60
8100405	Sign, Type IIIb	Sft	\$20.00	194	41		10	41	10		41
8110045	Pavt Mfkg, Only Cold Plastic, Railroad Sym	Ft	\$15.00	192	48		72	48			41
8110231	Pavt Mfkg, Waterborne, 4 inch, White	Ea	\$340.00	2							24
8110232	Pavt Mfkg, Waterborne, 4 inch, Yellow	Ft	\$0.50	1560	600		440				520
8110343	Rem Spec Mfkg	Sft	\$2.50	24	150						
8120211	Pavt Mfkg, Longit, Greater than 6 inch Width, Rem	Ft	\$1.25	48			24				
8120250	Plastic Drum, High Intensity, Furn	Ea	\$20.00	205	102		48				
8120251	Plastic Drum, High Intensity, Oper	Ea	\$0.50	205	102		102				
8120350	Sign, Type B, Temp, Prismatic, Furn	Sft	\$4.50	336	168		168				
8120351	Sign, Type B, Temp, Prismatic, Oper	Sft	\$0.25	336	168		168				
8127051	Maintenance of Traffic (Minor Traffic Devices, Staging or Detour)	LS	\$25,000.00	4	1		1				1
8507060	Cable Locate Fee	Dir	\$1.00	1000	250		250				250
8507060	Railroad Inspection and Flagging	Dir	\$1.00	60000	15000		15000				15000
8507060	Right of Entry License	Dir	\$1.00	3000	750		750				750

Subtotal:	\$108,077.59	\$200.00	\$82,884.64	\$106,187.38	\$200.00	\$83,118.24	\$200.00
Contingency (5%):	\$10,900.00	\$100.00	\$8,300.00	\$10,700.00	\$100.00	\$8,400.00	\$100.00
SSM Install Cost:	\$118,977.59	\$300.00	\$91,184.64	\$116,887.38	\$300.00	\$91,518.24	\$300.00

Subtotal: 10
Contingency (5%):
SSM Install Cost:

Railroad Associated Items/Costs	UNIT	QTY	UNIT PRICE	AMOUNT	13 MT HOPE RD	13 HAGADORN RD	13 HULETT RD	13 OKEMOS RD	13 DOBIE RD	13 VANATTA RD	13 MERIDIAN RD
Installation of Gates	Ea	2	\$300,000.00	\$600,000.00							
Installation of Constant Warning Time Circuitry	Ea	4	\$175,000.00	\$700,000.00							
Yrs until Construction:					3						
Inflation (5%):					3						
Subtotal:					\$118,977.59	\$175,300.00	\$566,184.64	\$116,887.38	\$175,300.00	\$266,518.24	\$300,300.00
Yrs until Construction:											
Inflation (5%):											
Subtotal:					\$40,800.00	\$15,800.00	\$51,000.00	\$10,600.00	\$15,800.00	\$24,000.00	\$27,100.00
Yrs until Construction:											
Inflation (5%):											
Subtotal:											

CSX Agreement Fee	Ea	1	\$5,500.00	\$5,500.00
Update USDOT Inventory Forms	Ea	7	\$1,000.00	\$7,000.00
Subtotal:				\$12,500.00

Design (10% of SSM installation cost + inflation): \$46,000
Construction Engineering (15% of SSM installation cost + inflation + RR Associated Items): \$282,000
Grand Total: \$2,250,000

Engineer's Estimate of Cost

January 2019

CN Railroad - Option #1 -

Quiet Zone from Bogue St to Green Rd

Signal installation and constant warning time systems installed by railroad at their expense (by 2021).

