

FINAL
FINDING OF NO SIGNIFICANT IMPACT (FONSI)
FINDING OF NO PRACTICAL ALTERNATIVE (FONPA)

Proposed Lake St. Clair Shoreline Trail Project

Mt. Clemens, Michigan

Pursuant to the Council on Environmental Quality regulations (40 CFR 1500-1508) for implementing the National Environmental Policy Act (NEPA) of 1969 (42 U.S.C 4321 et seq.), Macomb County Department of Roads (MCDOR) conducted an Environmental Assessment (EA) for the Department of the Air Force, Air National Guard (ANG). The purpose of the EA is to identify and evaluate and document the potential environmental, socioeconomic and human health effects associated with the proposed Lake St. Clair Shoreline Trail Project (proposed project).

Description of the Proposed Action

The proposed project is located in Harrison Township, Macomb County, Michigan on the western shore of Lake St. Clair, 2 miles northeast of Mount Clemens, Michigan, and 25 miles north of downtown Detroit. The proposed project is construction of a trail along the eastern edge of Selfridge Air National Guard Base (SANGB) to the intersection of Jefferson Avenue and M-59 in two phases. Phase 1 is construction of a trail segment approximately 1.1 miles in length and Phase 2 is construction of a trail segment approximately 3.24 miles in length.

The purpose of the proposed project is to provide a non-motorized, scenic trail along the shore of Lake St. Clair that provides connectivity to the proposed larger, local system of trails. This trail would provide a connection from the intersection of Bridgeview Street and North River Road to the intersection of Jefferson Avenue and M-59. The proposed project is the key connector in a 70 mile long circular network of non-motorized trails planned within Macomb County in their Trailways Master Plan. The trail network is being developed by the Macomb County Department of Roads (MCDR) to address the goal of completing a regional network of non-motorized facilities that provide communities a connected recreation alternative. Public benefit goals of the trail network include improved quality of life, overall public health, protection of natural resources, and sustainable economic development (Macomb County 2004). The proposed project will provide pedestrian access to over two miles of Lake St. Clair shoreline.



The Macomb County Department of Planning and Economic Development, the Michigan Department of Transportation (MDOT) and the Macomb County Board of Commissioners developed a master plan for greenways and trails to provide non-motorized linkage between people, schools, businesses, parks, natural resources, and cultural and historic landmarks to each other as well as to communities and resources in adjacent counties. The County held meetings with an informal stakeholder group consisting of representatives from local communities, other County departments, the Huron Clinton Metropark Authority (HCMA), Michigan Department of Transportation (MDOT), Macomb Land Conservancy, Friends of the Macomb Orchard Trail, Southeast Michigan Council of Governments (SEMCOG), Mt. Clemens General Hospital, International Transmission Corp (ITC), Oakland County, St. Clair County, and others to develop a vision and framework for a county-wide non-motorized system.

The proposed public access trail will consist of a 12-foot wide; 3-inch deep strip of asphalt, overlaid on a gravel bed approximately 14-foot wide and 6 inches deep. Generally, an 8-foot setback between the edge of trail asphalt and security fencing or the edge of trail asphalt and the shoreline will be maintained. In areas where an existing security road is already in place, the road will be resurfaced and improved to meet these specifications. The proposed project will include construction of new security fencing adjacent to the trail where security fencing is absent. The fence will consist of 8-foot high fencing designed to ANG standards. The trail location will comply with the 150-foot Anti Terrorism standoff distance between the trail and the nearest SANGB structure. Construction of the new security road will be conducted concurrently with the construction of the proposed trail way and will be the financial responsibility of the MCDR.

Phase I of the proposed action is an east-west trail along North River Road. Phase II is a north-south trail, the majority of which is located on the east side of SANGB and includes a segment of the trail that traverses an open water area of Lake St. Clair via an elevated wood and/or composite boardwalk. The proposed easement width for trail segments located on SANGB property is generally 50 feet in width, with several segments reduced to 30 feet in width.

