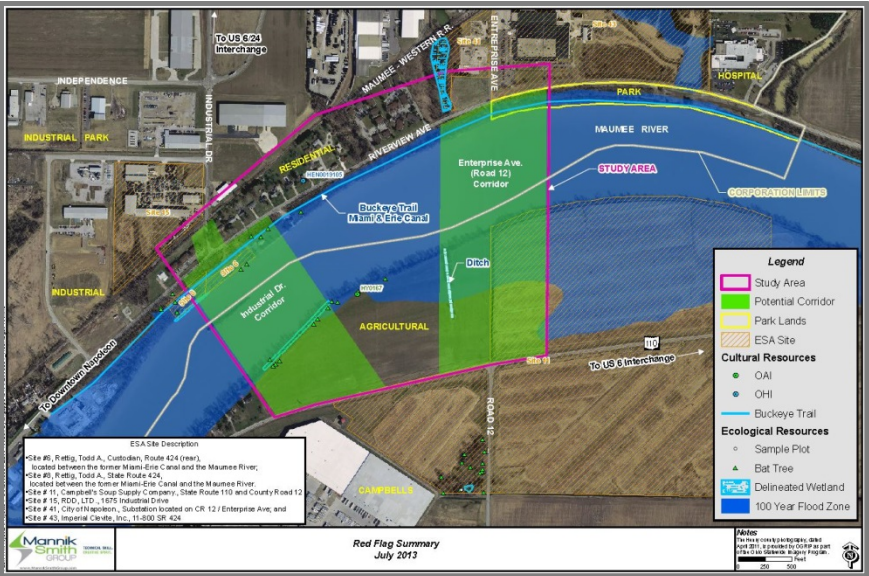


FEASIBILITY STUDY

HENRY COUNTY NEW MAUMEE RIVER CROSSING HEN-NEW MAUMEE RIVER BRIDGE PID 22984



OCTOBER 2013

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EXECUTIVE SUMMARY

This feasibility study is intended to build upon the 2010 *Final Planning Study Report* that was approved on May 10, 2010 to provide a transition to the revised ODOT Project Development Process (PDP) which has been streamlined to be more efficient in determining a preferred alternative.

In all, five conceptual solutions were considered in the *Final Planning Study Report*. Four of these involve the construction of a new bridge over the Maumee River at the following general locations:

- Corridor 1 - West of SR 108 Bridge to Western Corporation Limits
- Corridor 2 - East of SR 108 Bridge to West of Road 12
- Corridor 3 - West of Road 12 to US 6 Bridge over Maumee River
- Re-use of Abandoned Railroad Bridge north of the Campbell's Soup plant

A fifth conceptual solution, involving a no-build alternative that considers various measures such as the addition of turn lanes, improving signal coordination and the implementation of access management strategies to address some or all of the transportation-related issues that exist as a result of having only one river crossing is also discussed. Each transportation solution/concept was evaluated based on its ability to meet the Purpose & Need for the project, including the following elements:

- Its ability to provide a link between existing industrial development areas;
- Its connectivity to the existing highway system;
- Its ability to improve access to future development areas consistent with the Comprehensive Plan;
- Its ability to increase overall community connectivity;
- Its ability to provide improvements to Napoleon and Henry County emergency services, and;
- Ability to reduce downtown traffic congestion and enhance public safety

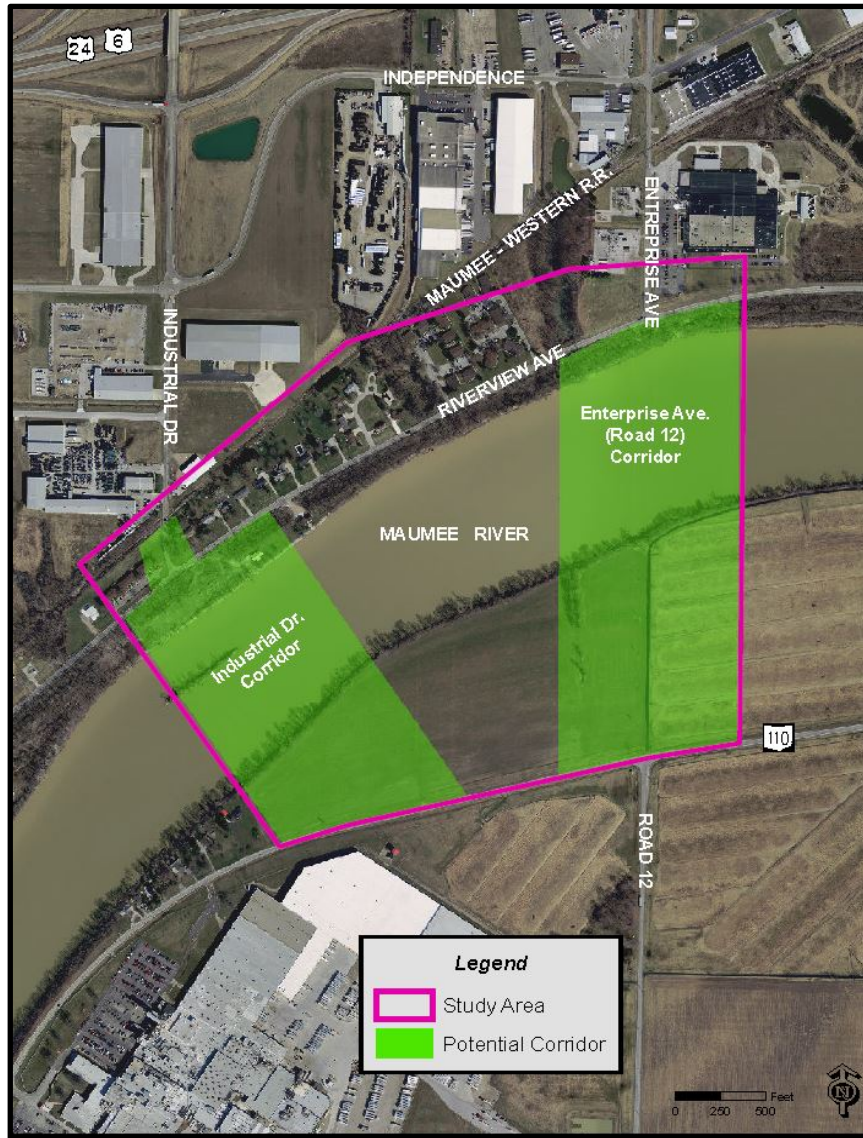
The *Final Planning Study Report* evaluated four (4) Conceptual Build Alternatives and a No Build option. According to the conclusions of this document, two (2) Build Alternatives (and the No Build) were recommended for further evaluation as they best met the project's purpose & need. The two build alternatives included the following:

1. **Industrial Drive Corridor** – Extend this roadway across the Maumee River so to provide a connection between the Riverview Avenue (previously SR 424) roadway on the north side of the river and SR 110 on the south side of the river
2. **Enterprise Avenue (Road 12) Corridor** – Extend this roadway across the Maumee River so to provide a connection between the Riverview Avenue (previously SR 424) roadway on the north side of the river and SR 110 on the south side of the river

A graphic of the corridors involving the two build alternatives listed above are located on the next page. These alternatives (along with the other alternatives considered in the original *Planning Study Report*) were evaluated for various criteria such as traffic analysis; connectivity of developed areas; connectivity to highway system; access to future development areas; enhancement of emergency services access; improve school transportation; reduce downtown traffic congestion; and impacts to environmental resources (parks/4(f)/6(f); farmland; cultural resources; endangered/threatened species; ecological resources; and FEMA 100-Year flood plain). The original analyses and approved Planning Study Report is provided in *Appendix A* for reference.

A preliminary Preferred Alternative was determined through review and updates of the data/analyses of the Industrial Drive Corridor; Enterprise Avenue (Road 12) Corridor; and the No Build Alternative. An alternatives comparison matrix was developed based on the updated data/analyses of these three alternatives to assist in identifying a

preliminary Preferred Alternative. The graphic below highlights the more narrowly focused study area utilized for this feasibility study as well as the two Build Alternatives corridors.



Build Alternative Corridors & Study Area

In comparing the evaluations of the two build alternatives above and the No Build; a summary of the alternatives is presented below (see *Table 11.1* for the Alternatives Evaluation Matrix):

No-Build – This alternative would result in further congestion, safety, and logistical problems. No amount of secondary solutions will result in a substantial reduction in traffic congestion or an increase in safety. The No Build does not satisfy any of the Purpose & Need elements of the project. The Benefits and Impacts / Issues include:

Benefits:

- Essentially no impacts given there are not any major improvements involved
- Minimal cost as only minor secondary improvements would occur

Impacts / Issues:

- Does not satisfy any of the Purpose & Need Elements
- Increased congestion and safety issues as future growth and increasing truck volumes will further degrade operations and safety of the SR 108 corridor and adjacent connecting roadways
- Will negatively impact economic development efforts as increased congestion, delays, and higher crash rates will lead to increased transportation costs for the community and businesses

Industrial Drive Corridor – This alternative would construct a new bridge spanning the Maumee River and provide a connector road from SR 110 (south side of Maumee River) to the intersection of Riverview Avenue (previously SR 424) & Industrial Drive (north side of Maumee River). This alternative fully satisfies the Purpose & Need Elements of the project. The Benefits and Impacts / Issues include:

Benefits:

- Satisfies all of the Purpose & Need Elements
- Fewer negative impacts to environmental resources
- Provides substantial benefits to several Community Elements in regards to Connectivity to Highway System; Reduces Downtown Traffic Congestion & Enhances Safety; and Economic Development.
- Decreases congestion in the existing SR 108 bridge corridor as it removes the most traffic from the existing roadway
- Results in fewer crashes in the SR 108 corridor as truck traffic and traffic volumes are reduced
- Provides most direct link and access between existing, future, and planned development areas on both the north side and south sides of the river with a direct link to the US 6/24 interchange
- Consistent with recommendations in local land use plans
- Provides substantial economic development benefit by constructing direct link of south side of river at SR 110 northward to the US 6/24 interchange, and also reduces transportation costs associated with traffic congestion and safety on existing SR 108 Corridor
- Lower cost than the Enterprise Avenue (Road 12) alternative.

Impacts / Issues:

- Impacts to farmland on south side of the river
- Impacts to State Scenic River and requires various permits with USACE, Ohio EPA, and ODNR
- Property impacts, and possibly a full residential take (although current owner has expressed a desire to sell property for the project)

Enterprise Avenue (Road 12) Corridor – This alternative would construct a new bridge spanning the Maumee River that provides a connector road from SR 110 (south side of Maumee River) to the intersection of Riverview Avenue (previously SR 424) & Enterprise Avenue (north side of Maumee River). This alternative does not fully satisfy the Purpose & Need Elements of the project. The Benefits and Impacts / Issues include:

Benefits:

- Provides some benefits to 3 of the 4 Purpose & Need Elements and fully satisfies one element
- Provides linkage and access between existing, future, and planned development areas on both the north side and south sides of the river but does not have direct link to the US 6/24 Corridor
- Provides some benefit to the Community Elements, but not substantial benefits

Impacts / Issues:

- Impacts farmland on south side of the river
- Impacts to State Scenic River and requires various permits with USACE, Ohio EPA, and ODNR
- Property impacts, but no full takes anticipated

- More impacts to the environment
- Impacts a public park 4(f) site
- Impacts 100-yr. floodplain area
- Predicted usage (in attracting traffic) would be 56 percent less than Industrial Drive location
- The longest span alternative (length of bridge)
- No direct link to the US 6/24 & Industrial Drive Interchange
- High voltage power lines will have to be relocated
- Requires substantial upgrades to streets on the north side of the river

Updates to the traffic data and analyses; crash data; environmental screenings during this Feasibility Study along with previous study and findings; were used to compare the two Build Alternatives and No Build. **The Industrial Drive location is the recommended Preferred Alternative for a new river crossing.**

Next Steps

- 1) The results of the Feasibility Study including the recommended Preferred Alternative will be presented to the public through various media such as a press release, local City and County websites; and possibly a newsletter. The last public meeting for the project was held in February 2004. Given the amount of time that has passed, and the updated data/analyses that has been conducted, a public meeting will be held to update the public on the recommended Preferred Alternative and key Feasibility Study findings to solicit comments;
- 2) Public comments will be reviewed and considered with a summary added to the Feasibility Study document;
- 3) Preliminary & environmental engineering phases will begin on the preferred alternative to collect more detailed data and to refine the project design, scope, and potential impacts;
- 4) Public involvement including public meetings will continue throughout project development;
- 5) Upon completion of the preliminary engineering phase and NEPA process approval, the project will move into the detailed design phase following construction, pending available funding.

TABLE OF CONTENTS

SECTION:

PAGE NO.:

EXECUTIVE SUMMARY	ES-1
1.0 INTRODUCTION / BACKGROUND.....	1
1.1 PROJECT HISTORY	1
1.2 PURPOSE AND NEED	3
1.3 STUDY AREA	4
1.4 STUDY APPROACH & NEXT STEPS	8
2.0 ALTERNATIVES	9
2.1 ALTERNATIVES CONSIDERED FOR FURTHER ANALYSIS	12
2.2 EVALUATION PROCESS OF ALTERNATIVES.....	12
3.0 TRAFFIC ANALYSIS ASSESSMENT	13
3.1 DESCRIPTION OF STUDY AREA FOR TRAFFIC ANALYSIS	13
3.2 DATA COLLECTED	13
3.3 SAFETY/CRASH ANALYSIS	15
3.4 TRAFFIC VOLUME PROJECTIONS (OPENING DAY/DESIGN YEAR)	17
3.5 CAPACITY ANALYSES.....	19
3.6 TRAFFIC ANALYSIS SUMMARY	20
4.0 ROADWAY ASSESSMENT	22
4.1 EXISTING ROADWAY ASSESSMENT.....	22
4.2 COMMUNITY COSTS ASSOCIATED WITH A SR 108 (PERRY STREET) BRIDGE CLOSURE	22
4.3 ROADWAY RECOMMENDATIONS	22
4.4 CONCEPTUAL TYPICAL SECTION	23
4.5 CONCEPTUAL INTERSECTION LAYOUT	24
5.0 STRUCTURE ASSESSMENT	25
5.1 EXISTING STRUCTURES WITHIN VICINITY	25
5.2 PROPOSED STRUCTURE IMPROVEMENTS	25
6.0 PRELIMINARY GEOTECHNICAL ASSESSMENT	26
6.1 SUMMARY OF GEOLOGIC AND GEOTECHNICAL CONCERNS.....	26
7.0 RIGHT-OF-WAY ASSESSMENT.....	27
7.1 EXISTING RIGHT-OF-WAY DESCRIPTION AND ASSESSMENT.....	27
7.2 RIGHT-OF-WAY IMPACTS	27
8.0 UTILITY ASSESSMENT	28
8.1 EXISTING UTILITY DESCRIPTION AND ASSESSMENT.....	28
8.2 UTILITY IMPACTS	28
9.0 ENVIRONMENTAL ANALYSIS ASSESSMENT	29
10.0 PUBLIC INVOLVEMENT	32
10.1 STAKEHOLDER/PUBLIC MEETING ISSUES & COMMENTS	32
10.2 FUTURE PUBLIC INVOLVEMENT FOR THE PROJECT	33
11.0 ALTERNATIVES COMPARISON	34
11.1 COST SUMMARY.....	34
11.2 CONSTRUCTABILITY.....	34
11.3 ALTERNATIVES EVALUATION MATRIX.....	34

TABLE OF CONTENTS (Continued)

<u>SECTION:</u>	<u>PAGE NO.:</u>
12.0 RECOMMENDED PREFERRED ALTERNATIVE	37
12.1 CONCLUSION	37
12.2 IDENTIFICATION OF PRELIMINARY PREFERRED ALTERNATIVE	37
12.3 NEXT STEPS/SCHEDULE	38

FIGURES

FIGURE 1.1 ORIGINAL STUDY AREA	2
FIGURE 1.2 REVISED STUDY AREA.....	5
FIGURE 1.3 STUDY AREA & POTENTIAL BUILD ALTERNATIVE CORRIDORS	7
FIGURE 2.1 CONCEPTUAL BUILD ALTERNATIVES CORRIDORS.....	9
FIGURE 3.1 APPROXIMATE TRAFFIC DATA AREA	13
FIGURE 3.2 ADT DATA FROM ODOT (2011)	14
FIGURE 3.3 STATE AVERAGE CRASH RATES BY FUNCTIONAL CLASS FOR ROADWAYS.....	15
FIGURE 3.4 TRUCK ROUTES SUMMARY FOR CAMPBELL'S SITE WITH NEW US 24 OPEN	16
FIGURE 3.5 OPENING DAY & DESIGN YEAR TRAFFIC FOR BRIDGE ALTERNATIVES	18
FIGURE 3.6 LOCATION MAP	21
FIGURE 4.1 CONCEPTUAL BRIDGE TRANSVERSE SECTION	23
FIGURE 4.2 CONCEPTUAL INDUSTRIAL DRIVE RIVER CROSSING	24
FIGURE 9.1 RED FLAG SUMMARY MAP UPDATE (JULY 2013)	31

TABLES

TABLE 3.1 CRASH DATA SUMMARY FOR KEY INTERSECTIONS & SECTIONS (2010-2012).....	15
TABLE 3.2 NEW MAUMEE RIVER CROSSING VICINITY ROADWAYS 2015 & 2035 ODOT TRAFFIC PROJECTIONS ...	17
TABLE 3.3 NO BUILD ALTERNATIVE LEVELS OF SERVICE & DELAYS	19
TABLE 3.4 INDUSTRIAL DR. ALTERNATIVE LEVELS OF SERVICE & DELAY	19
TABLE 3.5 ENTERPRISE AVE. (ROAD 12) LEVELS OF SERVICE & DELAY	19
TABLE 3.6 TRUCK AND PASSENGER CAR TRAFFIC DATA	20
TABLE 11.1 ALTERNATIVES EVALUATION MATRIX.....	36

APPENDICES

APPENDIX A	FINAL PLANNING STUDY REPORT
APPENDIX B	TRAFFIC DATA, CRASH DATA, & CAPACITY REPORTS
APPENDIX C	UPDATED ALTERNATIVES EVALUATION MATRIX
APPENDIX D	UPDATED RED FLAG SUMMARY MAP
APPENDIX E	COST ESTIMATE

1.0 INTRODUCTION / BACKGROUND

1.1 Project History

The Henry County New Maumee River Bridge project was initiated in the year 2002 with local governments evaluating the needs for developing a second Maumee River bridge crossing within the City of Napoleon population/industrial areas to provide improved connectivity within the area. The Maumee River physically separates the key population areas, commercial/retail services, and safety services located on the north side of the river from the major employment area and smaller population/commercial areas located on the south side of the river. Several initial concerns were that one river crossing will not accommodate future traffic conditions; one crossing is contributing to crashes and truck traffic on city street network; desire to improve and connect access to development areas on both north and south sides of the Maumee; and to a second river crossing that would service the community if the SR108 bridge were ever closed for emergency or other unforeseen reasons. The key local stakeholders in the early-on coordination included the Henry County Engineer; City of Napoleon; Henry County Commissioners; Napoleon City Council; Napoleon Fire/EMS Services; Napoleon Police Department; Henry County Sheriff; Township Officials; School Districts; Chamber of Commerce; Henry County Planning Commission; Campbell Soup Company; Businesses within vicinity; and Henry County CIC.

Once local officials developed initial thoughts, they approached State officials and in March 2003 the project had some State/Federal funds provided for planning stages and it officially became the HEN-New Maumee River Bridge project. The initial project was developed using the ODOT 14-Step Project Development Process (PDP) as a Major Project. There were initial stakeholders meetings; environmental screenings; various studies; and a public involvement meeting that was held in February 2004. The public meeting presented initial analyses and environmental screenings of the four (4) conceptual build alternatives and the no build alternative for input by the public. The results of the public meeting showed the majority of support (89.5%) was for two of the build alternatives including:

1. New river crossing from **extending Industrial Drive southward across the Maumee River** to connect with SR 110 on the south side of the river (56% preferred this alternative);
2. New river crossing from **extending Enterprise Avenue (Road 12) southward across the Maumee River** to connect with SR 110 on the south side of the river (33.5% preferred this alternative)

The work culminated in the *Final Planning Study Report* in October 2009, which summarized the analyses, screenings, and input conducted to that point. The document recommended that only two of the four build alternatives be considered for further analyses/feasibility. These are the same two alternatives that are listed above that the public overwhelmingly considered the two best options. On May 10, 2010, ODOT officially approved the *Final Planning Study Report* and it was indicated that Steps 1 through 4 of the old PDP was completed for the project. The project had no committed funding after the approval of Steps 1 through 4, so no additional progress occurred from the middle of 2009 through the end of 2011.

Original Study

A 2003 Study for the project encompassed the Maumee River Corridor from Florida, Ohio to US 6, east of the City of Napoleon. The study was to review the area between the existing SR 108 (Perry Street) bridge in Downtown Napoleon and the first adjacent bridge located upstream (Road 17C bridge in Florida, Ohio) and downstream (US 6 bridge located east of Napoleon). Local officials from Henry County and the City of Napoleon, in consultation with state and federal officials and agencies discussed the Purpose & Need for a new river crossing and focused the study on the population and industrial/commercial areas of the City of

Napoleon. The revised study area provided a new river crossing within a mile or so upstream or downstream from the existing SR 108 (Perry Street) bridge in Downtown Napoleon.

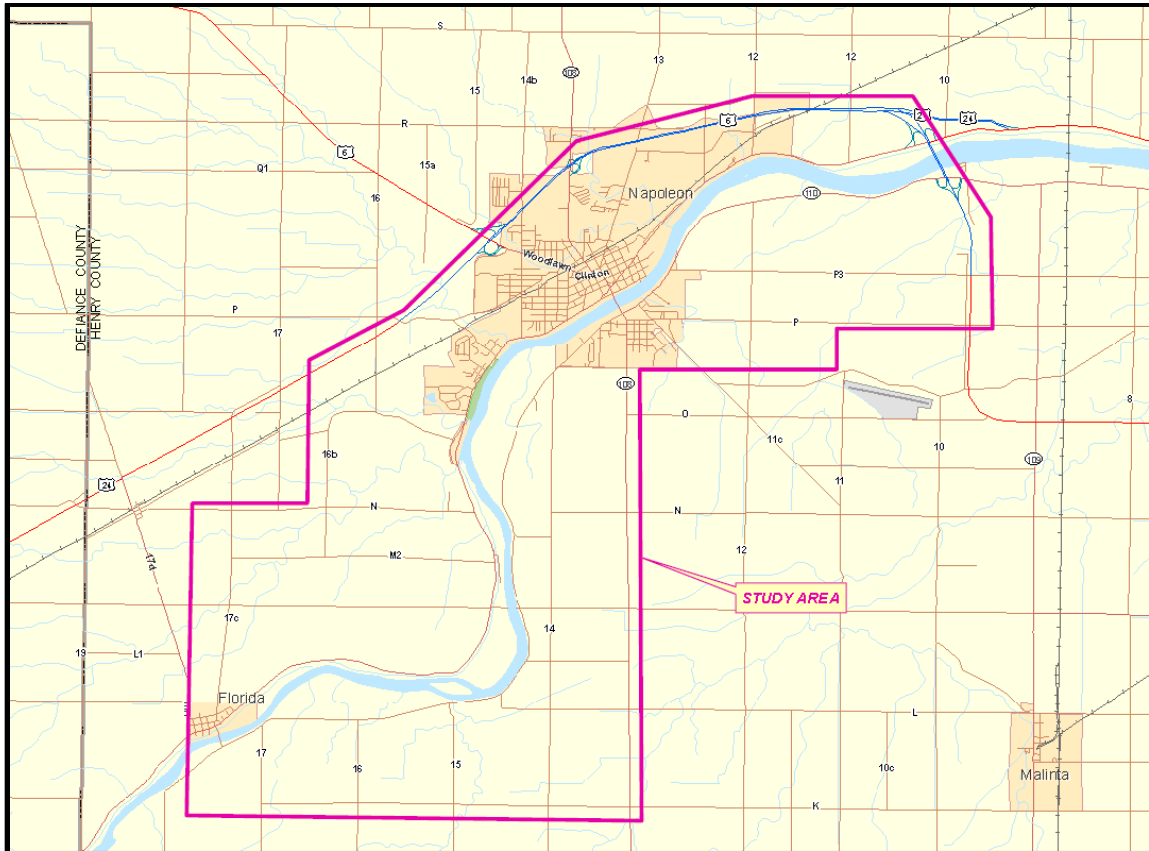


Figure 1.1 Original Study Area

The Henry County New Maumee River Bridge project (HEN-New Maumee River Bridge PID 22984) was initiated under the previous ODOT Project Development Process (PDP) as a Major Project. The *Final Planning Study Report* was approved in May of 2010 completing Steps 1 through 4 of the ODOT Major Project PDP.

According to the *Final Planning Study Report*, there were a total of two (2) build alternatives that better satisfied the project's Purpose & Need out of the original four (4) build alternatives evaluated (along with the No Build).

Beginning in 2011, this project transitioned to the ODOT's updated PDP. The streamlined project development process allows for flexibility in determining a Preferred Alternative.

This Feasibility Study built upon the results of the 2009 Final Planning Study to accomplish several tasks:

- 1) Reviewed and updated the technical analysis- traffic, safety, geometries, etc. to bring everything up to date with the most current data and information.
- 2) Reviewed and updated the corridor's Red Flags or fatal flaws through use of secondary source information (GIS, literature search, field review, etc.).
- 3) Built upon the information contained in the 2009 study and identified critical issues associated with the project's study area (i.e. utilities, environmental elements such as streams and wetland impacts, property impacts, etc.) through additional field review and secondary source research.

- 4) Assessed each of the conceptual alternatives from the 2009 study, utilizing the updated data, information and analyses outlined above, against each other and the No-Build Alternative. This was done by using the purpose and need elements for the project to develop evaluation criteria and establish measures of effectiveness (i.e. how each of the evaluation criteria was measured). The results of the evaluations for each of the conceptual alternatives were then presented in a matrix. Rationale was provided as to why some alternatives were eliminated and which alternative is being recommended as the preliminary Preferred Alternative.
- 5) The preliminary Preferred Alternative was presented to key stakeholders and public officials in an alternatives evaluation workshop on January 11, 2013.

Next Steps

- 1) The results of the Feasibility Study including the recommended Preferred Alternative will be presented to the public through various media such as a press release, local City and County websites; and possibly a newsletter. The last public meeting for the project was held in February 2004. Given the amount of time that has passed, and the updated data/analyses that has been conducted, a public meeting will be held to update the public on the recommended Preferred Alternative and key Feasibility Study findings to solicit comments;
- 2) Public comments will be reviewed and considered with a summary added to the Feasibility Study document;
- 3) Preliminary & environmental engineering phases will begin on the preferred alternative to collect more detailed data and to refine the project design, scope, and potential impacts;
- 4) Public involvement including public meetings will continue throughout project development;
- 5) Upon completion of the preliminary engineering phase and NEPA process approval, the project will move into the detailed design phase following construction, pending available funding.

1.2 Purpose and Need

The Purpose & Need Statement for the project established the need elements for the transportation solution in the study area. For this project, the transportation solution for the study area should:

1. Improve traffic operations on the SR 108 bridge and corridor;
2. Improve safety by decreasing crashes in the corridor;
3. Improve access to future and planned development areas on both sides of the Maumee River
4. Support and ensure consistency with the local Comprehensive Plan.

During the Original Planning Study, City and County officials were involved in establishing the intended purpose for the project. From this input, the following four issues were identified as major community goals for the project:

1. Provide a direct link between existing industrial development areas on both sides of the Maumee River;
2. Improve access to future development areas, consistent with the Comprehensive Plan;
3. Improve connectivity within the community;
4. Reduce the traffic demands on downtown roadways, decrease congestion and enhance public safety

In the originally approved *Planning Study Report* (see *Appendix A*), the alternatives were evaluated on various elements in relation to the Purpose and Need. These elements are highlighted below along with a brief summary of findings and analyses of each:

Linkage between existing industrial development areas:

The findings indicated that the two alternatives that provided substantial benefit in relation to this need element were both the Industrial Drive Corridor and the Enterprise Avenue (Road 12) Corridor. The other alternatives (including the No Build) provide some or no benefit to improving this need element. The Industrial Drive Corridor was found to provide the best linkage to the industrial areas as it passes directly into the heart of Napoleon's Industrial Area on the north side of the Maumee River and connects directly to the US6/US24 interchange at Industrial Drive. This corridor also connects to the Campbell's manufacturing facility and surrounding spin-off industries.

Connectivity to highway system:

A review of highway system access revealed the two alternatives that provided substantial benefit in relation to this need element were both the Industrial Drive Corridor and the Enterprise Avenue (Road 12) Corridor. The other alternatives (including the No Build) provide some or no benefit to improving connections to the highway network. The Industrial Drive Corridor was found to provide the best connection to the major US6/US24 arterials via use of an existing interchange at the US6/US24 bypass. The Enterprise Avenue Corridor does not provide such a direct link as traffic would need to travel on either Riverview Avenue or Independence Drive to access the interchange.

Access to future development areas consistent with the Comprehensive Plan:

A review of the Comprehensive Plan of future development areas revealed the two alternatives that provided substantial benefit in relation to this need element were both the Industrial Drive Corridor and the Enterprise Avenue (Road 12) Corridor. The other alternatives (including the No Build) provide some or no benefit to improving access to future development areas. The Industrial Drive Corridor was found to provide the most direct link between the future development areas located on both the north and south sides of the Maumee River, and was listed in the Comprehensive Plan as the preferred new river crossing location (see graphic on page 42 of *Appendix A*).

Community Connectivity in relation to emergency responses, access to local hospital, and school transportation needs:

A review of community connectivity items highway system access revealed that a bridge alternative west of the existing SR108 bridge closer to Downtown Napoleon would provide better connectivity for emergency vehicle responses; the Industrial Drive and Enterprise Avenue would provide the best connectivity to the local hospital; and in regards to connectivity for school transportation would be benefited more by a new river crossing located just west or east of the existing SR108 bridge as it would connect the more residential areas of the city.

Downtown traffic congestion and public safety concerns:

The final Purpose and Need element evaluated involved traffic operations and safety concerns (crash frequencies) and how each alternative bridge location would improve these concerns. A review of congestion and crash occurrences revealed the two alternatives that provided substantial benefit in relation to alleviating these concerns were both the Industrial Drive Corridor and the Enterprise Avenue (Road 12) Corridor. The other alternatives (including the No Build) provide some or no benefit to improving connections to the highway network. Alleviating congestion and crash frequencies of the Downtown and surrounding roadway network would best be served by the Industrial Drive Corridor as it was found to capture the most potential truck traffic and commuter traffic for the Campbell's Soup industrial area as well as the existing industrial park on the north side of the river.

In summary, these need elements resulted in the *Planning Study Report* recommending that both the Industrial Drive and Enterprise Avenue build alternatives be further evaluated along with the No Build. This further analysis was conducted herein as part of this Feasibility Study.

1.3 Study Area

The study area for the New Maumee River Crossing project has evolved over the life of this project (which began with some initial local planning in late 2002). The original study area was refined through engineering and environmental studies as well as meetings with various local, state and federal officials/agencies into a smaller, targeted study area.

Revised Study Area

As mentioned previously, several meetings/discussions occurred during the beginning of the project in March 2003 with officials from Henry County and the City of Napoleon along with other key stakeholders such as ODOT, FHWA, and various agencies. The purpose of these initial meetings were to narrow the focus of the original study area based on preliminary reviews of the Purpose & Need for the project; potential environmental and social/economic impacts; and other issues. The result of these initial meetings led to a revised study area in which several potential new logical river crossing alternatives locations were developed within the study area. The study area map provided call outs of potential Red Flag locations and issues to be studied in evaluating the four (4) conceptual build alternatives (see *Figure 1.2*), as well as the No Build condition. These corridors were evaluated for environmental and social impacts, as well as their ability to satisfy the project's Purpose & Need. These corridors were presented to the public at a meeting, and the study area and corridors were used for the *Final Planning Study Report* that was produced for the project (in the previous ODOT PDP). Upon completion of the public involvement meeting and the Final Planning Study, both the Industrial Drive (Alt. 2) and Enterprise Avenue/Road 12 (Alt. 3), along with the No-Build Alternative were recommended for further study so to develop a preliminary preferred alternative.

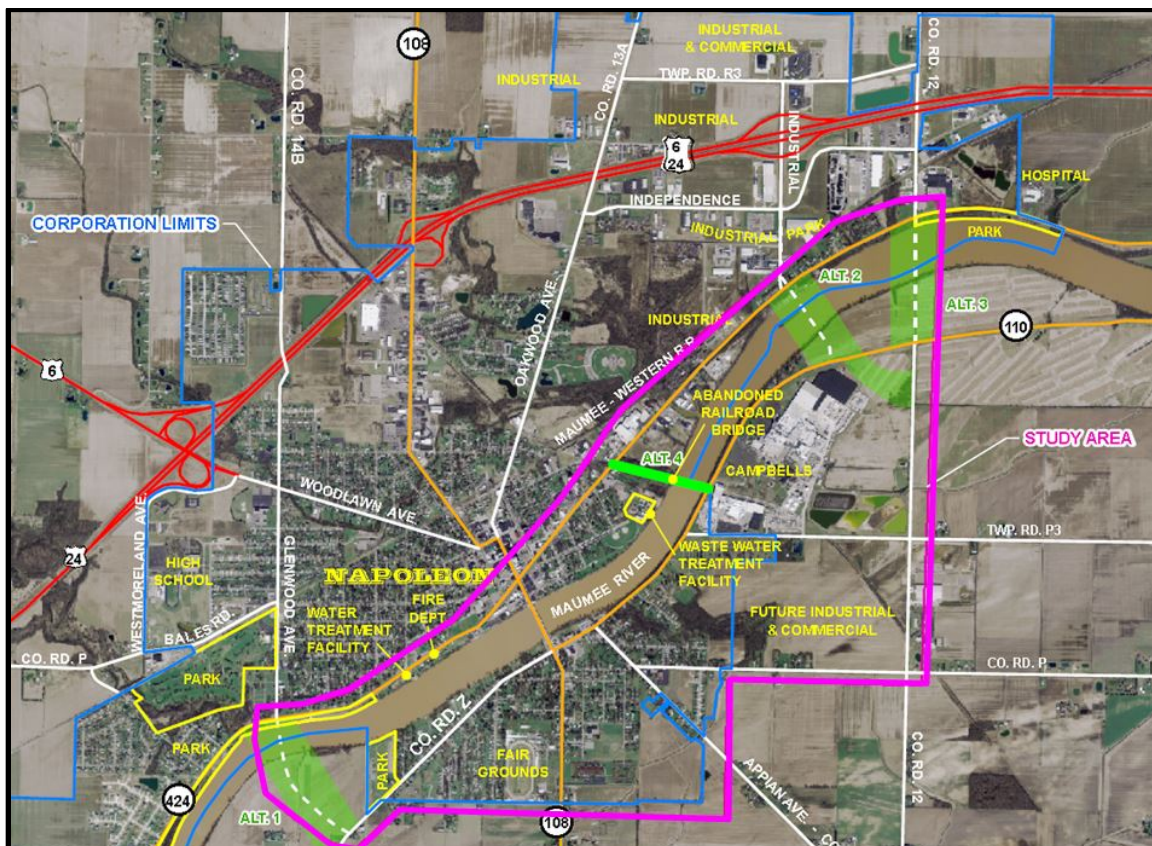


Figure 1.2 Revised Study Area

Updated Data & Analyses of Conceptual Build Alternatives and Comparison

Once the *Planning Study Report* was finalized and it was documented that the two conceptual build alternatives recommended for further analyses/consideration were the Industrial Drive and Enterprise Avenue/Road 12 corridors, along with the No-Build, an update and further screenings were conducted as part of this *Feasibility Study*. The study area and corridors that were the focus of this data/analyses update are shown in *Figure 1.3* (Study Area and Potential Build Alternative Corridors). During this feasibility study process, the two build corridors had updated environmental data searches and field reviews conducted under new ODOT guidelines and procedures. The key evaluation elements updated included cultural resources; ecological resources; environmental site assessment screenings; land use changes; traffic data/analyses; crash data/analyses and capacity analyses. These updated screenings and analyses were conducted to assist in identifying a recommended preferred alternative to be moved onto the preliminary and environmental engineering phase.

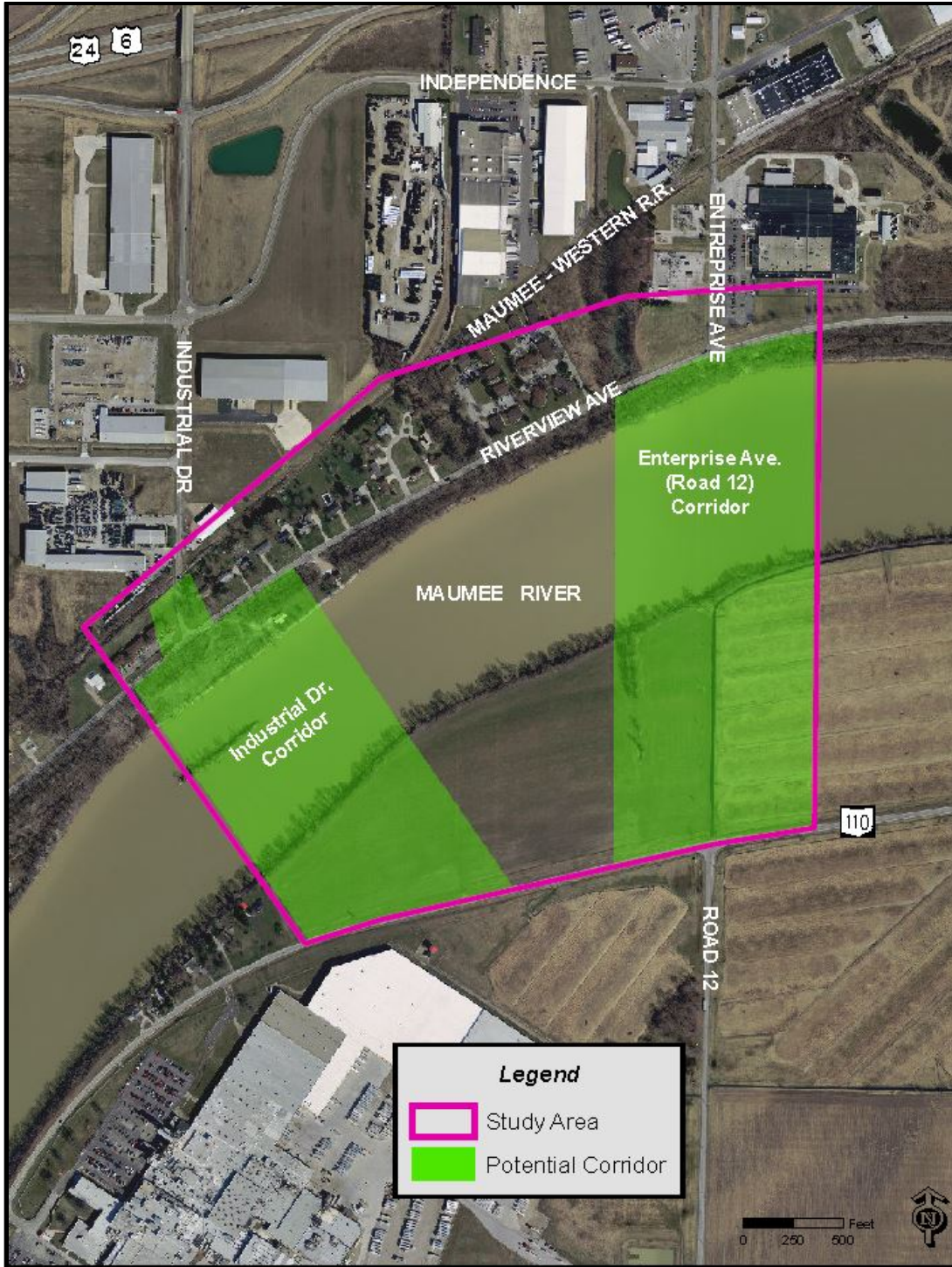


Figure 1.3 Study Area & Potential Build Alternative Corridors

1.4 Study Approach & Next Steps

In 2012, the Henry County Transportation Improvement District (TID) was formed to promote priority transportation improvements within Henry County. The first priority project to be pursued was to the HEN-New Maumee River Bridge. Funding was coordinated for this effort and made available in the last half of 2012. The newly formed Henry County TID assumed responsibility for managing the project and re-engaging with ODOT to decide how best to incorporate the project into ODOT's updated PDP.

A meeting was held with ODOT in August 2012, and it was conveyed to the Henry County TID that the most appropriate and efficient way to move forward was to integrate the previously approved *Final Planning Study Report* into the new ODOT streamlined PDP. The process outlined to accomplish this was the following:

1. **Feasibility Study** – Prepare a Feasibility Study with updated environmental screenings and traffic/data analyses for the Industrial Drive Corridor, Enterprise Avenue/Road 12 Corridor, and the No-Build Alternative, all of which were recommended for further evaluations from the previously approved *Final Planning Study Report*. It was also recommended to update the Red Flag Summary mapping with the new environmental screenings results. The Feasibility Study would recommend a preferred alternative call based on the updated data & analyses if possible;
2. **Presentation of Preferred Alternative to Public** – The results of the Feasibility Study including the recommended Preferred Alternative will be presented to the public and a comments period provided. This process will involve a combination of press release; City of Napoleon/Henry County website postings; a newsletter to key stakeholders and a public meeting.
3. **Documentation** – A summary of all will be added to the Feasibility Study document.
4. **Preliminary & Environmental Engineering Phase** – This next step will involve initiating more detailed engineering and environmental analyses of the Preferred Alternative to refine the project scope, conceptual alignment, environmental impacts, and project costs. A public involvement meeting will be conducted to present analyses and impacts of the Preferred Alternative and to solicit public comment. Once the preliminary & environmental phase is completed along with NEPA approval, the project will move into the detailed design and construction phases, pending available project funding.

2.0 ALTERNATIVES

The *Final Planning Study Report* for this project included a discussion of all the conceptual solutions that had been considered for the project. Five conceptual solutions were considered and are shown in *Figure 2.1*. Four of these involved the construction of a new bridge over the Maumee River at the following general locations:

- Corridor 1 - West of SR 108 Bridge to Western Corporation Limits
- Corridor 2 - East of SR 108 Bridge to West of Road 12
- Corridor 3 - West of Road 12 to US 6 Bridge over Maumee River
- Re-use of Abandoned Railroad Bridge north of the Campbell's Soup plant

A fifth conceptual solution, was the No-Build alternative that considers various measures, such as the addition of turn lanes, improving signal coordination and the implementation of access management strategies to address some or all of the transportation-related issues that exist as a result of having only one river crossing.

Each transportation solution/concept was evaluated based on its ability to meet the Purpose & Need for the project, including:

- Improve traffic operations in the corridor;
- Potential to decrease crash occurrences;
- Improve access to planned development areas;
- Consistency with local comprehensive plan

In addition, secondary items considered for each alternative included:

- Its ability to improve access between existing industrial development areas;
- Its connectivity to the existing highway system;
- Ability to reduce traffic congestion and enhance public safety in the corridor;
- Impacts to parks, farmland, cultural resources, endangered species, ecological resources and flood plains are also evaluated for each transportation solution/concept based on preliminary screenings.

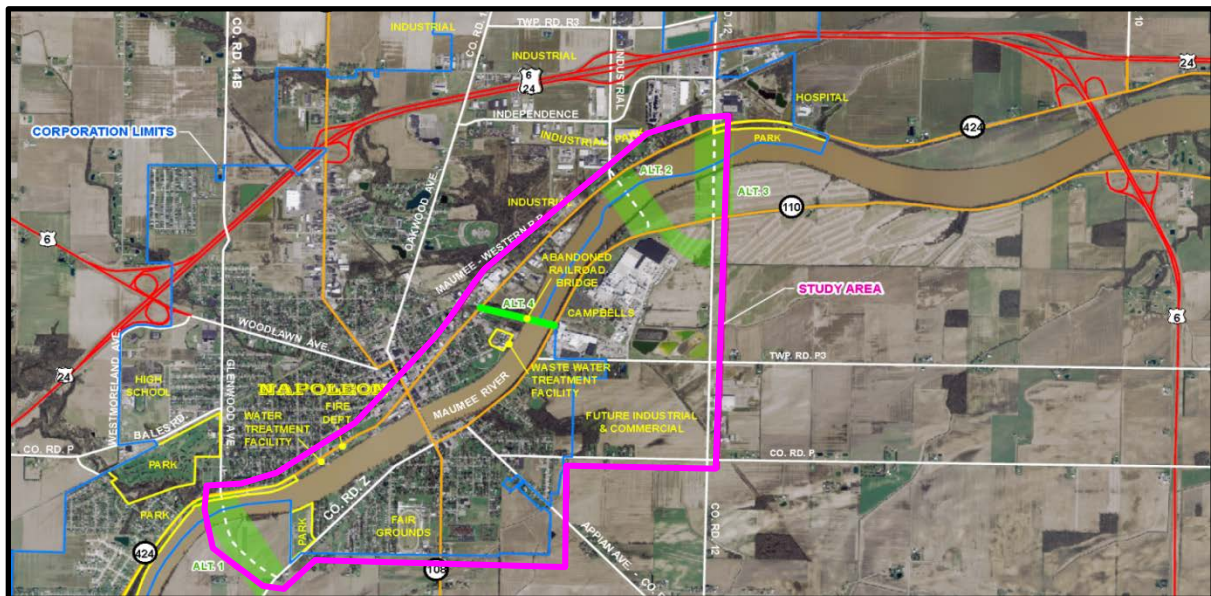


Figure 2.1 Conceptual Build Alternatives Corridors

Several additional Conceptual Alternative Solutions were also considered but then dropped from further consideration based on their inability to meet the elements of the Purpose and Need:

- **Rail (Freight)** – Development and use of rail to transport goods between the two industrial areas in the City of Napoleon was considered but then dismissed from further consideration, as it would satisfy only one of the elements of the project Purpose and Need. The only benefit would be a possible reduction of trucks from the Campbell Soup facility to the storage facilities on the north side of the river. However, this conceptual alternative solution would not reduce any other traffic such as employee commuter trips and trips associated with the schools. This option would require the construction of new rail lines to connect facilities on the south side of the river with those on the north side, and require either re-habilitating the abandoned rail bridge or constructing a new river crossing. Addition of a rail line would not enhance emergency response times in the event that the SR 108 Bridge was to be closed during an emergency, nor would it increase community connectivity. As a result, if this conceptual alternative were implemented, other measures would have to be considered to address these issues.
- **Transit (Bus or Light Rail)** – The introduction of bus or light rail to the community was also considered, but dismissed as it would minimally satisfy only one element of the Purpose and Need. This alternative would also require major investment in either buses or light rail equipment and tracks. These services may reduce a minimal amount of local trips to the major employer on the south side of the river (Campbell Soup), but many of the employees come from areas outside of Napoleon who would still need to drive personal vehicles to commute to and from work. This option would also entail an annual cost to operate buses or trains, staff to run and operate such services, all of which would likely not be supported solely by fares as ridership would be limited based on the small population of the City.
- **Ferry Service** – This concept would minimally meet possibly one or two of the elements of the Purpose and Need, and was therefore dismissed for further consideration. This concept would require the construction of roads to a determined crossing location along with storage for vehicles waiting on the ferry service. This service may eliminate some traffic on the SR 108 Bridge and provide a connection between industrial locations, however potential usage would be limited as fees would be associated with the crossing, which would encourage vehicles to keep using the free river crossing that also entails not waiting on a ferry. This service would also be seasonal as it would likely not be able to operate in winter months when the river freezes and also when the river levels drop low enough during dry spells that may not allow transport. Annual maintenance costs, purchases of ferry boats, and staffing would create on-going costs that would not likely be supported solely on user fees.
- **Access Management** – This concept was dismissed as it would only address only one element of the Purpose and Need, which would be to increase safety on the SR 108 corridor. Access management would also be difficult to implement, as many of the drives located on the SR 108 corridor would have to remain, as there is no alternative access location to parcels on the corridor due to no adjacent public roadway access to parcels and that state law requires at least one access to a public roadway per parcel. This option would therefore have only limited locations where drives could be reduced and would not reduce traffic on the corridor.”