CN RAILROAD

ITEM CODES	DESCRIPTION	UNIT	UNIT PRICES	SSM QTY	BOGUE ST	HAGADORN RD	OKEMOS RD	HASLETT RD	CARLTON RD	GREEN RD
8100405	Sign, Type IIIB	Sft	\$200.00	60	10	10	10	10	10	10

Subtotal:	\$200.00	\$200.00	\$200.00	\$200.00	\$200.00	\$200.00	\$200.00	\$200.00	\$200.00	\$200.00
Contingency (%):	\$100.00	\$100.00	\$100.00	\$100.00	\$100.00	\$100.00	\$100.00	\$100.00	\$100.00	\$100.00
*SSM Install Cost:	\$300.00	\$300.00	\$300.00	\$300.00	\$300.00	\$300.00	\$300.00	\$300.00	\$300.00	\$300.00

Railroad Associated Items/Costs

	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
	\$300.00	\$300.00	\$300.00	\$300.00	\$300.00	\$300.00	\$300.00	\$300.00	\$300.00	\$300.00

* Only signage need be installed, no SSMs or ASMS

Yrs until Construction: 3
Inflation (%): 3

Ea	\$1,000.00	6
		\$6,000.00

Update USDOT Inventory Forms

Administrative Costs (MSU/Ingham Co/DSTR meetings & coordination): \$7,000

Grand Total: \$20,000

Engineer's Estimate of Cost

January 2019

CN Railroad - Option #2 - Installation of
SSM 12 at Okemos Road
Quiet Zone from Okemos Rd to Green Rd

CN RAILROAD

ITEM CODES	DESCRIPTION	UNIT	UNIT PRICES	SSM QTY	BOGUE ST	HAGADORN RD	OKEMOS RD	HASLETT RD	CARLTON RD	GREEN RD
1500001	Mobilization, Max. _____	LS	\$10,000.00	4			1	1		1
8100405	SfPd, Type IIIB	SfP	\$20.00	40			10	10	10	10
8110045	Pavt Mkg, Ovly Cold Plastic, 24 inch, Stop Bar	FT	\$15.00	24			24			
8127001	Lane Separator System	FT	\$150.00	200			200			
8127051	Maintenance of Traffic	LS	\$10,000.00	1						
8507060	Cable Locate Fee	Dir	\$1.00	250						
8507060	Railroad Inspection and Flagging	Dir	\$1.00	2600						
8507060	Right of Entry License	Dir	\$1.00	750						

Subtotal:	\$54,160.00	\$10,200.00	\$10,200.00	\$10,200.00	\$10,200.00	\$10,200.00	\$10,200.00	\$10,200.00	\$10,200.00	\$10,200.00
Contingency (%):										
SSM Install Cost:	\$5,500.00	\$1,100.00	\$1,100.00	\$1,100.00	\$1,100.00	\$1,100.00	\$1,100.00	\$1,100.00	\$1,100.00	\$1,100.00
	\$59,660.00	\$11,300.00	\$11,300.00	\$11,300.00	\$11,300.00	\$11,300.00	\$11,300.00	\$11,300.00	\$11,300.00	\$11,300.00

Railroad Associated Items/Costs

Update USDOT Inventory Forms	Ea	\$1,000.00	4	\$4,000.00
Yrs until Construction:			3	
Inflation (%):			3	
Subtotal:		\$0.00	\$0.00	\$0.00
Contingency (%):				
SSM Install Cost:		\$59,660.00	\$11,300.00	\$11,300.00
		\$5,400.00	\$1,100.00	\$1,100.00
		\$0.00	\$0.00	\$0.00
		\$54,160.00	\$10,200.00	\$10,200.00
		\$5,500.00	\$1,100.00	\$1,100.00
		\$59,660.00	\$11,300.00	\$11,300.00

Design (10% of SSM Installation cost + Inflation): \$11,000
Construction Engineering (15% of SSM Installation cost + Inflation + RR Associated Items): \$16,000
Grand Total: \$150,000

Engineer's Estimate of Cost
January 2019

CN Railroad - Option #2 - Installation of:
SSM 13 at Okemos Road
Quiet Zone from Okemos Rd to Green Rd