Phase II of the proposed action involves the construction of a north-south trail located along the east edge of SANGB. The trail would begin at North River Road, east of George Avenue and west of Sea Ray Boulevard, where the Phase 1 trail terminates. The trail will extend to the north, east of the SANGB golf course and west of an open water channel that is used in operation of MacRay marina, until it approaches the shoreline of Lake St. Clair. This trail segment exists and is separated from the SANGB golf course by 8-foot high security fencing. No alterations to the perimeter fencing are proposed within this trail segment.

As the existing trail approaches Lake St. Clair, the fencing ends where the trail terminates at the shoreline. At this point, the proposed trail heads northwest approximately 1000 feet along the shoreline. This segment of the trail requires new construction of both non-motorized trail and security fencing and security perimeter road.



From this point, the trail would extend into Lake St. Clair as a boardwalk / causeway over an existing breakwater structure. Approximately 2,200 feet of the trail would be constructed over the bottomlands of Lake St. Clair. The proposed boardwalk would be 16-feet wide at a minimum and built to standards that provide access for an ambulance or similarly-sized emergency vehicle.

The proposed trail continues to the north along the shoreline, converging with the south SANGB Marina Channel. The proposed trail would be constructed around the western perimeter of the marina, including grade separation and security fencing, to maintain base security. Multiple access points for SANGB personnel would be included in the design, and will be under the authority of SANGB security forces.

The proposed trail continues from the marina back to the shoreline and then north along the east side of the existing fish ponds to a point where it meets a local drain channel. This segment of the proposed trail will be redeveloped from an existing trail within the narrow corridor. Security fencing will be installed along the west side of the trail at the edge of the fish ponds to restrict access along this segment.

From this point, the proposed trail will head slightly east and over a constructed foot bridge, then continuing north along the location of the existing shoreline trail, until approaching the north SANGB marina and its associated structures. The proposed trail will be constructed around the western perimeter of the marina and continue north along the SANGB and west along the DNR marina channel. Grade separation crossings will be included near the marina and security fencing included along this entire trail segment. A second foot bridge crossing is planned near the westernmost end of the DNR marine channel, with the proposed trail following the western edge of the DNR public access site at William P. Rosso Highway where the path will merge into the proposed Jefferson Trail.

Preliminary layout estimates include approximately 0.46 miles of newly constructed trail, and 2.32 miles of redeveloped existing trail, two 90 foot bridge spans over a local drain and marina channel, and 2,200 feet of path elevated above Lake St. Clair. The estimated total length of trail to be constructed in Phase II is 3.24 miles.

Alternatives Considered

Three alternatives to the selected trail were considered as part of this EA: a No Action Alternative; the North River Road West Alternative; and the South River Road West Alternative.

No Action Alternative

Under the No Action Alternative, there will be no impacts to the local environment as a result of this project. The goals of the Macomb County Trailways Master Plan will not be implemented and a regional system of trail ways, greenways, and connector trails will not be established. By not implementing any of the alternatives, the convergence of several local trail



connectors will not be achieved and the regional trail ways system will remain fragmented. The social and economic benefits of attracting additional visitors to the Lake St. Clair shoreline will also not be realized.

North River Road West

The North River Road West alternative route begins at the intersection of Bridgeview Street and North River Road and proceeds west along North River Road to the intersection with Irwin Drive. The proposed trail route would continue north along Irwin Drive to the intersection with Henry B. Joy Boulevard, where it would turn west and continue to the I-94 corridor. The proposed trail would then head north along the I-94 corridor to the intersection with M-59/Hall Road, where it would continue east and terminate at Jefferson Avenue, connecting to the proposed Jefferson Trail (see North River Road West Alternative Map, Appendix A). The total approximate length of new trail construction for this alternative is 5.75 miles.

This alternative was proposed in the 2004 Macomb County Trailways Master Plan. The concept eliminates the shoreline aspect of the proposed Lake St. Clair Shoreline Trail Project and reroutes the north-south portion of the proposed trail to the I-94 corridor, west of the SANGB. This alternative would require location of the trail way within a Clear Zone (CZ) as described in the Department of Defense (DoD) Instruction 4165.57, Air Installations Compatible Use Zones. A bike path or pedestrian trail is not considered a compatible use within a CZ.