The following is a discussion of reasons for determining whether a corridor is feasible or not feasible:

- **Corridor 1 (West of SR 108 Bridge, South of Glenwood Avenue)** was eliminated based on its poor evaluation in the matrix and its inability to meet the project Purpose and Need. It would provide little or no benefit over the current conditions. A bridge constructed at this location would have considerable impacts to known cultural resources and park property.

- **Corridor 2 (East of SR 108 Bridge, South of Industrial Drive)** ranked high on the majority of Purpose and Need elements. This corridor would provide a direct link between existing industrial development areas, provide an efficient link with the existing highway system to the north of the city, improve access to future development areas consistent with the Comprehensive Plan, reduce downtown traffic congestion and enhance public safety. This corridor would also increase community connectivity, and provide better access for residents south of the river to emergency facilities north of the river, and enhance school transportation in the city.
- **Corridor 3 (East of SR 108, South of Road 12)** also ranked relatively high on several of the factors that were used to evaluate each alternative. While ranking lower than Corridor 2 on several important factors, this corridor would provide an efficient link between existing industrial development areas, improve access between future development areas that are consistent with the comprehensive master plan and provide a good alternative emergency service route between north and south sides of the river. It would also decrease demand on the existing SR 108 Bridge, thereby reducing downtown truck traffic congestion and enhance public safety. It does not provide an as good a route for school buses as do Corridors 1 and 2, due to its location on the far east side of the city.
- **Re-use of the abandoned railroad bridge** is ranked as the third best corridor when compared with the other corridors that have been considered. However, the use of the existing bridge piers in this corridor may be cost-prohibitive due to existing structural deficiencies. The existing railroad bridge is a four-span steel truss structure on concrete piers that was constructed in early 1900. During an earlier investigation, the piers were found to contain vertical cracks that extended into the full depth of the pier stems. Compressive tests of concrete cores taken from the piers also indicated weakness in the outer layers of the pier concrete. In 1994 a Level II underwater inspection of the pier foundations revealed that the overall condition of the piers below the water level was fair, with some scour and undercutting present. Earlier remedial action had been performed by driving protective sheet piling to mitigate damage that had resulted from scour at the river piers. The bridge also carries an asbestos covered waterline on its deck. Based on these observations, the existing piers may not have the longevity required to support a new structure for its normal design life. In addition, construction costs for such a project could be excessive, requiring the dismantling of the existing steel truss and bridge deck, replacement or retrofitting of the existing piers, and the lowering of the elevated rail bed in the vicinity of Riverview Ave. (previously SR 424).

In addition to the above structural uncertainties, this corridor would provide moderate improvements over the existing condition with respect to providing a direct link between industrial development areas, increasing community connectivity, providing more efficient routes for emergency services, schools and access developed areas to assist in reducing downtown congestion and enhancing public safety. This alternative provides only marginal improvements over the existing condition with respect to its connection to the US6/US24 bypass and providing improved access to development areas consistent with the Comprehensive Plan. As such, it is recommended that this alternative be dropped from further consideration as a feasible alternative.

- **No-build Alternative** - The No-build Alternative will continue to be evaluated, along with Feasible Corridors 2 and 3, until the Preferred Alternative is selected for this project. However, this alternative fails to provide a link between existing industrial development areas, does not enhance connectivity to the surrounding highway system, fails to increase community connectivity and does not improve access to future development areas consistent with the Comprehensive Plan. With time, this alternative will result in an increase in downtown traffic congestion and decrease the ability of emergency services and the schools to efficiently access all areas of the community. Efficient access to the community hospital from areas south of the river will also decline under this alternative.

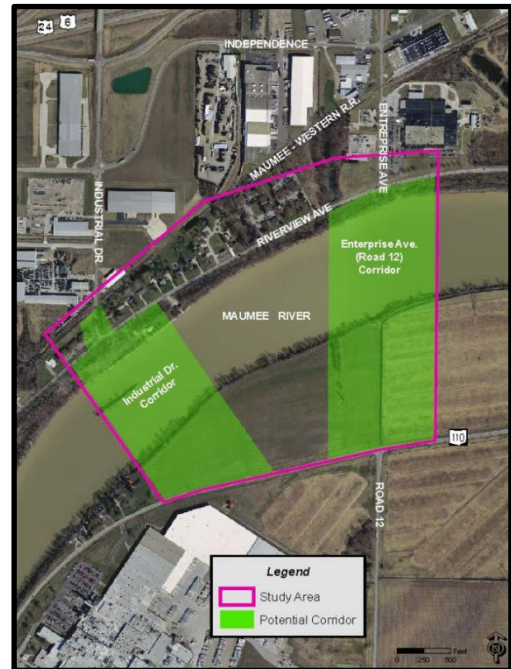
It is therefore recommended that Corridor 1 – West of SR 108 Bridge, South of Glenwood and the reuse of the existing railroad bridge be eliminated based on the evaluation criteria from the Purpose and Need. Corridor 2 best meets the Purpose and Need while having less potential for impacts over the Glenwood Road Alternative. Corridor 3 also appears to meet several key elements of the Purpose and Need. As such, both corridors should be carried forward to the next phase of the project. The No-build Alternative, while failing to meet the Purpose and Need for the project, will also be evaluated in accordance with NEPA requirements.

2.1 Alternatives Considered for Further Analysis

Based upon the ability to meet the project purpose and need, it is recommended that the Industrial Drive Corridor (formerly referred to as “Corridor 2”); Enterprise Avenue/Road 12 Corridor (formerly referred to as “Corridor 3”); as well as the No-Build Alternative be further evaluated with updated data/analyses beyond the previously approved *Planning Study Report*. This reduction in the number of corridors being recommended for further detailed analyses was made so as to concentrate on the two corridors that best meet the Purpose and Need for the project and are therefore are the most feasible.

This Feasibility Study will serve to document previous analyses as well as to update applicable environmental screenings, traffic & crash data/analyses, and current environmental process guidelines for developing an updated alternatives evaluation matrix for the following alternatives (as shown in graphic):

- Industrial Drive Corridor
- Enterprise Avenue/Road 12 Corridor
- No-Build Alternative



2.2 Evaluation Process of Alternatives

This Feasibility Study has documented previous analyses and is also updating environmental screenings/data and the traffic & crash data for the corridor. This will provide more detailed review of the various comparison elements of the two build corridors against the No-Build alternative. The results will be incorporated into an alternatives evaluation matrix for the No Build, Industrial Drive Corridor, and Enterprise Avenue Corridor. The Feasibility Study also serves as a transitional document for this project so to move it into the new ODOT Project Development Process (PDP).

In Sections 3.0 through 11.0 herein, the three alternatives will be reviewed for various assessment elements including Traffic Analysis; Roadway; Structures; Preliminary Geotechnical; Right-of-Way; Utilities; Environmental Analysis; Public Involvement; and an Alternatives Comparison that will include an updated Alternatives Comparison Matrix. Finally, in Section 12.0, a preferred alternative will be recommended based on the evaluation of the elements outlined above.

3.0 TRAFFIC ANALYSIS ASSESSMENT

3.1 Description of Study Area for Traffic Analysis

The area studied involved the key major roadway facilities (primarily State and Federal routes) around the vicinity of Napoleon. These roadways included US 6; US 24; SR 108; SR 110; SR 424 (now Riverview Ave.) and SR 109. The volumes on these roadways in the corridor from just west of Napoleon to just east of Napoleon (near SR 109 Bridge) on both sides of the Maumee River were reviewed for total and truck average daily traffic (ADT) volumes. See graphic below for approximate traffic data area that was reviewed.

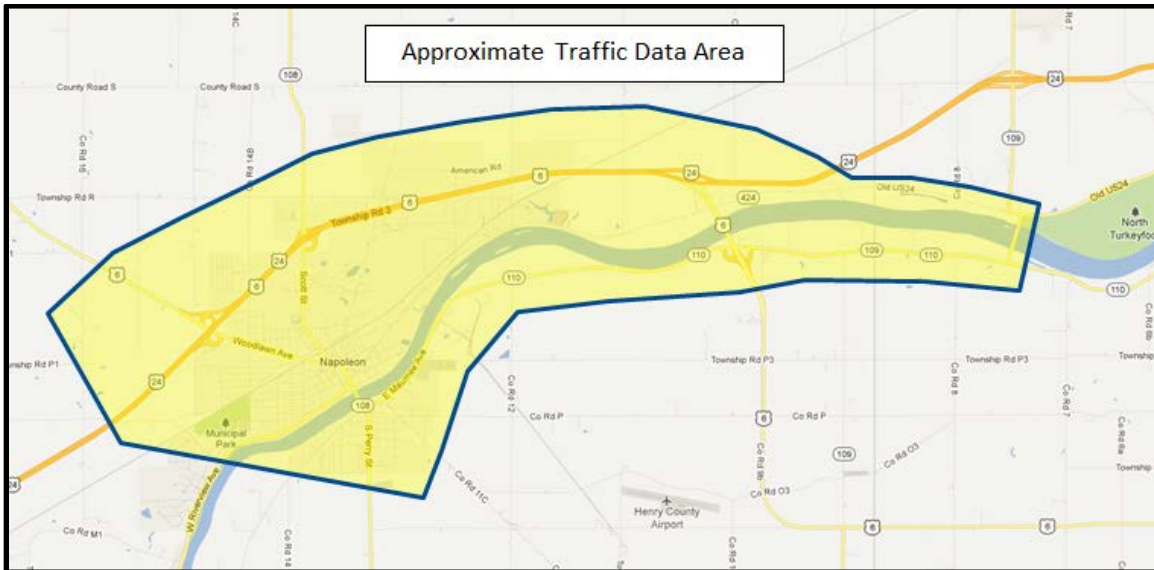


Figure 3.1 Approximate Traffic Data Area

3.2 Data Collected

During the initial phased of the original ODOT Project Development Process (Steps 1-4), traffic data was collected from several resources. This included counts provided directly from ODOT; traffic counts conducted at key intersections; and an Origin-Destination Study that was conducted in 2003 on the Perry Street (SR 108) Bridge to evaluate traffic patterns of those utilizing the bridge in Downtown Napoleon. ODOT provided updated traffic in 2009 just before the planning study report was finalized. The traffic data from the *Final Planning Study Report* can be seen on page III-12 of the previous report in *Appendix A*.

This Feasibility Study has updated the current traffic data via use of online data from ODOT's Traffic Survey Reports (2011), as well as data that was received directly from ODOT District Two (see *Appendix B*). The updated 2011 Average Daily Traffic (ADT) can be viewed herein on *Figure 3.2*. Once this project moves into the next phase of preliminary and environmental engineering, there will be certified traffic developed for the preferred alternative that will be reviewed and approved by ODOT.



Figure 3.2 ADT Data from ODOT (2011)

3.3 Safety/Crash Analysis

Crash data for the three most recent years available were obtained from the GIS Crash Analysis Tool (GCAT) on ODOT's website. This provides a summary of the existing crashes at the intersections and corridors that are currently closely associated with the existing single bridge crossing of SR108 over the Maumee River. The table below shows the data that was collected from the GCAT.

Table 3.1 Crash Data Summary for Key Intersections & Sections (2010-2012)

Primary Intersections			Key Roadway Sections				
Riverview Ave. & SR 108 (Perry St.)			SR 108 from Clinton St. to S. Corp. Limit				
Year	Crashes	3-Year Rate	Year	Crashes	3-Year Rate		
2010	4	N/A	2010	32	N/A		
2011	3	N/A	2011	27	N/A		
2012	2	N/A	2012	19	N/A		
Total	9	0.56 MEV	Total	78	7.14 MVM		
SR 110 (Maumee Ave.) & SR 108 (Perry St.)			Riverview Ave. from Perry St. to Road 12				
Year	Crashes	3-Year Rate	Year	Crashes	3-Year Rate		
2010	9	N/A	2010	8	N/A		
2011	9	N/A	2011	3	N/A		
2012	6	N/A	2012	11	N/A		
Total	24	1.63 MEV	Total	22	4.02 MVM		
MEV indicates average number of crashes per million vehicles entering the intersection. MVM indicates average number of crashes per million vehicle miles traveled through the section of roadway.			SR 110 from SR 108 (Perry St.) to Road 12				
			Year	Crashes	3-Year Rate		
			2010	5	N/A		
			2011	3	N/A		
			2012	4	N/A		
			Total	12	0.91 MVM		

The crash data revealed one of the intersections experiencing frequent crashes (24) is the SR110 and SR108 location on the south side of the river, where all traffic to/from both sides of the river must pass through, which creates congestion during peak hours associated with Campbell's Soup Plant and local school traffic. In addition, the section of SR108 (Perry St.) from downtown Napoleon south to the southern corporation limits of Napoleon has a high crash rate of 7.14 crashes per MVM and the section of Riverview Avenue from SR108 (Perry St.) east to Enterprise Avenue (Road 12) has a rate of 4.02 crashes per MVM. See *Appendix B* for rate calculations. Both of these section rates are well above the most recent available three year base crash rate of 1.40 crashes per MVM. These higher rates indicate a need to reduce traffic and truck traffic on these corridors, which are primarily associated with traffic to/from businesses and the Campbell Soup Facility.

	Tot Miles	Rate	Density
1 - Rural Interstate	553.85	0.40	5.14
2 - Rural Other Prin Arterial	1954.92	0.65	2.10
6 - Rural Minor Arterial	2617.99	1.04	1.69
7 - Rural Major Collector	7901.02	1.33	1.06
8 - Rural Minor Collector	1102.47	1.64	0.47
9 - Rural Local	2.33	0.99	0.29
11 - Urban Interstate	774.4	0.65	17.87
12 - Urban Other Frwy/Exway	475.57	0.61	6.99
14 - Urban Other Prin Arterial	2027.13	1.45	7.51
16 - Urban Minor Arterial	1326.27	1.40	4.60
17 - Urban Collector	377.88	1.10	2.01

Figure 3.3 State Average Crash Rates by Functional Class for Roadways

In late 2012, the US 24 corridor from Fort Wayne, IN to Maumee, OH was opened as a full four-lane highway which will serve as a major travel and shipping corridor. One change in access that impacts the Napoleon area is the elimination of the at-grade intersection between US 24 and Township Road 10 (TR-10), just east of the US 6/US 24 interchange. This change now makes it necessary for westbound trucks on US 24 destined for the Campbell's Soup facilities to exit at the SR 108 (Scott Street) interchange instead of accessing southbound US 6 via the previous at-grade intersection of TR-10 (see *Figure 3.4* below). Exiting at the SR 108 interchange now requires the trucks to travel through the downtown area to cross the Maumee River. It was estimated this will cause an estimated increase of 1,440 vehicles, of which 220 are trucks along the SR 108 corridor, thereby increasing congestion in the downtown area of the city.

A transportation solution is needed to reduce downtown traffic conflicts/congestion and reduce traffic volumes through high crash segments of SR 108 (as noted in the crash data above), as well as additional downtown streets, and the existing SR 108 (Perry Street) bridge crossing. The preferred solution would ideally utilize the most direct route from US 24 southward to SR 110 as this would provide the most efficient truck route for eastbound and westbound trucks on the new US 24 corridor. Extending the Industrial Drive roadway across the Maumee River to SR110 from its current terminus into Riverview Avenue would allow for direct access to the US 6/US 24 interchange at Industrial Drive, and thereby connect the industrial/warehouse areas on the north side of the river with the Campbell's Soup facilities as well as connect future industrial park areas on the south side of the river. The other alternative of extending Enterprise Avenue/Road 12 southward across the Maumee River would not provide a direct access to the interchange of US 6/US 24 at Industrial Drive, and would require truck and vehicular traffic to make several turns on a couple local roadways, which would increase the potential for local street crash frequencies.

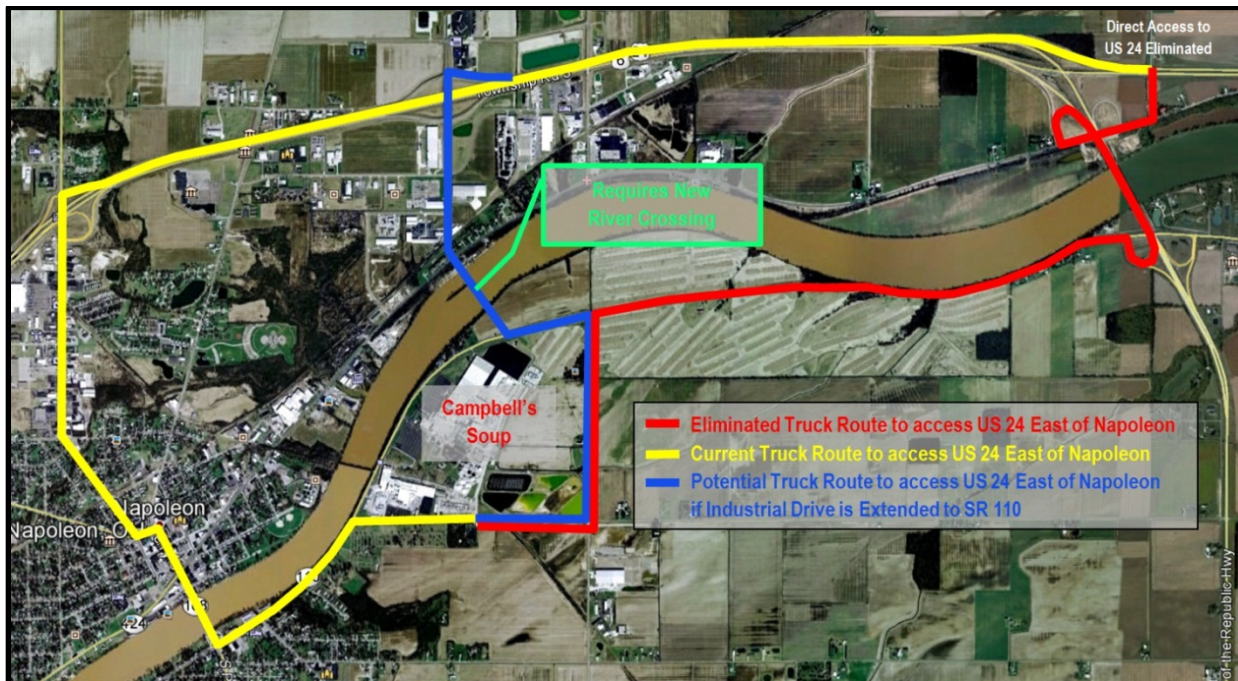


Figure 3.4 Truck Routes Summary for Campbell's Site with New US 24 Open

3.4 Traffic Volume Projections (Opening Day/Design Year)

ODOT supplied traffic projections for the state and federal routes that are impacted by use of the existing SR 108 Bridge over the Maumee River as displayed in the table below for the years 2015 and 2035.

**Table 3.2 New Maumee River Crossing Vicinity Roadways
2015 & 2035 ODOT Traffic Projections**

Location	2015 ADT	2035 ADT	2035 DHV	Directional Distribution	Percent Trucks
US 6 (log 15.50) near TR-11	17,460	22,580	2,510	55%	42%
US 6 (log 16.50) at Bridge over Maumee River	7,710	9,600	960	55%	27%
SR 108 (log 15.00) near TR-2	6,300	6,500	650	55%	7%
SR 108 (log 15.65) at Bridge Over Maumee River	13,800	13,800	1,380	55%	7%
SR 108 (log 16.00) near N. Perry St.	8,700	8,700	870	55%	7%
SR 110 (log 0.40) near Appian Ave.	7,100	7,100	710	55%	8%
SR 110 (log 0.65) near Maumee Ln.	4,300	4,300	480	55%	7%
SR 110 (log 3.00) east of TR-12	2,200	2,600	290	55%	38%
Riverview Ave. near Haley Ave.	7,100	8,400	840	55%	2%
Riverview Ave. near Wayne St.	3,700	3,700	410	55%	12%
Riverview Ave. east of TR-11	1,800	1,800	200	55%	10%

Early on in the project development process in 2003, an Origin-Destination (O&D) Study was conducted on the existing SR 108 (Perry Street) Bridge to assess travel patterns utilizing the bridge. The study also evaluated what the traffic pattern changes would be if a new river crossing were constructed at alternative locations (Industrial Drive or Enterprise Avenue/Road 12) and what the residual traffic would be on the existing SR 108 (Perry Street) Bridge with each of these options in place. These predicted volumes are shown on the *Figure 3.5* on the next page. The Opening Day and Design Year at the time of the O&D Study were assumed to be 2005 and 2025. An updated Opening Day given the current project status and new ODOT PDP would be anticipated for 2015. Given this, the traffic projections shown on Table 3.2 above were compared to the previously collected and projected traffic volumes from the O&D Study and *Final Planning Study Report*. The 2015 traffic projections from ODOT are fairly comparable to the previous 2005/2008 ADT volumes as well as the volumes predicted for the roadways within the vicinity of the new river crossing alternatives. Given this, for the Planning Phase of the project and this Feasibility Study, the previously predicted Opening Day and Design Year volumes for 2005/2025 are still valid as they compare well with the projected volumes of the 2015/2035 volumes above.

Certified traffic will be developed during the preliminary and environment engineering phase once a preferred alternative is established. Therefore, the predicted Opening Day (2015) and Design Year (2035) traffic volumes on *Figure 3.5* were used for operational analyses to compare the two build alternatives and the No-Build alternative. The volumes on the figure show that the Industrial Drive location for a new river crossing would capture the most vehicular and truck traffic of the two potential river crossing locations. The Industrial Drive location also captures more traffic off of the existing SR 108 Bridge in Downtown Napoleon, which is due to the Industrial Drive location being closer to the population and developed areas, as well as having a direct access to the US 6/US 24 corridor with the interchange being on Industrial Drive. Given these findings, the Industrial Drive location for a new bridge would provide the most benefit for capturing traffic as well as alleviating congestion on the existing SR 108 Bridge.

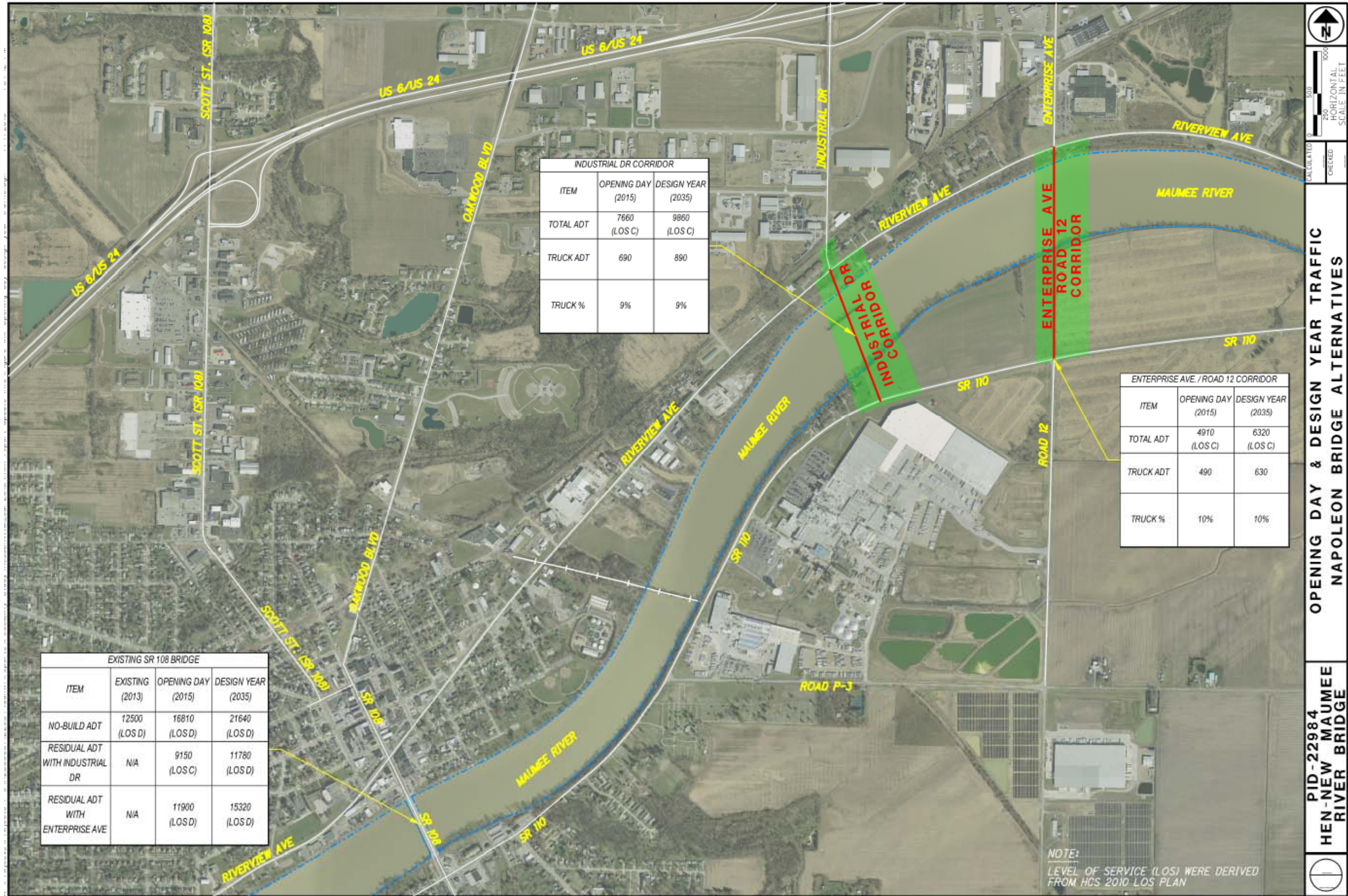


Figure 3.5 Opening Day & Design Year Traffic for Bridge Alternatives

3.5 Capacity Analyses

In order to evaluate the two build alternatives and the No-Build alternative, the ARTPLAN 2009 Conceptual Planning Analysis program was used from the HCS2010 traffic software. The traffic volumes shown previously on *Figure 3.5* were used to conduct the arterial planning capacity analyses. As *Tables 3.3, 3.4, & 3.5* below indicate the following preliminary results were found:

- The current SR 108 Bridge with existing ODOT traffic volumes (2013) is operating at a LOS D during peak periods. This is below the minimum LOS C desired for an Urban Principal Arterial.
- In 2015 under a “No Build” condition, the SR 108 Bridge is predicted to operate at a LOS D with additional delay for free flow traffic on the existing bridge corridor.
- In design year 2035 under a “No Build” condition, the SR 108 Bridge has the free flow delay increase to 32.14 seconds, which is a borderline LOS D that is nearing a LOS E.

Table 3.3 No Build Alternative Levels of Service & Delays

Location	2013 LOS (Delay)	Opening Day (2015) LOS (Delay)	Design Year (2035) LOS (Delay)
Existing SR108 Bridge	D 23.86 seconds	D 27.33 seconds	D 32.14 seconds

Table 3.4 Industrial Dr. Alternative Levels of Service & Delay

Location	2013 LOS (Delay)	Opening Day (2015) LOS (Delay)	Design Year (2035) LOS (Delay)
Existing SR108 Bridge (with Industrial Dr. Bridge in Place)	D 23.86 seconds (w/o New Bridge)	C 21.53 seconds	D 23.34 seconds
Proposed Industrial Dr. Bridge	Not Applicable	C 20.98 seconds	C 22.51 seconds

Table 3.5 Enterprise Ave. (Road 12) Levels of Service & Delay

Location	2013 LOS (Delay)	Opening Day (2015) LOS (Delay)	Design Year (2035) LOS (Delay)
Existing SR108 Bridge (with Enterprise Ave. Bridge in Place)	D 23.86 seconds (w/o New Bridge)	D 23.43 seconds	D 26.06 seconds
Proposed Enterprise Ave. Bridge	Not Applicable	C 19.35 seconds	C 20.27 seconds

The Industrial Drive Bridge (if in place) would improve the LOS D to a LOS C on the existing SR 108 Bridge as it would attract enough traffic to improve operations. The LOS D in 2035 on the existing bridge would also see a reduction in the delay from 32.14 down to 23.34 seconds. The Industrial Drive Bridge would operate at adequate LOS C through design year. The Enterprise Avenue/Road 12 Bridge would reduce delays as well on the existing SR 108 Bridge, but not nearly as much as the Industrial Drive location as Enterprise Avenue would attract less traffic. The Enterprise Avenue/Road 12 Bridge would operate at an acceptable LOS C through design year 2035. In summary, both the Industrial Drive and Enterprise Avenue/Road 12 proposed bridge locations would improve operations on the existing SR 108 Bridge;

however the Industrial Drive alternative would provide more benefit in reducing delays. The capacity reports for the analyses are provided in *Appendix B*.

3.6 Traffic Analysis Summary

In reviewing the 1999 and 2008 ODOT Traffic Survey Reports (TSR), it was determined that traffic entering Scott Street (SR 108) from Clinton Street has increased approximately 15 percent during this time period (see table below). Traffic growth has slowed in recent years, especially with the economic downturn in late 2008 through early 2010. However, in 2011 and 2012 the economic conditions have been slowly improving, thus traffic is returning to more pre-recession numbers with increased shipping of goods and materials and the population returning to work.

Table 3.6 Truck and Passenger Car Traffic Data

Data Year	ADT for Passenger & "A" Commercial	ADT for "B & C" Commercial	Total ADT	Percent Change
1999 (ODOT TSR)	9,060	640	9,700	Nearly 15% increase in traffic from 1999 to 2008
2008 (ODOT TSR)	10,300	840	11,140	

The large 1999-2008 causes for the increase in traffic can be attributed to three major factors:

- The permanent closure of the Oakwood Avenue Intersection at US 6/US 24 in 2000. With the increased industrial development adjacent to Industrial Drive, the Oakwood intersection was closed and moved ¼-mile east to the Industrial Drive Interchange.
- Wal-Mart relocating its Super Center from Oakwood Avenue to Scott Street (SR 108). With the closure of the Oakwood Intersection, Wal-Mart abandoned its store adjacent to the intersection and moved west to the North Scott Street retail corridor. This relocation changed related travel patterns within Napoleon.
- Campbell's Soup Company has continued to grow and locate its related industries within Napoleon. Therefore, truck traffic has increased throughout Napoleon, especially in the downtown SR 108 corridor.

All of these factors continue to influence traffic patterns in the community. In late 2012, as mentioned previously, the at-grade intersection of Township Road 10 and US 24 was closed when the new reconfigured new US 24 corridor was opened. This has forced additional truck traffic (particularly associated with Campbell's Soup) through the SR 108 corridor that passes through Downtown Napoleon and across the existing SR 108 (Perry St.) bridge.

The design year traffic from ODOT for the year 2035 indicates a predicted 13,800 Average Daily Traffic (ADT) on the SR 108 Bridge if no additional river crossing is constructed. This would include approximately 970 trucks. Currently per the ODOT Traffic Survey Report (TSR) for 2011, there are 440 trucks utilizing the existing bridge on a daily basis. The 2035 predicted trucks of 970 would be a 120% increase in truck volumes, which would create operational and safety issues on the SR 108 Corridor as well as the secondary corridors feeding into the SR 108 Corridor.

All of these changes have caused an increase in traffic throughout the SR 108 corridor, and the recent closure of access from westbound US 6 to eastbound US 24 via Road 10 has increased traffic on the corridor through the City. Because of this increased traffic, Henry County and the City of Napoleon are

looking for a transportation solution that will decrease congestion, increase safety and economic development by diverting the majority of the truck traffic away from SR 108.

Downtown Intersection Geometrics

At the intersection of SR 108 (North Perry Street) and East Clinton Street, traffic must make a left turn when traveling northbound or right turns when traveling south/eastbound. Currently, the traffic signal allows both traffic movements at the same time even though the path of two trucks would overlap. The picture to the right shows a truck turning right onto North Perry Street (SR 108) and swinging over the centerline of the road to negotiate the turn movement.



N. Perry Street/E. Clinton Street Intersection (looking north)

School Children Safety

The City of Napoleon and the Napoleon City Schools identified the main areas where school children reside relative to the existing schools they attend on the north side of the river. The majority of the schools are located to the southwest of downtown, to the west and south of SR 108 and the 5-approach intersection involving North Scott Street/Clinton Street/Woodlawn Avenue. Four major concentrations of school age children (136 students currently) are located just across SR 108 to the east and north along with Woodlawn Avenue. Whether those children take the bus, a car, walk, or bike, the pathway takes them into the downtown and across SR 108 and through the 5-approach intersection. Morning and evening school traffic and after school activities (occurring during peak traffic periods), combined with an increase in traffic, particularly truck traffic, increases the potential for crashes involving school age children.

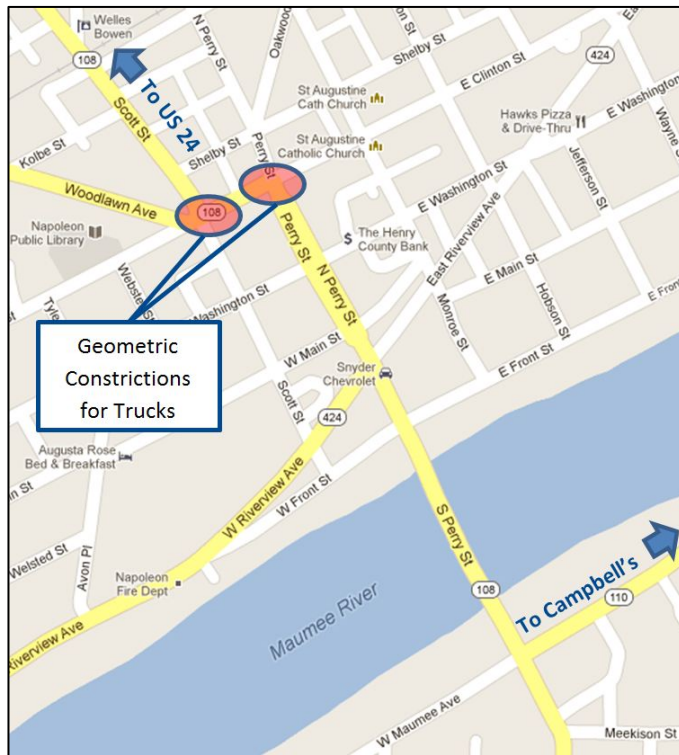


FIGURE 3.6 Location Map

The Industrial Drive Bridge alternative would attract the most truck and vehicular traffic off of the existing SR 108 Bridge, and thus provide improvement to traffic and safety operations though the Downtown Napoleon area and adjacent corridors. The Enterprise Avenue Bridge Alternative would also help alleviate such traffic, but not as much as the Industrial Drive location as it is tied directly into the US 6/US 24 Corridor via the interchange that Industrial Drive has with the bypass around Napoleon.

4.0 ROADWAY ASSESSMENT

4.1 Existing Roadway Assessment

Traffic volumes during the 3 to 6 PM weekday period in Napoleon are an on-going problem due to the large demand that is placed on the SR 108 (Perry Street) Bridge by a combination of truck traffic; Campbell's employees leaving/entering the facilities; school busses; and the traveling public. The release times for the Napoleon School District and Campbell's shift change overlap during the first hour of this time period and create safety and congestion issues. The congestion is localized at the SR 108 Bridge northbound, SR 108 through the downtown, especially at the Scott/Clinton/Woodlawn 5-approach intersection, and SR 108 north (Scott Street) through the retail corridor of Napoleon. Traffic traveling on SR 108 into the downtown area and through the 5-approach intersection also becomes congested as trucks and buses have to make a left and right turn, which slows traffic as they negotiate tight turning radii. A transportation solution is necessary to reduce the demand on the SR 108 corridor and bridge. Congestion problems could be significantly relieved by removing a large portion of the truck traffic and relieving the influence of shift changes on the peak traffic period.

4.2 Community Costs Associated with a SR 108 (Perry Street) Bridge Closure

The *Final Planning Study Report* (refer to page III-9) conducted an assessment in 2008 of what the costs are to the community when the existing bridge is closed for either a crash or some unforeseen event. It was found the closest detour would be the US 6 Bridge to the east, which involves approximately an eight (8) mile detour. The estimated cost to the community was found to be nearly \$84,700 for a 1-day detour/closure.

4.3 Roadway Recommendations

The approved *Final Planning Study Report* (2009) made a recommendation that the two build concept alternatives to be studied in more detail include:

1. New river crossing from extending **Industrial Drive** southward across the Maumee River to connect with SR 110 on the south side of the river
2. New river crossing from extending **Enterprise Avenue (Road 12)** southward across the Maumee River to connect with SR 110 on the south side of the river

Since this recommendation in 2009, changes have occurred including key items like the new US 24 corridor has been opened which eliminated access to US 24 via Road 10; and the new PDP of ODOT now allows for a more streamlined process with faster delivery of projects to the construction phase.

Given these changes and previous documentation/analyses on this project, the Industrial Drive Corridor for a new river crossing would best solve the safety and congestion from a roadway/operational perspective versus the Enterprise Avenue (Road 12) Corridor. This is based on the following items:

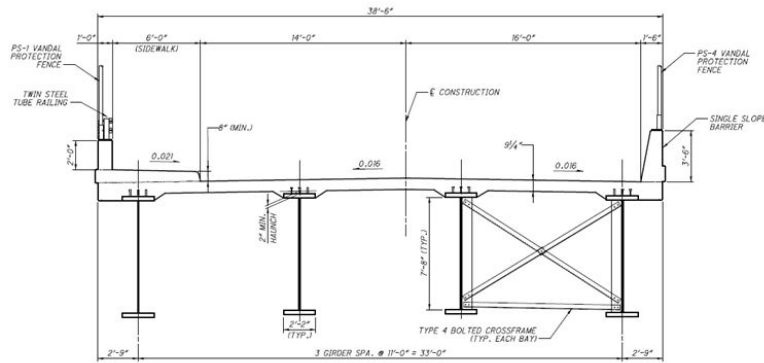
- Direct connection to the US 6/US 24 Corridor via use of the Industrial Drive interchange;
- Industrial Drive crossing would capture 56% more traffic than Enterprise Ave (Road 12) location;
- The Enterprise Avenue (Road 12) alternative would still require traffic to "back-track" on either Riverview Avenue or on Independence Drive to access US 24 at the Industrial Drive interchange;
- Traffic analysis review of roadway network conditions, capacity analyses, and crash data indicate Industrial Drive Corridor would offer improved conditions beyond those of Enterprise Avenue (Road 12) location;

- The Industrial Drive Alternative is supported by both the Henry County and City of Napoleon Comprehensive Plans as the preferred location for a new river crossing;
- The comments from the public meeting held on February 24, 2004 in which approximately 150 were in attendance indicated that 93% believed a second river crossing was needed, and of the build corridor alternatives presented, the Industrial Drive corridor received 56% support and the Enterprise Avenue (Road 12) received 33.5%;

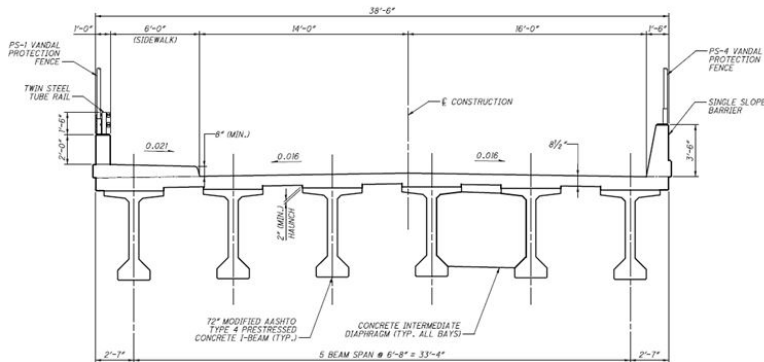
The next two sections display what a conceptual typical section would look like for the bridge, and then what the intersections could be like at both Riverview Avenue and at SR 110 with the Industrial Drive alternative.

4.4 Conceptual Typical Section

The proposed bridge and roadway will accommodate two lanes of through traffic, with adequate turn lanes, storage lengths sidewalks and signalization at both the SR 110 and Riverview Avenue (previously SR 424) intersections. The proposed bridge typical section options (steel vs. concrete) are shown below. The bridge will most likely have an approximate length of 1000 feet, and will accommodate 2 through lanes of traffic, and a 6' wide sidewalk on the west side of the bridge. If turn lanes are warranted on the north side of the river where the new river crossing intersects with Riverview Avenue, these turn lanes may require widening of the structure on the northern end of the structure depending on how long of storage length is required. On the south side of the river, any needed turn lanes at the intersection with SR 110 would not impact the bridge structure as the turn lanes would be accommodated within the vacant land area. The need for turn lanes and storage lengths will occur during the preliminary and environmental engineering phase of the project for the preferred alternative when certified traffic will be developed for the project.



Transverse Section
Steel Girder Option



Transverse Section
Prestressed Concrete Option

Figure 4.1 Conceptual Bridge Transverse Section Options

4.5 Conceptual Intersection Layout

The conceptual intersection at both the SR 110 and Riverview Avenue intersections would most likely include signalization (if applicable signal warrants met), adequate left turn and deceleration lanes, approximately 700 foot tapers, a generous truck turn radius, and open & closed drainage systems. Additional infrastructure modifications include, pavement reconstruction to accommodate increased truck traffic, raised pavement markings, applicable warning signs, curb ramps, cross walks, guardrail replacement and a connection to the Buckeye Trail which is a hiking trail being developed throughout Ohio and currently traverses along the old Miami/Erie Canal through the corridor on the north side of the river. The need for turn lanes and storage lengths will occur during the preliminary and environmental engineering phase of the project for the preferred alternative when certified traffic will be developed for the project. Signal warrants and turn lane warrants can be conducted once certified traffic is approved by ODOT. These warrant analyses will determine if traffic signals are needed as well as what turn lanes would be necessary for the two intersections on either side of the bridge where they intersect SR 110 and also Riverview Avenue. The conceptual intersection layout shown below is a graphical representation of what the intersections at these two intersections could look like if turn lanes and a traffic signal are needed.

The Industrial Drive Corridor shown below was developed so as to evaluate how much of a property impact would occur at the intersection of Industrial Drive and Riverview Avenue so as to achieve an adequate intersecting angle. To achieve the proper intersecting angle, it appears a total take would occur at the parcel located on the northeast corner of the Industrial Drive and Riverview Avenue intersection. The property owner at this location has expressed an interest to sell the property, thus if needed, the current owner is a willing seller of the property. A schematic of the Enterprise Avenue (Road 12) Corridor was not developed at this time as there was not an intersecting angle geometric issue to explore like there was at Industrial Drive.