CN RAILROAD

Meridian Township Quiet Zones Cost Summaries										
ITEM CODES	DESCRIPTION	UNIT	UNIT PRICES	SSM QTY	BOGUE ST	HAGADORN RD	OKEMOS RD	HASLETT RD	CARLTON RD	GREEN RD
1500001	Mobilization, Max.	LS	\$15,000.00	4			1	1	1	1
2040050	Pavt, Rem	Syd	\$25.00	80			80			
3020001	Aggregate Base	Ton	\$35.00	27			27			
5010002	Cold Milling HMA Surface	Syd	\$5.00	853			853			
5010034	HMA, 36A	Ton	\$100.00	77			77			
6020050	Conc Pavt, Misc, Nonreinf, 6 inch	Syd	\$40.00	59			59			
8027001	_Curb, Conc, Det E4, Modified	Ft	\$40.00	240			240			
8100340	Post Hole Through Conc for Steel Post	Ea	\$60.00	4			4			
8100371	Post, Steel, 3 lb	Ft	\$8.00	60			60			
8100405	Sign, Type III B	Sft	\$20.00	71			41	10	10	10
8110045	Pavt Mfg, Only Cold Plastic, 24 inch, Stop Bar	Ft	\$15.00	24			24			
8110231	Pavt Mfg, Waterborne, 4 inch, White	Ft	\$0.50	600			600			
8127051	Maintenance of Traffic (Minor Traffic Devices or Detour)	LS	\$25,000.00	1			1			
8507060	Cable Locate Fee	Dir	\$1.00	250			250			
8507060	_Railroad Inspection and Flagging	Dir	\$1.00	13000			13000			
8507060	_Right of Entry License	Dir	\$1.00	750			750			

Subtotal: 10
Contingency (%):
SSM Install Cost:

\$83,002.67	\$15,200.00	\$15,200.00	\$15,200.00	\$15,200.00
\$8,400.00	\$1,600.00	\$1,600.00	\$1,600.00	\$1,600.00
\$91,402.67	\$16,800.00	\$16,800.00	\$16,800.00	\$16,800.00

\$141,803

Railroad Associated Items/Costs

\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
\$91,402.67	\$16,800.00	\$16,800.00	\$16,800.00	\$16,800.00
\$8,300.00	\$1,600.00	\$1,600.00	\$1,600.00	\$1,600.00

\$0

\$141,803

Yrs until Construction: 3
Inflation (%): 3

Ea	\$1,000.00	4	\$4,000.00
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Update USDOT Inventory Forms

Design (10% of SSM installation cost + inflation): \$16,000
Construction Engineering (15% of SSM installation cost + inflation + RR Associated Items): \$24,000

Grand Total: \$200,000

NOTIFICATION OF PROPOSED PROJECT INVOLVING A PUBLIC RAILROAD CROSSING

INSTRUCTIONS: TO BE COMPLETED BY ROAD AUTHORITY OR RAILROAD.
PLEASE ATTACH A COPY OF APPLICABLE PLANS IF AVAILABLE.

- Road Project** - MDOT will determine if a diagnostic review is needed.
- New Crossing** - A review is required for new public roadways or trails proposed to cross a rail line, or for new rail lines to cross an existing public roadway or trail.
- Other** - _____

DATE: _____

CROSSING IDENTIFICATION

NAME OF EXISTING OR PROPOSED ROAD/TRAIL		ROAD AUTHORITY	
COUNTY		CITY/VILLAGE/TOWNSHIP	
RAILROAD	NATIONAL INVENTORY #	TRAIN MOVES (Projected if new track) _____ PER _____ (DAY/WEEK/ETC)	
CURRENT ADT	YEAR	PROJECTED ADT (Max. 5 years out)	YEAR

WRITTEN DOCUMENTATION OF CURRENT ADT (WITHIN 3 YEARS/24 HOUR STUDY) MUST BE PROVIDED AT THE REVIEW.

PROJECT INFORMATION

BRIEF DESCRIPTION OF PROPOSED PROJECT (Attach additional sheets if necessary)

DESCRIPTION OF PLANNED TRAFFIC CONTROL AT CROSSING DURING CONSTRUCTION

PROXIMITY OF WORK TO NEAREST RAIL IN CROSSING: _____ ft		SOURCE OF ROAD FUNDING (Check one): <input type="checkbox"/> Local / <input type="checkbox"/> Federal-aid	
ROADWAY DIMENSIONS	CURRENT	PLANNED	
Number of Lanes			
Total Road Width			
Shoulder Width			
Curb & Gutter	<input type="checkbox"/> YES <input type="checkbox"/> NO	<input type="checkbox"/> YES <input type="checkbox"/> NO	
WILL ROADWAY ELEVATION CHANGE IN RELATION TO CROSSING ELEVATION? <input type="checkbox"/> YES <input type="checkbox"/> NO		WILL ALIGNMENT OF THE ROADWAY CHANGE? <input type="checkbox"/> YES (If yes, please explain above). <input type="checkbox"/> NO	
PROPOSED CONSTRUCTION START DATE	SOURCE OF FUNDS FOR POTENTIAL RAILROAD SURFACE/SIGNAL WORK		