This trail concept does not include the shoreline aspect of the proposed Lake St. Clair Shoreline Trail Project and reroutes the north-south portion of the proposed trail to the I-94 corridor, west of the SANGB. This alternative was rejected, due to its proximity to SANGB clear zones and because it does not fulfill the stated purpose of the project which is to provide a non-motorized, scenic trail way along the shore of Lake St. Clair that provides connectivity to the proposed larger, local system of trail ways.

South River Road West

The South River Road West alternative route begins at the intersection of Bridgeview Street near North River Road and proceeds south to a proposed connection with E. Duluth Street. The proposed trail will continue west along E. Duluth Street and continue on Duluth Street to the intersection with S. River Road. From that point, it continues west along S. River Road to the I-94 corridor. The proposed trail turns north along the I-94 corridor, crosses the Clinton River and then heads east along North River Road to the intersection with Irwin Drive. The proposed trail continues north along Irwin Drive to the intersection with Henry B. Joy Boulevard, where it would turn west and continue to the I-94 corridor. The trail would then head north along the I-94 corridor to the intersection with M-59/Hall Road, head east and terminate at Jefferson Avenue, connecting to the proposed Jefferson Trail (see South River Road West Alternative Map, Appendix A). The total approximate length of new trail construction for this alternative is 6.5 miles.



The South River Road West concept was proposed in the 2004 Macomb County Trailways Master Plan. This alternative, like the North River Road West Alternative, conflicts with SANGB clear zone regulations and fails to provide the aesthetic benefits of access to the Lake St. Clair.

This alternative was also rejected because it does not fulfill the stated purpose of the project which is to provide a non-motorized, scenic trail way along the shore of Lake St. Clair that provides connectivity to the proposed larger, local system of trail ways.

Potential Environmental Impacts (FONSI/FONPA)

The attached EA describes the environmental setting and characteristics that may be affected by the proposed action and determines the significance of the impact to each of the environmental characteristics. Minor bottomland impacts associated with the causeway construction within Lake St. Clair will require U.S. Army Corp of Engineers and Michigan Department of Environmental Quality permits. Based on the currently proposed trail location no wetland impacts are anticipated. A finding of no practical alternative was determined regarding floodplain impacts because the majority of the proposed action will occur within a 100-year floodplain. The areas of reconstructed trail were determined to have no significant impact on floodplains as design elevations are expected to be similar to existing trail elevations. In areas of new trail construction, there will be no net impact (fill) within the 100-year floodplain, because the new trail segments will be designed at or below existing grades. Therefore the proposed action will include only negligible impacts within floodplains, and compensating cuts should not be required. The EA concluded that the construction of a new trail around the perimeter of SANGB would not have a significant adverse impact, either direct or indirect, on the natural or human environment.

NEPA Considerations

Based on the analysis contained in the EA and considering the significance criteria contained in 40 CFR 1508.27, a determination has been made that the proposed trail will not have a significant adverse impact on the quality of the human environment within the meaning of the National Environmental Policy Act of 1969. Therefore, an Environmental Impact Statement is not required.

Public Review and Comment

A Notice of Availability of the Draft EA was published on October 2, 2013 in the Macomb Daily Newspaper, and was sent via U.S. mail to the distribution list of potential stakeholders included in Appendix C. A copy of the Draft EA was made available for review and comment at the Macomb Public Library. Copies of the Draft EA were also available online at www.rcmcweb.org.

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Chief, Asset Management Division

Date



Lake St. Clair Shoreline Trail Project

Environmental Assessment (EA)

FINAL May 2014



Prepared for

Department of the Air Force, Air National Guard

Cooperating Agency

Macomb County Michigan



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1.0 INTRODUCTION

1.1 Background

Pursuant to the Council on Environmental Quality regulations (40 CFR 1500-1508) for implementing the National Environmental Policy Act (NEPA) of 1969 (42 U.S.C 4321 et seq.), Macomb County Department of Roads (MCDOR) conducted an Environmental Assessment (EA) for the Department of the Air Force, Air National Guard (ANG). The purpose of the EA is to identify and evaluate and document the potential, environmental, socioeconomic and human health effects associated with the proposed Lake St. Clair Shoreline Trail Project (proposed project).