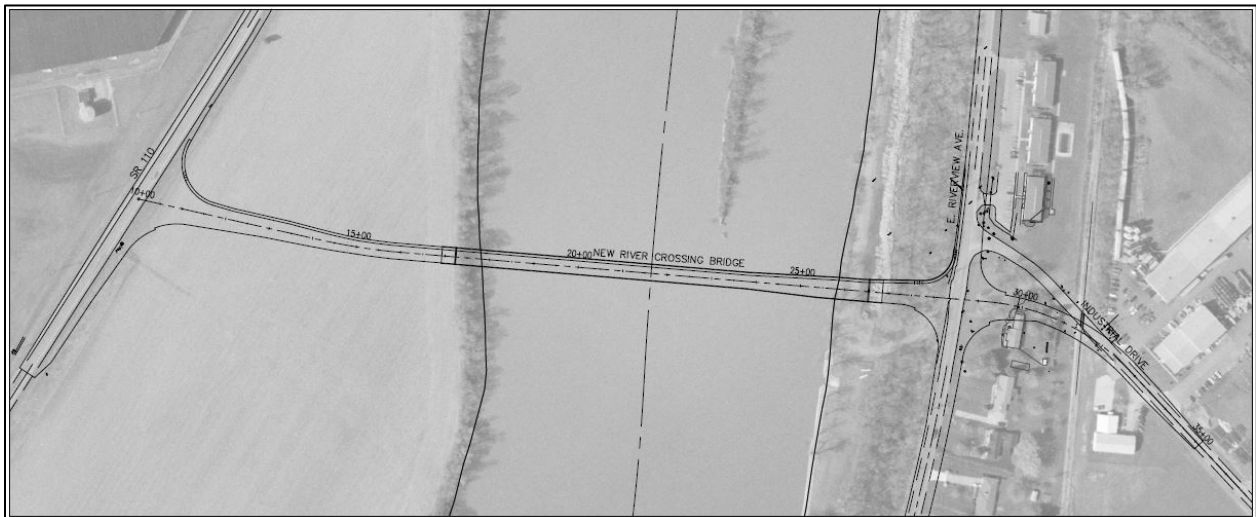


Figure 4.2 Conceptual Industrial Drive River Crossing

5.0 STRUCTURE ASSESSMENT

5.1 Existing Structures within Vicinity

The proposed project involves constructing a New Maumee River Crossing so to improve connectivity in the Napoleon vicinity, increase safety, provide a connection between existing/future industrial/manufacturing facilities; and improve access to the newly improved US 24 corridor. The City of Napoleon and areas of Henry County around Napoleon are currently serviced by two existing structures with one located within the City (Perry Street Bridge) and the other is the US 6 Bridge located approximately four miles east of the Perry Street Bridge where US 6 crosses the Maumee River in Henry County (bridge maintained by ODOT).

Perry Street (SR 108) Bridge in Downtown Napoleon, Ohio:

This structure connects the northern developed areas of Napoleon with the southern part of the City, which happens to include the area's largest employer (Campbell's Soup). The structure contains four travel lanes on the structure, and additional turn lanes on the roadway immediately off the bridge at the adjacent intersections on each side of the structure. The structure is in good condition as it was replaced in 2005. With this structure being the only access crossing the Maumee River in the City, it is critical to the City that it remain open at all times. Any event that results in a closure creates safety issues and hardships for the community and a second river crossing servicing the developed areas would be greatly beneficial for safety services, employment access, and other issues as documented in the *Final Planning Study Report*.

US 6 Bridge in Henry County, Ohio:

This structure is approximately 4 miles east of the Perry Street Bridge (mentioned above) and is maintained by ODOT. The structure has four travel lanes and US 6 is a limited access highway, so the bridge is only accessible to local traffic via interchanges located on both sides of the river adjacent to the bridge. As the closest alternative river crossing, emergency services for Napoleon must detour eight miles in order to provide vital services to the south side of the City from the Fire/EMS/Police stations that are located on the north side of the river.

5.2 Proposed Structure Improvements

The proposed structure will consist of a multiple span steel or prestressed concrete girder bridge with a composite reinforced concrete deck. The preliminary length is expected to be approximately 1000' and the superstructure depth will be approximately 8.5'. The abutments will be fixed stub abutments behind MSE abutment walls and MSE retaining walls. Thermal expansion and contraction will be accommodated with modular expansion joints. The piers will be wall type with cantilevers and all substructure units will be founded on bearing piles approximately 55' deep to bedrock.

6.0 PRELIMINARY GEOTECHNICAL ASSESSMENT

6.1 Summary of Geologic and Geotechnical Concerns

Field reconnaissance did not reveal any noticeable pavement failure or pumping, although noticeable wheel rutting at many intersections were present. Erosion is present along the banks of Maumee River especially along SR 110 adjacent to the river. Poor draining soils are prevalent within the study area. Based on record drawing information for the SR 108 Bridge over the Maumee River, the bridge is founded on bedrock at approximately 50 feet below the river bed. Pile lengths are assumed to be approximately 55' for the proposed structure. Only existing geotechnical data was reviewed at this phase of the project.

7.0 RIGHT-OF-WAY ASSESSMENT

7.1 Existing Right-of-Way Description and Assessment

A new roadway extension including a new bridge structure over the Maumee River will require acquisition of right-of-way (ROW) from property owners once the location is finalized and an alignment is set. It is likely that an 80' ROW width would be needed for the extension of Industrial Drive from Riverview Avenue (previously SR 424) southward to SR 110 on the south side of the river.

7.2 Right-of-Way Impacts

The majority of ROW needed will involve primarily farmland on the south side of the river. There would be ROW needed on the north side of the river, but it is much smaller in length and area. Also on the north side of the river the alignment would involve some City of Napoleon property associated with the old canal that passes along the north banks of the Maumee River. A newly created Buckeye Trail hiking corridor traverses the area of the old canal. Additional ROW may be necessary at both intersections if traffic signals are warranted and installed. A total take of a residential property at the northeast corner of Riverview Avenue and Industrial Drive may be necessary to achieve acceptable intersection angle geometry for the approach to a new river crossing. The current property owner of the potential total take has indicated they have a desire to sell the property since they reside at a different location and want to sell the property so they do not have to maintain two properties. Therefore, even though the Industrial Drive Corridor has a potential total take, it currently involves a property owner that has a desire to sell, and thus does not create much more in property impacts in comparison to the Enterprise Avenue (Road 12) Corridor which does not have any apparent total takes.

8.0 UTILITY ASSESSMENT

8.1 Existing Utility Description and Assessment

Existing overhead power lines with electrical poles and drainage structures are the most apparent along SR 110 & Riverview Avenue (previously SR 424). Underground gas and sanitary sewers are also anticipated.

8.2 Utility Impacts

For the purposes of this planning level effort, the following assumptions have been made regarding utility impacts:

- All utilities within the immediate proposed roadway improvement alignments will be impacted to some extent, with many requiring relocation. (This assumption has been made to ensure a conservative approach to determining total costs for each alternative).
- The determination regarding if the existing utilities are or are not within existing easements is beyond the scope of this study. Therefore, it has been assumed that the cost for all relocations will be a burden of the improvement.
- Structure mounted utilities will not be required at this time.

9.0 ENVIRONMENTAL ANALYSIS ASSESSMENT

Potential environmental issues/impacts were examined for the two build alternatives of the Industrial Drive Corridor and the Enterprise Avenue (Road 12) Corridor through a secondary source screening and limited field visits. The purpose of the environmental screening was to identify any potential environmental issues that were within or near the two build corridors. This would allow for a comparison of the two build alternatives to the No-build alternative. These environmental screenings included the following key environmental elements:

- Cultural Resources
- Parks / 4(f) Resources
- Farmland Impacts
- FEMA 100-Year Flood Plains
- Endangered / Threatened Species
- Ecological Resources
- Environmental Site Assessment (ESA) Screening

An updated Red Flag Summary Map (see *Figure 9.1*) identifies potential environmental concerns within the study area. In addition to the updated map, an Alternatives Evaluation Matrix (see *Table 11.1* or *Appendix C*) was developed with the new data and analyses to allow for a comparison of the Industrial Drive Corridor; Enterprise Avenue (Road 12) Corridor; and the No-Build Alternative. The Red Flag Summary map (see *Figure 9.1* or *Appendix D*) indicates the following potential environmental concerns need to be evaluated further in the preliminary/environmental engineering phase of the project for the preferred alternative:

Industrial Drive Corridor:

Cultural Resources – No sites identified within the corridor other than the abandoned Miami & Erie Canal on north side of the river which runs along the northern banks through the entire study area.

Parks / 4(f) Resources – The Buckeye Trail runs adjacent to the Miami & Erie Canal along north banks of the river;

Farmland Impacts – The south side of the river does have cultivated field between the river and SR 110.

FEMA 100-Year Flood Plains – There would be impacts to flood plains, however this alternative has less impacts as the elevation of the cultivated field on the south side of the river is higher than areas of the field to the east.

Endangered / Threatened Species – Potential presence of threatened mussel species and there are potential Indiana Bat habitat trees within the corridor.

Ecological Resources – The Maumee River is a State Scenic River. Wetland A is on the northern banks of the river on the western edge of the corridor, and is approximately 0.175 acres in size. Wetland B is located on the south side of the river and is approximately 0.58 acres in size.

ESA Screening – Within the corridor, there are two small potential ESA sites located between the former Miami-Erie Canal and the Maumee River (shown as Sites #6 & #8) on the Red Flag Summary Map.

Enterprise Avenue (Road 12) Corridor:

Cultural Resources – No sites identified within the corridor other than the abandoned Miami & Erie Canal on the north side of the river which runs along the northern banks through the entire study area.

Parks / 4(f) Resources – The Buckeye Trail runs adjacent to the Miami & Erie Canal along the north banks of the river. A portion of a public park is located along the north side of the river which may be a potential 4(f) site depending on park ownership and use.

Farmland Impacts – The south side of the river does have cultivated field between the river and SR 110.

FEMA 100-Year Flood Plains – There would be impacts to flood plains and this corridor has lower elevations associated with the cultivated field on the south side of the river as the flood plain becomes wider moving eastward through the corridor (see Red Flag Summary Map).

Endangered / Threatened Species – Potential presence of threatened mussel species and also there are potential Indiana Bat habitat trees within the corridor.

Ecological Resources – The Maumee River is a State Scenic River. There is a potential jurisdictional ditch running north-south in the corridor.

ESA Screening – Within the corridor, there is a large potential ESA site located in part of the vacant land on the south side of the river between the river and SR 110 (Site #11 on Red Flag Summary Map), there is also a potential ESA site (#43) located adjacent to the corridor on the northern edge along Riverview Avenue.

Once a Preferred Alternative is selected, more detailed environmental analyses will be performed on the items listed above to determine potential impacts of an alignment within the preferred alternative corridor. In addition, the environmental items listed below will be evaluated to identify potential impacts of the preferred alternative corridor:

- Wetlands / Streams
- Potential ESA (Environmental Site Assessment) Sites
- Environmental Justice Populations
- Air Quality & Noise
- Geotechnical Issues (using available data within area)
- Right-of-Way Needs

These environmental issues as well as an evaluation of how each alternative satisfies the Purpose & Need elements of the project are presented in *Table 11.1* (Alternatives Evaluation Matrix) so to easily compare the alternatives.

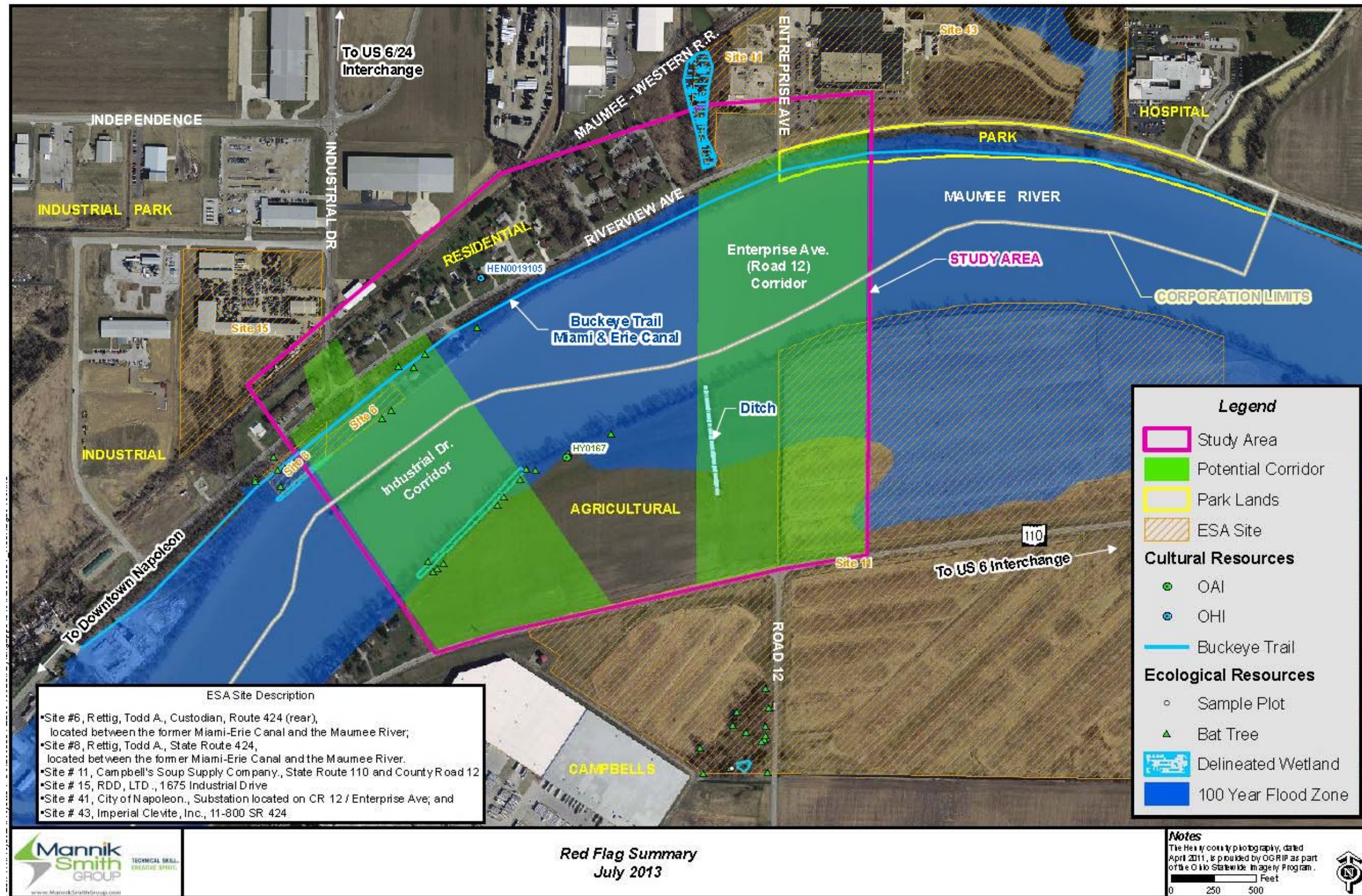


Figure 9.1 Red Flag Summary Map Update (July 2013)

10.0 PUBLIC INVOLVEMENT

Public involvement activities for the Henry County New Maumee River Bridge project (HEN-New Maumee River Bridge PID 22984) involved several early coordination meetings with key stakeholders and officials at the start of the project in 2002 and 2003. The results of these meetings included a focused study area with four conceptual build alternatives identified within the vicinity of Napoleon for consideration for a new river crossing. Environmental screenings were conducted to determine the benefits and impacts of each corridor. The results of the analyses of the four locations of the conceptual alternatives were presented to the public at a Public Involvement Meeting on February 24, 2004. An estimated 150 people attended the meeting. A summary of the issues and comments received are discussed in the next section.

10.1 Stakeholder/Public Meeting Issues & Comments

The public meeting on 2/24/2004 provided a handout to attendees showing a map of the corridors, project information, and a comment sheet. Two key questions were asked on the comment sheet which were:

1. Do you believe a Second Roadway Bridge Crossing of the Maumee River at Napoleon is needed? With answer options being Yes; No; and Undecided

The results of the survey question returned indicated:

- **93%** (140 responses) said a second Roadway Bridge Crossing **Is Needed**
- **2%** (3 responses) said a second Roadway Bridge Crossing is **Not Needed**
- **5%** (7 responses) said they were **Undecided**

2. Which Alternative (1, 2, 3, 4, or No Build) Would You Prefer?

The results of the survey on which alternative would be preferred indicated:

- **No Build – 0.5%** (1 response)
- **Glenwood Avenue Extension – 5.5%** (8 responses)
- **Industrial Drive Extension – 56%** (84 responses)
- **Enterprise Avenue (Road 12) Extension – 33.5%** (50 responses)
- **Reuse Old RR Bridge – 2.5%** (4 responses)
- **Other or None Listed – 2%** (3 responses)

As the results indicate above, there was overwhelming support for a second river crossing (93 percent), and the two concepts that received the most support were Industrial Drive (56 percent) and Road 12 (33.5 percent). These results further supported the recommendation in the *Final Planning Study Report* that these two conceptual alternatives be considered in moving forward.

Several common reasons as to why a second river crossing is needed were cited on the comment sheets. These included the following:

- Improve traffic flow for the community
- Remove truck traffic from city streets
- Alleviate traffic in the downtown area
- Improve roadway safety and safety services
- Encourage growth and development of industrial park areas
- Provide good access to Campbell's Soup facility and future industrial areas
- Improve emergency services and access to the hospital

10.2 Future Public Involvement for the Project

As a result of reviewing the new PDP and from discussions with ODOT and the Office of Environmental Services (OES), the public involvement strategy below was developed.

Upon completion of the Feasibility Study and public involvement a Preferred Alternative will be selected for the next steps for the project, including public involvement items in **bold** text:

Next Steps

- 1) The results of the Feasibility Study including the recommended Preferred Alternative will be **presented to the public through various media such as a press release, local City and County websites; newsletter and a public involvement meeting;**
- 2) Public comments will be reviewed and considered with a summary added to the Feasibility Study document;
- 3) Preliminary & environmental engineering phases will begin on the preferred alternative to collect more detailed data and to refine the project design, scope, and potential impacts;
- 4) Public involvement including public meetings will continue throughout project development;
- 5) Upon completion of the preliminary engineering phase and NEPA process approval, the project will move into the detailed design phase following construction, pending available funding.

11.0 **ALTERNATIVES COMPARISON**

11.1 **Cost Summary**

A general cost estimate is provided for preliminary planning purposes. The total estimated conceptual construction cost is a sum of the costs associated with roadway improvements, right-of-way acquisition, new bridge structure, retaining walls traffic control and utility impacts. The cost estimate will vary depending on conceptual solutions for each alternative between Riverview Avenue and SR 110. Preliminary cost estimates indicate a cost of approximately \$15 million for the Industrial Drive Alternative and \$19 million for the Enterprise Avenue Alternative, as presented in *Appendix E*.

11.2 **Constructability**

Constructability, sometimes referred to synonymously as Buildability, refers to the extent to which the design of a facility provides for ease of construction yet meets the overall requirements of that facility.

Aspects of constructability that should be considered include complexities that could negatively affect the duration of construction, traffic maintenance and possible complicated construction methods. Methods/activities which reduce project complexity related to construction of the project are what is sought in terms of the following:

- Construction methods required
- Maintenance of traffic (MOT)
- Construction materials including availability
- Access to construction site
- Weather concerns during time project will be constructed
- Environmental issues and permitting
- Utility relocation
- Right-of-way acquisition
- Project phasing
- Geotechnical constraints
- Foundation construction in channel
- Land use

A review of the Industrial Drive and Enterprise Avenue alternatives found no unusual constructability issues related to either alternative when compared against the above constructability criteria. The major constructability issue will be constructing the bridge pier foundations in the Maumee River. However, due to the relatively shallow depth of the river at the location of both alternatives (typically less than ten feet), standard construction methods can be employed by qualified contractors which will control costs by allowing for a better competitive environment when the project is bid.

11.3 **Alternatives Evaluation Matrix**

An updated Alternatives Evaluation Matrix (see *Table 11.1*) was developed to provide a comparison between the three alternatives in regards to how each one satisfied the Purpose and Need Elements; the Environmental Elements; Community Elements, project costs and constructability. These various elements are listed in the table along with a general assessment of how each alternative satisfies or impacts each individual element. A summary of the factors which caused an alternative to be eliminated or to be recommended for further study follows.

Purpose and Need Elements – The No-Build alternative provided no benefits when measured against the P & N Elements. On the other hand, the Industrial Drive alternative best met the P & N Elements over the Enterprise Avenue alternative.

Environmental Elements – The No-Build alternative had, of course, no impacts to any Environmental Elements, whereas, the Industrial Drive alternative had less significant impacts as compared to the Enterprise Avenue alternative. Probably the most significant difference between the two Build alternatives is the impact to the 100 year floodplain by the Enterprise Avenue alternative.

Community Elements – The No-Build alternative has negative community impacts in that safety and traffic congestion are not addressed. The Industrial Drive alternative provides increased safety and congestion reduction while also providing the most direct access to the Industrial Drive/US 6&24 interchange. The Enterprise Avenue alternative also provides access to the interchange but via a more circuitous and longer route. Both Build alternatives provide direct access to the industrial sites and undeveloped land south of the river.

Construction Elements – The No-Build alternative has no cost or constructability issues. Both the Build alternatives have only moderate constructability issues due to the need to construct the bridge from river barges. However, due to the significant project length differences and electric power transmission relocation over the Maumee River required by the Enterprise Avenue alternative, the construction cost estimate for the Industrial Drive alternative comes in considerably less than the Enterprise Avenue alternative (\$15 million versus \$19 million).


Based upon the Alternatives Comparisons Analysis as summarized above, **it is concluded that the Industrial Drive alternative provides the best overall option** as it was found to be superior over the Enterprise Avenue Build alternative in all categories and the No-Build alternative does not meet the Purpose & Need for the project.


Table 11.1 Alternatives Evaluation Matrix

Evaluation Criteria		No-Build Alternative	Build Alternative - Industrial Drive River Crossing Corridor	Build Alternative - Enterprise Avenue (Road 12) River Crossing Corridor	Comments
Purpose and Need Elements	Improve Traffic Operations on SR108 Bridge & Corridor	No Benefit – Traffic on existing bridge is currently at LOS D, and is projected to be borderline LOS D/E in 2035 if no other river crossing is constructed nearby.	Substantial Benefit – This location provides most draw of traffic from the existing SR108 bridge. Improves existing bridge to LOS C in 2015 and reduces delays in 2035. Industrial Drive bridge operates at LOS C through design year 2035.	Some Benefit – This location draws some traffic from the existing SR108 bridge, but not as much as Industrial Drive. Enterprise Avenue (Road 12) operates at LOS C through design year 2035.	No-Build does not satisfy P&N Element; Industrial Drive satisfies P&N Element the best of the two build alternatives as it draws most traffic from existing bridge.
	Improve Safety by Decreasing Crashes on the Corridor	No Benefit – The No-Build would not reduce traffic and congestion on existing corridors.	Substantial Benefit – Draws most truck and vehicular traffic off existing bridge and corridors leading to the bridge, which will reduce crash frequency due to lower traffic & congestion.	Some Benefit – Draws some traffic from existing bridge and corridors leading to bridge, but not as much as Industrial Drive location. Also requires traffic to negotiate on local roads since no direct access to US 6/US 24 interchange like Industrial Drive Corridor.	No-Build does not satisfy P&N Element; Industrial Drive satisfies P&N Element the best, as it reduces traffic the most on existing corridors which will reduce crash frequencies and enhance safety.
	Improve Access to Future and Planned Development on Both Sides of Maumee River	No Benefit – The No-Build does not provide a link between Future and Planned Development Areas on both sides of the river.	Substantial Benefit – This is the most direct connection between SR 110 south of the river and industrial developments on both sides of Industrial Drive, which also connects to interchange.	Substantial Benefit – Connects industrial developments on both sides of the river. However, this location is not as a direct link as Industrial Drive location.	No-Build does not satisfy P&N Element; Both Industrial Drive and Enterprise Avenue provide substantial benefit
	Consistency with Local Comprehensive Plans	No Consistency – The No-Build does not satisfy local Comprehensive Plans as it does not provide a new river crossing to connect development areas.	Substantial Consistency – This is the preferred location per local plans and government officials as it provides the most benefit as it provides most direct connection between future development areas on both sides of the river and the US 6/24 interchange	Some Consistency – This location does provide a new river crossing as cited in the Comprehensive Plan, however it does not provide best connection to developed areas and does not provide direct link to the US 6/24 interchange like the Industrial Drive corridor does.	No-Build does not satisfy P&N Element; Industrial Drive is the actual recommended location in the local Comprehensive Plan.
Environmental Elements	Cultural Resources	No Impacts – Since this is No-Build Option.	Potential Impacts – Further field studies needed to determine presence of archaeological sites and evaluate project impacts.	Potential Impacts – Further field studies needed to determine presence of archaeological sites and evaluate project impacts.	No impacts from No-Build; Potential impacts from both of the build alternatives.
	Parks/4(f)	No Impacts – Since this is No-Build Option.	Potential Impacts – Project could impact the Buckeye Trail.	Likely Impacts – Project likely impacts a public park found on northern banks of river that could be 4(f), as well as Buckeye Trail.	No impacts from No-Build; Potential impacts from both of the build alternatives.
	Farmland Impacts	No Impacts – Since this is No-Build Option.	Likely Impacts – Farmland on south side of river likely impacted.	Likely Impacts – Farmland on south side of river likely impacted.	No impacts from No-Build; Potential impacts from both of the build alternatives.
	FEMA 100-year Flood Plain	No Impacts – Since this is No-Build Option.	Potential Impacts – Project could impact the 100-Yr. Flood Plain, however bridge span may allow avoidance of impacts.	Likely Impacts – Project likely impacts the 100-Yr. Flood Plain as there is unavoidable area on south side of the river.	No impacts from No-Build; Potential impacts from both of the build alternatives.
	Endangered & Threatened Species	No Impacts – Since this is No-Build Option.	Potential Impacts – There are potential threatened/endangered mussels in river and possible Indiana Bat habitat. Mussel survey would be needed to determine if present & relocations required.	Potential Impacts – There are potential threatened/endangered mussels in river and possible Indiana Bat habitat. Mussel survey would be needed to determine if present & if so, relocations required.	No impacts from No-Build; Potential impacts from both of the build alternatives.
	Ecological Resources	No Impacts – Since this is No-Build Option.	Likely Impacts – Any alignment in the corridor would involve in-stream work that would require a Section 404 permit from USACE, a Section 401 Water Quality Certification from Ohio EPA, and Scenic River coordination with ODNR. Two small wetlands also found within the corridor that may be impacted.	Likely Impacts – Any alignment in the corridor would involve in-stream work that would require a Section 404 permit from USACE, a Section 401 Water Quality Certification from Ohio EPA, and Scenic River coordination with ODNR. A potential regulated ditch is also found within the corridor along the western side of the corridor.	No impacts from No-Build; Likely impacts from both build alternatives given the scope of the project involving in-stream work and new bridge construction.
Environmental Site Assessments	No Impacts – Since this is No-Build Option.	Potential Impacts – There are two small potential ESA sites (#6 & #8) located between the former Miami-Erie Canal and the River.	Potential Impacts – There is a large potential ESA site (#11) within the corridor associated with the Campbell's Soup facility.	No impacts from No-Build; Potential impacts from both of the build alternatives.	
Community Elements	Connectivity to Highway System	No Improvement – The No-Build does not enhance highway connections.	Substantial Benefit – Provides direct connection to the US 6/24 interchange via Industrial Drive Corridor.	Some Benefit – Provides some benefit in connectivity, however there is no direct access to US 6/24 as Executive Avenue does not have interchange and several local roads would be used to access US 6/24.	No-Build provides no improvement while the Industrial Drive Corridor provides a substantial benefit given the direct connection to the US 6/24 interchange.
	Reduce Downtown Traffic Congestion & Enhance Safety	Negative Impact – The No-Build does nothing to reduce congestion and enhance safety, and no action will actually degrade conditions further in future.	Substantial Benefit – Provides largest capture of truck and vehicular traffic from the existing SR 108 Bridge and improves existing bridge LOS on Opening Day to a LOS C.	Some Benefit – Provides some benefit in capturing traffic from the existing SR 108 Bridge; however the lack of direct access to US 6/24 does not allow for as much of captured traffic as Industrial Drive.	No-Build provides negative impact as no action will actually degrade as traffic grows; Industrial Drive provides substantial benefit in reducing delays/traffic.
	Enhance Emergency Response and Hospital Access	No Improvement – The No-Build does not enhance emergency response and hospital access.	Some Benefit – Provides some benefit to enhancing emergency responses and hospital access, especially if existing bridge blocked.	Some Benefit – Provides some benefit to enhancing emergency responses and hospital access, especially if existing bridge blocked.	No-Build provides no improvement; both build alternatives provide some benefit.
	Right-of-Way and Property Impacts	No Impacts – The No-Build does not impact properties as no Right-of-Way is needed.	Likely Impacts – Corridor is new facility, and will require property acquisition. This alternative may require a total take of a residential parcel, however property owner has indicated desire to sell.	Likely Impacts – Corridor is new facility, and will require property acquisition.	No impact from No-Build; Impacts to properties will occur as roadway is a new facility on new alignment.
	Economic Development Benefits	Negative Impacts – The No-Build does not enhance highway connections.	Substantial Benefit – Provides direct link of south side of river at SR 110 northward to the US 6/24 interchange and corridors. This provides maximum transportation benefit for Campbell's Soup facility and other existing industrial sites and future development areas.	Some Benefit – Provides connection of developed areas on south side of river to those on north side of river. This alternative however does not have direct link to the US 6/24 interchange and corridors.	No-Build will lead to higher transportation costs to businesses and public as traffic congestion increases. Industrial Drive would provide substantial benefit given direct link to US 6/24 interchange and traffic reductions.
Construction	Costs	No Costs for this is a No-Build Option	\$15.0 Million	\$19.4 Million	Enterprise Avenue alternative is considerably higher cost than Industrial Drive alternative due to a significantly longer project length and a substantial cost to relocate an existing electric transmission line over the Maumee River.
	Constructability	No Constructability Issues as this is a No-Build Option	Moderate Constructability Issues – Maumee River is typically less than 10' deep at this location; minor utility impacts; barges will be required to construct bridge; borrow for embankments close to site; no fill required in river; well established bridge & road construction methods required; MOT will require one-way traffic maintenance	Moderate Constructability Issues – Maumee River is typically less than 10' deep at this location; major power utility relocation over river; barges will be required to construct bridge; borrow for embankments close to site; no fill required in river; well established bridge & road construction methods required; MOT will require one-way traffic maintenance	Enterprise Avenue Alternative somewhat more complex to build due to longer bridge and major power utility relocation over river required.

Legend

 Provides Substantial Benefit Relative to Purpose and Need and/or Will Not Negatively Impact Environmental Resource

 Provides Some Benefit Relative to Purpose and Need and/or Has Potential to Negatively Impact Environmental Resource

 Provides No Benefit Relative to Purpose and Need and/or Will Likely Negative Impact to Environmental Resource

12.0 **RECOMMENDED PREFERRED ALTERNATIVE**

12.1 **Conclusion**

In summary, the *Final Planning Study Report* that was approved by ODOT on May 10, 2010 made recommendations that two of the four build alternatives be considered for more detailed analyses along with the No-Build. Upon the conclusion of this document, the project was placed on hold as there was no committed funding to move to Step 5 of the former 14-Step PDP for a Major Project. Several attempts were made to secure funding from TRAC, but no funding was secured given the economic crisis that occurred in 2008-2009 which fiscally constrained many government agency budgets.

In 2012 the Henry County Transportation Improvement District (TID) was formed to pursue critical transportation projects in Henry County. By the middle of 2012, the Henry County TID contracted a consultant to begin moving the Henry County New Maumee River Bridge project (HEN-New Maumee River Bridge PID 22984) forward and to take advantage of streamlined ODOT's PDP process. This Feasibility Study is the first step to transitioning this project into the new ODOT PDP.

12.2 **Identification of Preliminary Preferred Alternative**

Using updated environmental screenings, traffic/crash analyses, and the matrix comparison of the alternatives the following build alternative corridor is recommended as the Preferred Alternative for the project:

Recommended Preferred Alternative:

Industrial Drive Corridor – This alternative proposes a new river crossing by extending Industrial Drive southward across the Maumee River to connect with SR 110 on the south side of the river.

Summary of Basis for Selection of Preferred Alternative:

Based on the updated traffic/crash data findings; updated environmental screenings and field visits; and strong support for this conceptual build alternative from the public meeting held on February 24, 2004, the Industrial Drive Corridor is recommended as the Preferred Alternative based on the following key items:

- Meets the Purpose & Need elements.
- Provides a direct link to the US 6/US 24 facility via use of the Industrial Drive interchange.
- The Industrial Drive crossing is predicted to capture 56 percent more traffic than the Enterprise Avenue (Road 12) alternative.
- Traffic analysis of roadway network conditions, capacity analyses, and crash data demonstrates the alternative results in the highest reduction of traffic on the SR 108 bridge and adjacent corridors. This will reduce delays and reduce crash frequencies, and improve operations.
- The Industrial Drive Alternative is listed in the Henry County Comprehensive Plan as the preferred location and it is also listed in the City of Napoleon's Comprehensive Plan.
- Comments from the public meeting held on February 24, 2004 indicated that 93 percent believed a second river crossing was needed, and of the build corridor alternatives presented, the Industrial Drive corridor received 56 percent support and the Enterprise Avenue (Road 12) received 33.5 percent.
- Proposes fewer potential negative impacts on environmental resources than the Road 12 alternative.
- Exhibits more substantial benefits to the various community elements listed in the Alternatives Evaluation Matrix (*Table 11.1 or Appendix C*).

12.3 Next Steps/Schedule

A public meeting will be held to present the results of the Feasibility Study recommended Preferred Alternative to the public and solicit input on the recommendation. The Feasibility Study will then be finalized and the project will move into preliminary engineering and environmental study.

The anticipated schedule for key milestone dates of the project includes the following items:

- Finalization of Feasibility Study & Preferred Alternative Corridor – October 2013;
- Environmental Document Approved – April 2014
- Detailed Design Completed* – June 2015;
- ROW Acquisition Finalized* – October 2015;
- Final Plans Submitted to Central Office* – October 2015;
- Sale Date* – January 2016;
- Start Construction* – March 2016

*These steps/phases are pending available funding.

APPENDIX A
FINAL PLANNING STUDY REPORT



FINAL PLANNING STUDY REPORT

NEW MAUMEE RIVER CROSSING PROJECT

PID #: 22984

STATE JOB #: 423780

FOR REVIEW BY:

THE OHIO DEPARTMENT OF TRANSPORTATION
THE FEDERAL HIGHWAY ADMINISTRATION

OCTOBER 12, 2009

PREPARED FOR:
HENRY COUNTY ENGINEER
660 N. PERRY STREET
NAPOLEON, OH 43545

TABLE OF CONTENTS

SECTION I.....EXECUTIVE SUMMARY

SECTION II PUBLIC INVOLVEMENT PLAN (PIP)

SECTION III..... PURPOSE & NEED

SECTION IV CONCEPTUAL ALTERNATIVES

SECTION V DESIGN CONCEPT AND DESIGN SCOPE OF PROJECT

SECTION VI..... GENERAL COST ESTIMATE

SECTION VII PROJECT ACTION PLAN

APPENDIX A..... STAKEHOLDERS AND MAILING LIST

APPENDIX B..... TECHNICAL REPORTS

APPENDIX C.....SOURCE BIBLIOGRAPHY

Section I

Executive Summary

EXECUTIVE SUMMARY
NEW MAUMEE RIVER CROSSING PROJECT
PID #: 22984 - STATE JOB #: 423780

INTRODUCTION

For many years local officials have recognized the need to better connect the northern and southern halves of the City of Napoleon, in Henry County, Ohio (Figure I-1). The city, which was founded in 1834, is physically separated by the Maumee River. A single river crossing at State Route 108 currently provides the only direct transportation link between the two halves of the community. Two alternative river crossings exist, however both are too far removed from the City of Napoleon's major traffic routes to be of much use to its residents, except during emergency situations when the SR 108 Bridge has to be closed. One bridge is located at Henry County Road 17c, 7.5 miles upstream of the SR 108 Bridge, west of the City. The second alternative river crossing is located on US Route 6, 4 miles downstream of the SR 108 Bridge, to the east of the City.

Providing a viable transportation solution to this community of 9,300 residents is needed for several reasons. First, there is a need to provide a more direct transportation corridor between the two designated industrial development areas that are located on the east side of the city, both north and south of the Maumee River. Secondly, an option is needed to improve emergency response times when traffic is disrupted on the existing bridge that crosses the river on SR 108 in the city. Thirdly, although the majority of Napoleon's developed areas are located on the north side of the river, the south side of the river contains the largest single employer in Napoleon, the world's largest Campbell's Soup plant, which employs an average of 1,200 people. The Henry County fairgrounds, several small businesses, and residential areas also exist on the south side of the Maumee River.

Heavy traffic volumes on the single river crossing at SR 108 also causes significant traffic congestion and delays in the central business district (downtown) during peak traffic periods. These peak traffic periods are associated with shift changes and truck traffic both to and from the Campbell's facility and school traffic, which together place high demands on the lone bridge. A transportation solution is needed that will provide an alternative link for these important areas of the community and reduce the demand on the State Route 108 Bridge. This will also reduce congestion within the downtown area of Napoleon.

Given the limitations of having only one river crossing in the City of Napoleon, local officials have initiated a study to identify a transportation solution that will alleviate the current and future demand that is and will be placed on the SR 108 bridge, provide a better link between the two halves of the community, alleviate downtown congestion and foster economic development. In addition, on April 7, 2003, the City of Napoleon approved a comprehensive master plan. This comprehensive plan is a critical tool for guiding the city into the future by providing logical development strategies and infrastructure improvements. One critical infrastructure improvement intended to facilitate economic development for the city and surrounding area is a second river crossing that is strategically located to meet the needs of the community.

FINAL PLANNING STUDY REPORT

The evaluation of a transportation solution for the SR 108 Corridor in the City of Napoleon will follow the Ohio Department of Transportation's (ODOT) Project Development Process (PDP). Steps One through Three of the PDP involves the following tasks:

1. Working with stakeholders to identify and understand the problems, needs, and goals of the community;
2. Conducting research and technical studies to characterize existing and future conditions and identify engineering and environmental "red flags"; and
3. Identification and evaluation of potential transportation planning solutions that meet the Purpose and Need for the project.

Upon completion of Steps One through Three, a Final Planning Study Report is then developed (Step Four of the PDP) to document the findings of Steps One through Three and recommend the concepts for further study. The Final Planning Study Report presented herein includes the following elements:

PUBLIC INVOLVEMENT PLAN

The Public Involvement Plan (PIP) outlines the strategy that will be implemented in order to engage the public in this project. Public involvement will provide a means for public participation in the identification of the problems, needs, goals and objectives for the community; to inform project stakeholders and the general public of the decisions that are being made; to provide a forum to present ideas and voice concerns; and to collect input regarding the project.

PURPOSE & NEED

City and County officials were involved in establishing goals for the project. From this input, the following four issues were identified as major needs for the community.

1. Provide a direct link between existing industrial development areas on both sides of the Maumee River;
2. Improve access to future development areas, consistent with the Comprehensive Plan
3. Improve connectivity within the community
4. Reduce the traffic demands on downtown roadways, decrease congestion and enhance public safety

The Purpose & Need Statement for the project establishes the need for the transportation solution in the study area. For this project, the transportation solution for the study area should:

1. Improve traffic operations on the SR 108 bridge and corridor;
2. Improve safety by decreasing crashes in the corridor and enhancing the ability of local emergency response teams in the area;

3. Improve access to future and planned development areas on both sides of the Maumee River – to link existing industrial areas and improve access and transportation operations for Campbell’s Soup and other businesses; and
4. Coordinate with and ensure consistency with the local Comprehensive Plan.

TRANSPORTATION PLANNING SOLUTIONS

This component of the Final Planning Study Report discusses all of the conceptual solutions that have been considered for the project. In all, five conceptual solutions are considered. Four of these involve the construction of a new bridge over the Maumee River at the following locations:

- Corridor 1 - West of SR 108 Bridge to Western Corporation Limits
- Corridor 2 - East of SR 108 Bridge to West of CR 12
- Corridor 3 - West of CR 12 to US 6 Bridge over Maumee River
- Re-use of Abandoned Railroad Bridge north of the Campbell’s Soup plant

A fifth conceptual solution, involving a no-build alternative that considers various measures, such as the addition of turn lanes, improving signal coordination and the implementation of access management strategies to address some or all of the transportation-related issues that exist as a result of having only one river crossing is also discussed.

Each transportation solution/concept is evaluated based on its ability to meet the Purpose & Need for the project, including:

- Its ability to provide a link between existing industrial development areas;
- Its connectivity to the existing highway system;
- Its ability to improve access to future development areas consistent with the Comprehensive Plan;
- Its ability to increase overall community connectivity;
- Its ability to provide improvements to Napoleon and Henry County emergency services’; and
- Ability to reduce downtown traffic congestion and enhance public safety

Impacts to parks, farmland, cultural resources, endangered species, ecological resources and flood plains are also evaluated for each transportation solution/concept based on preliminary screenings. Based on the Purpose & Need criteria and on the impacts of the preliminary screenings, only three transportation solutions/concepts are being recommended for further evaluation. These include a new river crossing at Corridor 2 (Industrial Drive), a new river crossing at Corridor 3 (Henry County Road 12) and the No-build alternative.

Several additional Conceptual Alternative Solutions were also considered but then dropped from further consideration based on their inability to meet the elements of the Purpose and Need:

- **Rail (Freight)** – Development and use of rail to transport goods between the two industrial areas in the City of Napoleon was considered but then dismissed from further

consideration, as it would satisfy only one of the elements of the project Purpose and Need. The only benefit would be a possible reduction of trucks from the Campbell Soup facility to the storage facilities on the north side of the river. However, this conceptual alternative solution would not reduce any other traffic such as employee commuter trips and trips associated with the schools. This option would require the construction of new rail lines to connect facilities on the south side of the river with those on the north side, and require either re-habilitating the abandoned rail bridge or constructing a new river crossing. Addition of a rail line would not enhance emergency response times in the event that the SR 108 Bridge was to be closed during an emergency, nor would it increase community connectivity. As a result, if this conceptual alternative were implemented, other measures would have to be considered to address these issues.

- **Transit (Bus or Light Rail)** – The introduction of bus or light rail to the community was also considered, but dismissed as it would minimally satisfy only one element of the Purpose and Need. This alternative would also require major investment in either buses or light rail equipment and tracks. These services may reduce a minimal amount of local trips to the major employer on the south side of the river (Campbell Soup), but many of the employees come from areas outside of Napoleon who would still need to drive personal vehicles to commute to and from work. This option would also entail an annual cost to operate buses or trains, staff to run and operate such services, all of which would likely not be supported solely by fares as ridership would be limited based on the small population of the City.
- **Ferry Service** – This concept would minimally meet possibly one or two of the elements of the Purpose and Need, and was therefore dismissed for further consideration. This concept would require the construction of roads to a determined crossing location along with storage for vehicles waiting on the ferry service. This service may eliminate some traffic on the SR 108 Bridge and provide a connection between industrial locations, however potential usage would be limited as fees would be associated with the crossing, which would encourage vehicles to keep using the free river crossing that also entails not waiting on a ferry. This service would also be seasonal as it would likely not be able to operate in winter months when the river freezes and also when the river levels drop low enough during dry spells that may not allow transport. Annual maintenance costs, purchases of ferry boats, and staffing would create on-going costs that would not likely be supported solely on user fees.
- **Replicating EMS, Fire and Police Services on Both Sides of Maumee River** – Replicating EMS capabilities on both sides of the Maumee River was dismissed from further consideration as it would only meet one of the Purpose and Need criteria that involved improving local emergency response times. In addition, this concept would require that the City take on additional annual costs associated with additional vehicles, a new facility, and additional staff. The EMS would still need to travel across the river to access the one hospital in the City and as such would remain limited by a single river crossing should it become blocked or closed. Construction of a second hospital, on the south side of the river, would not be cost effective, as the existing population would not support two hospital facilities.

- **Access Management** – This concept was dismissed as it would only address only one element of the Purpose and Need, which would be to increase safety on the SR 108 corridor. Access management would also be difficult to implement, as many of the drives located on the SR 108 corridor would have to remain, as there is no alternative access location to parcels on the corridor due to no adjacent public roadway access to parcels and that state law requires at least one access to a public roadway per parcel. This option would therefore have only limited locations where drives could be reduced and would not reduce traffic on the corridor.

DESIGN CONCEPT AND SCOPE

This component of the Final Planning Study Report outlines the general design concept, which is a roadway bridge crossing of the Maumee River and connecting roadways to either CR Z or to SR 110 on the south side of the river and SR 424 on the north side. The Design Scope discusses the general design characteristics of the project, such as the number of lanes, length of project, etc.

GENERAL COST ESTIMATE

A generalized cost estimate is provided for preliminary planning purposes. The cost estimate will vary depending on the conceptual solution. Preliminary cost estimates indicate a cost range of \$14.5 million to \$16.5 million for a new river crossing.

PROJECT ACTION PLAN

At this time, no specific funding has been identified for this project. The project action plan is based on the assumption that the project will be funded in its entirety (100%) with the appropriate ODOT and federal funds. The project timetable and delivery schedule will follow the ODOT Project Development Process (PDP). As the project proceeds through the ODOT PDP, specific funding sources, along with their timeframes and other restrictions will be identified and applied for.

APPENDIX A - STAKEHOLDERS AND MAILING LIST

This appendix provides a detailed list of those stakeholders that will be contacted directly for notices of public meetings and project updates. This list will be updated, as appropriate during the PDP.