CONTACT INFORMATION

NAME/TITLE	PHONE	FAX	
ORGANIZATION	E-MAIL		
ADDRESS	CITY	STATE	ZIP CODE

Please complete all sections and return with a copy of applicable plans if available, to:
Ms. Tina Hissong, Manager, MDOT Rail Safety Section, 425 West Ottawa, Lansing, Michigan 48909,
Email: hissongt@michigan.gov, Phone: (517) 335-2592, Fax: (517) 373-0856.

July 20, 2022

Ms. Melissa Massie
Director of Project Management & Operations
Meridian Township
5151 Marsh Road
Okemos, MI 48864

RE: Design Services for Quiet Zone for Meridian Township, CN Railroad from Okemos Road to Green Road

Dear Ms. Massie:

Thank you for the opportunity to meet with you and your team on June 29 to discuss the Township's desire to establish a Quiet Zones for the CN Railroad line that runs through Meridian Township. Based on preliminary discussions with the City of East Lansing and Michigan State University the Quiet Zone would not include the Bogue Street or Hagadorn Road crossings.

Our mission at OHM Advisors is to advance communities – which means helping each client not only meet the needs for each project, but also meet their needs as it relates to their entire community. We understand that while this project is for Meridian Township, we are tasked with establishing the most effective use of available resources provided by the people of the township.

In addition to our talented and experience staff, we propose to utilize the knowledge and experience of Mr. Larry Bowron, formerly with the City of Battle Creek, whom we worked with on the successful construction and implementation of their Quiet Zone.

Scope of Services

Upon Notice to Proceed, OHM will proceed with the following specific work efforts for Phase 1:

- Update and analysis of potential crossing treatments with the FRA Quiet Zone Calculator
- Organize, facilitate and attend a Diagnostic Study Team Review (DSTR) with MDOT, CNRR, Meridian Township, Ingham County Road Department and other required/interested parties.
- Evaluation of recommended crossing treatments based on FRA Quiet Zone Calculator and DSTR meeting
 - Review proposed SSM's for feasibility with field conditions and estimate costs
 - Review costs for railroad provided items (relocate gates, if needed).
 - Review costs for railroad fees (permits, flagging and inspection, cable locate fees)
- Meeting with Meridian Township staff to review alternatives and estimated costs.
- Prepare the Notice of Intent – 60 day comment period.

Work efforts for Phase 2 will be determined after Phase 1 determines the recommended improvements and staffing capabilities for Meridian Township are assessed. Following are the general work tasks to be performed for Phase 2:

- Design of crossing improvements, required signage, etc.
- Draft and negotiate agreement with CN RR for construction of RR improvements, if any.
- Prepare Bid package for improvements, bid/award recommendation
- Construction administration and inspection
- Prepare the Notice of Establishment

Schedule

Depending on response time from CN Railroad and MDOT we would anticipate Phase 1 to be approximately 6 months in duration. Individual milestones will be established upon notice to proceed and scheduling of the DSTR meeting.

Compensation

The services outlined above for Phase 1 will be performed for the amount of twelve thousand five hundred dollars (\$12,500). This amount is based on the assumptions listed above. The Township will be invoiced monthly for services performed based on 2022 OHM Public billing rates. Additional meetings, if requested, will be billed based on the billing rates. A copy of our Terms and Conditions is attached.

Clarifications and Assumptions

Our Proposal was prepared based on the following assumptions:

- If additional labor effort or change in schedule is required beyond described herein, OHM Advisors will negotiate an amendment with Meridian Township. OHM Advisors will not proceed with additional services without written authorization to proceed from the Township.
- No topographic survey is included in this scope.
- No assistance for easement acquisitions is included in this scope.
- No right-of-way negotiations are included in this scope.
- No public utility design is included in this scope.