The EA assists ANG and MCDR in project planning and ensuring compliance with NEPA, and in making a determination as to whether any significant impacts could result from implementation of the Proposed Project. Criteria for definition of a significant impact are found in regulation 40 CFR 1508.27.

The ANG is charged with ensuring United States Air Force Regulations are followed with regard to Granting an Easement to a local government agency to allow the construction of a Public path over Air Force Property. As a result, since the property is federally owned, an Environmental Assessment must be done. And, to ensure that “in-kind” services are identified to offset the Fair Market Value of the property being considered for public use. The ANG decision to grant an easement must not interfere with the mission of Selfridge Air National Guard Base (SANGB) or any of its Department of Defense (DoD) and Department of Homeland Security (DHS) tenants. Terms of the easement such as revocability conditions and duration are still under discussion between ANG and MCDR. The proposed easement width for trail segments located on SANGB property is generally 50 feet in width, with several segments reduced to 30 feet in width.

Air Force Instruction (AFI) 32-7001 implements Department of Defense Instruction (DoDI) 4715.17, Environmental Management System, and Air Force Policy Directive (AFPD) 32-70, Environmental Quality, and is consistent with AFPD 90-8, Environment, Safety, and Occupational Health. AFI 32-7001 establishes the framework for an Environmental Management System (EMS) at Headquarters, United States Air Force (HQ USAF), major commands (MAJCOMs), and at installations.

MCDR is evaluating the social, environmental and economic costs and benefits of the proposed project. Their decision will be whether or not to move forward with construction of the trail project if an easement is granted by the United States Air Force, at the recommendation of the ANG.

The MCDR will be responsible for all construction activities and all costs related to trail way construction, fence installation, and all security road, utility and infrastructure relocations



required. Ongoing maintenance and operation of the Lake St. Clair Shoreline Trail will also be the financial responsibility of the MCDR.

The Macomb County Department of Planning and Economic Development, the Michigan Department of Transportation (MDOT) and the Macomb County Board of Commissioners developed a master plan in 2004 for greenways and trails to provide non-motorized linkage between people, schools, businesses, parks, natural resources, and cultural and historic landmarks to each other as well as to communities and resources in adjacent counties. The proposed project is a key component in connecting the trail system and implementation of the master plan.

1.2 Project Location

The proposed project is located in Harrison Township, Macomb County, Michigan on the western shore of Lake St. Clair, 2 miles northeast of Mount Clemens, Michigan, and 25 miles north of downtown Detroit (Project Location Map, Appendix A). The installation occupies 3,075 acres, or about 5 square miles of Federal Fee Land, which is managed by the ANG for the U.S. Air Force. Following the expiration of a Lease in 1917, the original Installation was acquired through a condemnation proceeding on June 29, 1921 in the District Court of the United States for the Eastern District of Michigan Southern Division to create the site of Selfridge Field. In 1943 an additional (approx. 2,500) acres was acquired through condemnation by the U S War Department on behalf of the Army Air Force. The Secretary of the United States Air Force has granted a License to the Michigan Air National Guard "for an indefinite term". There is no expiration date.

The proposed trail location will encroach on SANGB property. The U.S. Air Force will need to grant an easement over real property to the local Macomb County government for the Lake St. Clair Shoreline Trail project to move forward. The total area of the easement requested from SANGB will be determined by an on-site land survey and final engineering site plans. The width of the easement may vary in certain locations, but will generally be 20 to 30 feet wide.

Interstate Highway 94 is the primary regional road west of SANGB. The southern boundary of the installation borders North River Road. The northern boundary is bordered by Wm. P. Rosso Highway. Single-family homes have been built along the estuaries associated with Lake St. Clair. The proposed project consists of two phases (Proposed Action Location Map, Appendix A). Phase 1 is approximately 1.1 miles in length and begins at the intersection of Bridgeview Street and North River Road and proceeds east along the northern boundary of the North River Road right-of-way. Phase 2 is approximately 3.24 miles in length and proceeds north from the terminus of Phase 1, along the eastern edge of SANGB to the intersection of Jefferson Avenue and M-59. This EA addresses the affected environment and consequences associated with both Phase 1 and Phase 2 of the proposed project.