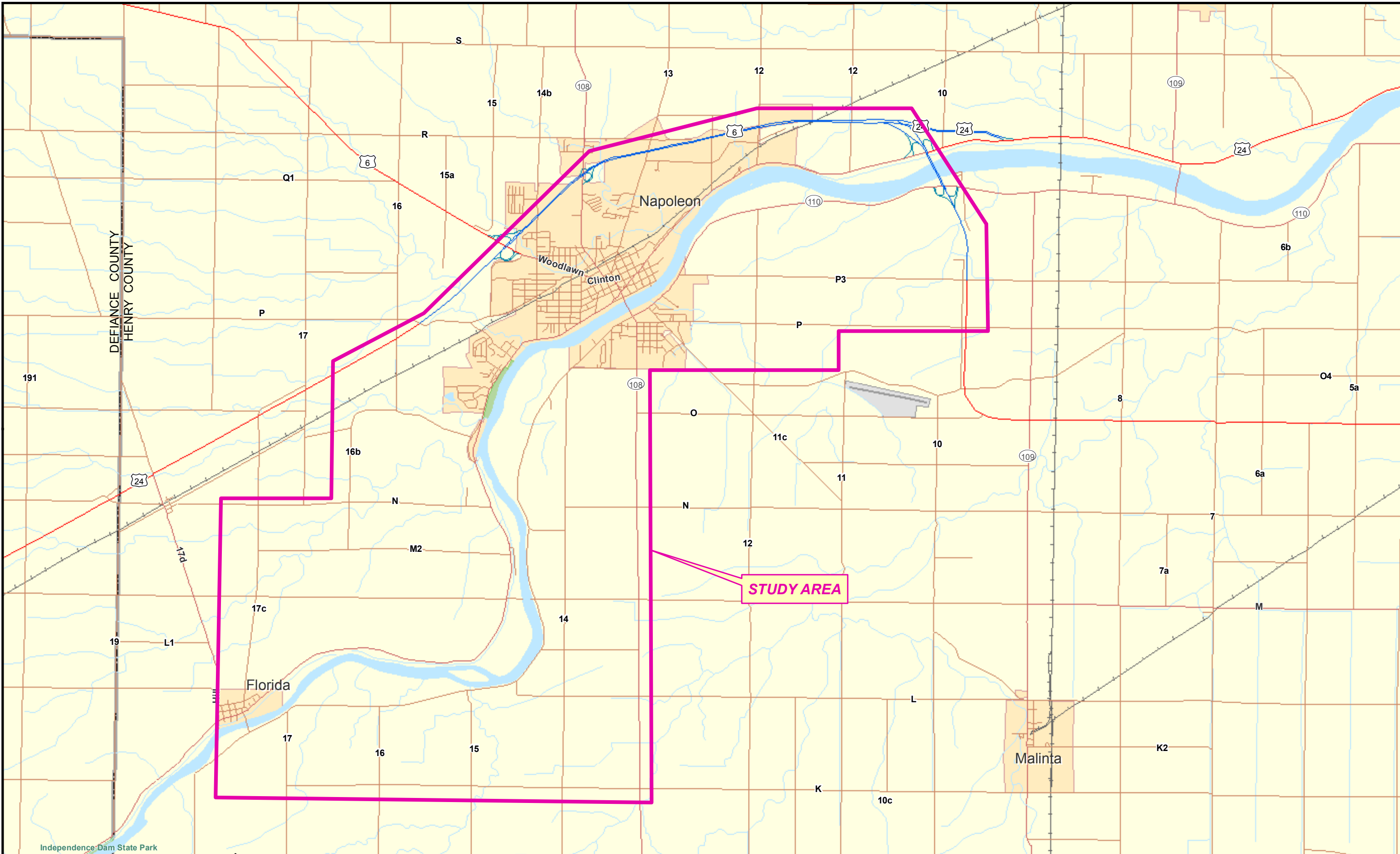
APPENDIX B - TECHNICAL REPORTS

This section of the Final Planning Study Report includes several supporting technical reports or plans that were utilized in developing a Purpose and Need for the project. These documents were also utilized for provide information during the comparative analysis of the conceptual solutions. These reports include:

- *Origin-Destination Study of State Route 108 (Perry St.) Bridge - May 2003*
- *The Napoleon Comprehensive Plan - 2003*
- *Henry County Comprehensive Plan - 2003*

APPENDIX C - SOURCE BIBLIOGRAPHY

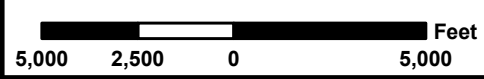
The source bibliography provides documentation of the secondary and primary sources of information that were utilized for preliminary research for the project in evaluating each conceptual alternative.



STUDY AREA

FIGURE I-1
ORIGINAL STUDY AREA BOUNDARIES

Notes Mapping taken from
 StreetMap North America



Section II

Public Involvement Plan (PIP)

Public Involvement Plan (PIP)
New Maumee River Crossing Project
PID #: 22984 - State Job #: 423780

INTRODUCTION

In 2003, the New Maumee River Crossing project management team began implementing a public involvement strategy in the early planning stages of the project to address the concerns of local stakeholders and to provide a means of public input for the project. To date, input from ODOT and FHWA has also been solicited for the project.

The goals of the Public Involvement Process are to:

- Obtain information from the public to help identify problems, needs goals and objectives of the community that might be addressed by improvements in the transportation infrastructure
- Inform the public of project history and current project activities
- Provide a forum for gathering information and sharing ideas
- Solicit comments from the public and governmental agencies
- Incorporate ideas from public involvement into the project decision-making process

PUBLIC INVOLVEMENT PLAN (PIP)

The PIP has been developed to guide the public involvement process that will be used during the course of this study. These activities are intended to encourage active participation throughout the project and to provide a means of disseminating project-related information. Proactive public participation will increase the likelihood of developing a project that will adequately address the needs of the community and be supported by the public and project stakeholders. The following key elements will be crucial to the success of the public involvement process:

- Identification of key local, state, and federal stakeholders
- Timely dissemination of project-specific information
- Continued involvement of project stakeholders and local agencies regarding the selection of a preferred alternative
- Presentation of preliminary analyses, concepts considered, and recommended concepts for further study
- Solicitation of questions, comments, and concerns from the public
- Integration of public input into the decision-making process

Public participation will be considered successful if:

- Interested citizens and stakeholders perceive that they are well informed during the course of the project and that their input was documented and considered
- Comments and questions from citizens are addressed in a timely manner

- The public understands the time element and scope of work for the overall development of the project, including construction
- The project is implemented without significant delays that may arise as a result of controversies
- Support for the project is maintained among local officials, stakeholders, and the public
- A line of information and communication is maintained between the project team and the community so that the public and stakeholders feel informed and involved in the project development process
- The project team is well-informed on public concerns and able to address concerns before they become problems for the project

PROJECT MANAGEMENT TEAM

The project management team includes the following individuals:

Randolph Germann - Henry County Engineer
Michael Ligibel - ODOT District Two
Mike Smith - The Mannik & Smith Group, Inc.
John Kusnier - The Mannik & Smith Group, Inc.
Russ Critelli – The Mannik & Smith Group, Inc.

The Henry County Engineer is the project sponsor and is responsible for local guidance of the project. ODOT provides state and federal guidance and coordination of the project and reviews all studies and documentation. The Mannik & Smith Group, Inc (MSG) is performing various technical aspects of the project, including all engineering and environmental studies and analyses, technical research, document preparation, and public involvement activities.

The Henry County Engineer and MSG will work together to develop project direction including development of the Purpose and Need, characterization of existing and future conditions, identification and evaluation of conceptual solutions, identification of preliminary corridors and preliminary alignments, and identification of the preferred alignment. ODOT and FHWA will review all project findings, reports, and analyses to determine if the project is being implemented in accordance with the PDP. Project stakeholders and the general public will be solicited for input at critical points in the project schedule.

PIP ACTIVITIES

The following public involvement activities have been developed for this project:

Identify Stakeholders

Project stakeholders are those agencies, local units of government, businesses, property owners, interested groups and the general public that offer unique perspectives in identifying the transportation problem and what could ensure a successful project outcome. Some stakeholders will be notified of public involvement meetings by direct mailings, while others, such as the general public, will be notified through local media

outlets (newspapers, radio, and television) and advertisements placed at various locations throughout the community such as churches, post office, and major retail centers. Table II-1 contains those stakeholders that have been identified for this project, as well as the mode of contact that will be used to notify these parties. The stakeholder list will be updated as appropriate throughout the course of this study.

**Table II-1
Local Stakeholders**

Stakeholder	Contacted By
City of Napoleon Administrative Officials	Direct Mailing
Napoleon City Council	Direct Mailing
Napoleon Fire/EMS Services	Direct Mailing
Napoleon Police Department	Direct Mailing
Napoleon Park District	Direct Mailing
Local Township Officials	Direct Mailing
Local School Districts	Direct Mailing
Chamber of Commerce & Members	Direct Mailing
Henry County Engineer	Direct Mailing
Henry County Commissioners	Direct Mailing
Henry County CIC	Direct Mailing
Henry County Sheriff	Direct Mailing
Henry County Planning Commission	Direct Mailing
Campbell Soup Company	Direct Mailing
Residential Property Owners Within or Adjacent to Corridors	Direct Mailing
Businesses Within or Adjacent to Corridors	Direct Mailing
Residents of Napoleon	Media Press Release
Various Churches	Media Press Release
Various Community Groups	Media Press Release

Note: A complete mailing list of those sent direct mailings are provided in *Appendix A*.

Several of the stakeholders were contacted early in the project to provide comments and guidance on early planning, data collection, preliminary conceptual solutions, and confirmation of preliminary findings. These included the following:

- Henry County Engineer
- City of Napoleon
- Napoleon Police Department
- Napoleon Fire/EMS Department
- Napoleon City Schools
- Campbell Soup Company

State and Federal Agencies

The state, federal and agency stakeholders include all agencies that may be involved with or have an interest in the project. Many of these agencies often review data and analyses collected for the project. Table II-2 below provides a listing of these stakeholders for the New Maumee River Crossing project:

**Table II-2
State, Federal, and Agency Stakeholders**

Stakeholder	Contacted By
Ohio Department of Transportation (ODOT)	Direct Mailing
Federal Highway Administration (FHWA)	Direct Mailing
Toledo Metropolitan Area Council of Governments (TMACOG)	Direct Mailing
NW Ohio Scenic River Coordinator	Direct Mailing
Northwest Ohio Rivers Council	Direct Mailing
Ohio Division of Wildlife	Direct Mailing
U.S. Army Corps of Engineers	Direct Mailing
U.S. Fish and Wildlife Service	Direct Mailing
Ohio Department of Natural Resources (ODNR)	Direct Mailing
Ohio Environmental Protection Agency (OEPA)	Direct Mailing
Ohio State Historic Preservation Office	Direct Mailing
Ohio Department of Agriculture	Direct Mailing
Local Officials of Ohio House of Representative	Direct Mailing
Local Officials of Ohio Senate	Direct Mailing
Local Officials of U.S. House of Representative	Direct Mailing
Local Officials of U.S. Senate	Direct Mailing

Note: A complete mailing list of those sent direct mailings are provided in *Appendix A*.

Mailing List

A database of stakeholders has been developed to facilitate the mailing of notices for public involvement meetings. This mailing list will include property owners and businesses within or adjacent to all of the preliminary alternative corridors being evaluated for this project. Other individuals and organizations not included on the mailing list will be notified indirectly by press releases. These individuals will have an opportunity, at any time during the project, to be added to the direct mailing list for any future notices of public meetings and project updates. The current mailing list is presented in *Appendix A*.

News Releases

News releases will be prepared to inform the local and regional media about the project at important milestones, such as the public involvement meetings and the identification of the Preferred Alternative. News releases will be drafted by the project management team and reviewed by the Henry County Engineer and ODOT before being submitted to the media for release. The media will be utilized to notify the general public and others not being sent direct mailings of public involvement meetings. A media contact list supplied by ODOT will be used to electronically submit press releases to local and other NW Ohio media of upcoming public meetings and project milestones.

Advertisements

Flyers will be developed for advertisements of public meetings. These flyers will be distributed to community businesses, organizations and major employment centers for posting in visible locations. Examples of such facilities may include grocery stores, government offices, major employment facilities, and major retail centers within the community.

Public Involvement Meetings

Public involvement meetings will be held at critical points during the PDP to share information, solicit input from the public, and to answer any questions the general public may have. The public meetings will include a brief formal presentation followed by a question and answer session. The remainder of the meeting will be an "Open House" style format where the public can visit stations set up at the meeting and ask questions to experts involved with the project. Written comments can either be submitted at the meeting in a comment box or can be mailed in within a two-week period.

These public involvement meetings will involve the following elements:

- News releases and advertisements
- Mailings to stakeholders
- Meeting materials
 - Handouts
 - Sign-in sheets
 - Nametags
 - Station signs
 - Station exhibits
 - Comment sheets
 - Copies of project-related studies
 - Origin-Destination study
 - Napoleon Comprehensive Master Plan
 - Henry County Comprehensive Master Plan

Meeting Locations

The consultant will work with the local agencies to decide on where meeting will be held. Meeting locations will satisfy requirements of the Americans with Disabilities Act (ADA).

Informational Handouts

A handout will be developed for each public meeting that includes a summary of the project purpose, the impacts of each concept under consideration, a map of the conceptual solutions, a list of contact persons, and a comment sheet.

Meeting Exhibits

Meeting exhibits will at minimum include a Preliminary Engineering Exhibit. Additional exhibits that summarize traffic issues, community connectivity, purpose & need,

proposed project schedule and other aspects of the project may also be displayed, as deemed appropriate.

Public Comment Period

Comment forms will be available at the public meeting, and will be included as part of informational handouts. These comment forms will provide individuals the opportunity to record questions, concerns and preferences regarding the project. Comments can be submitted at the public meeting or they will also be accepted for a two-week period after the public meeting. All comments received will be reviewed and considered during future decision-making and all questions will be addressed.

Documentation

All public involvement activities will be documented throughout the study. . Photographs will be taken during all public involvement activities to help document the meetings.

PUBLIC INVOLVEMENT TIMELINE

Public involvement activities will be conducted throughout this study. This includes meetings and input from key and local stakeholders in early project activities followed by public involvement with the general public as the project progresses and preliminary alternatives are developed.

SUMMARY OF PUBLIC INVOLVEMENT COMPLETED TO DATE

The following public involvement activities have been carried out to date:

Project Kick-Off Meeting with Key and Local Stakeholders

Several meetings were held during the beginning of the project in March 2003 with officials from the City of Napoleon and Henry County, Ohio. During these meetings, the following issues were discussed:

- Proposed project study area
- Purpose and need for the project
- Previously collected data for a new river crossing
- Public opinion/perceptions of the project
- Development of stakeholders and mailing lists
- Developing preliminary corridors
- Logical termini for a new river crossing within these corridors
- Results of the Origin-Destination Study
- Police and fire/EMS issues
- Traffic issues
- School transportation issues
- Hospital issues
- Funding issues
- Overall project approach.

Information collected during these meetings were then used to help develop the Purpose and Need for the project, which is presented in Section III of this document.

Public Involvement Meeting No. 1

The first public involvement meeting for this study was held on February 24, 2004 at the American Legion Post #300 at 500 Glenwood Avenue in Napoleon, Ohio 43545. The purpose of the meeting was to present preliminary findings of the Purpose and Need for the project, the results of preliminary traffic and environmental studies, and to solicit input from the public on the five conceptual solutions that were currently being considered for the project:

- New river crossing at Corridor 1 – south of Glenwood Avenue
- New river crossing at Corridor 2 – south of Industrial Drive
- New river crossing at Corridor 3 – south of County Road 12
- Reuse of the existing railroad bridge at Corridor 4 - north of Poe Road
- No-Build Alternative

A handout was provided that included a summary of the project Purpose and Need; the conceptual solutions under consideration; a map showing the locations of each conceptual solution; a list of contact persons; and a comment sheet. The meeting was facilitated by MSG, with support by TranSystems Corporation, who was working as a subconsultant to MSG at that time.

Upon completion of the public meeting and the two-week comment period, all comments and questions were addressed and considered in continuing development of the project.

One hundred and fifty (150) people provided comments at the public meeting. Of these, individuals, 140 (93 percent) were in favor of building a second roadway bridge over Maumee River in the City of Napoleon. Only three respondents were opposed to a new bridge over the river.

During the public meeting, attendees also had an opportunity to list their preference for one of four concepts for the location of a second river crossing. Fifty-six (56) percent of the individuals who responded preferred Corridor 2, located south of Industrial Drive. Approximately 33 percent of the respondents preferred Corridor 3, located south of County Road 12. Corridor 1, south of Glenwood Avenue, was preferred by only 5.5 percent of the respondents, while the No-build alternative was supported by only 0.5 percent of those who responded to the survey.

Letters from Local Stakeholders

Between September 2005 and July 2006, the following public and private entities sent ODOT six letters of support for a second river crossing in the City of Napoleon:

- Henry County Commissioners, September 12, 2005
- Henry County Community Improvement Corporation, September 20, 2005

- Napoleon/Henry County Chamber of Commerce, October, 2005
- Cloverleaf Cold Storage, October 27, 2005
- Campbell Soup Company, October 28, 2005 Henry County Community Improvement Corporation, July 13, 2006

In each of the six letters, project proponents stated a preference for Corridor 3, south of County Road 12, for one or more of the following reasons:

- Foster economic development
- Serve as alternative route for traffic to avoid congested areas on SR 108
- Provide a faster route to the county hospital
- Provide a vital link for Campbell Soup Company
- Provide more direct access to the Henry County Hospital

The letters of support that have been received for the project will be incorporated into the environmental document for the project.

Section III

Purpose & Need

Purpose and Need
New Maumee River Crossing Project
PID #: 22984 - State Job #: 423780

INTRODUCTION

The City of Napoleon is a community that is divided into two halves by the Maumee River. Currently only one bridge at SR 108 connects the northern and southern halves of the city. The nearest existing alternative river crossings are located at County Road 17c and U.S. Route 6 , which lie 7.5 miles to the west and 4 miles to the east of the SR 108 Bridge, respectively (See Figure III-1).

Having only one river crossing at SR 108 places a significant demand on the local roads within the downtown area of Napoleon. This is especially evident on weekdays between 3 PM to 6 PM, when trucks, school buses full of students and employees entering and leaving the Campbell's Soup plant (located on the south side of the river) converge onto the SR 108 Bridge to cross the Maumee River. This convergence of traffic also results in congestion within the downtown area of Napoleon. While the recently reconstructed and wider SR 108 Bridge has alleviated some of the congestion in the downtown area, a reduction in the through traffic along the SR 108 corridor, north of the river, in the central business district, is still needed to reduce the number of trucks and other through traffic that is causing congestion within the city. A transportation solution is needed that will move a substantial amount of truck and shift-change traffic away from the SR 108 corridor, decrease the demand on the SR 108 Bridge and reduce congestion in the downtown area.

Several events have also occurred in Henry County and the City that have increased public awareness and support for an efficient, alternative means to connect the northern and southern halves of the City of Napoleon, in the event that the SR 108 Bridge would have to be closed during an emergency. In 2003 the Damascus Bridge (SR 109), located 2.5 miles east of the US 6/US 24 bridge, was closed due to the presence of an unknown, potentially hazardous substance that was spilled onto the bridge pavement by a moving vehicle. After the spill was discovered, local officials had to close the bridge for two hours as local emergency crews determined the risks associated with the cleanup and disposal of the unknown material. If a similar situation took place on the SR 108 Bridge in Napoleon, closure of the bridge would place a severe hardship and safety concern on the community. Closing the bridge completely would severely hamper the ability of emergency personnel, such as fire, police and emergency medical services, to efficiently respond to calls on the south side of the Maumee River.

With no other reasonable detour options, local officials have been forced to allow the SR 108 Bridge to remain partially open when the bridge should be closed for emergency purposes. A few years earlier, a suicide attempt took place on the SR 108 Bridge. With no alternatives, local officials maintained two lanes of traffic while emergency crews responded to the emergency situation. While no specific records exist, City and County safety officials have stated that over the years, there have been a number of other emergencies on the SR 108 Bridge that under normal circumstances would have warranted closing the bridge until the situation had been

resolved. However, since the detour length is so great, local safety officials have instead maintained traffic on the bridge by assigning additional emergency personnel to the scene to direct traffic during these situations. There is a strong belief among local officials that these situations compromise the safety of City and County emergency response personnel who must put themselves in harms way to maintain traffic. Napoleon residents and the traveling public are also forced to become a part of such events on the SR 108 Bridge, which puts their health and safety at risk as well. These situations could be avoided if an alternative means to cross the river was available nearby that could be utilized as an efficient detour in the event of an emergency.

To address these issues, in 2002 the Henry County Engineer, with the support of the City of Napoleon, the Henry County Commissioners, Henry County Community Improvement Corporation and the Napoleon/Henry County Chamber of Commerce, commissioned a study to evaluate various transportation solutions that, if implemented, would achieve the following goals:

1. Improve traffic operations on the SR 108 bridge and corridor;
2. Improve safety by decreasing crashes in the corridor and enhancing the ability of local emergency response teams in the area;
3. Improve access to future and planned development areas on both sides of the Maumee River – to link existing industrial areas and improve access and transportation operations for Campbell’s Soup and other businesses; and
4. Coordinate with and ensure consistency with the local Comprehensive Plan.

LOGICAL TERMINI AND INDEPENDENT UTILITY

The original study area for this project encompassed the Maumee River Corridor from Florida, Ohio to US 6 as indicated in Figure III-1. During the development of the Purpose and Need for the project logical termini were refined to consist of SR 424 to the north, Glenwood Avenue to the west, CR 12 to the east, and CR Z or SR 110 on the south side of the river(Figure III-2).

FHWA states that “as long as a project will serve a significant function by itself (i.e., it has independent utility), there is no requirement to include separate but related projects in the same analysis.” The project that is described herein, with the limits set forth as described above, does have independent utility in that no additional transportation improvements would be required in the area to meet the project Purpose and Need. In other words, the transportation infrastructure that exists outside of the limits set forth for this study is sufficient to meet the Purpose and Need for the project.

PURPOSE AND NEED STATEMENT

The purpose of the project is to develop ways to:

- Improve traffic operations on the SR 108 Bridge and corridor;

- Improve safety by decreasing crashes throughout the corridor and enhancing the ability of local emergency crews (fire, police and EMT) to respond to calls throughout their jurisdictions;
- Improve access to future development areas located in the study area; and
- Coordination and consistency with the local comprehensive plan.

To that end, in 2002 the Henry County Engineer commissioned a study to determine what transportation-related solution(s), if implemented, would meet the needs of the community, as listed above.

Each need element is described in greater detail below.

ACCESS AND FUTURE DEVELOPMENT

Henry County is largely agricultural; however, the City of Napoleon supports the largest Campbell's Soup plant in the world, along with numerous heavy and light industrial warehouses. The Campbell's plant is comprised of two large facilities on 742 acres: the original V8 plant, acquired by Campbell's in 1948, and a second facility completed in 1957. The plant is located along SR 110, immediately south of the Maumee River, about two miles east of the existing SR 108 Bridge. The plant is located across the river from Industrial Drive, which connects to an interchange for the US 6/US 24 Napoleon bypass.

Three other companies, Silgan Manufacturing, TMT (trucking company) and Amcor PET Packaging, also are located on the south side of the Maumee River, adjacent to the Campbell's facility. Additional industrial land uses in Napoleon are located in the vicinity of Industrial Drive, on the north side of the Maumee River.

Approximately 14 years ago, Campbell's discontinued rail service to their Napoleon facility. Since that time, the distribution of materials and goods into and out of the Campbell's facility has occurred entirely by truck. More than half of the truck traffic that services the Campbell's facility must travel across the SR 108 Bridge, through the commercial heart of downtown Napoleon on the north side of the river, to reach the US 24 westbound or the Ohio Turnpike (I-80/90), a major east-west route. Trucks also utilize the SR 108 Bridge to reach the cold and dry storage facilities that are located in the Industrial Park adjacent to Industrial Drive on the north side of the river. To access this area, the trucks must travel across the river on the SR 108 Bridge and the northeast on SR 424 to Industrial Drive, as shown in Figure III-3, below.

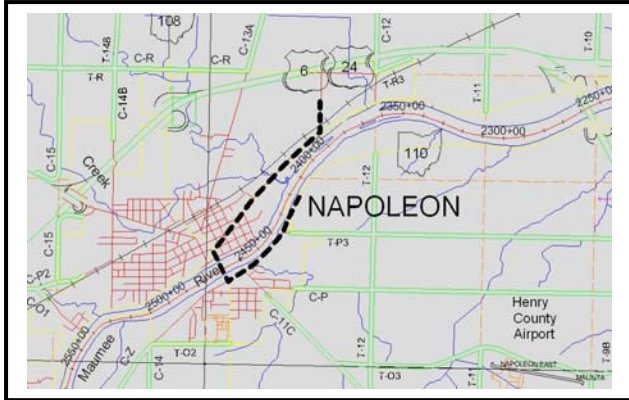


Figure III-3: the dark, dashed line represents the current preferred truck route from Campbell's plant to their cold and dry storage facilities located adjacent to Industrial Drive.

Based upon information supplied by Campbell Soup Company, the total number of trucks entering and exiting the plant varies from 275 to 400 per day. When leaving the plant, Campbell's estimates that 50 percent of these trucks (138 to 200 trucks on average) travel east on SR 110 to the US 6 interchange. From there about half of the trucks (69 to 100 trucks) travel east on US 6 to I-75, while the remaining half travel north on US 6 to US 24 east. The remaining 50 percent (138 to 200 trucks on average) of the truck traffic leaving the Campbell Soup Company travel west on SR 110 to SR 108, where they cross the Maumee River to access the cold and dry storage facilities off Industrial Drive, US 24 westbound at the SR 108 interchange, or the Ohio Turnpike (located to the north on SR 108). It is estimated that 40-75 trucks per day access the facilities off of Industrial Drive, while the remaining trucks (90-125 trucks per day), which represent the majority of the trucks crossing the river at SR 108, continue north on SR 108 to either US 24 or the Ohio Turnpike.

In addition to the truck traffic, employee traffic from Campbell's, Silgan and TMT adds to the passenger trips across the existing SR 108 Bridge. The Campbell's facility operates 24 hours a day, seven days a week throughout the year. As of December, 2006, Campbell's employed 1,154 permanent and 410 temporary full-time employees. They operate in three shifts, with changes generally occurring at midnight, 7:00 am and 3:30 pm. A detailed breakdown of employee shift changes is presented below:

Midnight Shift:

- 11:00pm Start with 6:00am Departure – 100 people
- 12:00am Start with 7:00am Departure – 200 people

7am Shift:

- 6:00am Start with 2:30pm Departure – 150 people
- 7:00am Start with 3:30pm Departure – 350 people

3:30pm Shift:

- 2:30pm Start with 11:00pm Departure – 100 people
- 3:30pm Start with 12:00am Departure – 300 people

The above breakdown equates to 1,200 employees, which represents Campbell's reported average. This number does not include 164 individuals who work on site for Silgan

Manufacturing, 125 employees at TMT and 35 employees at Amcor PET Packaging. As a result of the shift changes, a large spike in traffic currently occurs along SR 110, from the Campbell's plant west to the SR 108 Bridge and north into downtown Napoleon. This increased demand on the SR 108 bridge results in considerable traffic congestion in the downtown area. (For further traffic analyses refer to Section V.) Approximately 90 percent of Campbell's work force resides within 30 miles of the plant. Major population centers within this radius are located north of the Maumee River, which means that the bulk of the work force must cross the river to access the plant.

The 2008 ODOT Traffic Survey Report (TSR) indicates that on average, 700 trucks travel on the existing SR 108 Bridge each day. An estimated 470 trucks travel on SR 110 east of SR 108 and 270 trucks travel south on SR 108. Given this and the above detailed Campbell Soup truck traffic, the following projections and assumptions can be made:

Of the 700 trucks that utilize the SR 108 bridge, the 470 trucks on SR 110 east of SR 108 can be subtracted as these trucks would utilize a new river crossing (these 470 trucks would contain the 150 Campbell's trucks). This would leave an estimated 230 trucks on the SR 108 Bridge. This corresponds well with the 270 truck volume on SR 108 south of SR 110 as these trucks would primarily be through traffic on SR 108, with a portion using SR 110 to access Campbell's and US 6 further to the east. Future 2015 and 2035 traffic volumes supplied by ODOT are discussed later in the Traffic Operations section of this document.

In May 2006, Campbell's Soup Company announced that it is planning a \$41 million investment in its Napoleon facility, where it will construct a 346,000 square foot addition to its warehouse operation in order to add to its soup inventory. This new investment is in addition to \$50 million the company said in 2004 that it would spend to upgrade its soup and juice operations at the plant. Officials from the Campbell's facility have indicated that the new warehousing will be used to store finished product and will not cause a decrease in the number of trucks that will have to travel between the plant and the storage facilities on the north side of the River, at Industrial Drive.

TMT has recently entered into a contract with Campbell Soup to store, repackage and ship product from the company's Napoleon operations. This new business, which will create fifty permanent, full time positions, will be established on land that is located southwest of the US 24/Industrial Drive interchange. According to TMT officials, as many as fifty additional trucks per day will be required to cross the Maumee River to transport product from the Campbell Soup plant to the new TMT facility.

In summary, there is a need to improve the access from Campbell's Soup Plant and TMT to their cold and dry storage facilities located adjacent to Industrial Drive on the north side of the river.

COMPREHENSIVE MASTER PLAN

On April 7, 2003, the City of Napoleon approved a comprehensive Master Plan to help guide the community into the future. Henry County approved the plan in June/July 2003. The Master Plan includes future land use plans showing the development of additional industrial/commercial

areas in the vicinity of the US 6/US 24 and the Industrial Drive interchange and also in areas east and south of the existing Campbell's plant. The Master Plan also identifies a new river crossing at the southern terminus of Industrial Drive. (*Note: While a specific location is shown in the Master Plan, the location of the proposed crossing has not been officially determined.*) Listed below are some of the economic development opportunities, concept areas and improvements the City of Napoleon has specified that will have continued effects on truck traffic and the SR 108 bridge. (See Economic Development Plan, Thoroughfare Plan, and Future Land Use/Concept Area Plan at the end of Section III).

Due to increased traffic congestion on Scott Street, City officials and residents have proposed a connector street that would link Scott Street to Oakwood Avenue. That proposed alignment would create a connection from Industrial Drive to Scott Street via Interchange Drive and the new connector.

The North Pointe Retail, Technology and Industrial Campus was recently annexed and zoned in the Northeast part of Napoleon adjacent to the US 6/US 24 interchange with Industrial Drive. This 400-acre site is expected to become the location of several new technology-based firms and retailers. The city of Napoleon is currently in the process of extending water and sewer utilities and lengthening Industrial Drive north from the US 6/US 24 interchange to allow the site to properly develop. According to the Napoleon Master Plan, development will begin on two parcels (30 acres) in the next several months.

The recently opened Napoleon Commerce Park (Phase One) currently is experiencing its first new construction. A 40,000 square foot building located off Industrial Drive is the first of several buildings that are being constructed to create new investment and jobs in Napoleon and Henry County. The Commerce Park plan calls for 14 industrial buildings, 10 commercial buildings and 32 housing units for low to moderate-income families located just off Industrial Drive.

Phase Two of the Napoleon Commerce Park is the brownfield redevelopment of the former Holgrefe auto property, consisting of 65 acres. The city of Napoleon intends to utilize State of Ohio Issue One monies to potentially raise more than \$70 million in new tax revenue along with the generation of thousands of new jobs, according to the Napoleon Master Plan.

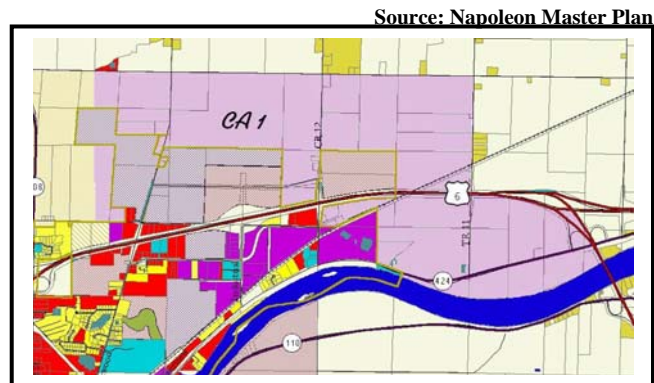
The City of Napoleon is already facing traffic issues with the number of trucks traveling in the downtown area, the congestion that occurs at the SR 108 bridge and the congestion of SR 108 north (Scott Street) because of truck traffic and retail development, anchored by a new Wal-Mart Super Center. Further development along the Industrial Drive corridor and areas south and east of the existing Campbell's plant will increase traffic in these areas. Because of Campbell's size and reputation, companies want to locate in and around Napoleon to become suppliers and warehouseers of Campbell's products. Therefore, if no new transportation link is provided, trucks from these new businesses will continue to use the SR 108 Bridge. This increase in demand to cross the river will exacerbate safety and traffic congestion problems along the SR 108 corridor north.

Listed below are two Concept Areas from the Napoleon Master Plan. Concept Area 1 is located in the northeast part of Napoleon adjacent to the Industrial Drive interchange with US 6/US 24. The Concept Area is bounded by US 6 on the east, the Maumee River and existing developments on the south, Township Road S to the north, and areas just west of County Road 13A. With the extension of Industrial Drive and two newer roads north of US 6/US 24, this concept area is experiencing current industrial and commercial growth in the North Point Campus. Concept Area 2 is located south of the Maumee River adjacent to the Campbell's Soup Plant, and is bounded by County Road 12 to the east, County Road P to the south, the Maumee River to the north and northwest, and the existing City limits of Napoleon to the west.

CONCEPT AREA (CA) 1: INDUSTRIAL AND COMMERCIAL GROWTH AREA – 1,515 ACRES

Preferred Uses: I-1 and I-2 (enclosed and open industrial uses). C-4 and C-5 (planned commercial and highway commercial uses), R-R (rural residential), and other planned development concepts. Special studies may be required to substantiate approval of other uses, especially higher density residential uses. Locations near and contiguous to the North Pointe Retail, Technology, and Industrial Campus should be a continuation of land uses compatible with existing uses at this site. Land uses such as higher density residential and other residential uses should be buffered to ensure overall quality of life and safety for residents (Napoleon Master Plan).

Utility Grade: B. Water available upon extension (with limitations), pump station required for sanitary sewer. Planned water and sewer improvements to accommodate the North Pointe Campus could make utility extensions to this concept area more feasible in the future (Napoleon Master Plan).

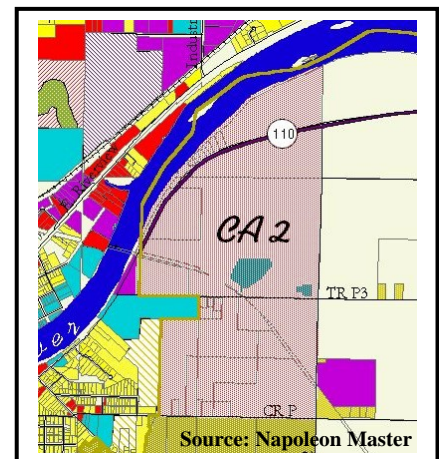


CONCEPT AREA (CA) 2: GROWTH AREA (INDUSTRIAL AND COMMERCIAL USES) – 558 ACRES

Preferred Uses: North of Township Road P3, I-1 (enclosed industrial uses) and planned development concepts. South of Road P-3, planned residential developments with buffering from industrial uses should occur. Special studies may be required to substantiate approval of other uses (Napoleon Master Plan).

Utility Grade: B. Water available upon extension (with limitations), pump station required for larger developments needing sanitary sewer extension (Napoleon Master Plan).

With Campbell's on-going expansion, this area is poised for



development of uses associated with the Campbell's and Silgan Plants. Both of these Concept Areas are the only industrial and mixed commercial use areas for Napoleon in the future. Because of their proximity to US 6/US 24 and the Industrial Drive interchange, these areas will continue to generate considerable truck traffic, which will place increased demands on the local roadway network. A more efficient transportation corridor is needed between these two Concept Areas to increase the viability and marketability of the undeveloped land and create a better transportation network to complement the budding industrial market in Napoleon.

INCREASE COMMUNITY CONNECTIVITY

Henry County occupies roughly 415 square miles and is home to 29,210 people, according to the 2000 Census. The City of Napoleon has a population of 9,318. The vast majority of medical, commercial, and financial services exist on the north side of the river (see Table III-1 below). Consequently, residents who live on the south side of the river must cross the SR 108 Bridge to access these services.

**Table III-1
Number of Facilities/Services/Business Establishments on North and South Sides
of The Maumee River**

Type of Service	Number of Facilities/Services/Business Establishments ¹	
	North of River	South of River
Police/Sheriff	2	0
Fire	1	0
Medical/Chiropractic/Counseling	16	1
Dental	10	0
Hospital	1	0
Nursing Home/Senior Centers	2	1
Schools	9	1
Parks	1	1
Churches	8	2
Restaurants	10	0
Retail	3	0
Automotive	10	0
Grocery	2	0
Pharmacy	1	1
Insurance	8	0
Banking/Financial	13	1

¹ Based on search of www.maps.google.com

There are approximately 5,600 licensed drivers in the City of Napoleon and approximately 14,000 within Henry County. On average, over 13,000 vehicles cross the existing SR 108 Bridge per day (2008 traffic data). The existing SR 108 Bridge is a vital link to the City and the surrounding area (See Figure III-2).

The Napoleon Police Department, Fire Department and the Henry County Hospital are located on the north side of the Maumee River and provide services to both sides of the community. The Henry County Sheriff and Napoleon Police and Fire Chiefs reported that response times would increase by 20 minutes by having to use the US 6/US 24 bridge if the SR 108 Bridge is closed to traffic. During periodic congestion or collisions in the vicinity of the SR 108 Bridge, services to the south side of the river are slowed. Currently, the bridge is kept open during all incidents and accidents to allow continuous movement north and south within the City of Napoleon and Henry County, which places increased risk on emergency crews who must maintain traffic through the area during this time.

The public library and the majority of the public schools in Napoleon, including the middle school and high school, are located on the north side of the river and serve students from both sides of the existing bridge. One elementary school is located on the south side. The bus routes for Napoleon City Schools use the SR 108 Bridge for all trips to the north and south. Its closure or delays affect the bus traffic because detour routes are lengthy.

In the table below, a calculation of the cost to personal and commercial users are determined for short term closures of the existing SR 108 Bridge due to accidents, events, or acts of terrorism. The calculation was performed based upon current traffic information and the methodology utilized in *Saving Time, Saving Money: The Economics of Unclogging America's Worst Bottlenecks*, from the American Highway Users Alliance, 1999.

In 2008, 13,050 vehicles per day utilized the existing SR 108 Bridge, consisting of 700 commercial trucks and 12,350 passenger cars. The shortest detour route available is approximately 8 miles (round trip), which can be traveled in approximately 12 minutes. The average total operating cost for passenger cars is estimated to be \$0.522 per mile (US DOT Bureau of Transportation Statistics, 2006), with \$8.97 per hour value for time (mean per capita hourly wage, based on mean per capita income for residents of Henry County in 2000). The average operating cost for heavy commercial vehicles is assumed to be \$53.18 per hour, based on data published by the Minnesota Department of Labor and Industry in December, 2007. Employer costs for commercial truck drivers were assumed to be \$25.12 per person, per hour. This estimate was obtained by adding the national mean hourly wage of heavy and tractor trailer operators (\$17.46) reported in May, 2006 to the mean employer cost for employee compensation in the private sector (\$7.66 per hour) for 3rd quarter of 2007, as reported but the US Department of Labor, Bureau of Labor Statistics. The resulting calculations are shown in Table III-2 below. It should be noted that the calculations assumed only one user per vehicle traveling the detour/closure route, so the actual costs may be somewhat higher depending upon vehicle occupancy.

**Table III-2
User Costs due to Closure or Detour of SR 108 Bridge¹**

Duration	Commercial Operating Costs	Commercial Salary Costs	Total
1 Hour	\$310.22	\$146.53	\$456.75
1 Day	\$7,445.20	\$3,516.80	\$10,962.00
	Passenger Operating Costs	Passenger Salary Costs	Total
1 Hour	\$2,148.90	\$923.16	\$3,072.06
1 Day	\$51,573.60	\$22,155.90	\$73,729.50

¹ See preceding text for the data sources and assumptions that were used to calculate costs.

Using the above information, total user costs for passenger and commercial vehicles during a 1 hour detour/closure of the SR 108 Bridge will be approximately \$3,529 and 1-day detour/closure would be \$84,691.

TRAFFIC OPERATIONS

Traffic volumes during the 3 to 6 PM weekday period in Napoleon are a continuing problem due to the large demand that is placed on the SR 108 Bridge by a combination of trucks, Campbell's employees leaving and entering the facility, school busses transporting children and the traveling public. The release times for the Napoleon School District and Campbell's shift change overlap during the first hour of this time period and create safety and congestion issues. The congestion is localized at the SR 108 Bridge northbound, SR 108 through the downtown, especially at the Scott/Clinton/Woodlawn 5-approach intersection, and SR 108 north (Scott Street) through the retail corridor of Napoleon. Traffic traveling on SR 108 into the downtown area and through the 5-approach intersection also becomes congested as trucks and buses have to make left and right turns. A transportation solution is necessary to reduce the demand on the SR 108 Bridge. Congestion problems could be relieved by removing a large portion of the truck traffic and/or relieving the influence of shift changes on the peak traffic period.

In reviewing the 1999 and 2008 ODOT Traffic Survey Reports (TSR), it was determined that traffic entering Scott Street (SR 108) from Clinton Street has increased approximately 15 percent during this time period (Table III-3).

**Table III-3
Truck and Passenger Car Traffic Data
From ODOT Traffic Survey Reports (TSR)**

ODOT TSR Data Year	ADT for Passenger & "A" Commercial	ADT for "B & C" Commercial	Total ADT	Percent Change
1999	9,060	640	9,700	Nearly 15% increase in traffic from 1999 to 2008
2008	10,300	840	11,140	

Likely causes for the increase in traffic can be attributed to three major factors as listed below:

- The closure of the Oakwood Avenue Intersection at US 6/US 24 in 2000. With the increased industrial development adjacent to Industrial Drive, the Oakwood intersection was closed and moved ¼ - mile east to Industrial Drive.
- Wal-Mart relocating its Super Center from Oakwood Avenue to Scott Street (SR 108). With the closure of the Oakwood Intersection, Wal-Mart abandoned its store adjacent to the intersection and moved west to the Scott Street retail corridor. This relocation changed related travel patterns within Napoleon.
- Campbell's Soup Company has continued to grow and locate its related industries within Napoleon. Therefore, truck traffic has increased throughout Napoleon, especially in the downtown SR 108 corridor.

All of these changes have caused an increase in traffic throughout the SR 108 corridor. Because of this increased traffic, Henry County and the City of Napoleon are looking for a transportation solution that will divert the majority of the truck traffic away from SR 108. The Oakwood Avenue and Perry Street intersection has been an ongoing problem through the downtown.

At the intersection of SR 108 and Clinton Street traffic must make a left turn when traveling northbound or right turns when traveling south/eastbound. Currently, the traffic signal allows both traffic movements at the same time even though the path of two trucks would overlap. The picture to the right shows a truck turning right onto Perry Street (SR 108) and swinging over the centerline of the road to negotiate the turn movement.



The City of Napoleon and the Napoleon City Schools identified the main areas where school children reside relative to the existing schools they attend on the north side of the river. The majority of the schools are located to the southwest of downtown, to the west and south of SR 108 and the 5-approach intersection involving Scott Street/Clinton Street/Woodlawn Avenue. Four major concentrations of school age children (136 students currently) are located just across

SR 108 to the east and north along with Woodlawn Avenue. Whether those children take the bus, a car, walk, or bike, the pathway takes them into the downtown and across SR 108 and through the 5-approach intersection. Morning and evening school traffic and after school activities (occurring during peak traffic periods), combined with an increase in traffic, particularly truck traffic, enhances the possibility of accidents involving school age children.

ODOT supplied traffic projections for the state and federal routes that are impacted by use of the existing SR 108 Bridge over the Maumee River as displayed in Table III-4 below for the years 2015 and 2035.

**Table III-4
New Maumee River Crossing
2015 & 2035 Traffic Projections (supplied by ODOT)**

Location	2015 ADT	2035 ADT	2035 DHV	Directional Distribution	Percent Trucks
US 6 (log 15.50) near TR-11	18830	25100	2510	55%	45%
US 6 (log 16.50) at Bridge over Maumee River	8880	11750	1175	55%	27%
SR 108 (log 15.00) near TR-2	6700	7150	715	55%	7%
SR 108 (log 15.65) at Bridge Over Maumee River	15200	15380	1540	55%	7%
SR 108 (log 16.00) near N. Perry St.	9680	10690	1070	55%	7%
SR 110 (log 0.40) near Appian Ave.	8680	9950	995	55%	7%
SR 110 (log 0.65) near Maumee Ln.	4550	5030	505	55%	10%
SR 110 (log 3.00) east of TR-12	2230	2680	270	55%	40%
SR 424 (log 9.20) near Haley Ave.	8250	10650	1065	55%	2%
SR 424 (log 10.00) near Wayne St.	4280	4730	475	55%	8%
SR 424 (log 13.00) east of TR-11	2130	2430	245	55%	11%

An urban arterial analysis for the SR 108 Bridge for the section from the SR 108 & SR 110 intersection northward to Washington Street in Downtown Napoleon was conducted utilizing the *HCS+ Arterials Version 5.3* software to analyze the predicted Level of Service (LOS) for the SR 108 Bridge. Level of Service (LOS) is a qualitative measure of traffic graded from LOS A to LOS F, with LOS A representing free flow and LOS F representing extremely heavy congestion. The analysis revealed the following preliminary results:

- The current SR 108 Bridge with existing ODOT traffic volumes (2008) is operating at a LOS D. This is below the minimum LOS C desired for an Urban Principal Arterial.
- In 2015 under a “No Build” condition, the SR 108 Bridge is predicted to operate at a LOS E.
- In design year 2035 under a “No Build” condition, the SR 108 Bridge is predicted to operate at a LOS E.

These results of the arterial analysis indicate that the existing SR 108 Bridge currently does not meet the minimum design guidelines for an urban principal arterial as outlined in the ODOT *L&D Manual*. This indicates a need for additional capacity in order to accommodate the peak hour of traffic that utilizes the river crossing.

Safety

The Ohio Department of Transportation (ODOT) provided CAM-Tool crash data for the time period of 10/29/2005 through 10/29/2008. The SR 108 bridge replacement was fully open on 10/29/05 thus the reason for starting the three year crash period on that date, and at the time of the study revisions, the most recent 2008 data available was only to the end of October. The findings of the crash data review is provided in the Table III-5.