Client Responsibilities

- The Township will provide a single point of contact to OHM Advisors who is knowledgeable about the project needs and desired outcomes.
- The Township will facilitate communication and coordination with local residents and with the Ingham County Road Department.
- The Township will provide updated traffic counts for the crossings considered.

Authorization and Acceptance

If this proposal is acceptable to you an issued Purchase Order or signed copy of this proposal will serve as our authorization to proceed. Upon execution, this Proposal and attached Terms & Conditions form our agreement.

We thank you for the opportunity to provide professional engineering services for this project. If you have any questions or require additional information please contact me at (517) 525-1808 or Alan at (616) 780-5353.

Please sign both copies and return one signed copy to OHM or if you prefer send a Purchase Order referencing this proposal.

Sincerely,
OHM Advisors

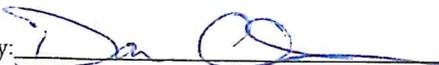


Christine Spitzley, AICP
Principal

Encl: Terms & Conditions

cc: Dan Opsommer, Meridian Township
Alan Halbeisen, OHM Advisors
Larry Bowron, LCB & Co.

Meridian Township Quiet Zone for CNRR line, Phase 1

Accepted By:  _____

Printed Name: Dan Opsommer _____

Title: Assistant Township Manager and Director of Public Works and Engineering _____

Date: 8/5/22 _____

TERMS & CONDITIONS



1. **THE AGREEMENT.** These Terms and Conditions and the attached Proposal or Scope of Services, upon acceptance by CLIENT, shall constitute the entire Agreement between Orchard, Hiltz & McCliment, Inc. (OHM ADVISORS), a registered Michigan Corporation, and CLIENT. OHM ADVISORS and CLIENT may be referred to individually as a Party or collectively as Parties. This Agreement supersedes all prior negotiations or agreements and may be amended only by written agreement signed by both Parties.
2. **CLIENT RESPONSIBILITIES.** CLIENT, at no cost, shall:
 - a. Provide access to the project site to allow timely performance of the services.
 - b. Provide all information in CLIENT'S possession as required by OHM ADVISORS to perform the services.
 - c. Designate a person to act as CLIENT'S representative who shall transmit instructions, receive information, define CLIENT policies, and have the authority to make decisions related to services under this Agreement.
3. **PROJECT INFORMATION.** OHM ADVISORS shall be entitled to rely on the accuracy and completeness of services and information furnished by CLIENT, other design professionals, or consultants contracted directly to CLIENT.
4. **PERIOD OF SERVICE.** The services shall be completed within the time specified in the Proposal or Scope of Services, or if no time is specified, within a reasonable amount of time. OHM ADVISORS shall not be liable to CLIENT for any loss or damage arising out of any failure or delay in rendering services pursuant to this Agreement that arise out of circumstances that are beyond the control of OHM ADVISORS.
5. **COMPENSATION.** CLIENT shall pay OHM ADVISORS for services performed in accordance with the method of payment, as stated in the Proposal or Scope of Services. CLIENT shall pay OHM ADVISORS for reimbursable expenses for consultant services, equipment rental, or other special project related items at a rate of 1.15 times the invoice amount.
6. **TERMS OF PAYMENT.** Invoices shall be submitted to the CLIENT each month for services performed during the preceding period. CLIENT shall pay the full amount of the invoice within thirty days of the invoice date. If payment is not made within thirty days, the amount due to OHM ADVISORS shall include a service fee at the rate of one (1%) percent per month from said thirtieth day.