1.3 Purpose and Need

The purpose of the proposed project is to provide a non-motorized, scenic trail way along the shore of Lake St. Clair that provides connectivity to the proposed larger, local system of trail ways. This trail segment should provide a connection from the intersection of Bridgeview Street and North River Road to the intersection of Jefferson Avenue and M-59.

The proposed project is the key connector in a 70 mile long circular network of non motorized trails planned within Macomb County in their Trailways Master Plan. The trail network is being developed by the Macomb County Department of Roads to address the goal of completing a regional network of non-motorized facilities that provide communities a connected recreation alternative. Public benefit goals of the trail network include improved quality of life, overall public health, protection of natural resources, and sustainable economic development. (Macomb County 2004)

Lake St. Clair is Macomb County's most significant natural feature providing approximately 430 square miles (275,200 acres) of surface water, 12 miles of shoreline and 4 beaches (MCHD, 2012). Lake St. Clair is a local and regional attraction, public destination and a vital natural and economic resource. In 2011, Macomb County Executive Mark Hackel implemented the New Blue Economy Initiative with Lake St. Clair as its focal point and catalyst for new business, educational, recreational and tourism opportunities. The initiative encourages vacationers, water sport enthusiasts, and others to make use of Lake St. Clair, however significant deficiencies in public access points exist.

Additional public access to Lake St. Clair is expected to provide sustainable increases in quality of life and economic benefits for businesses and citizens of Macomb County and southeast Michigan. Direct public access to the shoreline of Lake St. Clair will provide additional opportunities for existing and new businesses that service trail users attracted to the lake. The proposed project will provide pedestrian access to over two miles of Lake St. Clair shoreline.

1.4 Public Involvement and Scoping

The National Environmental Policy Act (NEPA) scoping process has been initiated early in the development of the EA for the following purposes:

- to identify reasonable development alternatives to be considered in the EA;
- to identify environmental/socioeconomic issues related to the proposed project;
- to determine the issues and the required depth of analysis to be provided in the final EA document;
- to proactively engage outside federal, state and local agencies, community organizations and the public in the process of identifying potential regulatory and natural resource agency concerns and community concerns that will need to be addressed in the EA.



The Macomb County Department of Planning and Economic Development, the Michigan Department of Transportation (MDOT) and the Macomb County Board of Commissioners developed a master plan for greenways and trails to provide non-motorized linkage between people, schools, businesses, parks, natural resources, and cultural and historic landmarks to each other as well as to communities and resources in adjacent counties. The County held meetings with an informal stakeholder group consisting of representatives from local communities, other County departments, the Huron Clinton Metropark Authority (HCMA), Michigan Department of Transportation (MDOT), Macomb Land Conservancy, Friends of the Macomb Orchard Trail, Southeast Michigan Council of Governments (SEMCOG), Mt. Clemens Regional, International Transmission Corp (ITC), Oakland County, St. Clair County, and others to develop a vision and framework for a county-wide non-motorized system.

This process resulted in the publication of the Macomb County Trailways Master Plan (Macomb County 2004). The Macomb County Trailways Master Plan identifies the following benefits to the local and regional community through the development of trailways including:

- Preservation and creation of open spaces;
- Facilitation of physical fitness and healthy lifestyles;
- Creation of new opportunities for outdoor recreation and transportation;
- Strengthening of local economies;
- Protection of the environment; and
- Preservation of culturally and historically valuable areas.

Scoping enables government agencies, the general public, and other interested parties to participate in and contribute to the analysis of the proposed project. Public input is important in establishing the scope of analysis for any NEPA document, and the MCDR encourages public participation through a formal process.

The scoping process has included a review of the existing data for existing plans for other trail projects, solicitation of input through the submission of scoping letters to key stakeholders and regulatory agencies, on-site surveys to assess potential effects of the proposed project on natural and social resources, and a public comment period on the Draft EA.