Table III-5
Crash Data Summary – SR 108 Bridge Crossing
10/29/05 (after bridge replacement) through 10/29/2008 (most recent data available)

Primary Intersections			Key Roadway Sections				
SR 424 (Riverview Ave.) & SR 108 (Perry St.)			SR 108 from Clinton St. to S. Corp. Limit				
Year	Crashes	3-Year Rate	Year	Crashes	3-Year Rate		
10/29/05 – 12/31/06	5	N/A	10/29/05 – 12/31/06	27	N/A		
2007	4	N/A	2007	22	N/A		
2008 (through 10/29)	3	N/A	2008 (through 10/29)	13	N/A		
Total	12	0.67 MEV	Total	62	5.49 MVM		
SR 110 (Maumee Ave.) & SR 108 (Perry St.)			SR 424 from Scott St. to CR-12				
Year	Crashes	3-Year Rate	Year	Crashes	3-Year Rate		
10/29/05 – 12/31/06	6	N/A	10/29/05 – 12/31/06	6	N/A		
2007	1	N/A	2007	8	N/A		
2008 (through 10/29)	4	N/A	2008 (through 10/29)	4	N/A		
Total	11	0.71 MEV	Total	18	2.03 MVM		
MEV indicates average number of accidents per million vehicles entering the intersection. MVM indicates average number of accidents per million vehicle miles traveled through the section of roadway.			SR 110 from SR 108 (Perry St.) to TR-P3				
			Year	Crashes	3-Year Rate		
			10/29/05 – 12/31/06	8	N/A		
			2007	3	N/A		
			2008 (through 10/29)	4	N/A		
			Total	15	1.96 MVM		

The rebuilt SR 108 Bridge was open on October 29, 2005. In order to obtain the three most recent years of data, crash data was obtained October 29, 2005 to October 29, 2008. The bridge improvements seem to correlate with a decrease in the number of crashes over the three year period in most sections and locations as shown in the table above. The three year intersection crash totals of 12 and 11 at the SR 108/SR 424 and SR 108 and SR 110 intersections, respectively are both below the three-year threshold of 14 crashes. The 3-year crash rates at the two intersections are also minimal, at 0.67 MEV and 0.71 MEV.

When evaluating roadway sections, a 3-year crash total of 20 crashes is considered to be high. Of the three roadway sections evaluated, the only section of roadway that exceeds this threshold is the segment of SR 108 from the south corporation limit north to Clinton Street. Here, 62 crashes occurred over the 1.13 mile section of SR 108 over the three year period, with a crash rate of 5.49 MVM. This rate is nearly double that of the State average for an urban principal arterial. This indicates that the funneling of traffic through the downtown and across the single river crossing at SR 108 results in crash frequency and rates above state thresholds and rate averages. The SR 108 section reviewed for crashes is where the highest peak periods of traffic occur, when traffic from both the Campbell's Soup Plant and school buses converge at the same time in the afternoon. This suggests that even with the recent SR 108 Bridge replacement and intersection improvements; there is still a need to reduce the traffic funneling effect through the downtown area and across the SR 108 Bridge

FUNCLASS	MEAN ACC/MVM	STANDARD DEVIATION
RURAL INTERSTATE	0.72914	0.95504
RURAL OTHER PRIN ARTERIAL	1.42022	1.82484
RURAL MINOR ARTERIAL	1.95652	2.78064
RURAL MAJOR COLLECTOR	2.39923	3.64663
RURAL MINOR COLLECTOR	3.24513	5.32734
RURAL LOCAL	3.23155	7.65076
URBAN INTERSTATE	1.38543	2.64291
URBAN OTHER FRWAY/XWAY	1.34603	3.62861
URBAN OTHER PRIN ARTERIAL	2.75294	4.02666
URBAN MINOR ARTERIAL	2.52400	3.89069
URBAN COLLECTOR	2.27429	4.01010
URBAN LOCAL	0.00000	0.00000

It is also important to note that the upcoming improvements to US 24, from Napoleon eastbound to Waterville, Ohio, which started construction in the second quarter of 2008, will result in the elimination of the existing at grade intersection between US 24 and Township Road 10, just east of the US 6/US 24 interchange. Currently, trucks traveling along US 24 from the east exit US 24 at Township Road 10. They then travel west on SR 424 to US 6, where they then head south to cross the Maumee River. They then exit on SR 110 and travel west to the Campbell Soup facility. With the elimination of the at grade intersection at Township Road 10, the trucks that must travel to the Campbell's Soup plant from westbound US 24 will have to exit at SR 108 and travel through the downtown area to cross the Maumee River. This will cause an estimated increase of 1,440 vehicles, of which 220 are trucks along the SR 108 corridor, thereby increasing congestion in the downtown area of the city.

A transportation solution is needed to reduce downtown traffic conflicts and congestion and reduce traffic volumes through high accident segments of SR 108, as well as additional downtown streets, and the existing bridge crossing. It must also provide for trucks crossing the river from westbound US 24, after the closure of the at grade intersection of US 24 and Township Road 10.

CONCLUSION

Based upon the identified needs described above, a transportation solution is needed in the vicinity of Napoleon, Ohio to:

1. Provide a direct link between existing industrial development areas on both sides of the Maumee River;
2. Improve access to future development areas, consistent with the Comprehensive Plan
3. Improve connectivity within the community
4. Reduce the traffic demands on downtown roadways, decrease congestion and enhance public safety

The Purpose & Need Statement for the project establishes the need for the transportation solution in the study area. For this project, the transportation solution for the study area should:

1. Improve traffic operations on the SR 108 bridge and corridor;
2. Improve safety by decreasing crashes in the corridor and enhancing the ability of local emergency response teams in the area;
3. Improve access to future and planned development areas on both sides of the Maumee River – to link existing industrial areas and improve access and transportation operations for Campbell’s Soup and other businesses; and
4. Coordinate with and ensure consistency with the local Comprehensive Plan.

Purpose & Need Referenced Figures

- Figure III-1: Original Study Area Boundaries
- Figure III-2: Revised Study Area Boundaries
- Draft Comprehensive Plan - Existing Land Use
- Draft Comprehensive Plan - Thoroughfare Plan
- Draft Comprehensive Plan - Existing and Future Land Use with Concept Areas
- Draft Comprehensive Plan - Economic Development Plan

Project # HEND2B5 March 2009, hend2_SA.mxd

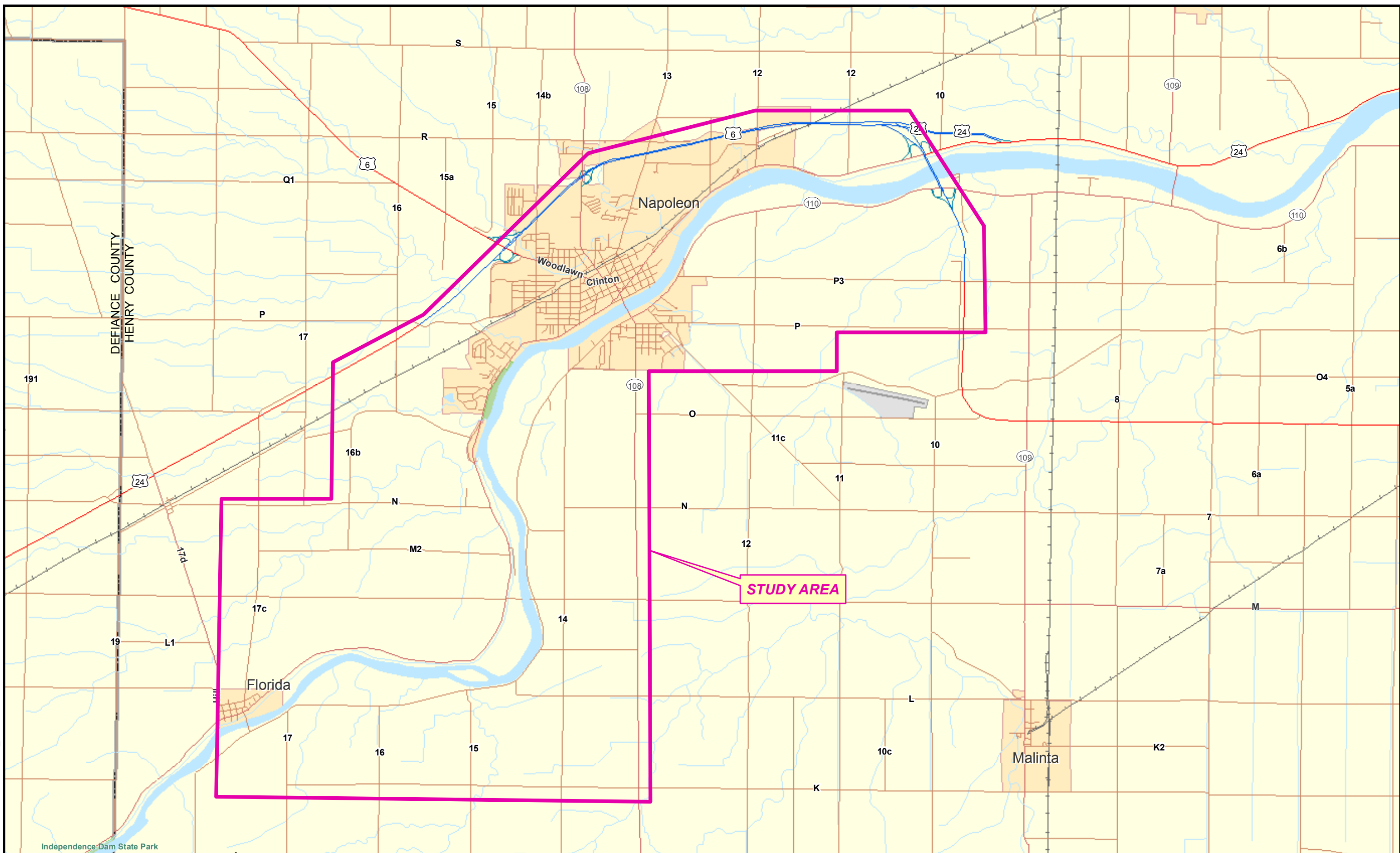
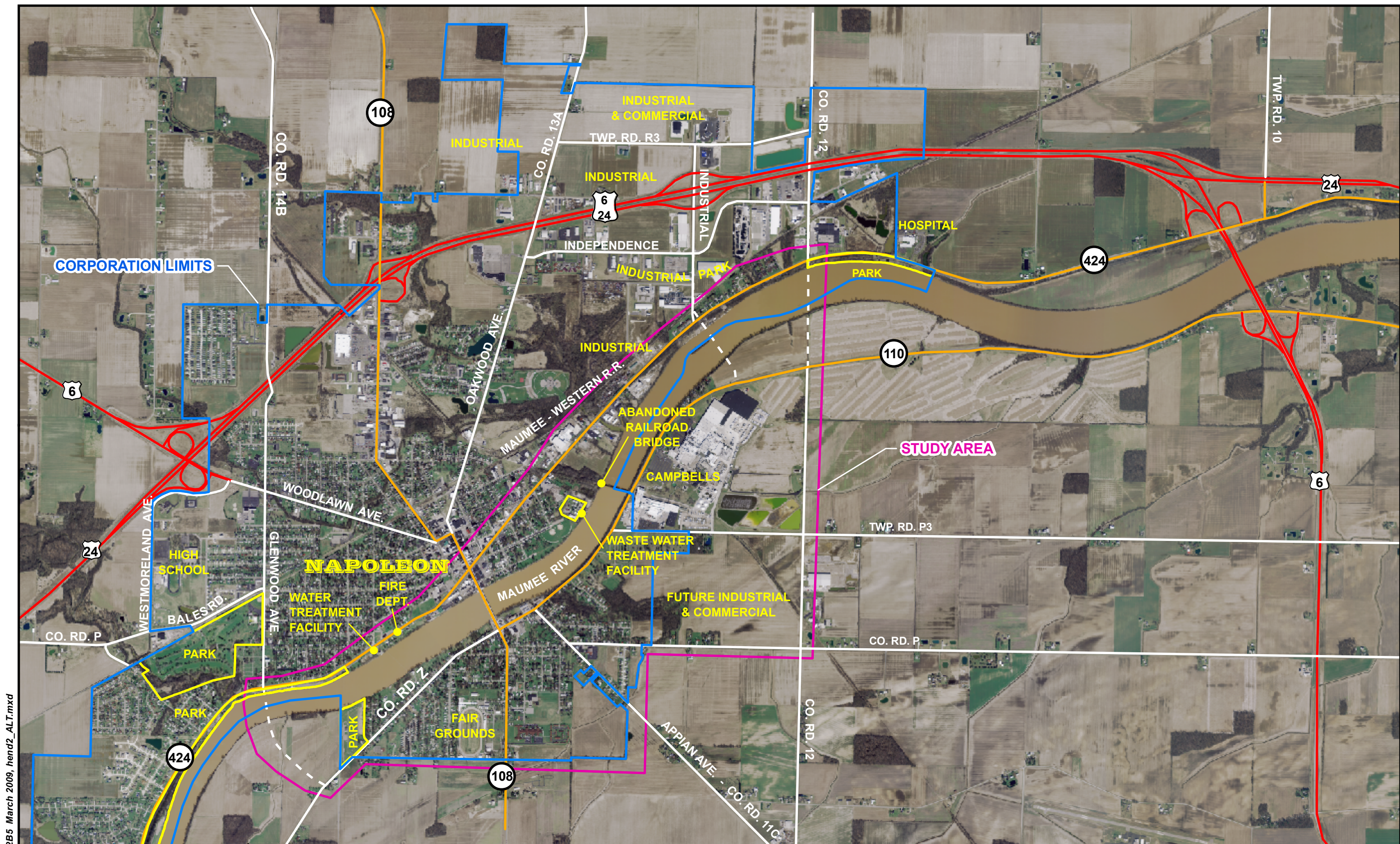


FIGURE III-1
ORIGINAL STUDY AREA BOUNDARIES



Project # HEND2B5 March 2009, hend2_ALT.mxd

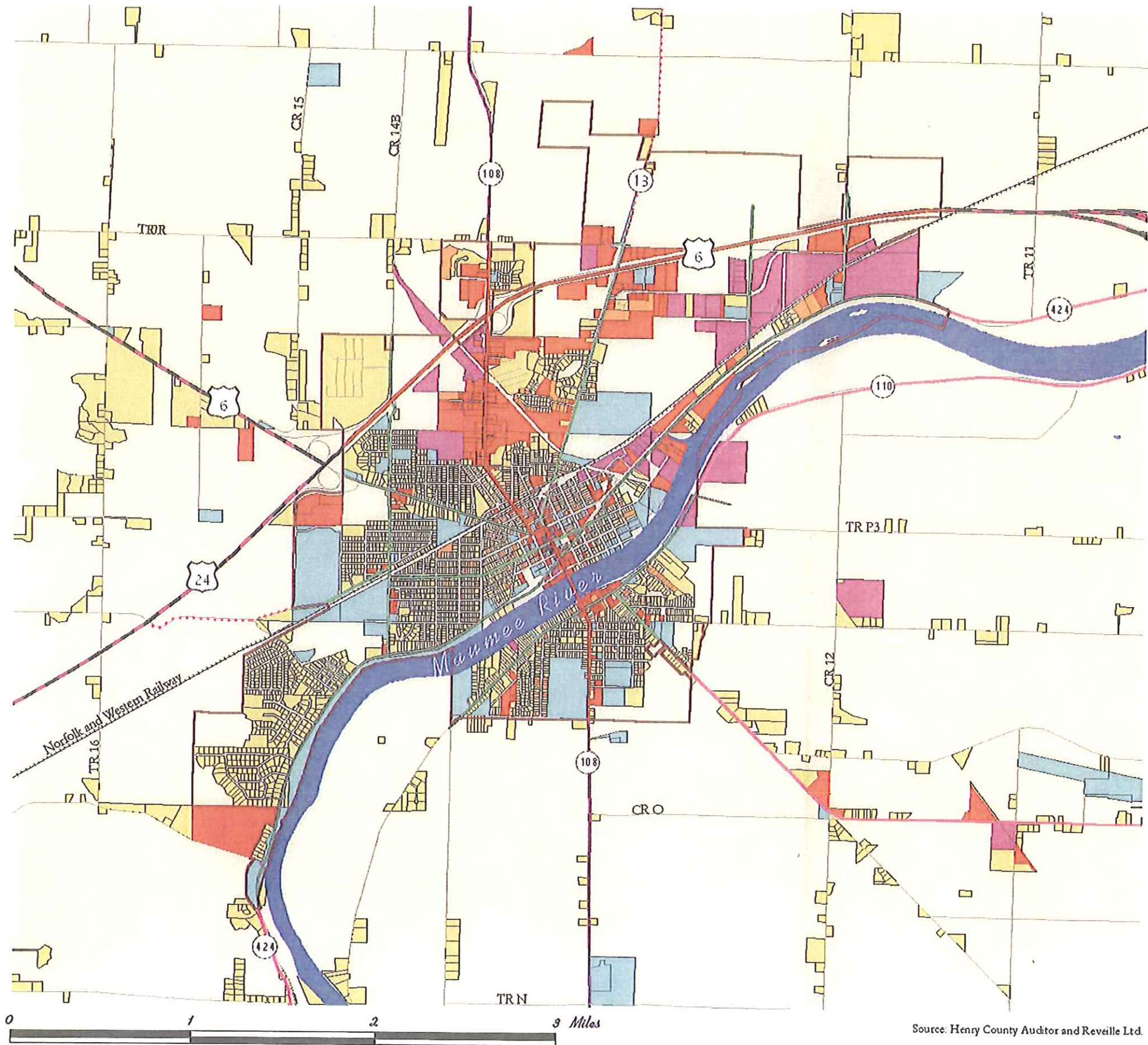
Mannik & Smith
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 Maumee, Ohio 43537
 Civil Engineering, Surveying and Environmental Consulting
 MAUMEE ♦ CLEVELAND ♦ MONROE ♦ CANTON

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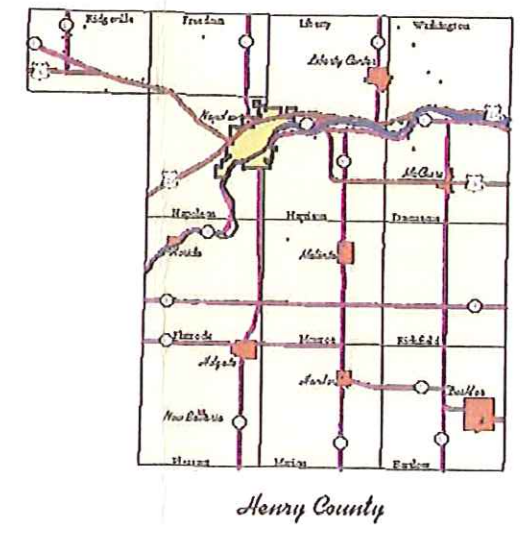
FIGURE III-2
REVISED STUDY AREA BOUNDARIES

Notes The photography, dated April 2006, is provided by OGRIP as part of the Ohio Statewide Imagery Program.

2,000 1,000 0 2,000 Feet




Source: Henry County Auditor and Reveille Ltd.

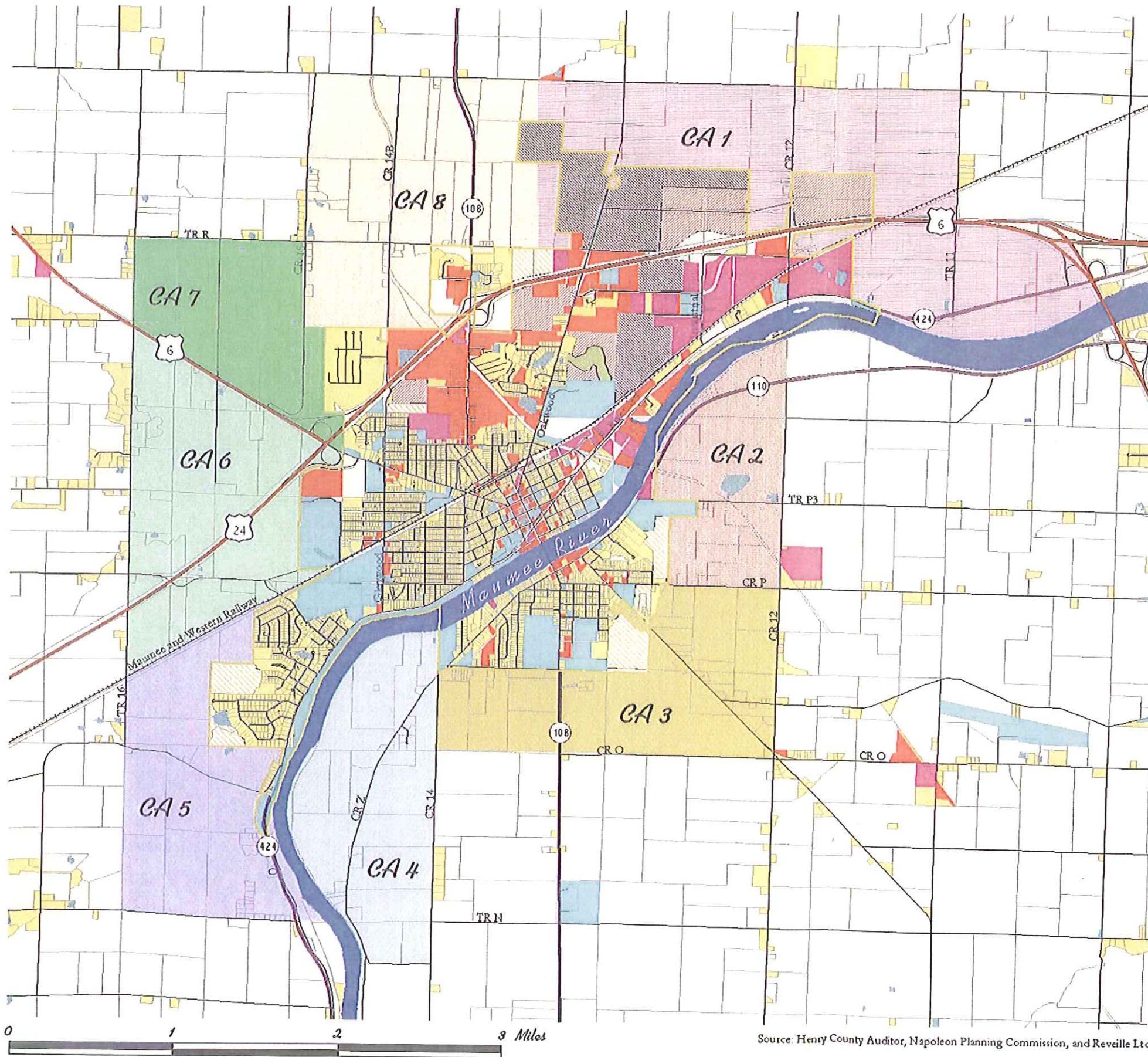


Legend

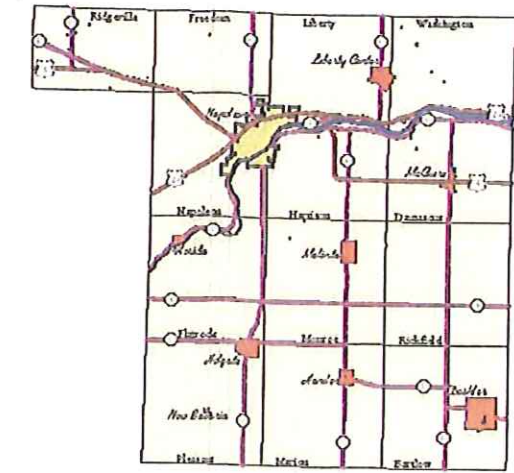
- City of Napoleon
- Urban Other Principal Arterial
- Urban Minor Arterial
- Urban Collector
- Rural Principal Arterial
- Rural Minor Arterial
- Rural Major Collector
- Rural Minor Collector
- Local Streets
- Maumee River
- Railroads
- Residential
- Multi Family Residential
- Commercial
- Industrial
- Public or Institutional
- Agriculture or Open Space

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 PORTLAND, OR 97201

*The City of Napoleon Comprehensive Plan
 Existing Land Use*



Source: Henry County Auditor, Napoleon Planning Commission, and Reveille Ltd.



Henry County



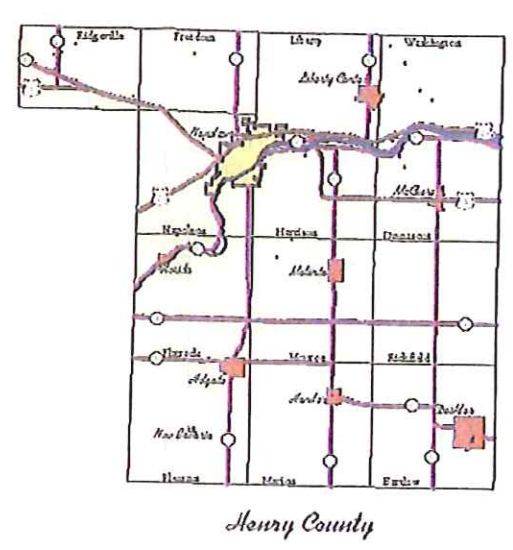
Legend

- City of Napoleon
- US Highway
- State Highway
- Local Streets
- Railroads
- Parcels
- Maumee River
- Ponds and Open Water
- Napoleon Concept Area 1
- Napoleon Concept Area 2
- Napoleon Concept Area 3
- Napoleon Concept Area 4
- Napoleon Concept Area 5
- Napoleon Concept Area 6
- Napoleon Concept Area 7
- Napoleon Concept Area 8
- Residential
- Proposed Residential
- Multi Family Residential
- Commercial
- Proposed Commercial
- Industrial
- Proposed Industrial
- Public or Institutional
- Proposed Natural Resource Area and Green Space
- Agriculture or Open Space

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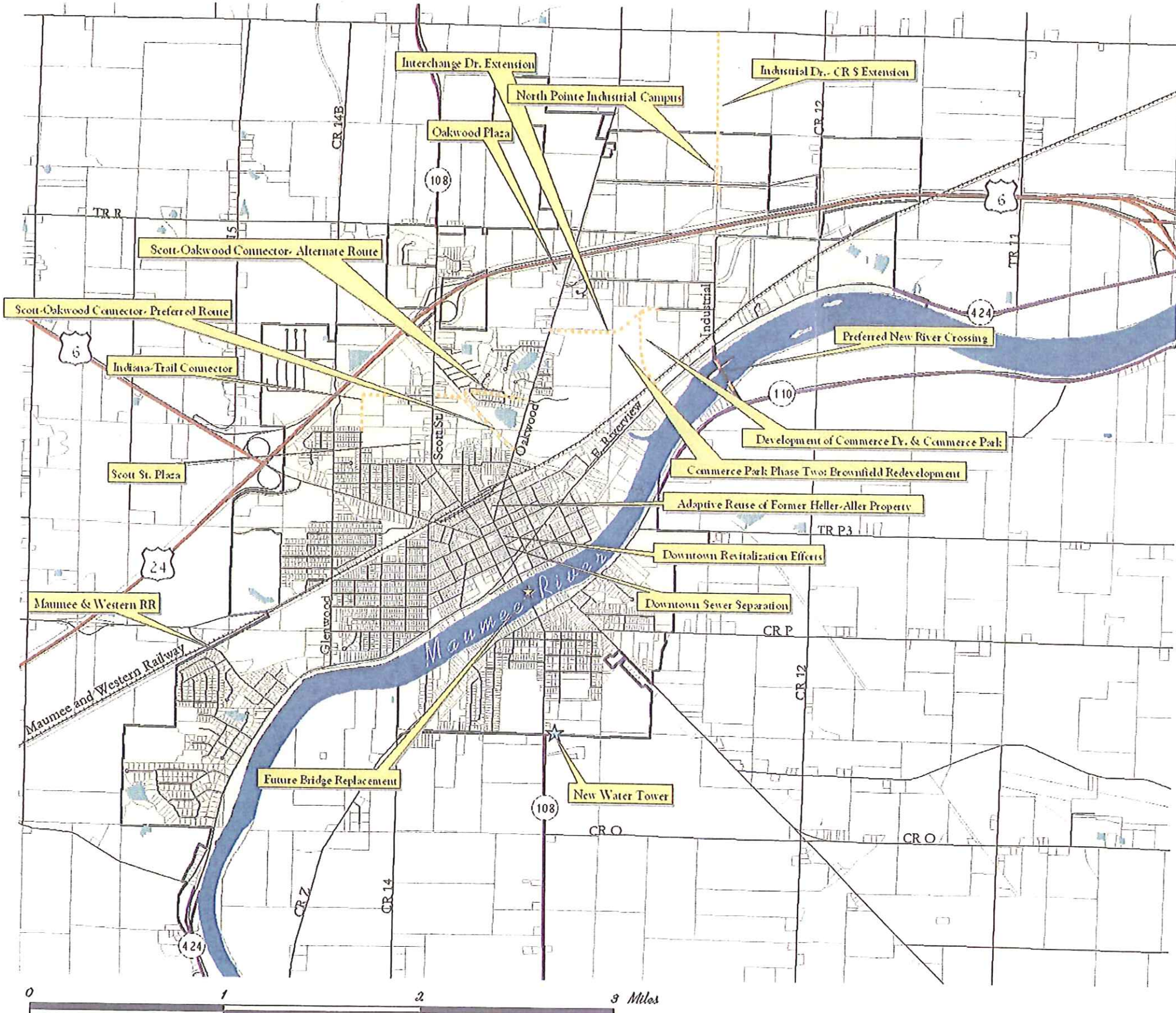
*The City of Napoleon Comprehensive Plan
 Existing and Future Land Use with Concept Areas*



Legend

- Proposed New River Crossing and Bridge
- Future Road Expansions
- Future State Bridge Replacement
- US Highway
- State Highway
- Local Streets
- Future Water Tower
- Railroads
- Parcels
- Maumee River
- Ponds and Open Water
- City of Napoleon

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Source: Henry County CIC, Henry County Engineer, and City of Napoleon Engineering Department.

*The City of Napoleon Comprehensive Plan
 Economic Development Plan*

Section IV

Conceptual Alternatives

Conceptual Alternatives
New Maumee River Crossing Project
PID #: 22984 - State Job #: 423780

CONCEPTUAL ALTERNATIVE SOLUTIONS

In following the guidance of the ODOT’s Project Development Process, the Project Management Team has developed several Conceptual Alternative Solutions (concepts) that have the potential to address the identified transportation needs of the community. These initial concepts were evaluated against the project Purpose and Need to determine whether the concept had enough merit to be considered for further evaluation.

Based on the elements of the project Purpose and Need, in order for a concept to be carried through for more detailed evaluation, it should:

- Improve traffic operations on the SR 108 bridge and corridor;
- Improve safety by decreasing crashes in the corridor and enhancing the ability of local emergency response teams in the area;
- Improve access to future and planned development areas on both sides of the Maumee River – to link existing industrial areas and improve access and transportation operations for Campbell’s Soup and other businesses; and,
- Coordinate with and ensure consistency with the local Comprehensive Plan.

After evaluating each concept against the above criteria, they were divided into two following categories:

- Concepts that are recommended for further evaluation; and,
- Concepts that were considered and then dismissed.

These two categories of concepts are briefly discussed in the next two sections.

CONCEPTUAL ALTERNATIVE SOLUTIONS RECOMMENDED FOR FURTHER INVESTIGATION

The following Conceptual Alternative Solutions were determined to merit further investigation as potential feasible alternatives, based on their abilities to meet the elements of the Purpose and Need:

1. **Transportation Corridor 1** – West of SR 108 Bridge; from Glenwood Avenue (north side of river) to CR-Z (south side of river) (Figure IV-1). This concept involves a 1,000-foot wide corridor that would explore the feasibility of a southerly extension of Glenwood Avenue across the Maumee River to a terminus on the southern side of the

river. This concept was recommended for further study as it could possibly address several of the Purpose and Need criteria.

2. **Transportation Corridor 2** – East of SR 108 Bridge; from Industrial Drive (north side of river) to SR 110 and CR-12 (south side of river) (Figure IV-1). This concept involves a 1,000-foot wide corridor that would explore the feasibility of a southerly extension of Industrial Drive across the Maumee River to a terminus on the southern side of the river. This concept was recommended for further study as it could possibly address several of the Purpose and Need criteria.
3. **Transportation Corridor 3** – East of SR 108 Bridge; from CR-12 (north side of river) to SR 110 (south side of river) (Figure IV-1). This concept involves a 1,000-foot wide corridor that would explore the feasibility of a southerly extension of CR-12 across the Maumee River to a terminus on the southern side of the river. This concept was recommended for further study as it could possibly address several of the Purpose and Need criteria.
4. **Re-use of Abandoned Railroad Bridge** between SR 424 (north side of river) and SR 110 (south side of river) (Figure IV-1). This concept involves a possible adaptive re-use of the existing abandoned railroad bridge structure in place that spans the Maumee River. This concept was recommended for further study as it could possibly address several of the Purpose and Need criteria.
5. **No Build** – This concept would involve no improvements other than routine maintenance of the existing Maumee River crossing in Napoleon and the adjacent roadway network. This option fails to meet any of the Purpose and Need criteria, but must be carried forward as a base comparison of the build concepts as to what would occur should no improvements occur.

These concepts are explored in greater detail in the section entitled: Ability to Meet the Purpose and Need and Possible Impacts.

CONCEPTS THAT WERE CONSIDERED AND DISMISSED

The following Conceptual Alternative Solutions were considered but then dropped from further consideration based on their inability to meet the elements of the Purpose and Need:

- **Rail (Freight)** – Development and use of rail to transport goods between the two industrial areas in the City of Napoleon was considered but then dismissed from further consideration, as it would satisfy only one of the elements of the project Purpose and Need. The only benefit would be a reduction of trucks from the Campbell Soup facility to the storage facilities on the north side of the river. However, this conceptual alternative solution would not reduce any other traffic such as employee commuter trips and trips associated with the schools. This option would require the construction of new rail lines to connect facilities on the south side of the river with those on the north side, and require either re-habilitating the abandoned rail bridge or constructing a new river crossing. Addition of a rail line would not enhance emergency response times in the event that the SR 108 Bridge was to be closed during an emergency, nor would it

increase community connectivity. As a result, if this conceptual alternative were implemented, other measures would have to be considered to address these issues.

- **Transit (Bus or Light Rail)** – The introduction of bus or light rail to the community was also considered, but dismissed as it would minimally satisfy only one element of the Purpose and Need. This alternative would also require major investment in either buses or light rail equipment and tracks. These services may reduce a minimal amount of local trips to the major employer on the south side of the river (Campbell Soup), but many of the employees come from areas outside of Napoleon who would still need to drive personal vehicles to commute to and from work. This option would also entail an annual cost to operate buses or trains, staff to run and operate such services, all of which would likely not be supported solely by fares as ridership would be limited based on the small population of the City.
- **Ferry Service** – This concept would minimally meet possibly one or two of the elements of the Purpose and Need, and was therefore dismissed for further consideration. This concept would require the construction of roads to a determined crossing location along with storage for vehicles waiting on the ferry service. This service may eliminate some traffic on the SR 108 Bridge and provide a connection between industrial locations, however potential usage would be limited as fees would be associated with the crossing, which would encourage vehicles to keep using the free river crossing that also entails not waiting on a ferry. This service would also be seasonal as it would likely not be able to operate in winter months when the river freezes and also when the river levels drop low enough during dry spells that may not allow transport. Annual maintenance costs, purchases of ferry boats, and staffing would create on-going costs that would not likely be supported solely on user fees.
- **Replicating EMS, Fire and Police Services on Both Sides of Maumee River** – Replicating EMS capabilities on both sides of the Maumee River was dismissed from further consideration as it would only meet one of the Purpose and Need criteria that involved improving local emergency response times. In addition, this concept would require that the City take on additional annual costs associated with additional vehicles, a new facility, and additional staff. The EMS would still need to travel across the river to access the one hospital in the City and as such would remain limited by a single river crossing should it become blocked or closed. Construction of a second hospital, on the south side of the river, would not be cost effective, as the existing population would not support two hospital facilities.
- **Access Management** – This concept was dismissed as it would only address only one element of the Purpose and Need, which would be to increase safety on the SR 108 corridor. Access management would also be difficult to implement, as many of the drives located on the SR 108 corridor would have to remain, as there is no alternative access location to parcels on the corridor due to no adjacent public roadway access to parcels and that state law requires at least one access to a public roadway per parcel. This option would therefore have only limited locations where drives could be reduced and would not reduce traffic on the corridor.

ABILITY TO MEET THE PURPOSE AND NEED AND POSSIBLE IMPACTS

Based upon the identified needs of the community, Henry County considered three potential 1,000-foot wide corridors on new alignment and the re-use of an existing railroad bridge for construction of a new roadway bridge crossing the Maumee River. These four alternatives are shown on *Figure 4: Conceptual Project Alternative Corridors* at the end of Section VIII and are identified as:

- Corridor 1 – West of SR 108 Bridge, from Glenwood Avenue to CR Z
- Corridor 2 – East of SR 108, From Industrial Drive to SR 110 and CR 12
- Corridor 3 – East of SR 108, from CR 12 to SR 110
- Re-use of Abandoned Railroad Bridge between SR 424 and SR 110

Each of the possible bridge corridors (including the re-use location), in addition to the No-build Alternative, were evaluated based on the following criteria:

- Their ability to provide a direct link between existing industrial development areas on both sides of the Maumee River;
- Connectivity to existing highway system;
- Their ability to improve access to future development areas consistent with the comprehensive plan;
- Their ability to increase community connectivity;
 - Possible improvements to Napoleon and Henry County emergency services;
 - Access to Henry County Hospital;
 - Access to Napoleon city schools;
- Their ability to reduce downtown traffic congestion and enhance public safety.

The three corridors, re-use of the abandoned railroad bridge, and the no-build alternative were also evaluated for potential impacts to the following resources:

- Parkland
- Farmland
- Cultural resources
- Endangered species
- Ecological resources, including wetlands
- FEMA 100-year flood plains

CORRIDOR 1 – WEST OF SR 108 SOUTH OF GLENWOOD AVENUE

ABILITY TO MEET PURPOSE AND NEED

This 1,000-foot corridor is a southerly extension of Glenwood Avenue, which currently terminates at SR 424 on the north side of the Maumee River (Figure IV-1). County Road Z, which parallels the south bank of the Maumee River, would be the likely connecting point on the south side of the river. A new river crossing at this location would connect a mostly residential area on the west side of the city to an agricultural and residential area southwest of the city. An evaluation of this corridor's ability to meet the Purpose and Need for this project is provided below.

Provide a Link between Existing Industrial Development Areas

The majority of industrial development in the City of Napoleon is located on the east side of the city, north and south of the Maumee River. Locating a new river crossing at the Glenwood Avenue would place the new bridge on the opposite side of the city from the industrial development areas. As such this location would not improve the transportation linkage between these areas.

Connectivity to Major Highway System

A river crossing at Glenwood Avenue would not provide an efficient link to the existing major highway systems (namely US 6 and US 24) and would not provide any considerable improvements over the existing conditions. Traffic using a river crossing at this location to access US6 and US 24 would be required to travel along County Road Z and Glenwood Avenue, which pass through residential areas and contain twenty-four intersections with local side streets. Traffic would then have to travel west on Woodlawn Avenue before accessing the interchange with US 6 and US 24.

Improve Access to Future Development Areas Consistent with the Comprehensive Plan

The majority of land that has been identified for future industrial development in the City of Napoleon is located on the east side of the city. Locating a river crossing south of Glenwood Avenue, on the opposite side of the city, would do little to improve access to these identified future development areas.

Increase Community Connectivity

A river crossing located in Corridor 1 would provide an efficient connection to the south side of the river for emergency services and the Napoleon City Schools. However, the location of this corridor on the far west side of the City enhances community connectivity for that portion of the City's population which resides west of SR 108. Access to the Henry County Hospital would not improve with the addition of this crossing since the bridge would be located on the opposite side of the city. As a result, the overall improvement in community connectivity would be moderate.

Reduce Downtown Traffic Congestion and Enhance Public Safety

A bridge crossing in Corridor 1 has the potential to draw some truck traffic from the downtown area, particularly trucks coming from the west on US 6/US 24 to the industrial area on the south side of the river. However, this shift in traffic would also shift traffic congestion to Glenwood Avenue and County Road Z. Public safety might improve somewhat along the SR 108 Corridor, but it would deteriorate along the new corridor. This is due to the fact that trucks that would choose to use a river crossing in Corridor 1 would have to travel past the High School/Junior High School campus and then through the residential areas along Glenwood Avenue and County Road Z to reach SR 110 on the south side of the river. Conflicts between these trucks, school buses, students who drive to and from school, people who utilize the parks located on both sides of the river and residential traffic would increase along this corridor.

Finally, while trucks that need to head west on US 6/US 24 might choose to use Corridor 1 to avoid negotiating the turns at SR 108 and Woodlawn and Oakwood Avenues, it is likely that this alternative would attract only a minor amount of shift change traffic from the Campbell's facility located on the east side of Napoleon. As a result, Corridor 1 is expected to have a minimal impact on reducing downtown shift change traffic associated with the Campbell's plant.

POSSIBLE IMPACTS

A summary of potential impacts that may occur as a result of Corridor 1 are presented below. Within each issue is a description of potential impacts based on the proposed corridor.

Parkland

This corridor will impact park property on the north side of the Maumee River and potentially impact park property on the south side of the river. Impacts to these areas would require Section 4(f) coordination.

Farmland

This corridor will impact farmland on the south side of the Maumee River.

Cultural Resources

The areas within the corridor, adjacent to the Maumee River, may contain previously unidentified archaeological sites. Additionally, this corridor contains a potentially historically noteworthy property on the south bank of the Maumee River. Proposed alignments may potentially impact these areas, requiring Section 106 coordination during the project development process.

Endangered Species

All corridors would require surveys for potential roosting or nesting sites for the Indiana bat and endangered mollusk species in the Maumee River. Additionally, bald eagles are known to nest along the Maumee River corridor, in the vicinity of Florida, Ohio.

Ecological Resources, Including Wetlands

Alignments proposed within each corridor would require in-stream work that would require a Section 404 permit from the US Army Corps of Engineers, a Section 401 Water Quality Certification from Ohio EPA, a Section 10 Permit from the U. S. Army Corps of Engineers a Section 9 Bridge Permit from the U.S. Coast Guard and Scenic River coordination with ODNR.

FEMA 100-year Flood Plains

Due to the nature of the project, it is a certainty that the project will encroach into the limits of the 100-year flood plain regardless of location.

CORRIDOR 2 – EAST OF SR 108 BRIDGE, SOUTH OF INDUSTRIAL DRIVE

ABILITY TO MEET PURPOSE AND NEED

This 1,000-foot wide corridor is located in the vicinity of Industrial Drive, which terminates at SR 424 north of the Maumee River (Figure IV-1). At State Route 110, south of the Maumee River, the corridor continues southeastward toward County Road 12, as shown in Figure 4. Listed below are the major factors in determining whether this corridor location meets the various elements of the Purpose and Need.

Provide a Link between Existing Industrial Development Areas

The location of a river crossing in the vicinity of Industrial Drive would create a direct transportation link between the north and south sides of the river, between Napoleon's major industrial development areas. This would also improve the connection for the Campbell's Soup Plant to the cold and dry storage facilities located on the north side of the river.

Connectivity to Highway System

This corridor lies directly south of the interchange at Industrial Drive and US 6/US 24. As such, it provides direct access the major highway system in the area. Not including SR 110, only three at grade intersections and six driveways exist along this corridor.

Improve Access to Future Development Areas Consistent with the Comprehensive Plan

The location of a bridge crossing in the vicinity of Industrial Drive would be near Napoleon's Industrial/Mixed Use Concept Areas and would provide a direct link to future growth and truck traffic in close proximity to this corridor. This is consistent with the City of Napoleon's Comprehensive Master Plan.

Increase Community Connectivity

This corridor would provide necessary alternatives for emergency services and allow Napoleon City Schools to provide a more circular bus route within the city. This corridor will also provide a good alternative route for the community on the south side of the river

to the Henry County Hospital, which is located on the north side of the Maumee River. It would also provide better access for those commuting to and from work in the industrial development areas.

While the Corridor 1 location would best reduce emergency response times to the south side of the river (with respect to the other alternatives currently being considered), the Industrial Drive corridor would provide a considerable improvement in response times from the current situation. The location of the bridge crossing within this corridor would provide considerable improvement and an additional route for emergency vehicles to reach the Henry County Hospital.

Reduce Downtown Traffic Congestion and Enhance Public Safety

Industrial Drive currently has an interchange with the US 6/US 24 bypass. Given this, it is assumed that an Industrial Drive bridge crossing would attract the largest amount of trucks since it has direct access to the bypass. This location would also remove the most traffic (trucks and shift change traffic) associated with the Campbell Soup Company facility and surrounding businesses from the existing SR 108 bridge. This route would contain no turning movements and would further provide a direct link of the Campbell's facility on the south side of the river to their support warehouses off of Industrial Drive.

POSSIBLE IMPACTS

A summary of potential impacts from Corridor 2 are provided below. Within each issue is a description of potential impacts based on the proposed corridor.

Parkland

A river crossing located within this corridor would not affect any currently identified park property.

Farmland

This corridor will impact farmland on the south side of the Maumee River.

Cultural Resources

The areas adjacent to the Maumee River within this corridor may contain unidentified archaeological sites, which may be impacted by proposed alignments. No impacts to historic structures are anticipated in this corridor.

Endangered Species

All corridors would require surveys for potential roosting or nesting sites for the Indiana bat and endangered mollusk species in the Maumee River. Additionally, bald eagles are known to frequent the Maumee River Corridor. One active nest is known to exist several miles west of SR 108 in the vicinity of Florida, Ohio.

Ecological Resources, Including Wetlands

Alignments proposed within each corridor would require in-stream work that would require a Section 404 permit from the US Army Corps of Engineers, a Section 401 Water Quality Certification from Ohio EPA, a Section 10 permit from the U.S. Army Corps of Engineers, Section 9 Bridge permit from the U.S. Coast Guard and Scenic River coordination with ODNR.