7. **STANDARD OF CARE.** OHM ADVISORS shall perform their services under this Agreement in a manner consistent with the professional skill and care ordinarily provided by similar professionals practicing in the same or similar locality under the same or similar conditions.
8. **RESTRICTION OF REMEDIES.** OHM ADVISORS is responsible for the work of its employees while they are engaged on OHM ADVISORS' projects. As such, and in order to minimize legal costs and fees related to any dispute, CLIENT agrees to restrict any and all remedies it may have by reason of OHM ADVISORS' breach of this Agreement or negligence in the performance of services under this Agreement, be they in contract, tort, or otherwise, to OHM ADVISORS, and to waive any claims against individual employees.
9. **LIMIT OF LIABILITY.** To the fullest extent permitted by law, CLIENT agrees that, notwithstanding any other provision in this Agreement, the total liability in the aggregate, of OHM ADVISORS to CLIENT, or anyone claiming under CLIENT, for any claims, losses, damages or costs whatsoever arising out of, resulting from, or in any way related to this Agreement or the services provided by OHM ADVISORS pursuant to this Agreement, be limited to \$25,000 or OHM ADVISORS fee, whichever is greater, and irrespective of whether the claim sounds in breach of contract, tort, or otherwise.
10. **ASSIGNMENT.** Neither Party to this Agreement shall transfer, sublet, or assign any duties, rights under or interest in this Agreement without the prior written consent of the other Party.
11. **NO WAIVER.** Failure of either Party to enforce, at anytime, the provisions of this Agreement shall not constitute a waiver of such provisions or the right of either Party at any time to avail themselves of such remedies as either may have for any breach of such provisions.
12. **GOVERNING LAW.** The laws of the State of Michigan will govern the validity of this Agreement, its interpretation and performance.
13. **INSTRUMENTS OF SERVICE.** OHM ADVISORS shall retain ownership of all reports, drawings, plans, specifications, electronic data and files, and other documents (Documents) prepared by OHM ADVISORS as Instruments of Service. OHM ADVISORS shall retain all common law, statutory and other reserved rights, including, without limitation, all copyrights thereto. CLIENT, upon payment in full for OHM's services, shall have an irrevocable license to use OHM's Instruments of Service for or in conjunction with repairs, alterations or maintenance to the project involved but for no other purpose. CLIENT shall not reuse or make any modifications to the Documents without prior written authorization by OHM ADVISORS. In accepting and utilizing any Documents or other data on any electronic media provided by OHM ADVISORS, CLIENT agrees they will perform acceptance tests or procedures on the data within 30 days of receipt of the file.
14. **CERTIFICATIONS.** OHM ADVISORS shall have 14 days to review proposed language prior to the requested dates of execution. OHM ADVISORS shall not be required to execute certificates to which it has a reasonable objection, or that would require knowledge, services, or responsibilities beyond the scope of this Agreement, nor shall any certificates be construed as a warranty or guarantee by OHM ADVISORS.
15. **TERMINATION.** Either Party may at any time terminate this Agreement upon giving the other Party 7 calendar days prior written notice. CLIENT shall within 45 days of termination pay OHM ADVISORS for all services rendered and all costs incurred up to the date of termination in accordance with compensation provisions in this Agreement.
16. **RIGHT TO SUSPEND SERVICES.** In the event CLIENT fails to pay OHM ADVISORS the amount shown on any invoice within 45 days of the date of the invoice, OHM ADVISORS may, after giving 7 days' notice to CLIENT, suspend its services until payment in full for all services and expenses is received.