Initial scoping activities for the project included submittal of review request letters to the U.S. Fish and Wildlife Service (USFWS), Michigan Department of Natural Resources (MDNR) Fisheries and Wildlife Divisions, Michigan Department of Environmental Quality (MDEQ), Michigan State Historic Preservation Office (SHPO), and other relevant agencies. Copies of agency coordination and public involvement correspondence can be found in Appendix C. Information submitted with agency review request letters included the following:

- A description of the purpose and need for the proposed project;



- A project description including the involved federal agency, project sponsor and location of the proposed trail route (including maps);
- Conceptual designs drawings of the proposed project components,
- Potential environmental impacts that may require permitting.

Regular coordination meetings have taken place between staff from the ANG, MCDR, local government and contractors and have included an interdisciplinary team of environmental scientists, biologists, planners, engineers, archaeologists, and military personnel. Comments and issues raised during these coordination meetings have been included in the development of the proposed action and alternatives and contributed greatly in the development of the Final EA.

A multi-agency pre-application meeting was also held on-site October 26, 2012 as part of the scoping process to solicit comments from multiple government agencies. This meeting included the normal team of coordination meeting attendees plus representatives from the MDNR, MDEQ and USACE. Meeting notes from the coordination meetings and pre-application meetings can be found in Appendix D.

A Notice of Availability of the Draft EA was published on October 2, 2013 in the Macomb Daily Newspaper, and was sent via U.S. mail to the distribution list of potential stakeholders included in Appendix C. A copy of the Draft EA was made available for review and comment at the Macomb Public Library. Copies of the Draft EA were also available online at www.rcmcweb.org.

1.5 Framework for Analysis

The EA has been developed in accordance with NEPA and regulations found at 40 Code of Federal Regulations (CFR) Part 1500 through Part 1508 (President's Council on Environmental Quality [CEQ], 2002). Its purpose is to inform decision-makers and the public of the likely environmental consequences of the proposed action and alternatives.

The EA aims to identify, document, and evaluate the environmental and socioeconomic effects of constructing and maintaining a non-motorized trail along the south and eastern boundaries of SANGB. The proposed trail way would be constructed on existing SANGB property. To complete the trail, an easement over real property must be granted by the U.S. (i.e., Army Corps of Engineers or other federal entity) for the proposed use by Macomb County. Security issues and impacts to base missions and operations associated with the proposed action will also be a primary area of concern for SANGB.

The EA will also consider the potential impacts of the No Action Alternative, as required by NEPA, to provide a benchmark for comparison of the potential impacts of the Proposed Action. NEPA requires planning activities designed to ensure that federal decisions consider environmental and socioeconomic factors in a systematic manner, and is a required component of planning for federal projects and projects with federal funding. Applicable permits,



requirements and regulations are included in the evaluation performed under the NEPA process.

Statutes, regulations, and executive orders (EOs) applicable to one or more components of the Proposed Action and No Action Alternative as described in the EA may include, but are not necessarily limited to:

Federal Statutes

- Air Installation Compatible Use Zone (AICUZ)
- NEPA (42 USC 4321-4370)
- Endangered Species Act of 1973 (ESA) (16 USC 1531-1543)
- Fish and Wildlife Coordination Act (16 USC 661, et seq.)
- Migratory Bird Treaty Act (16 USC 701, et seq.)
- Clean Water Act of 1977 (CWA) and the Water Quality Act of 1987 (WQA) (33 USC 1251 et seq., as amended)
- Farmland Protection Act of 1981 (7 USC 4201 et seq., as amended)
- Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA) (as amended by the Superfund Amendments and Reauthorization Act of 1986 [SARA])
- Resource Conservation and Recovery Act of 1976 (RCRA) (42 USC 6901)
- Toxic Substances Control Act (TSCA) (15 USC 2601 et seq., as amended)
- National Historic Preservation Act (NHPA) of 1966 (16 USC 470 et seq., as amended)
- Archeological Resources Protection Act of 1979 (16 USC 470)
- Clean Air Act (CAA) (42 USC 7401 et seq., as amended)
- Noise Control Act of 1972 (42 USC 4901 - 4918)

State Statutes

- Natural Resources and Environmental Protection Act (P.A. 451 of 1994)