FEMA 100-year Flood Plains

Due to the nature of the project, it is a certainty that the project will encroach into the limits of the 100-year flood plain regardless of location.

CORRIDOR 3 - EAST OF SR 108 BRIDGE, SOUTH OF CR 12

ABILITY TO MEET PURPOSE AND NEED

This 1,000-foot wide corridor is located south of the intersection of SR 424 and County Road 12 (Figure IV-1). A bridge at this location would connect the eastern end of Napoleon's industrial park area on the north side of the river to industrially zoned land south of the river. The new crossing would likely terminate at SR 110 and link the northern and southern sections of CR 12. Listed below are the major factors in determining the ability of this alternative to meet the project Purpose and Need.

Provide a Link between Existing Industrial Development Areas

This corridor would provide a direct link between the existing industrial areas because of its location on the eastern side of the City. Truck traffic would potentially use this alternative to bypass the downtown and it would improve upon the existing conditions.

Connectivity to Major Highway System

This corridor would provide an indirect link to US 6 via the interchange with SR 424 and to US 24 via the interchange with Industrial Drive. Accessing both interchanges will require that vehicles travel on SR 424. As a result, the connection to the major highway system is not as efficient as it is in Corridor 2.

Improve Access to Future Development Areas Consistent with the Comprehensive Plan

Corridor 3 would provide an adequate connection between future growth areas to the south of the Maumee River. However, as stated above, the connection to US 6/US 24 is not as efficient as it is in Corridor 2. Trucks using this crossing would have to travel southwest on SR 424 and then north on Industrial Drive, or north on CR 12 and then west through the industrial park before heading north on Industrial Drive, to access the US6/US 24 bypass. Providing more direct access to the bypass from County Road 12 would require that a new interchange be built at CR 12. This is not feasible, due to the close proximity of CR 12 to the recently constructed Industrial Road/US 24 interchange.

Increase Community Connectivity

Corridor 3 is located too far to the east of the city to provide an efficient route for the local school district to utilize as a bus route. However, the corridor does provide excellent access to the Henry County Hospital for emergency vehicles that have to transport patients to the hospital from the south side of the Maumee River.

Reduce Downtown Traffic Congestion and Enhance Public Safety

A river crossing located within Corridor 3 would reduce truck and commuter vehicle traffic that travel to and from the industrial areas on the south and north sides of the river from SR 108 and the downtown area, but would not be expected to achieve as much of a reduction as would be realized in Corridor 2 due primarily to the increased distance of this corridor from the center of the community.

The CR-12 river crossing alternative would also require routing trucks onto SR 424 and turning movements at several intersections to access CR-12. It would not provide a direct link between the US 6/US 24 bypass. However, this alternative would likely attract more truck traffic than the Glenwood Avenue Alternative (west of the SR 108 Bridge), due to the proximity of this corridor to the industrial areas located on both sides of the river. If the crossing were to be built at Glenwood Avenue, trucks exiting US 6/US 24 from the west would have to travel down Woodlawn and Glenwood Avenues on the north side of the river and then CR Z and SR 110 on the south side of the river to access the Campbell's Soup Plant. All of these roads exist in residential areas. So while downtown traffic might be reduced by this alternative, new conflicts between trucks and these residential areas would arise from the construction of this alternative.

POSSIBLE IMPACTS

Potential impacts of this corridor are listed below. Within each section is a description of potential impacts based on the proposed corridor.

Parkland

This corridor has the potential to impact park property that is located on the north bank of the Maumee River, requiring a possible 4(f) document.

Farmland

This corridor will impact farmland on the south side of the Maumee River.

Cultural Resources

The area surrounding the Maumee River within this corridor may contain unidentified archaeological sites, which may be impacted by proposed alignments within this corridor.

Endangered Species

All corridors would require surveys for potential roosting or nesting sites for the Indiana bat and endangered mollusk species in the Maumee River. Additionally, bald eagles are known to frequent the Maumee River Corridor. One active nest is known to exist several miles west of SR 108 in the vicinity of Florida, Ohio.

Ecological Resources, Including Wetlands

Alignments proposed within each corridor would require in-stream work that would require a Nationwide or Section 404 permit from the US Army Corps of Engineers, a Section 401 Water Quality Certification from Ohio EPA, and Scenic River coordination with ODNR.

FEMA 100-year Flood Plains

Due to the nature of the project, it is a certainty that the project will encroach into the limits of the 100-year flood plain regardless of location.

RE-USE OF ABANDONED RAILROAD BRIDGE

ABILITY TO MEET PURPOSE AND NEED

This option could potentially utilize the existing piers of the abandoned railroad bridge located approximately $\frac{3}{4}$ -mile downstream (east) of the SR 108 Bridge (Figure IV-1). The abandoned railroad bridge is a four-span steel truss structure on concrete piers that was constructed in early 1900. While the other corridors are not alignment specific at this stage, this alternative would not deviate from the existing bridge location. The possible new bridge and road would connect SR 424 to SR 110 near Campbell's plant entrance. Listed below are the major factors in assessing the ability of this alternative to meet the Purpose and Need.

Provide a Link between Existing Industrial Development Areas

This existing railroad bridge location would create a new transportation route from the south to the north side of the river and the majority of Napoleon's industrial development. However, while this corridor would allow trucks to avoid the SR 108 Bridge, it would not provide as direct a transportation link as corridors 2 and 3 to these areas or to the US 6/US 24 bypass, since it would require trucks and other vehicles to travel a considerable distance on SR 424 and on SR 110 to access these areas.

Connectivity to Highway System

Unlike Corridor 2, this alternative does not provide a direct connection to the US 6/US 24 bypass to the north of the city. Vehicles that would cross the river at this location would have to access US 6/US 24 by traveling northeast on SR 424 and then north on Industrial Drive or west on SR 424 to SR 108 north. Trucks currently use this route to access these areas after crossing the SR 108 Bridge. Therefore, while a new crossing at this corridor would allow trucks to avoid the SR 108 Bridge, this alternative would only be a marginal improvement over the existing condition, since it would still require trucks and cars to utilize substantial portions of SR 424.

Improve Access to Future Development Areas Consistent with the Comprehensive Plan

While providing a better location for a bridge crossing than Corridor 1, this location does not provide as good of a connector to future development areas as Corridors 2 and 3, due to the need to make right and left hand turns on local roads to access these areas. As a

result, this alternative would provide only a marginal improvement over the existing condition.

Increase Community Connectivity

This location would provide an alternative for emergency services and allow Napoleon City Schools to provide a more circular bus route within the City. While the Corridor 1 location would best reduce emergency response times to calls on the south side of the river, this corridor provides a better route to the Henry County Hospital for emergency vehicles that have to travel to the hospital from the south side of the river. With the majority of schools located near Corridor 1, this location would not provide noteworthy upgrades for the schools other than the ability to provide a circular route for bus traffic which is a desire of the local schools.

Reduce Downtown Traffic Congestion and Enhance Public Safety

Because of its location near the center of town, this corridor has the potential to capture a substantial amount of passenger vehicles that need to travel across the river.

This alternative would also be expected to attract some shift change traffic for the Campbell's facility and would also attract some truck traffic for the facility. However, the terminus on the north side of the river would still route traffic onto local roadways (SR 424) and place traffic back into the downtown area and on local roads to gain access to the US 6/US 24 Bypass. This alternative would therefore be less effective in attracting truck traffic and shift change traffic from the existing SR 108 Bridge than the Industrial Drive or CR-12 alternatives.

POSSIBLE IMPACTS

Listed below are the major factors in determining the Possible Impacts. Within each issue is a description of potential impacts based on the location.

Parkland

A river crossing located along this alignment would not affect any currently identified park property.

Farmland

This option would impact no farmland on either side of the Maumee River.

Cultural Resources

The area surrounding the Maumee River adjacent to the existing bridge may contain unidentified archaeological sites, which may be impacted.

Endangered Species

All corridors would require surveys for potential roosting or nesting sites for the Indiana bat and endangered mollusk species in the Maumee River. Additionally, bald eagles are known to frequent the Maumee River Corridor. One active nest is known to exist several miles west of SR 108 in the vicinity of Florida, Ohio.

Ecological Resources, Including Wetlands

Alignments proposed within each corridor would require in-stream work that would require a Nationwide or Section 404 permit from the US Army Corps of Engineers, a Section 401 Water Quality Certification from Ohio EPA, and Scenic River coordination with ODNR.

FEMA 100-year Flood Plains

Due to the nature of the project, it is a certainty that the project will encroach into the limits of the 100-year flood plain regardless of location.

NO-BUILD ALTERNATIVE

ABILITY TO MEET PURPOSE AND NEED

The No-build Alternative was evaluated with respect to its ability to meet the Purpose and Need for the Project. It is important to note that the No-build Alternative does not mean doing nothing within the study area to address the problems that currently exist. Other measures, such as the development of improved signal coordination and providing additional turn lanes along the SR 108 corridor and rerouting traffic away from the downtown area could be considered to reduce congestion in downtown Napoleon and alleviate the existing demand on the SR 108 Bridge. An evaluation of this alternative's ability to meet the Purpose and Need for this project is presented below.

Provide a Link between Existing Industrial Development Areas

The No-build Alternative, which would include one or more of the combinations listed above, would not provide a direct link between existing industrial areas in the City of Napoleon. Under the No-build Alternative, vehicles that travel between the two industrial development areas would still be required to utilize the SR 108 or US 6/US 24 river crossings, as they currently must do.

Connectivity to Highway System

By its very nature, the No-build Alternative will not provide a better, more efficient connection to the surrounding highway system.

Improve Access to Future Development Areas Consistent with the Comprehensive Plan

The No-build Alternative will not improve access to future development areas consistent with the Comprehensive Plan. As development progresses, improved access will become more of a necessity, as more vehicles need to travel to, from and between these areas. The No-build Alternative will have a negative impact on development, as prospective businesses will be deterred from these areas because of inefficiencies in vehicular access.

Increase Community Connectivity

The No-build Alternative will not increase connectivity within the community. With only one river crossing, with time, community connectivity will decrease as the level of service (LOS) declines on the SR 108 Bridge to a LOS E in 2025, as predicted by the Urban Arterial Analysis that was completed for this project. This reduction in LOS will result in increased travel times across the river for all vehicles, including school busses and emergency service vehicles. With time, as the LOS declines on the SR 108 Bridge, the No-build Alternative will have a negative impact on the ability of emergency services to respond to calls across the river.

The No-build Alternative will also have a negative impact on people's ability to access the hospital from the south side of the Maumee River.

It will also have a negative impact on the Napoleon City School's ability to efficiently transport students across the Maumee River. Once again, this negative impact is associated with a decrease in LOS that is expected to occur under this alternative.

Reduce Downtown Traffic Congestion and Enhance Public Safety

Under the No-build Alternative, an increase in traffic is expected to occur as indicated by the decrease in the LOS on the SR 108 river crossing. Hence traffic congestion will continue to increase in the downtown area; public safety will be reduced and will continue to deteriorate with time. Adding turn lanes, improving signal coordination and rerouting traffic may help to reduce downtown traffic congestion on a temporary basis. However, as development continues in the industrial area to the east of the city, south of the Maumee River, these measures will eventually become ineffective and congestion within along the SR 108 corridor will become more severe, as more and more vehicles are forced to cross the Maumee River at SR 108.

This alternative would continue to encourage truck traffic and Campbell's facility traffic to utilize the current SR 108 bridge, as there is no nearby alternative river crossing. This will become more of a problem as congestion increases with continued increases in traffic volumes.

POSSIBLE IMPACTS

By its very nature, the No-build Alternative is expected to have no negative impacts on parkland, farmland, cultural resources, endangered species, ecological resources and FEMA 100-year floodplains.

CONCLUSION

Based upon the ability to meet the project purpose and need, it is recommended that Corridors 2 and 3, as well as the No-build alternative, be carried forward for further detailed analyses. This reduction in the number of corridors being recommended for further detailed analyses was made so as to concentrate on the two corridors that best meet the Purpose and Need for the project and are therefore the most feasible. Both corridors will be studied in greater detail, along with the No-build alternative. The following is a discussion of reasons for determining whether a corridor is feasible or not feasible:

- Corridor 1 (West of SR 108 Bridge, South of Glenwood Avenue) was eliminated based on its poor evaluation in the matrix and its inability to meet the project Purpose and Need. It would provide little or no benefit over the current conditions. A bridge constructed at this location would have considerable impacts to known cultural resources and park property.
- Corridor 2 (East of SR 108 Bridge, South of Industrial Drive) ranked high on the majority of Purpose and Need elements. This corridor would provide a direct link between existing industrial development areas, provide an efficient link with the existing highway system to the north of the city, improve access to future development areas consistent with the

Comprehensive Plan, reduce downtown traffic congestion and enhance public safety. This corridor would also increase community connectivity, and provide better access for residents south of the river to emergency facilities north of the river, and enhance school transportation in the city.

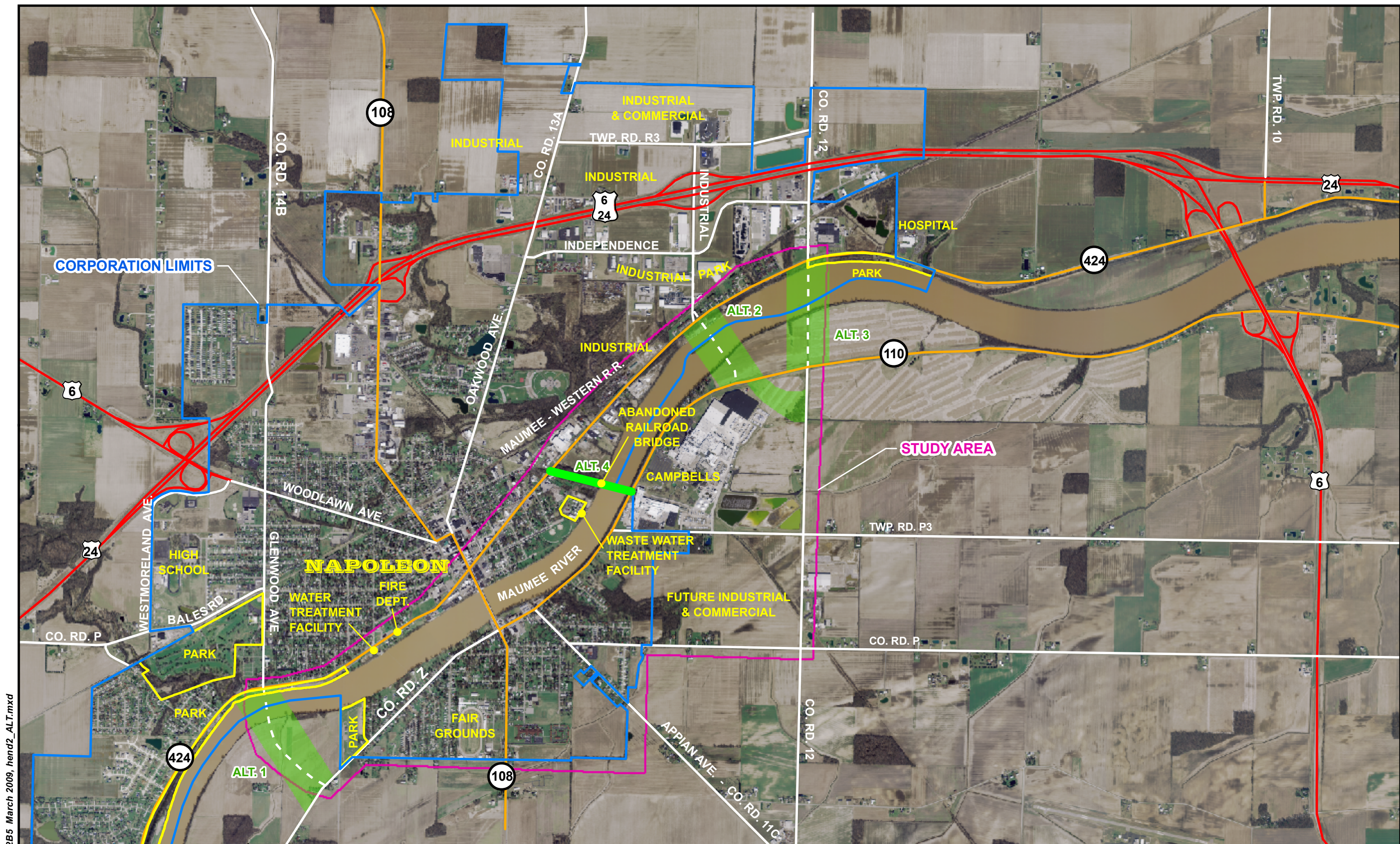
- Corridor 3 (East of SR 108, South of CR 12) also ranked relatively high on several of the factors that were used to evaluate each alternative. While ranking lower than Corridor 2 on several important factors, this corridor would provide an efficient link between existing industrial development areas, improve access between future development areas that are consistent with the comprehensive master plan and provide a good alternative emergency route to the Henry County Hospital for residents who live and work south of the river. It would also decrease demand on the existing SR 108 Bridge, thereby reducing downtown truck traffic congestion and enhance public safety. It does not provide an as good a route for school buses as do Corridors 1 and 2, due to its location on the far east side of the city.
- Re-use of the abandoned railroad bridge is ranked as the third best corridor when compared with the other corridors that have been considered. However, the use of the existing bridge piers in this corridor may be cost-prohibitive due to existing structural deficiencies. The existing railroad bridge is a four-span steel truss structure on concrete piers that was constructed in early 1900. During an earlier investigation, the piers were found to contain vertical cracks that extended into the full depth of the pier stems. Compressive tests of concrete cores taken from the piers also indicated weakness in the outer layers of the pier concrete. In 1994 a Level II underwater inspection of the pier foundations revealed that the overall condition of the piers below the water level was fair, with some scour and undercutting present. Earlier remedial action had been performed by driving protective sheet piling to mitigate damage that had resulted from scour at the river piers. The bridge also carries an asbestos covered waterline on its deck. Based on these observations, the existing piers may not have the longevity required to support a new structure for its normal design life. In addition, construction costs for such a project could be excessive, requiring the dismantling of the existing steel truss and bridge deck, replacement or retrofitting of the existing piers, and the lowering of the elevated rail bed in the vicinity of SR 424.

In addition to the above structural uncertainties, this corridor would provide moderate improvements over the existing condition with respect to providing a direct link between industrial development areas, increasing community connectivity, providing more efficient routes for emergency services, schools and access to the Henry County Hospital and reducing downtown congestion and enhancing public safety. This alternative provides only marginal improvements over the existing condition with respect to its connection to the US6/US24 bypass and providing improved access to development areas consistent with the Comprehensive Plan. As such, it is recommended that this alternative be dropped from further consideration as a feasible alternative.

- No-build Alternative - The No-build Alternative will continue to be evaluated, along with Feasible Corridors 2 and 3, until the Preferred Alternative is selected for this project.

However, this alternative fails to provide a link between existing industrial development areas, does not enhance connectivity to the surrounding highway system, fails to increase community connectivity and does not improve access to future development areas consistent with the Comprehensive Plan. With time, this alternative will result in an increase in downtown traffic congestion and decrease the ability of emergency services and the schools to efficiently access all areas of the community. Efficient access to the community hospital from areas south of the river will also decline under this alternative.

It is therefore recommended that Corridor 1 – West of SR 108 Bridge, South of Glenwood and the reuse of the existing railroad bridge be eliminated based on the evaluation criteria from the Purpose and Need. Corridor 2 best meets the Purpose and Need while having less potential for impacts over the Glenwood Road Alternative. Corridor 3 also appears to meet several key elements of the Purpose and Need. As such, both corridors should be carried forward to the next phase of the project. The No-build Alternative, while failing to meet the Purpose and Need for the project, will also be evaluated in accordance with NEPA requirements.



Project # HEND2B5 March 2009, hend2_ALT.mxd

Mannik & Smith
 The Group, Inc.
 1800 Indian Wood Circle
 Maumee, Ohio 43537
 Civil Engineering, Surveying and Environmental Consulting
 MAUMEE ♦ CLEVELAND ♦ MONROE ♦ CANTON

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FIGURE IV-1
PROPOSED CONCEPTUAL ALTERNATIVE CORRIDORS

Notes The photography, dated April 2006, is provided by OGRIP as part of the Ohio Statewide Imagery Program.

2,000 1,000 0 2,000 Feet

Conceptual Alternatives Ranking Matrix

(Number represents ranking relative to three other Conceptual Alternatives)

Evaluation Criteria		Corridor 1 West of SR 108 Bridge, South of Glenwood Avenue	Corridor 2 East of SR 108 Bridge, South of Industrial Drive	Corridor 3 East of SR 108 Bridge, South of CR 12	Corridor 4 Re-use of Abandoned Railroad Bridge	No-Build Option	
Benefit Assessment	Elements of Purpose and Need	Provide a Link Between Existing Industrial Development Areas	Provides no benefit - located on opposite side of City from industrial development areas	Provides substantial benefit - the most direct connection between CR 12 south of the river and industrial development on both sides of Industrial Drive	Provides substantial benefit as a second river crossing but not as direct of a route as Corridor 2 for access from the south of the river to industrial areas located west of Industrial Drive	Provides some benefit, but is not as direct a route as Corridors 2 and 3 between industrial areas on both sides of the river	Will not provide a link between existing industrial development areas
		Connectivity to Highway System	Provides little benefit - traffic accessing US 6/24 would have to pass by large residential areas with numerous intersections along Glenwood and CR 2	Provides substantial benefit - the most direct connection between CR 12 south of the river and the US 6/24 interchange with Industrial Drive	Provides substantial benefit, however this location does not provide as direct a connection as Corridor 2 to the US 24/US 6 interchange with Industrial Drive	Provides some benefit, but is not as direct a link to the US 24/US 6 interchange with Industrial Drive as Corridors 2 or 3	Will not provide a better connection to the existing highway system
		Access to Future Development Areas consistent with the Comprehensive Plan	Provides no benefit - located on opposite side of City from planned future development areas	Provides substantial benefit - the most direct connection between future development areas on both sides of the Maumee River	Provides substantial benefit, but is not as direct a connection to future development areas on the north side of the river as Corridor 2	Provides some benefit, but is not as direct a connection to future development areas on both sides of the river as Corridors 2 or 3	Will not increase access to future development areas
		Enhance Emergency Response Times	Provides substantial benefit for fire and police service to south side of river	Provides some benefit as a second river crossing, but not as direct a route for fire and police to access the south side of the river	Provides some benefit as a second river crossing, but not as good as Corridors 1 and 2, due to its distance from police and fire stations	Provides some benefit as a second river crossing and is better than Corridors 2 and 3 due to its proximity to police and fire stations	Will not enhance emergency service access to south side of river
		Access to Hospital	Provides no benefit - located on opposite side of City from Henry County Hospital	Provides substantial benefit as a second river crossing for access to the Henry County Hospital from the south side of the river	Provides substantial benefit due to its proximity to the Henry County Hospital	Provides substantial benefit due to its proximity to residential areas and the Henry County Hospital	Will not enhance access to Henry County Hospital
		Improve School Transportation	Provides substantial benefit - provides second river crossing in close proximity to schools and residential areas	Provides some benefit as a second river crossing for school bus transportation, but far removed from residential areas; not as good as Corridors 1 or 4	Provides minimal benefit due to its far distance from schools and residential areas	Provides substantial benefit due to its proximity to residential areas and schools. However, not as good as Corridor 1	Will not enhance school bus routes
		Reduce Downtown Traffic Congestion and Enhance Public Safety	Provides little benefit - located too far from existing industrial areas and future development areas	Provides substantial benefit - will provide the most direct route for trucks and employees accessing the industrial development areas on both sides of the river	Provides substantial benefit - the second most direct route between the industrial areas on both sides of the river and the US 24/US 6 interchange with Industrial Drive	Provides some benefit, but not as much as Corridor 2	Will not reduce downtown traffic congestion
Impact Assessment	Environmental Issues	Parks/4(f)	Impacts to parkland on North side of river	No Impacts to parkland	Impacts to parkland on north side of river	No impacts to parkland	No Impacts to parkland
		Farmland Impacts	Farmland Impacts on South side of River	Farmland Impacts on South side of River	Farmland Impacts on south side of River	No farmland impacts	No farmland impacts
		Cultural Resources	Potential Cultural Resource Impacts	Potential Cultural Resource Impacts	Potential Cultural Resource Impacts	Potential Cultural Resource Impacts	Potentially historic properties could be affected, depending on what measures are implemented to increase capacity on the SR 108 corridor (e.g., addition of turn lanes)
		Endangered Species	Possible Impacts to Indiana Bat Habitat and Threatened/Endangered Mollusks	Possible Impacts to Indiana Bat Habitat and Threatened/Endangered Mollusks	Possible Impacts to Indiana Bat Habitat and Threatened/Endangered Mollusks	Possible Impacts to Indiana Bat Habitat and Threatened/Endangered Mollusks	No effects.
		Ecological Resources	Alignments proposed within each corridor would require in-stream work that would require a Section 404 permit from the US Army Corps of Engineers, a Section 401 Water Quality Certification from Ohio EPA, and Scenic River coordination with ODNR.	Alignments proposed within each corridor would require in-stream work that would require a Section 404 permit from the US Army Corps of Engineers, a Section 401 Water Quality Certification from Ohio EPA, and Scenic River coordination with ODNR.	Alignments proposed within each corridor would require in-stream work that would require a Section 404 permit from the US Army Corps of Engineers, a Section 401 Water Quality Certification from Ohio EPA, and Scenic River coordination with ODNR.	Alignments proposed within each corridor would require in-stream work that would require a Section 404 permit from the US Army Corps of Engineers, a Section 401 Water Quality Certification from Ohio EPA, and Scenic River coordination with ODNR.	No effects.
		FEMA 100-year Flood Plain	Due to the nature of the project, it is a certainty that the project will encroach into the limits of the 100-year flood plain regardless of location.	Due to the nature of the project, it is a certainty that the project will encroach into the limits of the 100-year flood plain regardless of location.	Due to the nature of the project, it is a certainty that the project will encroach into the limits of the 100-year flood plain regardless of location.	Due to the nature of the project, it is a certainty that the project will encroach into the limits of the 100-year flood plain regardless of location.	No effects.

Legend

	Provides Substantial Benefit Relative to Purpose and Need and/or Will Not Negatively Impact Environmental Resource		Provides Some Benefit Relative to Purpose and Need and/or Has the Potential to Negatively Impact Environmental Resource		Provides No Benefit Relative to Purpose and Need and/or Will Impact Environmental Resource
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Section V

*Design Concept and Design Scope
of Project*

Design Concept and Design Scope
New Maumee River Crossing Project
PID #: 22984 - State Job #: 423780

DESIGN CONCEPT

The Purpose and Need (P&N) and evaluation of Conceptual Alternatives demonstrate that a new roadway bridge crossing the Maumee River is the only feasible transportation solution that will address the needs of the City of Napoleon. The design concept is envisioned to be a roadway bridge crossing of the Maumee River with a connecting roadway between either SR110 on the south side of the river, and to SR 424 on the north side. The limits of the study area for this crossing will be generally in and around the corporate limits of the City of Napoleon.

DESIGN SCOPE

The bridge and connecting roadways will accommodate two lanes of through traffic; with adequate turn lanes, storage lengths, and signalization at intersections. The length of the project is anticipated to be between 1,800 and 3,200 feet (including bridge and connecting roadway). The facility will be curbed and have an enclosed storm drainage system. The pavement associated with the design will be sufficient to accommodate anticipated heavy truck traffic volumes associated with the design year. Additional infrastructure modification work adjacent to each end of the project such as pavement and curb work, drainage changes, and traffic control devices are possible regardless of location.

Section VI

General Cost Estimate

GENERAL COST ESTIMATE

A generalized cost estimate was prepared to determine a preliminary planning cost for a new river crossing (Table VI-1). These values were based on 2007 costs.

**Table VI-1
Henry County Maumee River Crossing Cost Estimate**

Work Item	Unit Cost	Project Limits Between SR-424 & SR-110	
		Qty.	Cost
Removal Of Exist. Roadway-2 lane (ft.)	\$ 40	700	\$28,000
Removal Of Exist. Roadway-3 lane (ft.)	\$32		\$0
Roadway Construction - embank (ft.)			\$0
Roadway Construction-2 lane w/c&g, (ft.)	\$265	700	\$185,500
Roadway Construction - 3 lane (ft.)	\$320		\$0
Traffic Signals (ea.)	\$100,000	2	\$200,000
Retaining Wall - Conventional (s.f.)	\$100		\$0
Retaining Wall – MSE/Soil Nails (s.f.)	\$50		\$0
Noise Wall (FT.)	\$150		\$0
ROADWAY SUBTOTAL			\$413,500
Drainage	15%		\$62,000
Erosion Control	4%		\$17,000
Maintenance of Traffic	5%		\$21,000
Traffic Control	6%		\$25,000
Miscellaneous, (GR, Fence, etc.)	11%		\$45,000
INCIDENTAL SUBTOTAL			\$170,000
ROADWAY TOTAL			\$583,500
Bridge Removal (s.f.)	\$50	0	\$0
Bridge - Roadway (s.f.)	\$200	56250	\$11,250,000
BRIDGE SUBTOTAL			\$11,833,500
CONSTRUCTION SUBTOTAL			\$7,586,750
20% Contingency			\$2,366,700
CONSTRUCTION TOTAL			\$14,200,200
Engineering	6%		\$852,000
Utility Costs	3%		\$426,000
Right of Way			\$40,000
GRAND TOTAL			\$15,518,200
Suggested Cost Estimate Range			\$14.5M - \$16.5M

Section VII

Project Action Plan

Project Action Plan
New Maumee River Crossing Project
PID #: 22984 - State Job #: 423780

PROJECT ACTION PLAN

The Henry County Engineer recommends that project funding be sought through various federal and state programs. Upon receipt of adequate funding for this project, the project timetable and delivery schedule will follow the ODOT Project Development Process (PDP). Providing additional project funding can be secured by July 2009, a feasible timetable for completion of this project is presented in Table VII-1.

Table VII-1
New Maumee River Crossing
Project Action Plan

Project Development	Responsibility	Completion Date
1. Environmental Clearance and Stage 1 Plans	Henry County Engineer	July 2010
2. Stage 2 Design	Henry County Engineer	January 2011
3. Right-of-Way Acquisition	Henry County Engineer	March 2011
4. Stage 3 Design	Henry County Engineer	July 2011
5. Final Plan Package	Henry County Engineer	October 2011
6. Award Construction Contract	Henry County Engineer	March 2012
7. Construction (Start)	Henry County Engineer	April 2012

Appendix A

Stakeholders and Mailing List

STAKEHOLDERS AND GENERAL MAILING LIST

First Name	Last Name	Company	Title	ADDRESS	CITY	STATE	ZIP
Skip	Leupp	A.R.S. Refuse Service, Inc		200 Taylor Parkway	Archibold	Ohio	43502
Norb	Bauman	Adair, LTD		P.O. Box 231	Napoleon	Ohio	43545
James	Blank	Adelphia		310 Jefferson St.	Defiance	Ohio	43512
Eldon	Bostelman	Advanced Drainage Systems		1075 Independence Drive	Napoleon	Ohio	43545
Dexter	Benecke	Alex Products, Inc.		P.O. Box 26	Ridgeville Corners	Ohio	43555
Dave	Von Deylen	Alex Products, Inc.		P.O. Box 26	Ridgeville Corners	Ohio	43555
Brent	Gray	Allied Home Mortgage Capital Corp.	Branch Manager	616 North Scott Street	Napoleon	Ohio	43545
Laura	Grubb	Am Vets Post 1313		2250 North Scott Street	Napoleon	Ohio	43545
Judy	Cassady	American Municipal Power Ohio		2600 Airport Drive	Columbus	Ohio	43219
Jackie	Miller	American Red Cross, Henry County Chapter	Interim Director	117 West Washington Street	Napoleon	Ohio	43545
Benita	Lykowski	Amerigas (Propane)		P.O. Box 238	Swanton	Ohio	43558
Ed & Mary	Hoefel	Augusta Rose Bed & Breakfast		345 West Main Street	Napoleon	Ohio	43545
Nathan	Weeks	Automatic Feed Company	President	476 East Riverview Avenue	Napoleon	Ohio	43545
John	Swearingen	Bartels Electric, Inc.		P.O. Box 110	Napoleon	Ohio	43545
Tom	Baughman	Baughman Farms, Inc.		M614 County Road 12	Napoleon	Ohio	43545
Cheryl & Greg	Beck	Beck's Construction Co.		11622 County Rd. M	Napoleon	Ohio	43545
Bob	Bernicke	Bernicke's Super Valu		1322 Woodlawn Avenue	Napoleon	Ohio	43545
Richard	Eppstein	Better Business Bureau		3103 Executive Parkway #200	Toledo	Ohio	43606
Michelle	Carlton	Big Brothers Big Sisters --Serving Henry & Defiance Counties		219 East Washington St. Ste 230	Napoleon	Ohio	43545
Sheridan	Bilen	Bilen, Sheridan DDS		313 Norton St.	Napoleon	Ohio	43545
Mike	Blackwood	Blackwood Construction Services		25874 W. River Rd.	Perrysburg	Ohio	43551
Larry	Koesters	Bokerman-Yackee-Koesters Insurance		P.O. Box 390	Napoleon	Ohio	43545
Doug	Stults	BoWellCo Buildings		P.O. Box 628	Napoleon	Ohio	43545
Cheryl	Bostelman	Bright.net North, Inc.		818 N. Perry St.	Napoleon	Ohio	43545
P.J.	Jackson	Buckeye Launderers & Cleaners, LLC		1413 N. Scott St.	Napoleon	Ohio	43545
Ross	Scherzer	Bud's Pick-Up Service		725 Filmore Street	Napoleon	Ohio	43545
C. Richard	Luzny	Butler Mohr GMAC Real Estate		480 Briarcliff Drive	Napoleon	Ohio	43545
Lynn	Rausch	C.F. Rausch & Sons		P.O. Box 269	Napoleon	Ohio	43545
Ray	Odack	Campbell Soup	Vice President, Napoleon Operations	P.O. Box 311	Napoleon	Ohio	43545
Bob	Young	Carson Industries		1675 Industrial Drive	Napoleon	Ohio	43545
Sandy	Schlosser	Cattails, Inc.		621 N. Perry Street	Napoleon	Ohio	43545
Cheryl	Robbins	Center for Child & Family Advocacy, Inc.		219 East Washington Street	Napoleon	Ohio	43545
Peter	Lundberg	Charlie's Down Under		200 Clinton Street	Defiance	Ohio	43512
Peg	Shaver	Chief Supermarket		1247 Scott Street	Napoleon	Ohio	43545
Florence	Tamr	China Dragon Restaurant	Owner	1415 North Scott Street	Napoleon	Ohio	43545
Rev. Kirk	Petersen	Christ Untied Methodist Church		1255 Glenwood Ave.	Napoleon	Ohio	43545
Jon	Bisher	City of Napoleon	City Manager	255 Riverview St.	Napoleon	Ohio	43545
Tony	Cotter	City of Napoleon	Director of Parks & Recreation	P.O. Box 151	Napoleon	Ohio	43545
Brent	Damman	City of Napoleon	Zoning	255 Riverview St.	Napoleon	Ohio	43545
Michael	DeWit	City of Napoleon	Council	1479 Oakwood	Napoleon	Ohio	43545
Lynn	Handcock	City of Napoleon	Fire/EMS Department	255 Riverview St.	Napoleon	Ohio	43545
John	Helberg	City of Napoleon	Council	113 E. Barnes Ave.	Napoleon	Ohio	43545
James	Hershberger	City of Napoleon	Council	929 Haley Ave.	Napoleon	Ohio	43545
Joseph	Kleiner	City of Napoleon	City Engineer	255 Riverview St.	Napoleon	Ohio	43545
Glenn	Miller	City of Napoleon	Council	513 W. Washington St.	Napoleon	Ohio	43545
Travis	Sheaffer	City of Napoleon	Council	619 W. Washington St.	Napoleon	Ohio	43545
Andrew	Small	City of Napoleon	Mayor	255 Riverview St.	Napoleon	Ohio	43545
Steven C.	Small	City of Napoleon	Council	1415 Sedward	Napoleon	Ohio	43545
Robert	Weitzel	City of Napoleon	Police Department	310 Glenwood St.	Napoleon	Ohio	43545
Terri	Williams	City of Napoleon	Council	1165 Becca Lane	Napoleon	Ohio	43545
Bob	McLimans	Clear Channel Communications		709 N. Perry St.	Napoleon	Ohio	43545
George	Cochran	Cochran, George-S., DDS		1066 Chelsea Ave.	Napoleon	Ohio	43545
Phil	Flavin	Community Improvement Corp.	Director	104 E. Washington St.	Napoleon	Ohio	43545

STAKEHOLDERS AND GENERAL MAILING LIST

First Name	Last Name	Company	Title	ADDRESS	CITY	STATE	ZIP
Randy	Peterson	Corn City Bar		140 West Main Street	Deshler	Ohio	43516
Wayne	Michaelis	Culligan Water Conditioning		550 Independence Drive	Napoleon	Ohio	43545
Barry	Ranzau	Custom Agri Systems, Inc.		255 County Rd. R	Napoleon	Ohio	43545
Mike	Adams	Cut-Rate Tobacco (Tobacco Sales)		1414 North Scott Street Ste 170	Napoleon	Ohio	43545
David	Perry	Dave's Auto Service		P.O. Box 394	Liberty Center	Ohio	43532
Dave	Clapp	Dave's Plumbing		8229 County Road U3	Liberty Center	Ohio	43532
Director		Defiance Area Visiting Nurses, Hospice & Private Duty		6825 State Route 66N	Defiance	Ohio	43512
Ron	Phillips	Deshler American Legion Post 316		505 Stearns Avenue	Deshler	Ohio	43516
Lee	Caplinger	Deshler Village	Mayor	101 East Main Street	Deshler	Ohio	43516
Ed	Sanholtz, Jr.	Dielman, Inc.		302 E. Washington St.	Napoleon	Ohio	43545
Melba	Elling	Ellings Plumbing & Heating		T487 State Route 108	Napoleon	Ohio	43545
Susie	Grooms	Expressions Hair Artistry		1036 Chelsea Ave.	Napoleon	Ohio	43545
Nancy	Hespe	Faber Trophy Manufaacturing		P.O. Box 469	Napoleon	Ohio	43545
Steve	Jackson	Farmers & Merchants State Bank		P.O. Box 604	Napoleon	Ohio	43545
Paul	Oehrtman	Filling Memorial Home of Mercy, Inc.		N160 State Route 108	Napoleon	Ohio	43545
Joe	Dildine	First Call for Help, Inc.		1330-A North Scott Street	Napoleon	Ohio	43545
Douglas	Blackwood	First Federal Bank		625 Scott St.	Napoleon	Ohio	43545
Georgean	Davis	FISH of Henry County		1145 Highland Avenue	Napoleon	Ohio	43545
Lou	Levy	Four County ADAMHS Board		T761 State Route 66	Archibold	Ohio	43502
Dr. David	Nicholls	Four County Career Center	Superintendent	22900 State Route 34	Archibold	Ohio	43502
Leonard	Spitler	Fraternal Order of Eagles		539 North Perry Street	Napoleon	Ohio	43545
Chris	Peper	Frost Insurance Agency		P.O. Box 350	Napoleon	Ohio	43545
Paul	Chamberlin	George's Furniture & Bedding		1405 North Scott Street	Napoleon	Ohio	43545
Gary	Gerken	Gerken Construction		14438 County Rd. V	Napoleon	Ohio	43545
Brent	Gerken	Gerken Paving, Inc.		P.O. Box 607	Napoleon	Ohio	43545
Philip	Menzel	German Mutual Insurance		P.O. Box 191	Napoleon	Ohio	43545
Dawn	Pivnicka	Glen Arbors Apartments		2400 Glen Arbors Drive	Napoleon	Ohio	43545
Jim	Eisaman	Golf Shop		15211 U S Route 6	Napoleon	Ohio	43545
John & Graceann	Reese	Graben, LLC		15238 County Road M1	Napoleon	Ohio	43545
Cynthia	May	Graminex, LLC		2300 County Road C	Deshler	Ohio	43516
Mike	Farber	Grogan Towne Chrysler/Jeep/Dodge		500 East Clinton St.	Napoleon	Ohio	43545
Don	Gleckner	H & R Block		1255 North Scott Street Ste 340	Napoleon	Ohio	43545
Thomas	Manahan	Hanahan, Thomas R., Attorney at Law		614 N. Perry St.	Napoleon	Ohio	43545
Jay	Hanna	Hanna & Fisher		P.O. Box 605	Napoleon	Ohio	43545
D.J.	Yagel	Harley-Davidson Sales & Service		862 American Rd.	Napoleon	Ohio	43545
Junior	Harmon	Harmon Building Mover		1307 Woodlawn Avenue	Napoleon	Ohio	43545
RaAnn	Bauman	Harrison Township	Clerk	0311 County Rd. 8	Napoleon	Ohio	43545
Dale	Brinkman	Harrison Township	Trustee	N569 County Rd. 8	Napoleon	Ohio	43545
Vernon	Oberhaus	Harrison Township	Trustee	10061 County Rd. O	Napoleon	Ohio	43545
Alan	Storch	Harrison Township	Trustee	7742 U.S. Rte. 6	Napoleon	Ohio	43545
Tom	VonDeylen	Harry VonDeylen Co. (Farm & Lawn Equipment)		20 Interstate Drive	Napoleon	Ohio	43545
Clark	Hogan	Hawk's Pizza	Owner	402 East Washington Street	Napoleon	Ohio	43545
Steve	Thomas	Heartland Disposal Service		1445 Scott Street	Napoleon	Ohio	43545
Jeffrey	Heinrichs	Heinrichs, R. Jeffrey DDS		375 Independence Dr., Ste. 110	Napoleon	Ohio	43545
Steve	Baden	Henry County	Commissioners	660 N. Parry St.	Napoleon	Ohio	43545
Randolf	Germann	Henry County	County Engineer	645 Buckeye Lane	Napoleon	Ohio	43545
John	Nye	Henry County	Sheriff	476 Marlow Dr.	Liberty Center	Ohio	43532
Tom	Wiggins	Henry County	Planning	104 E. Washington St.	Napoleon	Ohio	43545
Jeff	Sharp	Henry County Airport Authority	President	10646 County Road O	Napoleon	Ohio	43545
Alice	Watson	Henry County Arts Council		125 West Washington Street	Napoleon	Ohio	43545
Joseph	Frederick	Henry County Board of D D		J169 State Route 65	McClure	Ohio	43534
Colleen	Phillips	Henry County Commissioners Office	Operations Manager	660 N. Perry	Napoleon	Ohio	43545
Phil	Flavin	Henry County Community Improvement Corporation		104 East Washington St. Ste 301	Napoleon	Ohio	43545