17. OPINIONS OF PROBABLE COST. OHM ADVISORS preparation of Opinions of Probable Cost represents OHM ADVISORS' best judgment as a design professional familiar with the industry. CLIENT recognizes that OHM ADVISORS has no control over costs of labor, equipment, materials, or a contractor's pricing. OHM ADVISORS makes no warranty, expressed or implied, as to the accuracy of such opinions as compared to bid or actual cost.
18. JOB SITE SAFETY. Neither the professional activities of OHM ADVISORS, nor the presence of OHM ADVISORS or our employees and subconsultants at a construction site shall relieve the Contractor or any other entity of their obligations, duties, and responsibilities including, but not limited to, construction means, methods, sequences, techniques or procedures necessary for performing, superintending or coordinating all portions of the work of construction in accordance with the contract documents and the health or safety precautions required by any regulatory agency. OHM ADVISORS has no authority to exercise any control over any construction contractor or any other entity or their employees in connection with their work or any health or safety precautions.
19. CONTRACTOR SUBMITTALS. If included in the services to be provided, OHM ADVISORS shall review the contractor's submittals such as shop drawings, product data, and samples for the limited purpose of checking for conformance with information given and the design concept expressed in the construction documents issued by OHM ADVISORS. Review of such submittals is not for the purpose of determining the accuracy and completeness of other information such as dimensions, quantities, and installation or performance of equipment or systems, which are the contractor's responsibility. OHM ADVISORS review shall not constitute approval of safety precautions or, unless otherwise specifically stated by OHM ADVISORS, of any construction means, methods, techniques, sequences or procedures. OHM ADVISORS approval of a specific item shall not indicate approval of an assembly of which the item is a component.
20. CONSTRUCTION OBSERVATION. If requested, OHM ADVISORS shall visit the project construction site to generally observe the construction work and answer questions that CLIENT may have. OHM ADVISORS shall not be required to make exhaustive or continuous on-site inspections to check the quality or quantity of the construction work, or to determine whether the construction work is being constructed in accordance with the Contract Documents.
21. HAZARDOUS MATERIALS. As used in this Agreement, the term hazardous materials shall mean any substances, including without limitation asbestos, toxic or hazardous waste, PCBs, combustible gases and materials, petroleum or radioactive materials (as each of these is defined in applicable federal statutes) or any other substances under any conditions and in such quantities as would pose a substantial danger to persons or property exposed to such substances at or near the Project site. Both Parties acknowledge that OHM ADVISORS' Scope of Services does not include any services related to the presence of any hazardous or toxic materials. In the event OHM ADVISORS or any other person or entity involved in the project encounters any hazardous or toxic materials, or should it become known to OHM ADVISORS that such materials may be present on or about the jobsite or any adjacent areas that may affect the performance of OHM ADVISORS' services, OHM ADVISORS may, at its sole option and without liability for consequential or any other damages, suspend performance of its services under this Agreement until CLIENT retains appropriate qualified consultants and/or contractors to identify and abate or remove the hazardous or toxic materials and warrants that the jobsite is in full compliance with all applicable laws and regulations. CLIENT agrees, notwithstanding any other provision of this Agreement, to the fullest extent permitted by law, to indemnify and hold harmless OHM ADVISORS, its officers, partners, employees and subconsultants (collectively, OHM ADVISORS) from and against any and all claims, suits, demands, liabilities, losses, damages or costs, including reasonable attorneys' fees and defense costs arising out of or in any way connected with the detection, presence, handling, removal, abatement, or disposal of any asbestos or hazardous or toxic substances, products or materials that exist on, about or adjacent to the Project site, whether liability arises under breach of contract or warranty, tort, including negligence, strict liability or statutory liability, regulatory or any other cause of action, except for the sole negligence or willful misconduct of OHM ADVISORS.
22. WAIVER OF CONSEQUENTIAL DAMAGES. The Parties waive consequential damages for claims, disputes or other matters in question arising out of or relating to this Agreement. This mutual waiver is applicable, without limitation, to all consequential damages due to either Party's termination of this Agreement.
23. WAIVER OF SUBROGATION. The Parties waive all rights against each other and any of their contractors, subcontractors, consultants, agents, and employees, each of the other, for damages caused by fire or other causes of loss to the extent covered by property insurance obtained pursuant to a written contract or other property insurance applicable to the construction work.
24. THIRD PARTIES. Nothing contained in this Agreement shall create a contractual relationship with, or a cause of action in favor of, a third party against either CLIENT or OHM ADVISORS.
25. CODE REVIEW/ACCESSIBILITY. In providing its services under this Agreement, OHM ADVISORS may have to interpret federal and or state laws, codes, ordinances, regulations and/or statutes. CLIENT understands and agrees that these may be subject to different and possibly contradictory interpretations by relevant governmental officials charged with interpreting same and furthermore understands and agrees that OHM ADVISORS does not warrant or guarantee that their interpretation will be consistent with the interpretation of the relevant governmental officials. OHM ADVISORS shall not be liable for unreasonable or unforeseeable interpretation of federal and or state laws, codes, ordinances, regulations and/or statutes by governmental officials charged with interpreting same.
26. DISPUTE RESOLUTION. In an effort to resolve any conflicts that arise during the project or following the completion of the project, the Parties agree that all disputes between them arising out of or relating to this Agreement shall be submitted to nonbinding mediation, unless the Parties mutually agree otherwise, as a prerequisite to further legal proceedings. The Parties agree to share the mediator's fee and any filing fees equally, and the mediation shall be held in the place where the project is located, unless another location is mutually agreed upon.

2022 Meridian Township Railroad Quiet Zone Map