STAKEHOLDERS AND GENERAL MAILING LIST

First Name	Last Name	Company	Title	ADDRESS	CITY	STATE	ZIP
Connie	Schuette	Henry County Dept. of Job & Family Services		P.O. Box 527	Napoleon	Ohio	43545
Roy	Norman	Henry County Farm Bureau		P.O. Box 53099	Pettisville	Ohio	43553
Peggy	Bohls	Henry County Historical Society		P.O. Box 443	Napoleon	Ohio	43545
Kim	Bordenkircher	Henry County Hospital		11600 State Route 424	Napoleon	Ohio	43545
Connie	Jones	Henry County Humane Society		1136 Independence Drive	Napoleon	Ohio	43545
Tim	Schumm	Henry County Planning Commission	Planning Director	104 E. Washington St., Ste. 301	Napoleon	Ohio	43545
Robin	Small	Henry County Senior Center		130 East Clinton Street	Napoleon	Ohio	43545
Mike	Saneholtz	Henry County Transportation Network	Coordinator	130 E Clinton	Napoleon	Ohio	43545
Veronica	Henry	Henry's Garden Patch (Produce Sales)		S-664 County Road 22	Napoleon	Ohio	43545
Doug/Terry	Herman	Herman's Clothing		111 West Washington Street	Napoleon	Ohio	43545
Larry	Hilvers	Hilvers Jewelers		721 North Perry Street	Napoleon	Ohio	43545
Jeff	Stober	Holgate Implement Sales, Inc. (Farm)		P.O. Box 278	Holgate	Ohio	43527
Terry	McDowell	Holgate Local Schools	Superintendent	103 Frazier Avenue	Holgate	Ohio	43527
Wally	Snyder	Holgate Village	Mayor	P.O. Box 217	Holgate	Ohio	43527
Brenda	Carnahan	Holiday Inn Express	General Manager	590 Bonaparte Drive	Napoleon	Ohio	43545
Joseph	Frederick	Hope School	Superintendent	J-169 St. Rte. 65	McClure	Ohio	43534
Ben	Cook	Hubbard Company		P.O. Drawer 100	Defiance	Ohio	43512
Russell	Borstelman	Interstate Cold Storage		1 Interstate Drive	Napoleon	Ohio	43545
Rick	Miller	J & C Repair Service		P.O. Box 736	Napoleon	Ohio	43545
Linda	Nye	J M Golden Gourmet Popcorn		813 North Perry Street	Napoleon	Ohio	43545
James	Barnes	JBS Office Solutions, LTD		733 North Perry Street	Napoleon	Ohio	43545
Lavora	Johnson	Johnson's Carpet		563 East Riverview	Napoleon	Ohio	43545
Phil & Peggy	Johnson	Johnson's Country Shoppe	Owners	N527 State Route 108	Napoleon	Ohio	43545
David	Jones	Jones Appraisal Service		P.O. Box 676	Napoleon	Ohio	43545
Julie	Busch	Julie's Portrait Creations		136 West Washington Street	Napoleon	Ohio	43545
Bonnie	Lech	Key Driving School, Inc.		107 W. Main St. - P.O. Box 242	Napoleon	Ohio	43545
Linda	Dempsey	KFC/Dempsey Bros., Inc.		1410 North Scott Street	Napoleon	Ohio	43545
Linda	Arno	Kid's Castle, LLC		910 Third Street	Napoleon	Ohio	43545
Kay	Beerbower	Kircher's Flowers, Inc.		829 Oakwood Avenue	Napoleon	Ohio	43545
Darlene	Pitzen	Kircher's Flowers, Inc.		828 Oakwood Avenue	Napoleon	Ohio	43545
Michael	Klein	Klein Bros. Hardware		P.O. Box 142	Malinta	Ohio	43535
Dennis	Kurtz	Kurtz Ace Hardware		734 North Perry Street	Napoleon	Ohio	43545
Jeffrey	Lankenau	Lankenau Law Office		105 W. Main St.	Napoleon	Ohio	43545
Larry	Bischoff	Larry J. Bischoff Trucking		15404 Road U	Napoleon	Ohio	43545
Jeffrey	Lauf	Lauf, Jeffrey S., O.D.		606 Scott Street	Napoleon	Ohio	43545
Charles	Leader	Leader Engineering-Fabrication, Inc.		P.O. Box 670	Napoleon	Ohio	43545
Greg	Leupp	Leupp Building Service, Inc.		P.O. Box 602	Napoleon	Ohio	43545
Thomas	Lammers	Liberty Center Local Schools	Superintendent	P.O. Box 434	Liberty Center	Ohio	43532
Mary Beth	Slee	Liberty Center Public Library		P.O. Box 66	Liberty Center	Ohio	43532
Max	Fetterman	Liberty Center Village	Mayor	P.O. Box 92	Liberty Center	Ohio	43532
Mark	Harrington	Little German Village		P.O. Box 251	Ridgeville Corners	Ohio	43555
Mel	Zehnder	Lutheran Home of Napoleon		1036 South Perry Street	Napoleon	Ohio	43545
Marvin	Mt. Castle	M.D. Painting		115 Raymond Street	Napoleon	Ohio	43545
David	Manahan	Manahan, David, A, Attorney at Law		P.O. Box 531	Napoleon	Ohio	43545
Eric	Bueter	Marco's Pizza		1402 North Scott Street	Napoleon	Ohio	43545
William	Bierie	Maumee Valley Guidance Center		211 Biede Avenue	Defiance	Ohio	43512
Connie	Ehlers	McClure Village	Clerk	P.O. Box 340	McClure	Ohio	43534
Bradley	Meister	Meister Insurance Agency (Thrivent)		P.O. Box 392	Napoleon	Ohio	43545
Charlotte	Zgela	Mel Lanzer Company		P.O. Box 348	Napoleon	Ohio	43545
Michael	Slee	Michael's Hair Designers		1401 Oakwood Ave.	Napoleon	Ohio	43545
Phil	Buell	Midwest Community Federal Credit Union		1247 Scott Street	Napoleon	Ohio	43545
Gene	Westhoven	MidWest Wood Trim, Inc.		P.O. Box 585	Napoleon	Ohio	43545
Susan	Miller	Miller Bros Trucking, Inc.		P.O. Box 544	Napoleon	Ohio	43545

STAKEHOLDERS AND GENERAL MAILING LIST

First Name	Last Name	Company	Title	ADDRESS	CITY	STATE	ZIP
Neil	Mock	Mock-Buehrer Builders, LTD					
George	Nicely	N & R & G Recycling Inc.		P707 County Rd. 16	Napoleon	Ohio	43545
Joe	Szozda	Napoleon American Legion Post 300		471 Freedom Drive	Napoleon	Ohio	43545
David	Watson	Napoleon Area City Schools	Superintendent	500 Glenwood Avenue	Napoleon	Ohio	43545
Fred	Brockelman	Napoleon Auto Service Center		701 Briarheath Drive, Ste 108	Napoleon	Ohio	43545
Paul	Grewal	Napoleon Auto Truck Plaza		2276 N. Scott St.	Napoleon	Ohio	43545
Don	Schuette	Napoleon Car Care & Sales		P.O. Box 268	Napoleon	Ohio	43545
Gary	Grego	Napoleon Clinic		321 E. Riverview Ave.	Napoleon	Ohio	43545
Jan	Stover	Napoleon Creamery Co.		1426 North Scott St.	Napoleon	Ohio	43545
Michael	Carpenter	Napoleon Dental Excellence, LLC		P.O. Box 206	Napoleon	Ohio	43545
Dan	Koch	Napoleon Elks Lodge # 929		610 Broadmoor Ave.	Napoleon	Ohio	43545
Robert	Limbird, O.D.	Napoleon Family Vision Center		P.O. Box 4	Napoleon	Ohio	43545
Wilfred	Hesterman	Napoleon Lions Club		P.O. Box 587	Napoleon	Ohio	43545
Tootie	Bockelman	Napoleon Monuments/Divine Inspirations		936 East Graceway Drive	Napoleon	Ohio	43545
Prem	Mehta	Napoleon Motor Inn		613 North Perry Street	Napoleon	Ohio	43545
Karen	Dietrich	Napoleon Optimist Club	President	179 East Maumee Avenue	Napoleon	Ohio	43545
Doug	Herman	Napoleon Pride & Promotion Association		P.O. Box 243	Napoleon	Ohio	43545
Pamela	Lieser	Napoleon Public Library		111 West Washington Street	Napoleon	Ohio	43545
Larry	Koesters	Napoleon Rotary Club	President	310 West Clinton Street	Napoleon	Ohio	43545
Edward	Hoeffel	Napoleon Township	Trustee	P.O. Box 414	Napoleon	Ohio	43545
Elden	Meyer	Napoleon Township	Trustee	345 W. Main St.	Napoleon	Ohio	43545
Susan	Witt	Napoleon Township	Clerk	Q733 Co. Road 17	Napoleon	Ohio	43545
Dr. Doug	Burget	Napoleon Veterinary Clinic, Inc.		1002 Fiarview Dr.	Napoleon	Ohio	43545
Michael	Snyder	Napoleon Wash-N-Fill		1411 North Scott Street	Napoleon	Ohio	43545
Andy	Anderson	Napoleon/Henry County	Interim Executive Director	485 North Perry Street	Napoleon	Ohio	43545
Tricia	Badenhop	National City Bank		611 N. Perry St.	Napoleon	Ohio	43545
Larry	Cathcart	Northcrest Nursing & Rehabilitation Center		701 North Perry St.	Napoleon	Ohio	43545
Steve	Small	Northwest Capital Financial Group	President	240 Northcrest Drive	Napoleon	Ohio	43545
John	Wilhelm	Northwest Ohio Educational Service Center	Superintendent	625 N. Perry Street	Napoleon	Ohio	43545
Director		Northwest Ohio Rivers Council		104 E. Washington St., Ste 214	Napoleon	Ohio	43545
Chris	Cullis	Northwest Signal		709 Corwin St.	Defiance	Ohio	43512
Dr. Betty	Young	Northwest State Community College	President	P.O. Box 567	Napoleon	Ohio	43545
Deborah	Gerken	Northwestern Ohio Community Action Commission		22600 State Route 34	Archibold	Ohio	43502
Director		Ohio Department of Agriculture		1933 East Second Street	Defiance	Ohio	43512
Becky	Jenkins	Ohio Dept. of Natural Resources	Environmental Specialist	E8995 E. Main	Reynoldsburg	Ohio	43068
Robert	Vargo	Ohio Dept. of Natural Resources	NW Ohio Scenic River Coordinator	1840 Belcher Dr., Bldg. G-3	Columbus	Ohio	43224
Todd	Audet	Ohio Dept. of Transportation	District Deputy Director	1435 Township Rd. 38W	Tiffin	Ohio	44883
Aaron	Berhman	Ohio Dept. of Transportation		317 E. Poe Road	Bowling Green	Ohio	43402
Dave	Dicke	Ohio Dept. of Transportation	Real Estate Administrator	317 E. Poe Road	Bowling Green	Ohio	43402
Tricia	Hines	Ohio Dept. of Transportation		317 E. Poe Road	Bowling Green	Ohio	43402
Michael	Ligibel	Ohio Dept. of Transportation	Transportation Planning Program Admin.	317 E. Poe Road	Bowling Green	Ohio	43402
Michael	Stormer	Ohio Dept. of Transportation	District Transportation Engineer	317 E. Poe Road	Bowling Green	Ohio	43402
Edwin	Hammett	Ohio EPA		347 N. Dunbridge Rd.	Bowling Green	Ohio	43402
Douglas	Westhoven	Ohio Gas Company		P.O. Box 528	Bryan	Ohio	43506
Director		Ohio Historic Preservation Office		567 E. Hudson St.	Columbus	Ohio	43211
Nancy	Stehulak	Ohio State University Extension, Henry County		104 East Washington St. Ste 107	Napoleon	Ohio	43545
Don	Schuette	Omni Electronics/Radio Shack		610 North Perry Street	Napoleon	Ohio	43545
Denny	Knott	Ottawa Oil Company/Napoleon Party Mart (Gas Station)		P.O. Box 346	Ottawa	Ohio	45875
Susan	Miko	Patrick Henry Local Schools	Superintendent	6900 State Route 18	Hamler	Ohio	43524
Sara	Myles	Patton Poniac		1421 Scott St.	Napoleon	Ohio	43545
Troy	Pedraza	Pedraza Trucking, LLC		P.O. Box 584	Napoleon	Ohio	43545
David	Reiser	Penrod & George		421 Independence Drive	Napoleon	Ohio	43545
Edmund	Peper	Peper Law Firm		555 Monroe St.	Napoleon	Ohio	43545

STAKEHOLDERS AND GENERAL MAILING LIST

First Name	Last Name	Company	Title	ADDRESS	CITY	STATE	ZIP
Al & Pat	Wiederwohl	Peppermills Restaurant		1425 North Scott Street	Napoleon	Ohio	43545
Craig	Marshall	Perry Corporation		1101 Tiffin Avenue	Findlay	Ohio	45840
Scott	Weasel	Peterman Associates, Inc.		3480 N. Main St.	Findlay	Ohio	45840
Linda	Michaelis	Pro-Team Corvette Sales, Inc.		P.O. Box 606	Napoleon	Ohio	43545
Tom	Spillis	Quality Cleaning Service		Q750 County Road 16	Napoleon	Ohio	43545
Scott	Swiebeneck	Rausch Lumber		118 W. Front St.	Napoleon	Ohio	43545
Eileen	Granata	Regional Growth Partnership		300 Madison Avenue Ste 270	Toledo	Ohio	43604
Don	Moore	Reiser Realty		219 West Clinton Street	Napoleon	Ohio	43545
Robert	Rettig	Rettig Family Pallets, Inc.		G510 County Road 14	Holgate	Ohio	43527
Mel	Ricker	Rick's Sports Bar & Eatery	Owner	619 North Perry Street	Napoleon	Ohio	43545
Don	Stork	Rite Aid Pharmacy		1255 North Scott Street	Napoleon	Ohio	43545
Jo	Schwaiger	River City Bowl-A-Way (Bowling Alley)		380 Independence Drive	Napoleon	Ohio	43545
Janie	Markins	Riverview Estates Apartments		1140 East Riverview Ave. Apt. 1-B	Napoleon	Ohio	43545
Jerrie	Gray	Rodenberger Funeral Homes		P.O. Box 166	Napoleon	Ohio	43545
Charlie	Rogliatti	Rogliatti's Sport Center		709 North Perry Street	Napoleon	Ohio	43545
Roy	Kistner	Roy's Body Shop		P.O. Box 628	Napoleon	Ohio	43545
Dexter	Benecke	San Jan, Inc.		P.O. Box 61	Ridgeville Corners	Ohio	43555
Barbara	Shields	School House Funds		755 West Main Street	Napoleon	Ohio	43545
Phil	Cesen	Silgan Can Company		P.O. Box 29	Napoleon	Ohio	43545
Nancy	Hogrefe	Sky Bank		P.O. Box 565	Napoleon	Ohio	43545
Jerry	Smithers	Smithers Insurance & Financial (Nationwide Agent)		540 Perry St. Ste 100	Napoleon	Ohio	43545
William L.	Snyder	Snyder Chevrolet-Olds Co.		P.O. Box 506	Napoleon	Ohio	43545
Bryan	Evinger	Snyder Wesche Funeral Home		830 Scott Street	Napoleon	Ohio	43545
Carol	Stultz	Soul Images		P.O. Box 2	Ridgeville Corners	Ohio	43555
John	Speiser	Speiser, Jim & Sons, Inc.		P.O. Box 545	Napoleon	Ohio	43545
Cheryl	Weideman	Spengler's Restaurant & Pub	Owner	713 North Perry Street	Napoleon	Ohio	43545
Claude V.	Cliborne III	Sprint		122 South Elizabeth St.	Lima	Ohio	45801
Rev. Dan	Borgelt	St. Augustine Parish		210 E. Clinton	Napoleon	Ohio	43545
Rev. Norm	Koy	St. Paul Lutheran Church		1075 Glenwood Ave.	Napoleon	Ohio	43545
Rev. Michael	Westbay	St. Paul Untied Methodist Church		P.O. Box 367	Napoleon	Ohio	43545
Marcia	Bruns	Staffmark		1255 North Scott Street Ste 350	Napoleon	Ohio	43545
Nancy	Wilke	Sterling Milk Company (Gas Station)		P.O. Box 397	Wauseon	Ohio	43567
Richard	Fryman	T C Marketing, Inc.		P.O. Box 308	Napoleon	Ohio	43545
Tony	Marks	T M T Warehousing, LLC		P314 County Road 12	Napoleon	Ohio	43545
Tom	Weaver	Tenneco Automotive		11800 State Route 424	Napoleon	Ohio	43545
William L.	Wendt	The Henry County Bank		P.O. Box 72	Napoleon	Ohio	43545
Jennifer	Shriver	Toledo Edison, A First Energy Co.		300 Madison Avenue	Toledo	Ohio	43652
Anthony	Reams	Toledo Metropolitan Area Council of Governments (TMACOG)	President	P.O. Box 9508	Toledo	Ohio	43697
Dennis	Bockelman	Township Trustee's County Association	Secretary/Treasurer	14267 County Rd. V	Napoleon	Ohio	43545
Lonnie	Dishop	Township Trustee's County Association	President	309 Maple Street	Liberty Center	Ohio	43532
Kevin & Tammy	Vajen	Trailwind Village Apartments & U Lock Storage		750 Trail Drive	Napoleon	Ohio	43545
Phil	Parsons	Tricounty Rural Electric Cooperative, Inc.		P.O. Box 100	Malinta	Ohio	43535
Bev	Griteman	Turkeyfoot Printing		215 West Front Street	Napoleon	Ohio	43545
Claudia	Steele	U.S. Army Corps. of Engineers	Regulatory Field Office	1776 Niagara St.	Buffalo	New York	14207
Mary	Knapp	United States Fish & Wildlife Services	Supervisor	6950 Americana Pkwy., Ste. H	Reynoldsburg	Ohio	43068
Thomas	Mack	United Way of Henry County		611 North Perry Street	Napoleon	Ohio	43545
Tim	White	Universal Cooperatives, Inc		P.O. Box 471	Napoleon	Ohio	43545
Scott	Walter	VFW Post 8218		1008 North Perry Street	Napoleon	Ohio	43545
Roger	Latta	Village Apothecary		123 East Maumee Avenue	Napoleon	Ohio	43545
Randall	Fisher	Von Deylen Plumbing & Heating, Inc.		116 East Clinton Street	Napoleon	Ohio	43545
Scott	Walter	Walker Mortuary, Inc.		333 West Main Street	Napoleon	Ohio	43545
Ken	Wysong	Wal-Mart Supermarket		1815 North Scott Street	Napoleon	Ohio	43545
Dave	Ward	Ward's Truck Service		P.O. Box 465	Napoleon	Ohio	43545

STAKEHOLDERS AND GENERAL MAILING LIST

First Name	Last Name	Company	Title	ADDRESS	CITY	STATE	ZIP
Larry	Weirich	Weirich Electric		V025 County Road 5B	Liberty Center	Ohio	43532
Cheryl	Hershberger	Welles Bowen Realtors		1006 Dodd Street	Napoleon	Ohio	43545
Don	Wiemken	Wendt Shoes		725 North Perry Street	Napoleon	Ohio	43545
Casey	Wertz	Werlor, Inc.		1420 Ralston Avenue	Defiance	Ohio	43512
Eric	Witte	Wide Water Retreat & Ministry Center (Meeting Place)		4050 US Highway 24	Liberty Center	Ohio	43532
Ken	Woods	Wood's Auto Supply, Inc.		907 Oakwood Ave.	Napoleon	Ohio	43545
Timothy	Worline	Worline, T.R., & Associates		P.O. Box 671	Napoleon	Ohio	43545
Eric	Francis	Yark Ford Automotive		500 Independence Dr.	Napoleon	Ohio	43545
Steve	Baden		Commissioner	P.O. Box 343	Hamler	Ohio	43524
Morey	Bill			16-129 State Route 424	Napoleon	Ohio	43545
John	Collier			340 North Park Street	Deshler	Ohio	43516
Michael	DeWine		United States Senator	420 Madison Ave. Rm. 1205	Toledo	Ohio	43604
Rita	Franz		Commissioner	I-518 County Road 16	Holgate	Ohio	43527
Paul E.	Gillmor		United States Congressman	1655 N. Clinton St., Ste. C2	Defiance	Ohio	43512
Geri	Haase			1490 Oakwood Avenue	Napoleon	Ohio	43545
Bud & Fran	Hahn			0913 County Road 11C	Napoleon	Ohio	43545
Wilfred	Hesterman			936 East Graceway Drive	Napoleon	Ohio	43545
Adam	Hoff, P.E.			5555 Airport Highway Ste 210	Toledo	Ohio	43615
James	Hoops		Ohio House of Representatives 83rd District	195 Old Creek Drive	Napoleon	Ohio	43545
Henry	Huner			206 Jahns Road	Napoleon	Ohio	43545
Fern & James	Kieffer			3348 County Road K, 4	McClure	Ohio	43534
Steve	Lankenau			539 West Washington Street	Napoleon	Ohio	43545
Hal	Luebkar			14419 County Road Z	Napoleon	Ohio	43545
Denise	McColley			P.O. Box 70	Napoleon	Ohio	43545
John	Mohler			1025 Fairview Drive	Napoleon	Ohio	43545
Rupert	Schweinhagen			204 East Barnes Street	Napoleon	Ohio	43545
George V.	Voinovich		United States Senator	420 Madison Ave. Rm. 1210	Toledo	Ohio	43604
Lynn	Wachtmann		Ohio Senate First District	650 Euclid Ave.	Napoleon	Ohio	43545

Appendix B

Technical Reports

Technical Reports
New Maumee River Crossing Project
PID #: 22984 - State Job #: 423780
Napoleon, Ohio

SUPPORTING TECHNICAL REPORTS

Several supporting technical reports were utilized in developing a purpose and need for the project and for conducting analyses in comparing the various alternatives. Following is a list of those technical reports that were utilized:

Origin-Destination Study of State Route 108 (Perry St.) Bridge - May 2003

This study was conducted to determine existing traffic patterns on the current SR 108 Bridge and to predict the amount of traffic that may detour to a new river crossing depending on the proposed location.

The Napoleon Comprehensive Plan - 2003

This comprehensive plan provided much background data for the City of Napoleon area. The Plan also contains a Thoroughfare Plan that includes a new river crossing as a key component of the plan.

Henry County Comprehensive Plan - 2003

This document provides insight into planning for the peripheral areas of the City of Napoleon within the rural county areas. Items such as growth areas are predicted.

Appendix C

Source Bibliography

Source Bibliography
New Maumee River Crossing Project
PID #: 22984 - State Job #: 423780
Napoleon, Ohio

SECONDARY SOURCES

ENVIRONMENTAL SERVICES PRELIMINARY SCREENING:

- Ohio Environmental Protection Agency - Biological Screening
- National Wetland Inventory (NWI) Maps
- FirstSearch Technology Corporation - Environmental FirstSearch for Napoleon Area
- Henry County Soil Survey
- USGS Quadrangle Maps

CULTURAL RESOURCES PRELIMINARY SCREENING:

Center for Archival Collections, Bowling Green State University, Bowling Green

- General historic references for context development
- Local histories, atlases, and photographs of properties within the potential area of effects

The Local History Collection at the Toledo/Lucas County Public Library, Toledo

- Standard historic references for context development
- Local histories, atlases, and photographs of properties within the potential area of effects

Ohio Historic Preservation Office, Columbus

- Search for preciously-recorded resources in the Ohio Historic Bridge Inventory
- Search for preciously-recorded resources in the Ohio Historic Inventory
- Search for preciously-recorded resources in the Ohio Archaeological Inventory
- Search National Register of Historic Places
- Identify previous survey reports within the area of potential effects, including:
 1. *Archaeological Survey of the Van Hyning Creek Area, City of Napoleon, Henry County, Ohio*" (Schermer and Burdick, 1978)
 2. *Literature Review and Archaeological Survey for the Proposed Oakwood Park in the City of Napoleon, Napoleon Township, Henry County, Ohio* (Archaeological Services Consultants, Inc., 1992)
 3. *Literature Review, Reconnaissance Survey, and Architectural Documentation for the Napoleon Bridge Replacement Over the Maumee River on State Route 108 in Napoleon Township, Henry County, Ohio* (Archaeological Services Consultants, Inc., 1995)

4. *Literature Review for the Proposed U.S. Route 6/24 and Industrial Drive Interchange (HEN-6-13.45) near Napoleon in Liberty and Napoleon Townships, Henry County, Ohio* (Archaeological Services Consultants, Inc., 1992)
5. *A Reconnaissance Survey for the Proposed U.S. Route 6/24 and Industrial Drive Interchange (HEN-6-13.45) Near Napoleon in Liberty and Napoleon Townships, Henry County, Ohio* (Archaeological Services Consultants, Inc., 1992)

Other Secondary Literature Utilized:

The Napoleon Comprehensive Plan, 2003
Henry County Comprehensive Plan, 2003
Ohio Department of Transportation - Traffic Survey Data

PRIMARY SOURCES

Origin-Destination Study of State Route 108 (Perry St.) Bridge - May 2003

Data supplied by the Campbell Soup Company

- Employee Data
- Shift Data
- Truck Data
- Shipping Data

Various Data Supplied by City of Napoleon

Various Data Supplied by Henry County

Traffic Data Supplied by ODOT

APPENDIX B
TRAFFIC DATA, CRASH DATA, & CAPACITY REPORTS



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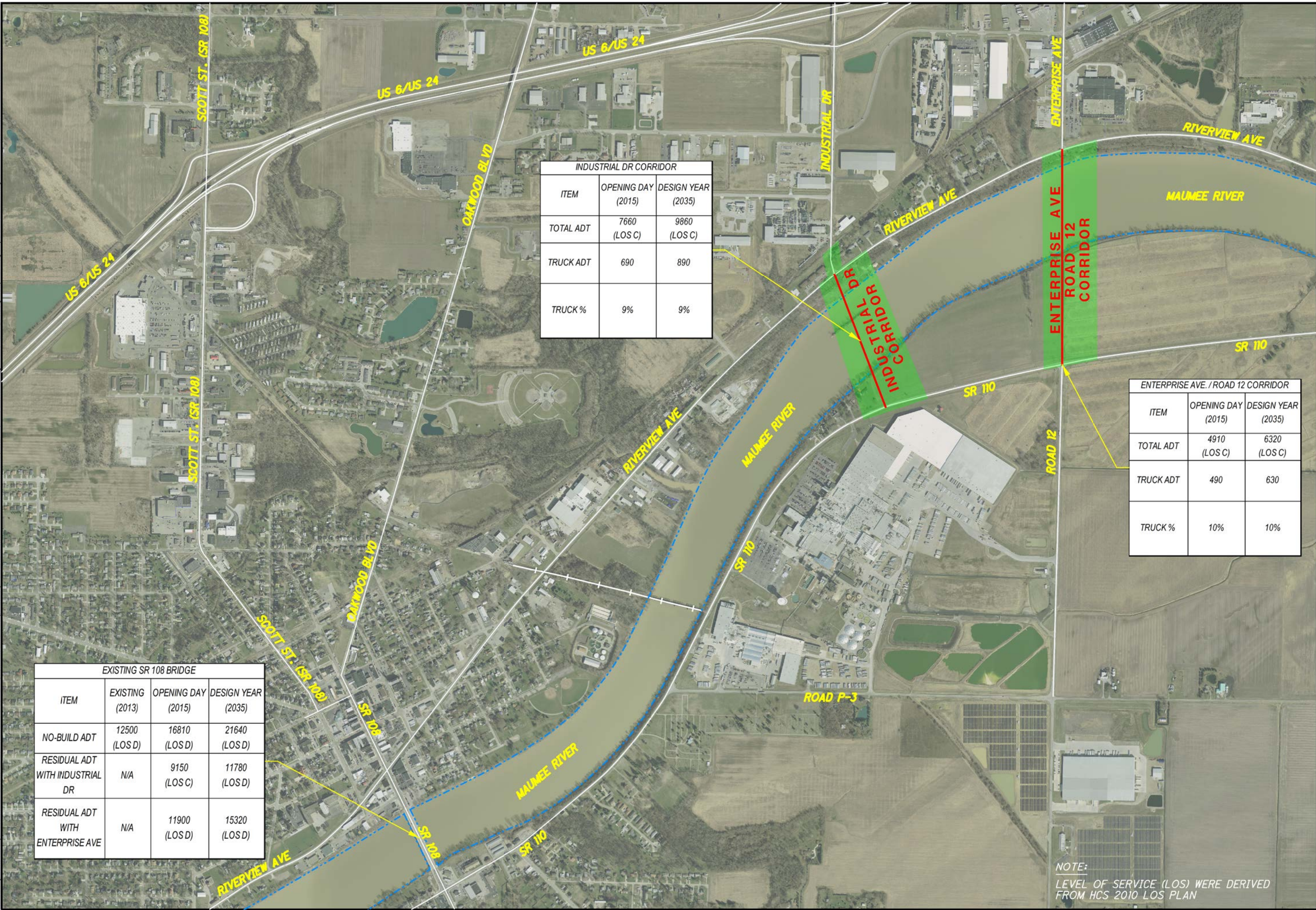


NOTE:
TRAFFIC DATA OBTAINED FROM ODOT'S 2011 TRAFFIC SURVEY REPORT.

LEGEND	
1234	TOTAL ADT
123	TRUCK ADT



PID - 22984
 HEN-NEW MAUMEE RIVER BRIDGE
 2011 ADT VOLUMES



INDUSTRIAL DR CORRIDOR		
ITEM	OPENING DAY (2015)	DESIGN YEAR (2035)
TOTAL ADT (LOS C)	7660	9860
TRUCK ADT	690	890
TRUCK %	9%	9%

ENTERPRISE AVE. / ROAD 12 CORRIDOR		
ITEM	OPENING DAY (2015)	DESIGN YEAR (2035)
TOTAL ADT (LOS C)	4910	6320
TRUCK ADT	490	630
TRUCK %	10%	10%

EXISTING SR 108 BRIDGE			
ITEM	EXISTING (2013)	OPENING DAY (2015)	DESIGN YEAR (2035)
NO-BUILD ADT (LOS D)	12500	16810	21640
RESIDUAL ADT WITH INDUSTRIAL DR	N/A	9150 (LOS C)	11780 (LOS D)
RESIDUAL ADT WITH ENTERPRISE AVE	N/A	11900 (LOS D)	15320 (LOS D)

NOTE:
LEVEL OF SERVICE (LOS) WERE DERIVED FROM HCS 2010 LOS PLAN

PID-22984
HEN-NEW MAUMEE RIVER BRIDGE

OPENING DAY & DESIGN YEAR TRAFFIC
NAPOLEON BRIDGE ALTERNATIVES

CALCULATED
CHECKED

0 500 1000
HORIZONTAL SCALE IN FEET

The following traffic volumes were provided by ODOT District 2 via email correspondence on 3/1/2013:

Location	2015 ADT	2035 ADT	2035 DHV	Directional Distribution	Percent Trucks
US 6 (log 15.50) near TR-11	17,460	22,580	2,510	55%	42%
US 6 (log 16.50) at Bridge over Maumee River	7,710	9,600	960	55%	27%
SR 108 (log 15.00) near TR-2	6,300	6,500	650	55%	7%
SR 108 (log 15.65) at Bridge Over Maumee River	13,800	13,800	1,380	55%	7%
SR 108 (log 16.00) near N. Perry St.	8,700	8,700	870	55%	7%
SR 110 (log 0.40) near Appian Ave.	7,100	7,100	710	55%	8%
SR 110 (log 0.65) near Maumee Ln.	4,300	4,300	480	55%	7%
SR 110 (log 3.00) east of TR-12	2,200	2,600	290	55%	38%
Riverview Ave. near Haley Ave.	7,100	8,400	840	55%	2%
Riverview Ave. near Wayne St.	3,700	3,700	410	55%	12%
Riverview Ave. east of TR-11	1,800	1,800	200	55%	10%

Click to Clear Data

County: Henry Co.

R1: SR108 (Perry St.)

R1 Log: 0

R2: Riverview Ave.

Crash Year Data: 2010 - 2012

Enter Number of Crashes for Intersection:

9

Enter Number of Years for Crash Data:

3

Enter Number of Intersection Entering Vehicles:

14,650

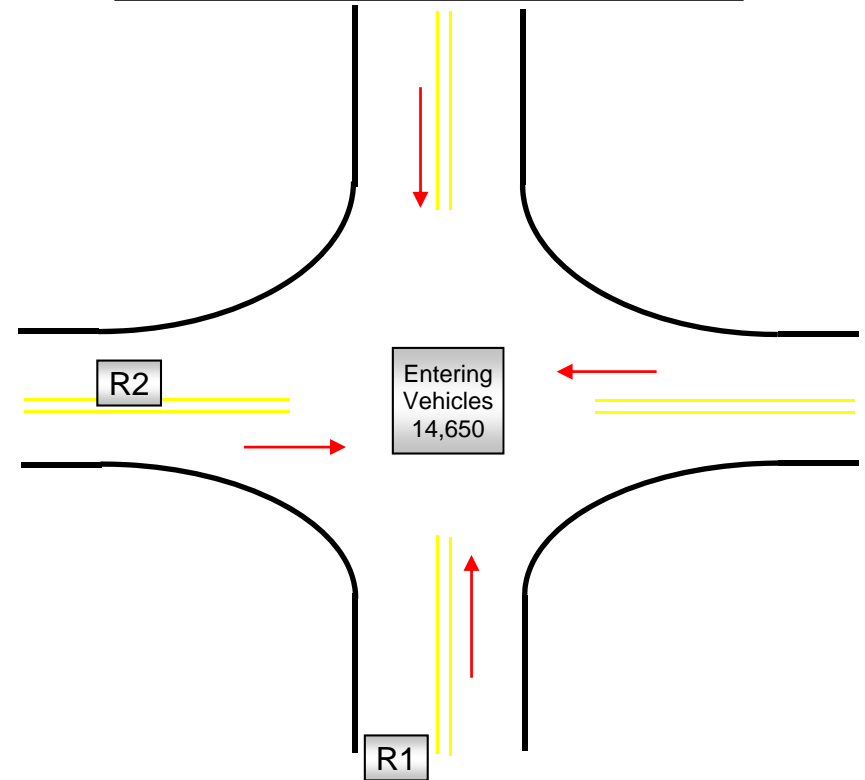
Number of Days in Year:

365

Crash Rate per Million Entering Vehicles (MEV):

0.56

Intersection Crash Rate Analysis Tool



*Statewide crash Rates are only available for sections. Intersections are excluded.

Click to Clear Data

County: Henry Co.

R1: SR108 (Perry St.)

R1 Log: 0

R2: SR110 (Maumee Ave.)

Crash Year Data: 2010 - 2012

Enter Number of Crashes for Intersection:

24

Enter Number of Years for Crash Data:

3

Enter Number of Intersection Entering Vehicles:

13,485

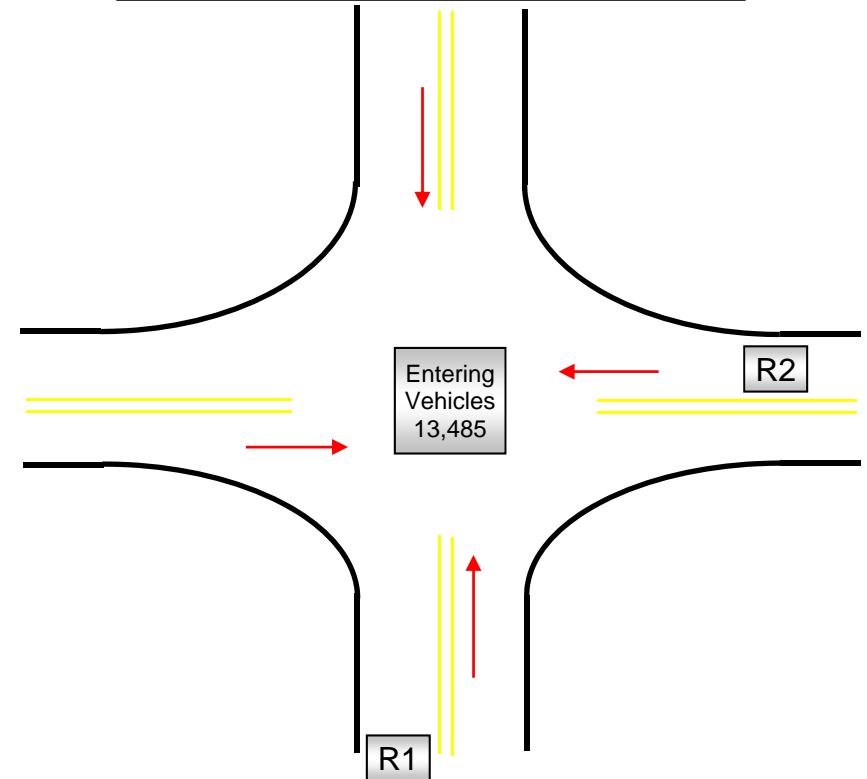
Number of Days in Year:

365

Crash Rate per Million Entering Vehicles (MEV):

1.63

Intersection Crash Rate Analysis Tool



*Statewide crash Rates are only available for sections. Intersections are excluded.

Click to Clear Data

County:	Henry Co.
Route:	SR108 (Perry St.)
BLog:	14.96 (Clinton St.)
ELog:	16.09 (Huddle Rd./S. Corp. Limit)
Crash Year Data:	2010 - 2012

Enter Number of Crashes on Section:

78

Enter Number of Years for Crash Data:

3

Enter Average Daily Traffic on Section (ADT):

8,830

Enter Length of Section in Miles

1.13

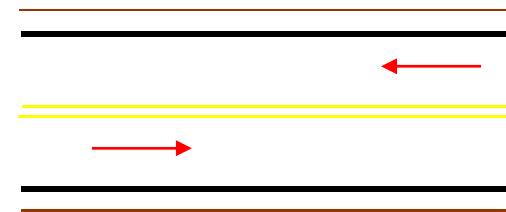
Number of Days in Year:

365

Crash Rate per Million Vehicle Miles Traveled (MVMT):

7.14

Section Crash Rate Analysis Tool



Average Daily Traffic (ADT)

[Click HERE to compare Statewide Averages](#)

*Statewide crash rates are only available for sections. Intersections are excluded.

Click to Clear Data

County:	Henry Co.
Route:	Riverview Ave.
BLog:	SR108 (Perry St.)
ELog:	Enterprise Ave. (Road 12)
Crash Year Data:	2010 - 2012

Enter Number of Crashes on Section:

22

Enter Number of Years for Crash Data:

3

Enter Average Daily Traffic on Section (ADT):

2,355

Enter Length of Section in Miles

2.12

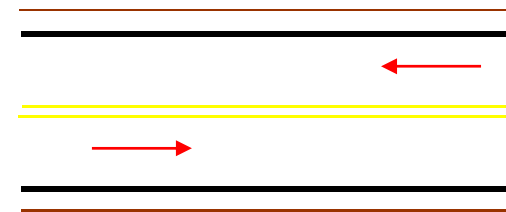
Number of Days in Year:

365

Crash Rate per Million Vehicle Miles Traveled (MVMT):

4.02

Section Crash Rate Analysis Tool



Average Daily Traffic (ADT)

**Click HERE to
compare Statewide
Averages**

*Statewide crash rates are only available for sections. Intersections are excluded.

Click to Clear Data

County:	Henry Co.
Route:	SR110 (Maumee Ave.)
BLog:	SR108 (Perry St.)
ELog:	Road 12
Crash Year Data:	2010 - 2012

Enter Number of Crashes on Section:

12

Enter Number of Years for Crash Data:

3

Enter Average Daily Traffic on Section (ADT):

5,555

Enter Length of Section in Miles

2.17

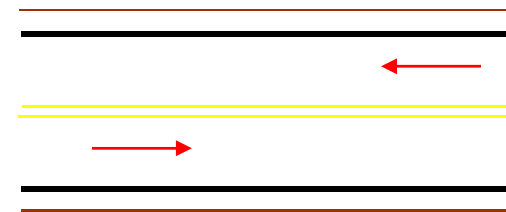
Number of Days in Year:

365

Crash Rate per Million Vehicle Miles Traveled (MVMT):

0.91

Section Crash Rate Analysis Tool



Average Daily Traffic (ADT)

[Click HERE to compare Statewide Averages](#)

*Statewide crash rates are only available for sections. Intersections are excluded.

2009-2011 Three Year Base Rates by Number of Lanes

	Tot Miles	Rate	Density
1	3.62	0.34	0.46
2	14582.67	1.23	1.56
3	81.19	1.70	6.15
4	3711.5	0.83	6.22
5	58.35	1.02	13.76
6	532.71	0.62	15.43
7	18.3	0.76	29.20
8	108.26	0.70	29.64
9	2.21	0.44	19.91
10	14.87	0.48	20.11
11	0.35	1.13	61.90

-Rate: Number of Crashes per MVMT

-Density: Number of Crashes/Mile/Year

-Only State Roadways (IR, US, SR) are Included in the Analysis (excludes Turnpike)

-Intersection and Related Crash Data are Excluded

2009-2011 Three Year Base Rates by Number of Lanes, Divided/Undivided

		Tot Miles	Rate	Density
1	Undivided	3.62	0.34	0.46
2	Divided	69.62	1.25	4.21
	Undivided	14513.05	1.23	1.55
3	Divided	7.67	0.75	4.65
	Undivided	73.52	1.89	6.30
4	Divided	2593.1	0.59	4.87
	Undivided	1118.4	1.68	9.34
5	Divided	37.18	0.88	14.79
	Undivided	21.17	1.53	11.94
6	Divided	500.94	0.60	15.63
	Undivided	31.77	1.75	12.37
7	Divided	18.06	0.75	29.05
	Undivided	0.24	2.26	40.28
8	Divided	107.79	0.70	29.63
	Undivided	0.47	3.30	31.21
9	Divided	2.21	0.44	19.91
10	Divided	14.87	0.48	20.11
11	Divided	0.35	1.13	61.90

-Rate: Number of Crashes per MVMT

-Density: Number of Crashes/Mile/Year

-Only State Roadways (IR, US, SR) are Included in the Analysis (excludes Turnpike)

-Intersection and Related Crash Data are Excluded

2009-2011 Three Year Base Rates

by Number of Lanes, Divided/Undivided and Urban/Rural by FC

			Tot Miles	Rate	Density
1	Undivided	RURAL	1.32	0.46	0.25
		URBAN	2.3	0.32	0.58
2	Divided	RURAL	23.92	1.80	2.47
		URBAN	45.7	1.16	5.13
	Undivided	RURAL	12381.22	1.18	1.17
		URBAN	2131.83	1.31	3.74
3	Divided	RURAL	2.36	0.47	1.84
		URBAN	5.31	0.81	5.90
	Undivided	RURAL	18.34	0.95	2.29
		URBAN	55.18	2.09	7.64
4	Divided	RURAL	1455.72	0.46	3.06
		URBAN	1137.38	0.69	7.19
	Undivided	RURAL	138.61	0.94	3.06
		URBAN	979.79	1.74	10.23
5	Divided	RURAL	4.91	0.43	3.80
		URBAN	32.27	0.92	16.47
	Undivided	RURAL	0.17	1.14	3.92
		URBAN	21	1.53	12.00
6	Divided	RURAL	105.87	0.41	6.72
		URBAN	395.07	0.63	18.02
	Undivided	URBAN	31.77	1.75	12.37
7	Divided	URBAN	18.06	0.75	29.05
	Undivided	URBAN	0.24	2.26	40.28
8	Divided	RURAL	0.14	0.35	2.38
		URBAN	107.65	0.70	29.66
	Undivided	URBAN	0.47	3.30	31.21
9	Divided	URBAN	2.21	0.44	19.91
10	Divided	URBAN	14.87	0.48	20.11
11	Divided	URBAN	0.35	1.13	61.90

-Rate: Number of Crashes per MVMT

-Density: Number of Crashes/Mile/Year

-Only State Roadways (IR, US, SR) are Included in the Analysis (excludes Turnpike)

-Intersection and Related Crash Data are Excluded

2009-2011 Three Year Base Rates

by Number of Lanes, Divided/Undivided and Functional Class

			Tot Miles	Rate	Density
1	Undivided	6 - Rural Minor Arterial	0.23	0.00	0.00
		7 - Rural Major Collector	1.09	0.70	0.31
		14 - Urban Other Prin Arterial	0.22	2.14	1.52
		16 - Urban Minor Arterial	1.45	0.41	0.46
		17 - Urban Collector	0.63	0.14	0.53
2	Divided	1 - Rural Interstate	1.43	6.05	21.21
		2 - Rural Other Prin Arterial	6.33	0.75	1.47
		6 - Rural Minor Arterial	5.39	1.12	1.67
		7 - Rural Major Collector	10.59	1.44	0.98
		8 - Rural Minor Collector	0.18	0.00	0.00
		11 - Urban Interstate	2.57	0.81	18.68
		12 - Urban Other Frway/Xway	7.91	1.33	11.34
		14 - Urban Other Prin Arterial	22.91	1.25	3.01
	Undivided	2 - Rural Other Prin Arterial	962.51	0.88	1.70
		6 - Rural Minor Arterial	2528.57	1.05	1.67
		7 - Rural Major Collector	7786.19	1.34	1.05
		8 - Rural Minor Collector	1101.62	1.64	0.47
		9 - Rural Local	2.33	0.99	0.29
		12 - Urban Other Frway/Xway	0.41	0.39	1.63
		14 - Urban Other Prin Arterial	844.65	1.33	4.73
16 - Urban Minor Arterial	936.16	1.34	3.53		
17 - Urban Collector	350.41	1.12	1.90		
19 - Urban Local	0.2	2.31	3.33		

-Rate: Number of Crashes per MVMT

-Density: Number of Crashes/Mile/Year

-Only State Roadways (IR, US, SR) are Included in the Analysis (excludes Turnpike)

-Intersection and Related Crash Data are Excluded

2009-2011 Three Year Base Rates

by Number of Lanes, Divided/Undivided and Functional Class

			Tot Miles	Rate	Density
3	Divided	2 - Rural Other Prin Arterial	1.94	0.50	2.23
		6 - Rural Minor Arterial	0.42	0.00	0.00
		11 - Urban Interstate	0.34	4.92	30.39
		12 - Urban Other Frway/Xway	1.22	0.29	4.92
		14 - Urban Other Prin Arterial	2.49	0.92	3.88
		16 - Urban Minor Arterial	1.26	1.07	4.23
		Undivided	2 - Rural Other Prin Arterial	4.19	1.38
	6 - Rural Minor Arterial	10.27	0.79	1.75	
	7 - Rural Major Collector	3.88	0.77	1.80	
	14 - Urban Other Prin Arterial	37.34	2.22	8.37	
	16 - Urban Minor Arterial	15.56	1.81	6.28	
	17 - Urban Collector	2.28	1.65	4.82	
	4	Divided	1 - Rural Interstate	444.32	0.39
2 - Rural Other Prin Arterial			928.89	0.53	2.40
6 - Rural Minor Arterial			32.5	0.77	2.31
7 - Rural Major Collector			50.01	0.67	1.15
11 - Urban Interstate			288.19	0.61	10.67
12 - Urban Other Frway/Xway			403.73	0.62	6.14
14 - Urban Other Prin Arterial			348.77	0.92	6.20
16 - Urban Minor Arterial			88.86	1.04	5.00
17 - Urban Collector			7.83	0.59	2.89
Undivided		2 - Rural Other Prin Arterial	48.18	0.90	4.34
		6 - Rural Minor Arterial	40.57	0.89	2.66
		7 - Rural Major Collector	49.19	1.13	2.17
		8 - Rural Minor Collector	0.67	0.66	0.50
		12 - Urban Other Frway/Xway	3.43	0.68	7.58
		14 - Urban Other Prin Arterial	698.62	1.79	11.19
		16 - Urban Minor Arterial	264.3	1.60	8.05
		17 - Urban Collector	13.44	1.18	3.97

-Rate: Number of Crashes per MVMT

-Density: Number of Crashes/Mile/Year

-Only State Roadways (IR, US, SR) are Included in the Analysis (excludes Turnpike)

-Intersection and Related Crash Data are Excluded

2009-2011 Three Year Base Rates

by Number of Lanes, Divided/Undivided and Functional Class

			Tot Miles	Rate	Density
5	Divided	1 - Rural Interstate	3.65	0.43	4.57
		2 - Rural Other Prin Arterial	1.26	0.45	1.59
		11 - Urban Interstate	19.19	0.98	22.65
		12 - Urban Other Frwy/Xway	6.48	0.56	7.41
		14 - Urban Other Prin Arterial	6.04	1.04	7.40
		16 - Urban Minor Arterial	0.56	0.85	7.14
		Undivided	2 - Rural Other Prin Arterial	0.06	1.76
		6 - Rural Minor Arterial	0.04	2.75	8.33
		7 - Rural Major Collector	0.07	0.00	0.00
		14 - Urban Other Prin Arterial	15.42	1.62	14.09
		16 - Urban Minor Arterial	5.55	1.16	6.25
		17 - Urban Collector	0.03	0.00	0.00
	6	Divided	1 - Rural Interstate	104.45	0.41
2 - Rural Other Prin Arterial			1.42	0.70	3.52
11 - Urban Interstate			327.93	0.63	19.10
12 - Urban Other Frwy/Xway			46.58	0.58	13.63
14 - Urban Other Prin Arterial			19.03	1.06	9.41
16 - Urban Minor Arterial			1.53	2.42	26.80
Undivided			14 - Urban Other Prin Arterial	29.84	1.76
		16 - Urban Minor Arterial	1.93	1.70	11.23
7		Divided	11 - Urban Interstate	15.89	0.74
	12 - Urban Other Frwy/Xway		1.46	0.31	5.94
	14 - Urban Other Prin Arterial		0.71	2.21	35.21
	Undivided	14 - Urban Other Prin Arterial	0.24	2.26	40.28
	8	Divided	2 - Rural Other Prin Arterial	0.14	0.35
11 - Urban Interstate			102.96	0.71	30.64
12 - Urban Other Frwy/Xway			4.25	0.31	7.53
14 - Urban Other Prin Arterial			0.38	1.02	12.28
16 - Urban Minor Arterial			0.06	10.44	27.78
Undivided		14 - Urban Other Prin Arterial	0.47	3.30	31.21

-Rate: Number of Crashes per MVMT

-Density: Number of Crashes/Mile/Year

-Only State Roadways (IR, US, SR) are Included in the Analysis (excludes Turnpike)

-Intersection and Related Crash Data are Excluded

2009-2011 Three Year Base Rates

by Number of Lanes, Divided/Undivided and Functional Class

			Tot Miles	Rate	Density
9	Divided	11 - Urban Interstate	2.11	0.43	20.06
		12 - Urban Other Frway/Xway	0.1	1.05	16.67
10	Divided	11 - Urban Interstate	14.87	0.48	20.11
11	Divided	11 - Urban Interstate	0.35	1.13	61.90

-Rate: Number of Crashes per MVMT

-Density: Number of Crashes/Mile/Year

-Only State Roadways (IR, US, SR) are Included in the Analysis (excludes Turnpike)

-Intersection and Related Crash Data are Excluded

2009-2011 Three Year Base Rates by Number of Lanes and Functional Class

		Tot Miles	Rate	Density
1	6 - Rural Minor Arterial	0.23	0.00	0.00
	7 - Rural Major Collector	1.09	0.70	0.31
	14 - Urban Other Prin Arterial	0.22	2.14	1.52
	16 - Urban Minor Arterial	1.45	0.41	0.46
	17 - Urban Collector	0.63	0.14	0.53
2	1 - Rural Interstate	1.43	6.05	21.21
	2 - Rural Other Prin Arterial	968.84	0.88	1.70
	6 - Rural Minor Arterial	2533.96	1.05	1.67
	7 - Rural Major Collector	7796.78	1.34	1.05
	8 - Rural Minor Collector	1101.8	1.64	0.47
	9 - Rural Local	2.33	0.99	0.29
	11 - Urban Interstate	2.57	0.81	18.68
	12 - Urban Other Frwy/Xway	8.32	1.31	10.86
	14 - Urban Other Prin Arterial	867.56	1.33	4.68
	16 - Urban Minor Arterial	945.21	1.34	3.52
	17 - Urban Collector	353.67	1.12	1.90
	19 - Urban Local	0.2	2.31	3.33
3	2 - Rural Other Prin Arterial	6.13	1.02	3.48
	6 - Rural Minor Arterial	10.69	0.77	1.68
	7 - Rural Major Collector	3.88	0.77	1.80
	11 - Urban Interstate	0.34	4.92	30.39
	12 - Urban Other Frwy/Xway	1.22	0.29	4.92
	14 - Urban Other Prin Arterial	39.83	2.13	8.09
	16 - Urban Minor Arterial	16.82	1.75	6.12
17 - Urban Collector	2.28	1.65	4.82	

-Rate: Number of Crashes per MVMT

-Density: Number of Crashes/Mile/Year

-Only State Roadways (IR, US, SR) are Included in the Analysis (excludes Turnpike)

-Intersection and Related Crash Data are Excluded

2009-2011 Three Year Base Rates by Number of Lanes and Functional Class

		Tot Miles	Rate	Density
4	1 - Rural Interstate	444.32	0.39	4.71
	2 - Rural Other Prin Arterial	977.07	0.55	2.50
	6 - Rural Minor Arterial	73.07	0.83	2.50
	7 - Rural Major Collector	99.2	0.91	1.66
	8 - Rural Minor Collector	0.67	0.66	0.50
	11 - Urban Interstate	288.19	0.61	10.67
	12 - Urban Other Frwy/Xway	407.16	0.62	6.15
	14 - Urban Other Prin Arterial	1047.39	1.49	9.53
	16 - Urban Minor Arterial	353.16	1.47	7.28
	17 - Urban Collector	21.27	0.91	3.57
5	1 - Rural Interstate	3.65	0.43	4.57
	2 - Rural Other Prin Arterial	1.32	0.50	1.77
	6 - Rural Minor Arterial	0.04	2.75	8.33
	7 - Rural Major Collector	0.07	0.00	0.00
	11 - Urban Interstate	19.19	0.98	22.65
	12 - Urban Other Frwy/Xway	6.48	0.56	7.41
	14 - Urban Other Prin Arterial	21.46	1.48	12.21
	16 - Urban Minor Arterial	6.11	1.12	6.33
	17 - Urban Collector	0.03	0.00	0.00
6	1 - Rural Interstate	104.45	0.41	6.76
	2 - Rural Other Prin Arterial	1.42	0.70	3.52
	11 - Urban Interstate	327.93	0.63	19.10
	12 - Urban Other Frwy/Xway	46.58	0.58	13.63
	14 - Urban Other Prin Arterial	48.87	1.45	11.26
	16 - Urban Minor Arterial	3.46	2.11	18.11
7	11 - Urban Interstate	15.89	0.74	30.90
	12 - Urban Other Frwy/Xway	1.46	0.31	5.94
	14 - Urban Other Prin Arterial	0.95	2.23	36.49

-Rate: Number of Crashes per MVMT

-Density: Number of Crashes/Mile/Year

-Only State Roadways (IR, US, SR) are Included in the Analysis (excludes Turnpike)

-Intersection and Related Crash Data are Excluded

2009-2011 Three Year Base Rates by Number of Lanes and Functional Class

		Tot Miles	Rate	Density
8	2 - Rural Other Prin Arterial	0.14	0.35	2.38
	11 - Urban Interstate	102.96	0.71	30.64
	12 - Urban Other Frway/Xway	4.25	0.31	7.53
	14 - Urban Other Prin Arterial	0.85	2.14	22.75
	16 - Urban Minor Arterial	0.06	10.44	27.78
9	11 - Urban Interstate	2.11	0.43	20.06
	12 - Urban Other Frway/Xway	0.1	1.05	16.67
10	11 - Urban Interstate	14.87	0.48	20.11
11	11 - Urban Interstate	0.35	1.13	61.90

-Rate: Number of Crashes per MVMT

-Density: Number of Crashes/Mile/Year

-Only State Roadways (IR, US, SR) are Included in the Analysis (excludes Turnpike)

-Intersection and Related Crash Data are Excluded

2009-2011 Three Year Base Rates by Functional Class

	Tot Miles	Rate	Density
1 - Rural Interstate	553.85	0.40	5.14
2 - Rural Other Prin Arterial	1954.92	0.65	2.10
6 - Rural Minor Arterial	2617.99	1.04	1.69
7 - Rural Major Collector	7901.02	1.33	1.06
8 - Rural Minor Collector	1102.47	1.64	0.47
9 - Rural Local	2.33	0.99	0.29
11 - Urban Interstate	774.4	0.65	17.87
12 - Urban Other Frway/Xway	475.57	0.61	6.99
14 - Urban Other Prin Arterial	2027.13	1.45	7.51
16 - Urban Minor Arterial	1326.27	1.40	4.60
17 - Urban Collector	377.88	1.10	2.01

-Rate: Number of Crashes per MVMT

-Density: Number of Crashes/Mile/Year

-Only State Roadways (IR, US, SR) are Included in the Analysis (excludes Turnpike)

-Intersection and Related Crash Data are Excluded

ARTPLAN 2009 Conceptual Planning Analysis

Project Information

Analyst	MLM	Arterial Name	SR 108 BRIDGE	Study Period	K100
Date Prepared	7/3/2013 1:05:25 PM	From		Modal Analysis	Auto Only
Agency		To		Program	ARTPLAN 2009
Area Type	Other Urbanized	Peak Direction	Northbound	Version Date	12/12/10
Arterial Class	2				
File Name	C:\Users\MMegyesi\AppData\Local\Temp\preview.xml				
User Notes	NO BUILD 2013				

Arterial Data

K	0.1	PHF	0.9	Control Type	Semiactuated
D	0.55	% Heavy Vehicles	7	Base Sat. Flow Rate	1950

Automobile Intersection and Segment Data

Segment #	Cycle Length	Thru g/C	Arr. Type	INT # Dir.Lanes	% Left Turns	% Right Turns	Left Turn Lanes	# Left Turn Lanes	LT Storage Length	Left g/C	Right Turn Lanes	Length	AADT	Hourly Vol.	SEG # Dir.Lanes	FFS	Median Type
1 (to)	120	0.44	4	2	12	12	Yes	1	235	0.15	No	1550	12500	688	2	40	None

Automobile LOS

Segment #	Thru Mvmt Flow Rate	Adj. Sat. Flow Rate	v/c	Control Delay	Int. Approach LOS	Queue Ratio	Speed (mph)	Segment LOS			
1 (to)	673	2996	0.510	21.81	C	0.32	21.02	D			
Arterial Length	0.2936	Weighted g/C	0.44	FFS Delay	23.86	Threshold Delay	0.00	Auto Speed	21.02	Auto LOS	D

ARTPLAN 2009 Conceptual Planning Analysis

Project Information

Analyst	MLM	Arterial Name	SR 108 BRIDGE	Study Period	K100
Date Prepared	7/3/2013 12:57:27 PM	From		Modal Analysis	Auto Only
Agency	Mannik & Smith Group Inc.	To		Program	ARTPLAN 2009
Area Type	Other Urbanized	Peak Direction	Northbound	Version Date	12/12/10
Arterial Class	2				
File Name	C:\Users\MMegyesi\AppData\Local\Temp\preview.xml				
User Notes	NO BUILD 2015				

Arterial Data

K	0.1	PHF	0.9	Control Type	Semiactuated
D	0.55	% Heavy Vehicles	7	Base Sat. Flow Rate	1950

Automobile Intersection and Segment Data

Segment #	Cycle Length	Thru g/C	Arr. Type	INT # Dir.Lanes	% Left Turns	% Right Turns	Left Turn Lanes	# Left Turn Lanes	LT Storage Length	Left g/C	Right Turn Lanes	Length	AADT	Hourly Vol.	SEG # Dir.Lanes	FFS	Median Type
1 (to)	120	0.44	4	2	12	12	Yes	1	235	0.15	No	1550	16810	925	2	40	None

Automobile LOS

Segment #	Thru Mvmt Flow Rate	Adj. Sat. Flow Rate	v/c	Control Delay	Int. Approach LOS	Queue Ratio	Speed (mph)	Segment LOS			
1 (to)	904	3033	0.678	24.67	C	0.44	19.66	D			
Arterial Length	0.2936	Weighted g/C	0.44	FFS Delay	27.33	Threshold Delay	0.00	Auto Speed	19.66	Auto LOS	D

ARTPLAN 2009 Conceptual Planning Analysis

Project Information

Analyst	MLM	Arterial Name	SR 108 BRIDGE	Study Period	K100
Date Prepared	7/3/2013 1:14:04 PM	From		Modal Analysis	Auto Only
Agency	Mannik & Smith Group Inc.	To		Program	ARTPLAN 2009
Area Type	Other Urbanized	Peak Direction	Northbound	Version Date	12/12/10
Arterial Class	2				
File Name	C:\Users\MMegyesi\AppData\Local\Temp\preview.xml				
User Notes	NO BUILD 2035				

Arterial Data

K	0.1	PHF	0.9	Control Type	Semiactuated
D	0.55	% Heavy Vehicles	7	Base Sat. Flow Rate	1950

Automobile Intersection and Segment Data

Segment #	Cycle Length	Thru g/C	Arr. Type	INT # Dir.Lanes	% Left Turns	% Right Turns	Left Turn Lanes	# Left Turn Lanes	LT Storage Length	Left g/C	Right Turn Lanes	Length	AADT	Hourly Vol.	SEG # Dir.Lanes	FFS	Median Type
1 (to)	120	0.44	4	2	12	12	Yes	1	235	0.15	No	1550	21640	1190	2	40	None

Automobile LOS

Segment #	Thru Mvmt Flow Rate	Adj. Sat. Flow Rate	v/c	Control Delay	Int. Approach LOS	Queue Ratio	Speed (mph)	Segment LOS
1 (to)	1164	3074	0.860	28.77	C	0.57	18.05	D

Arterial Length	0.2936	Weighted g/C	0.44	FFS Delay	32.14	Threshold Delay	0.00	Auto Speed	18.05	Auto LOS	D
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ARTPLAN 2009 Conceptual Planning Analysis

Project Information

Analyst	MLM	Arterial Name	SR 108 BRIDGE	Study Period	K100
Date Prepared	7/3/2013 1:39:16 PM	From		Modal Analysis	Auto Only
Agency	Mannik & Smith Group Inc.	To		Program	ARTPLAN 2009
Area Type	Other Urbanized	Peak Direction	Northbound	Version Date	12/12/10
Arterial Class	2				
File Name	C:\Users\MMegyesi\AppData\Local\Temp\preview.xml				
User Notes	OPENING DAY 2015 WITH INDUSTRIAL DR ALT BRIDGE				

Arterial Data

K	0.1	PHF	0.9	Control Type	Semiactuated
D	0.55	% Heavy Vehicles	7	Base Sat. Flow Rate	1950

Automobile Intersection and Segment Data

Segment #	Cycle Length	Thru g/C	Arr. Type	INT # Dir.Lanes	% Left Turns	% Right Turns	Left Turn Lanes	# Left Turn Lanes	LT Storage Length	Left g/C	Right Turn Lanes	Length	AADT	Hourly Vol.	SEG # Dir.Lanes	FFS	Median Type
1 (to)	120	0.44	4	2	12	12	Yes	1	235	0.15	No	1550	9150	503	2	40	None

Automobile LOS

Segment #	Thru Mvmt Flow Rate	Adj. Sat. Flow Rate	v/c	Control Delay	Int. Approach LOS	Queue Ratio	Speed (mph)	Segment LOS			
1 (to)	492	2968	0.377	19.93	B	0.23	22.04	C			
Arterial Length	0.2936	Weighted g/C	0.44	FFS Delay	21.53	Threshold Delay	0.00	Auto Speed	22.04	Auto LOS	C

ARTPLAN 2009 Conceptual Planning Analysis

Project Information

Analyst	MLM	Arterial Name	SR 108 BRIDGE	Study Period	K100
Date Prepared	7/3/2013 1:43:22 PM	From		Modal Analysis	Auto Only
Agency	Mannik & Smith Group Inc	To		Program	ARTPLAN 2009
Area Type	Other Urbanized	Peak Direction	Northbound	Version Date	12/12/10
Arterial Class	2				
File Name	C:\Users\MMegyesi\AppData\Local\Temp\preview.xml				
User Notes	DESIGN YEAR (2035) WITH INDUSTRIAL DR ALT BRIDGE				

Arterial Data

K	0.1	PHF	0.9	Control Type	Semiactuated
D	0.55	% Heavy Vehicles	7	Base Sat. Flow Rate	1950

Automobile Intersection and Segment Data

Segment #	Cycle Length	Thru g/C	Arr. Type	INT # Dir.Lanes	% Left Turns	% Right Turns	Left Turn Lanes	# Left Turn Lanes	LT Storage Length	Left g/C	Right Turn Lanes	Length	AADT	Hourly Vol.	SEG # Dir.Lanes	FFS	Median Type
1 (to)	120	0.44	4	2	12	12	Yes	1	235	0.15	No	1550	11780	648	2	40	None

Automobile LOS

Segment #	Thru Mvmt Flow Rate	Adj. Sat. Flow Rate	v/c	Control Delay	Int. Approach LOS	Queue Ratio	Speed (mph)	Segment LOS			
1 (to)	634	2990	0.482	21.38	C	0.30	21.24	D			
Arterial Length	0.2936	Weighted g/C	0.44	FFS Delay	23.34	Threshold Delay	0.00	Auto Speed	21.24	Auto LOS	D

ARTPLAN 2009 Conceptual Planning Analysis

Project Information

Analyst	MLM	Arterial Name	SR 108 BRIDGE	Study Period	K100
Date Prepared	7/3/2013 1:46:25 PM	From		Modal Analysis	Auto Only
Agency	Mannik & Smith Group Inc	To		Program	ARTPLAN 2009
Area Type	Other Urbanized	Peak Direction	Northbound	Version Date	12/12/10
Arterial Class	2				
File Name	C:\Users\MMegyesi\AppData\Local\Temp\preview.xml				
User Notes	OPENING DAY (2015) WITH ENTERPRISE AVE ALT BRIDGE				

Arterial Data

K	0.1	PHF	0.9	Control Type	Semiactuated
D	0.55	% Heavy Vehicles	7	Base Sat. Flow Rate	1950

Automobile Intersection and Segment Data

Segment #	Cycle Length	Thru g/C	Arr. Type	INT # Dir.Lanes	% Left Turns	% Right Turns	Left Turn Lanes	# Left Turn Lanes	LT Storage Length	Left g/C	Right Turn Lanes	Length	AADT	Hourly Vol.	SEG # Dir.Lanes	FFS	Median Type
1 (to)	120	0.44	4	2	12	12	Yes	1	235	0.15	No	1550	11900	655	2	40	None

Automobile LOS

Segment #	Thru Mvmt Flow Rate	Adj. Sat. Flow Rate	v/c	Control Delay	Int. Approach LOS	Queue Ratio	Speed (mph)	Segment LOS			
1 (to)	640	2991	0.487	21.45	C	0.30	21.20	D			
Arterial Length	0.2936	Weighted g/C	0.44	FFS Delay	23.43	Threshold Delay	0.00	Auto Speed	21.20	Auto LOS	D

ARTPLAN 2009 Conceptual Planning Analysis

Project Information

Analyst	MLM	Arterial Name	SR 108 BRIDGE	Study Period	K100
Date Prepared	7/3/2013 1:48:28 PM	From		Modal Analysis	Auto Only
Agency	Mannik & Smith Group Inc	To		Program	ARTPLAN 2009
Area Type	Other Urbanized	Peak Direction	Northbound	Version Date	12/12/10
Arterial Class	2				
File Name	C:\Users\MMegyesi\AppData\Local\Temp\preview.xml				
User Notes	DESIGN YEAR (2035) WITH ENTERPRISE AVE ALT BRIDGE				

Arterial Data

K	0.1	PHF	0.9	Control Type	Semiactuated
D	0.55	% Heavy Vehicles	7	Base Sat. Flow Rate	1950

Automobile Intersection and Segment Data

Segment #	Cycle Length	Thru g/C	Arr. Type	INT # Dir.Lanes	% Left Turns	% Right Turns	Left Turn Lanes	# Left Turn Lanes	LT Storage Length	Left g/C	Right Turn Lanes	Length	AADT	Hourly Vol.	SEG # Dir.Lanes	FFS	Median Type
1 (to)	120	0.44	4	2	12	12	Yes	1	235	0.15	No	1550	15320	843	2	40	None

Automobile LOS

Segment #	Thru Mvmt Flow Rate	Adj. Sat. Flow Rate	v/c	Control Delay	Int. Approach LOS	Queue Ratio	Speed (mph)	Segment LOS			
1 (to)	824	3020	0.620	23.61	C	0.40	20.14	D			
Arterial Length	0.2936	Weighted g/C	0.44	FFS Delay	26.06	Threshold Delay	0.00	Auto Speed	20.14	Auto LOS	D

ARTPLAN 2009 Conceptual Planning Analysis

Project Information

Analyst	MLM	Arterial Name	INDUSTRIAL DR BRIDGE	Study Period	K100
Date Prepared	7/3/2013 1:52:53 PM	From		Modal Analysis	Auto Only
Agency	Mannik & Smith Group Inc.	To		Program	ARTPLAN 2009
Area Type	Other Urbanized	Peak Direction	Northbound	Version Date	12/12/10
Arterial Class	2				
File Name	C:\Users\MMegyesi\AppData\Local\Temp\preview.xml				
User Notes	OPENING DAY (2015) INDUSTRIAL DR BRIDGE				

Arterial Data

K	0.1	PHF	0.9	Control Type	Semiactuated
D	0.55	% Heavy Vehicles	9	Base Sat. Flow Rate	1950

Automobile Intersection and Segment Data

Segment #	Cycle Length	Thru g/C	Arr. Type	INT # Dir.Lanes	% Left Turns	% Right Turns	Left Turn Lanes	# Left Turn Lanes	LT Storage Length	Left g/C	Right Turn Lanes	Length	AADT	Hourly Vol.	SEG # Dir.Lanes	FFS	Median Type
1 (to)	120	0.44	4	2	12	12	Yes	1	235	0.15	No	2000	7660	421	2	40	None

Automobile LOS

Segment #	Thru Mvmt Flow Rate	Adj. Sat. Flow Rate	v/c	Control Delay	Int. Approach LOS	Queue Ratio	Speed (mph)	Segment LOS			
1 (to)	412	2915	0.321	19.24	B	0.19	24.76	C			
Arterial Length	0.3788	Weighted g/C	0.44	FFS Delay	20.98	Threshold Delay	0.00	Auto Speed	24.76	Auto LOS	C

ARTPLAN 2009 Conceptual Planning Analysis

Project Information

Analyst	MLM	Arterial Name	INDUSTRIAL DR BRIDGE	Study Period	K100
Date Prepared	7/3/2013 1:52:53 PM	From		Modal Analysis	Auto Only
Agency	Mannik & Smith Group Inc.	To		Program	ARTPLAN 2009
Area Type	Other Urbanized	Peak Direction	Northbound	Version Date	12/12/10
Arterial Class	2				
File Name	C:\Users\MMegyesi\AppData\Local\Temp\preview.xml				
User Notes	DESIGN YEAR (2035) INDUSTRIAL DR BRIDGE				

Arterial Data

K	0.1	PHF	0.9	Control Type	Semiactuated
D	0.55	% Heavy Vehicles	9	Base Sat. Flow Rate	1950

Automobile Intersection and Segment Data

Segment #	Cycle Length	Thru g/C	Arr. Type	INT # Dir.Lanes	% Left Turns	% Right Turns	Left Turn Lanes	# Left Turn Lanes	LT Storage Length	Left g/C	Right Turn Lanes	Length	AADT	Hourly Vol.	SEG # Dir.Lanes	FFS	Median Type
1 (to)	120	0.44	4	2	12	12	Yes	1	235	0.15	No	2000	9860	542	2	40	None

Automobile LOS

Segment #	Thru Mvmt Flow Rate	Adj. Sat. Flow Rate	v/c	Control Delay	Int. Approach LOS	Queue Ratio	Speed (mph)	Segment LOS			
1 (to)	530	2933	0.411	20.39	C	0.25	24.09	C			
Arterial Length	0.3788	Weighted g/C	0.44	FFS Delay	22.51	Threshold Delay	0.00	Auto Speed	24.09	Auto LOS	C

ARTPLAN 2009 Conceptual Planning Analysis

Project Information

Analyst	MLM	Arterial Name	ENTERPRISE DR BRIDGE	Study Period	K100
Date Prepared	7/3/2013 2:17:15 PM	From		Modal Analysis	Auto Only
Agency	Mannik & Smith Group Inc.	To		Program	ARTPLAN 2009
Area Type	Other Urbanized	Peak Direction	Northbound	Version Date	12/12/10
Arterial Class	2				
File Name	C:\Users\MMegyesi\AppData\Local\Temp\preview.xml				
User Notes	OPENING DAY (2015) ENTERPRISE DR BRIDGE				

Arterial Data

K	0.1	PHF	0.9	Control Type	Semialtuated
D	0.55	% Heavy Vehicles	10	Base Sat. Flow Rate	1950

Automobile Intersection and Segment Data

Segment #	Cycle Length	Thru g/C	Arr. Type	INT # Dir.Lanes	% Left Turns	% Right Turns	Left Turn Lanes	# Left Turn Lanes	LT Storage Length	Left g/C	Right Turn Lanes	Length	AADT	Hourly Vol.	SEG # Dir.Lanes	FFS	Median Type
1 (to)	120	0.44	4	2	12	12	Yes	1	235	0.15	No	2200	4910	270	2	40	None

Automobile LOS

Segment #	Thru Mvmt Flow Rate	Adj. Sat. Flow Rate	v/c	Control Delay	Int. Approach LOS	Queue Ratio	Speed (mph)	Segment LOS			
1 (to)	264	2873	0.209	17.96	B	0.12	26.38	C			
Arterial Length	0.4167	Weighted g/C	0.44	FFS Delay	19.35	Threshold Delay	0.00	Auto Speed	26.38	Auto LOS	C

ARTPLAN 2009 Conceptual Planning Analysis

Project Information

Analyst	MLM	Arterial Name	ENTERPRISE DR BRIDGE	Study Period	K100
Date Prepared	7/3/2013 2:17:15 PM	From		Modal Analysis	Auto Only
Agency	Mannik & Smith Group Inc.	To		Program	ARTPLAN 2009
Area Type	Other Urbanized	Peak Direction	Northbound	Version Date	12/12/10
Arterial Class	2				
File Name	C:\Users\MMegyesi\AppData\Local\Temp\preview.xml				
User Notes	DESIGN YEAR (2035) ENTERPRISE DR BRIDGE				

Arterial Data

K	0.1	PHF	0.9	Control Type	Semialtuated
D	0.55	% Heavy Vehicles	10	Base Sat. Flow Rate	1950

Automobile Intersection and Segment Data

Segment #	Cycle Length	Thru g/C	Arr. Type	INT # Dir.Lanes	% Left Turns	% Right Turns	Left Turn Lanes	# Left Turn Lanes	LT Storage Length	Left g/C	Right Turn Lanes	Length	AADT	Hourly Vol.	SEG # Dir.Lanes	FFS	Median Type
1 (to)	120	0.44	4	2	12	12	Yes	1	235	0.15	No	2200	6320	348	2	40	None

Automobile LOS

Segment #	Thru Mvmt Flow Rate	Adj. Sat. Flow Rate	v/c	Control Delay	Int. Approach LOS	Queue Ratio	Speed (mph)	Segment LOS			
1 (to)	340	2884	0.268	18.62	B	0.15	25.97	C			
Arterial Length	0.4167	Weighted g/C	0.44	FFS Delay	20.27	Threshold Delay	0.00	Auto Speed	25.97	Auto LOS	C


APPENDIX C
UPDATED ALTERNATIVES EVALUATION MATRIX



Table 11.1 Alternatives Evaluation Matrix

Evaluation Criteria		No-Build Alternative	Build Alternative - Industrial Drive River Crossing Corridor	Build Alternative - Enterprise Avenue (Road 12) River Crossing Corridor	Comments
Purpose and Need Elements	Improve Traffic Operations on SR108 Bridge & Corridor	No Benefit – Traffic on existing bridge is currently at LOS D, and is projected to be borderline LOS D/E in 2035 if no other river crossing is constructed nearby.	Substantial Benefit – This location provides most draw of traffic from the existing SR108 bridge. Improves existing bridge to LOS C in 2015 and reduces delays in 2035. Industrial Drive bridge operates at LOS C through design year 2035.	Some Benefit – This location draws some traffic from the existing SR108 bridge, but not as much as Industrial Drive. Enterprise Avenue (Road 12) operates at LOS C through design year 2035.	No-Build does not satisfy P&N Element; Industrial Drive satisfies P&N Element the best of the two build alternatives as it draws most traffic from existing bridge.
	Improve Safety by Decreasing Crashes on the Corridor	No Benefit – The No-Build would not reduce traffic and congestion on existing corridors.	Substantial Benefit – Draws most truck and vehicular traffic off existing bridge and corridors leading to the bridge, which will reduce crash frequency due to lower traffic & congestion.	Some Benefit – Draws some traffic from existing bridge and corridors leading to bridge, but not as much as Industrial Drive location. Also requires traffic to negotiate on local roads since no direct access to US 6/US 24 interchange like Industrial Drive Corridor.	No-Build does not satisfy P&N Element; Industrial Drive satisfies P&N Element the best, as it reduces traffic the most on existing corridors which will reduce crash frequencies and enhance safety.
	Improve Access to Future and Planned Development on Both Sides of Maumee River	No Benefit – The No-Build does not provide a link between Future and Planned Development Areas on both sides of the river.	Substantial Benefit – This is the most direct connection between SR 110 south of the river and industrial developments on both sides of Industrial Drive, which also connects to interchange.	Substantial Benefit – Connects industrial developments on both sides of the river. However, this location is not as a direct link as Industrial Drive location.	No-Build does not satisfy P&N Element; Both Industrial Drive and Enterprise Avenue provide substantial benefit
	Consistency with Local Comprehensive Plans	No Consistency – The No-Build does not satisfy local Comprehensive Plans as it does not provide a new river crossing to connect development areas.	Substantial Consistency – This is the preferred location per local plans and government officials as it provides the most benefit as it provides most direct connection between future development areas on both sides of the river and the US 6/24 interchange	Some Consistency – This location does provide a new river crossing as cited in the Comprehensive Plan, however it does not provide best connection to developed areas and does not provide direct link to the US 6/24 interchange like the Industrial Drive corridor does.	No-Build does not satisfy P&N Element; Industrial Drive is the actual recommended location in the local Comprehensive Plan.
Environmental Elements	Cultural Resources	No Impacts – Since this is No-Build Option.	Potential Impacts – Further field studies needed to determine presence of archaeological sites and evaluate project impacts.	Potential Impacts – Further field studies needed to determine presence of archaeological sites and evaluate project impacts.	No impacts from No-Build; Potential impacts from both of the build alternatives.
	Parks/4(f)	No Impacts – Since this is No-Build Option.	Potential Impacts – Project could impact the Buckeye Trail.	Likely Impacts – Project likely impacts a public park found on northern banks of river that could be 4(f), as well as Buckeye Trail.	No impacts from No-Build; Potential impacts from both of the build alternatives.
	Farmland Impacts	No Impacts – Since this is No-Build Option.	Likely Impacts – Farmland on south side of river likely impacted.	Likely Impacts – Farmland on south side of river likely impacted.	No impacts from No-Build; Potential impacts from both of the build alternatives.
	FEMA 100-year Flood Plain	No Impacts – Since this is No-Build Option.	Potential Impacts – Project could impact the 100-Yr. Flood Plain, however bridge span may allow avoidance of impacts.	Likely Impacts – Project likely impacts the 100-Yr. Flood Plain as there is unavoidable area on south side of the river.	No impacts from No-Build; Potential impacts from both of the build alternatives.
	Endangered & Threatened Species	No Impacts – Since this is No-Build Option.	Potential Impacts – There are potential threatened/endangered mussels in river and possible Indiana Bat habitat. Mussel survey would be needed to determine if present & relocations required.	Potential Impacts – There are potential threatened/endangered mussels in river and possible Indiana Bat habitat. Mussel survey would be needed to determine if present & if so, relocations required.	No impacts from No-Build; Potential impacts from both of the build alternatives.
	Ecological Resources	No Impacts – Since this is No-Build Option.	Likely Impacts – Any alignment in the corridor would involve in-stream work that would require a Section 404 permit from USACE, a Section 401 Water Quality Certification from Ohio EPA, and Scenic River coordination with ODNR. Two small wetlands also found within the corridor that may be impacted.	Likely Impacts – Any alignment in the corridor would involve in-stream work that would require a Section 404 permit from USACE, a Section 401 Water Quality Certification from Ohio EPA, and Scenic River coordination with ODNR. A potential regulated ditch is also found within the corridor along the western side of the corridor.	No impacts from No-Build; Likely impacts from both build alternatives given the scope of the project involving in-stream work and new bridge construction.
Environmental Site Assessments	No Impacts – Since this is No-Build Option.	Potential Impacts – There are two small potential ESA sites (#6 & #8) located between the former Miami-Erie Canal and the River.	Potential Impacts – There is a large potential ESA site (#11) within the corridor associated with the Campbell's Soup facility.	No impacts from No-Build; Potential impacts from both of the build alternatives.	
Community Elements	Connectivity to Highway System	No Improvement – The No-Build does not enhance highway connections.	Substantial Benefit – Provides direct connection to the US 6/24 interchange via Industrial Drive Corridor.	Some Benefit – Provides some benefit in connectivity, however there is no direct access to US 6/24 as Executive Avenue does not have interchange and several local roads would be used to access US 6/24.	No-Build provides no improvement while the Industrial Drive Corridor provides a substantial benefit given the direct connection to the US 6/24 interchange.
	Reduce Downtown Traffic Congestion & Enhance Safety	Negative Impact – The No-Build does nothing to reduce congestion and enhance safety, and no action will actually degrade conditions further in future.	Substantial Benefit – Provides largest capture of truck and vehicular traffic from the existing SR 108 Bridge and improves existing bridge LOS on Opening Day to a LOS C.	Some Benefit – Provides some benefit in capturing traffic from the existing SR 108 Bridge; however the lack of direct access to US 6/24 does not allow for as much of captured traffic as Industrial Drive.	No-Build provides negative impact as no action will actually degrade as traffic grows; Industrial Drive provides substantial benefit in reducing delays/traffic.
	Enhance Emergency Response and Hospital Access	No Improvement – The No-Build does not enhance emergency response and hospital access.	Some Benefit – Provides some benefit to enhancing emergency responses and hospital access, especially if existing bridge blocked.	Some Benefit – Provides some benefit to enhancing emergency responses and hospital access, especially if existing bridge blocked.	No-Build provides no improvement; both build alternatives provide some benefit.
	Right-of-Way and Property Impacts	No Impacts – The No-Build does not impact properties as no Right-of-Way is needed.	Likely Impacts – Corridor is new facility, and will require property acquisition. This alternative may require a total take of a residential parcel, however property owner has indicated desire to sell.	Likely Impacts – Corridor is new facility, and will require property acquisition.	No impact from No-Build; Impacts to properties will occur as roadway is a new facility on new alignment.
	Economic Development Benefits	Negative Impacts – The No-Build does not enhance highway connections.	Substantial Benefit – Provides direct link of south side of river at SR 110 northward to the US 6/24 interchange and corridors. This provides maximum transportation benefit for Campbell's Soup facility and other existing industrial sites and future development areas.	Some Benefit – Provides connection of developed areas on south side of river to those on north side of river. This alternative however does not have direct link to the US 6/24 interchange and corridors.	No-Build will lead to higher transportation costs to businesses and public as traffic congestion increases. Industrial Drive would provide substantial benefit given direct link to US 6/24 interchange and traffic reductions.
Construction	Costs	No Costs for this is a No-Build Option	\$15.0 Million	\$19.4 Million	Enterprise Avenue alternative is considerably higher cost than Industrial Drive alternative due to a significantly longer project length and a substantial cost to relocate an existing electric transmission line over the Maumee River.
	Constructability	No Constructability Issues as this is a No-Build Option	Moderate Constructability Issues – Maumee River is typically less than 10' deep at this location; minor utility impacts; barges will be required to construct bridge; borrow for embankments close to site; no fill required in river; well established bridge & road construction methods required; MOT will require one-way traffic maintenance	Moderate Constructability Issues – Maumee River is typically less than 10' deep at this location; major power utility relocation over river; barges will be required to construct bridge; borrow for embankments close to site; no fill required in river; well established bridge & road construction methods required; MOT will require one-way traffic maintenance	Enterprise Avenue Alternative somewhat more complex to build due to longer bridge and major power utility relocation over river required.

Legend

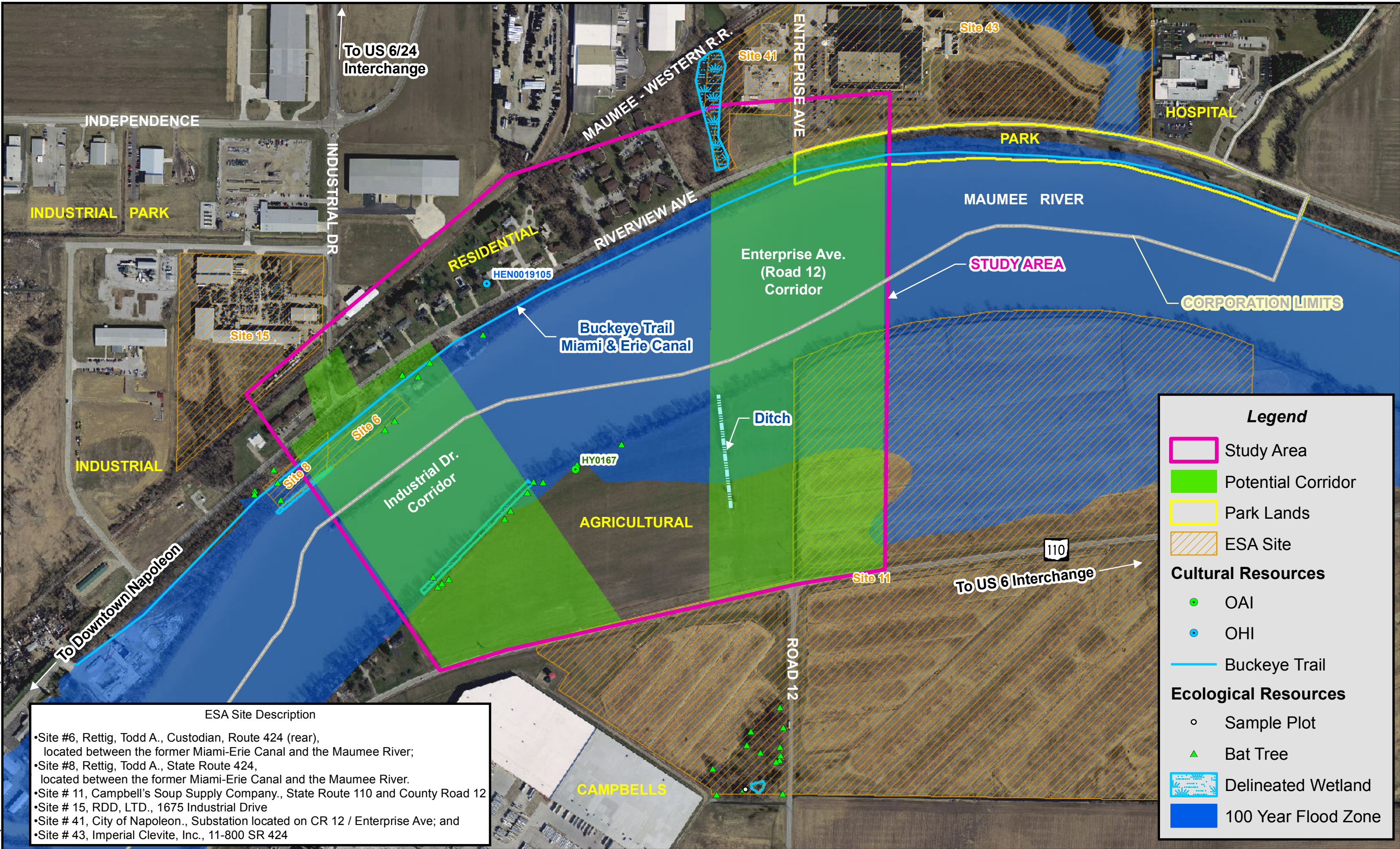
 Provides Substantial Benefit Relative to Purpose and Need and/or Will Not Negatively Impact Environmental Resource

 Provides Some Benefit Relative to Purpose and Need and/or Has Potential to Negatively Impact Environmental Resource

 Provides No Benefit Relative to Purpose and Need and/or Will Likely Negative Impact to Environmental Resource

APPENDIX D
UPDATED RED FLAG SUMMARY MAP





ESA Site Description

- Site #6, Rettig, Todd A., Custodian, Route 424 (rear), located between the former Miami-Erie Canal and the Maumee River;
- Site #8, Rettig, Todd A., State Route 424, located between the former Miami-Erie Canal and the Maumee River.
- Site # 11, Campbell's Soup Supply Company., State Route 110 and County Road 12
- Site # 15, RDD, LTD., 1675 Industrial Drive
- Site # 41, City of Napoleon., Substation located on CR 12 / Enterprise Ave; and
- Site # 43, Imperial Clevite, Inc., 11-800 SR 424

**APPENDIX E
COST ESTIMATE**



HENRY COUNTY NEW MAUMEE RIVER CROSSING HEN-NEW MAUMEE RIVER BRIDGE - PID 22984

CONCEPTUAL COST ESTIMATE FOR ALTERNATES

Enterprise Avenue Alternative				
Work Item	Unit	Unit Cost	Project Limits Between Riverview Ave. & SR-110	
			Qty.	Cost
ROADWAY				
Pavement Removed	S.Y.	\$12	12,568	\$150,816
Guardrail Removed	FT.	\$3	2,177	\$5,443
Excavation	C.Y.	\$9	4,745	\$42,705
Embankment	C.Y.	\$12	44,186	\$530,232
Guardrail	FT.	\$12	2,177	\$26,124
Subgrade Compaction	S.Y.	\$1	39,500	\$39,500
6" Aggregate Base	C.Y.	\$38	7,040	\$267,520
9" Asphalt Concrete	C.Y.	\$90	9,876	\$888,840
Tack Coat	Gal	\$2	2,963	\$5,926
1-1/4" Asphalt Concrete Surface Course	C.Y.	\$120	1,372	\$164,640
1-3/4" Asphalt Concrete Surface Course	C.Y.	\$110	1,921	\$211,310
Shallow Pipe Underdrain	FT.	\$6	10,994	\$65,964
Traffic Signals	EA.	\$100,000	2	\$200,000
ROADWAY SUBTOTAL				\$2,599,020
ROADWAY INCIDENTAL				
Drainage		3%		\$78,000
Erosion Control		2%		\$52,000
Maintenance of Traffic		10%		\$260,000
Traffic Control		5%		\$130,000
Miscellaneous, (Lighting, Fence, etc.)		4%		\$104,000
Mobilization		15%		\$390,000
ROADWAY INCIDENTAL SUBTOTAL				\$1,014,000
BRIDGE				
Bridge	L.S.	\$8,300,000	1	\$8,300,000
BRIDGE SUBTOTAL				\$8,300,000
CONSTRUCTION SUBTOTAL				\$11,913,020
DESIGN RISK CONTINGENCY				25.0%
INFLATION FACTOR				7.0%
CONSTRUCTION TOTAL				\$15,725,186
Design Engineering		8%		\$1,258,000
Construction Engineering, Inspection & Testing		10%		\$1,573,000
Utility Costs		4%		\$629,000
Right of Way				\$175,000
GRAND TOTAL				\$19,360,186

- Design Assumptions:
 1) Including turn lanes on Maumee River Crossing Roadway at Riverview Ave. and at SR 110 intersections.
 2) Bridge Width = 38.5', Average Length = 1200 ft.
 3) Two (2) Traffic Signals either side of Bridge.
 4) Relocate Electric Transmission Line over Maumee River

Industrial Drive Alternative				
Work Item	Unit	Unit Cost	Project Limits Between Riverview Ave. & SR-110	
			Qty.	Cost
ROADWAY				
Pavement Removed	S.Y.	\$12	12,805	\$153,660
Guardrail Removed	FT.	\$3	2,177	\$5,443
Excavation	C.Y.	\$9	4,903	\$44,127
Embankment	C.Y.	\$12	31,814	\$381,768
Guardrail	FT.	\$12	2,177	\$26,124
Subgrade Compaction	S.Y.	\$1	28,831	\$28,831
6" Aggregate Base	C.Y.	\$38	5,227	\$198,626
9" Asphalt Concrete	C.Y.	\$90	7,208	\$648,720
Tack Coat	Gal	\$2	2,162	\$4,324
1-1/4" Asphalt Concrete Surface Course	C.Y.	\$120	1,001	\$120,120
1-3/4" Asphalt Concrete Surface Course	C.Y.	\$110	1,402	\$154,220
Shallow Pipe Underdrain	FT.	\$6	8,016	\$48,096
Traffic Signals	EA.	\$100,000	2	\$200,000
ROADWAY SUBTOTAL				\$2,014,059
ROADWAY INCIDENTAL				
Drainage		3%		\$60,000
Erosion Control		2%		\$40,000
Maintenance of Traffic		10%		\$201,000
Traffic Control		5%		\$101,000
Miscellaneous, (Lighting, Fence, etc.)		4%		\$81,000
Mobilization		15%		\$302,000
ROADWAY INCIDENTAL SUBTOTAL				\$785,000
BRIDGE				
Bridge	L.S.	\$6,400,000	1	\$6,400,000
BRIDGE SUBTOTAL				\$6,400,000
CONSTRUCTION SUBTOTAL				\$9,199,059
DESIGN RISK CONTINGENCY				25.0%
INFLATION FACTOR				7.0%
CONSTRUCTION TOTAL				\$12,142,757
Engineering		8%		\$971,000
Construction Engineering, Inspection & Testing		10%		\$1,214,000
Utility Costs		2%		\$243,000
Right of Way				\$400,000
GRAND TOTAL				\$14,970,757

- Design Assumptions:
 1) Including turn lanes on Maumee River Crossing Roadway at Riverview Ave. and at SR 110 intersections.
 2) Bridge Width = 38.5', Average Length = 1000 ft.
 3) Two (2) Traffic Signals either side of Bridge.