Regulations

- CEQ Regulations for Implementing NEPA (Title 40 CFR, Parts 1500-1508 (40 CFR 1500-1508)
- Air Force Instruction 32-7001 Environmental Management, 4 November 2011
- Environmental Impact Analysis Process (32 CFR 989)
- Protection of Historic Properties (36 CFR Part 800)
- Unified Facilities Criteria (UFC 4-010-02) February 9, 2012. Department of Defense Minimum Antiterrorism Standoff Distances for Buildings

Executive Orders

- EO 11514, Protection and Enhancement of Environmental Quality (amended by EO 11991)
- EO 11988, Floodplain Management



- EO 11990, Protection of Wetlands
- EO 12088, Federal Compliance with Pollution Control Standards
- EO 12372, Intergovernmental Review of Federal Programs
- EO 12580, Superfund Implementation 1-4
- EO 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations
- EO 13045, Protection of Children from Environmental Health Risks and Safety Risk
- EO 13327, Federal Real Property Asset Management (amended by EO 13423)
- EO 13423, Strengthening Federal Environmental, Energy, and Transportation Management
- EO 13175, Consultation and Coordination with Indian Tribal Governments
- EO 13123, Greening the Government Through Efficient Energy Management
- EO 13148, Greening the Government Through Leadership in Environmental Management

2.0 PROPOSED ACTION AND ALTERNATIVES

Three alternatives to the selected trail were considered as part of this EA: a No Action Alternative; the North River Road West Alternative; and the South River Road West Alternative.

2.1 Alternative 1 - No Action Alternative

Under the No Action Alternative, there will be no impacts to the local environment as a result of this project. The goals of the Macomb County Trailways Master Plan will not be implemented and a regional system of trail ways, greenways, and connector trails will not be established. By not implementing any of the alternatives, the convergence of several local trail connectors will not be achieved and the regional trail ways system will remain fragmented. The social and economic benefits of attracting additional visitors to the Lake St. Clair shoreline will also not be realized.

2.2 Alternative 2 - Proposed Action

MCDR proposes to construct the Lake St. Clair Shoreline Trail. The proposed public access trail will consist of a 12-foot wide; 3-inch deep strip of asphalt, overlaid on a gravel bed approximately 14-foot wide and 6 inches deep. Generally, an 8-foot setback between the edge of trail asphalt and security fencing or the edge of trail asphalt and the shoreline will be maintained. In areas where an existing security road is already in place, the road will be resurfaced and improved to meet these specifications.

Phase I of the proposed action is an east-west trail along North River Road. Phase II is a north-south trail, the majority of which is located on the east side of SANGB and includes a segment



of the trail that traverses an open water area of Lake St. Clair via an elevated wood and/or composite boardwalk (See Preliminary Trail Design, Appendix B).

The proposed action was chosen as the preferred alternative because it provides higher aesthetic value including quality views of Lake St. Clair, access to several local marinas, no impacts on Clear Zones (CZ) and the opportunity for linking existing and proposed trails.

Phase I - North River Trail way

Phase I of the proposed action involves construction of a trail located along the north side of North River Road, east of Bridgeview Street which follows the N. River Road right of way to a point east of George Avenue and west of Sea Ray Drive where Phase II begins. Preliminary layout estimates include approximately one mile of newly constructed path with the remainder of trail constructed on an existing security road for a total of 1.1 total miles of trail to be constructed under Phase I (see Proposed Action Location Map, Appendix B).

There is an existing ANG security fence located along the north side of North River Road adjacent Phase 1 of the proposed trail. In order to provide adequate space for the trail within the right-of-way, it appears that, pending final construction plans, the existing security fence will need to be relocated 20 feet or more to the north along the majority of the Phase I trail way and several utility poles relocated.

Phase II –Shoreline Trail way

Phase II of the proposed action involves the construction of a north-south trail located along the east edge of SANGB. The trail would begin at North River Road, east of George Avenue and west of Sea Ray Drive, where the Phase 1 trail way terminates. The trail will then extend north, east of the SANGB golf course and west of an open water channel used in operation of MacRay marina, until it approaches the shoreline of Lake St. Clair. This trail segment exists and is separated from the SANGB golf course by 8-foot high security fencing. No alterations to the perimeter fencing are proposed within this trail segment.

As the existing trail approaches Lake St. Clair, the fencing ends as the trail terminates at the shoreline. At this point, the proposed trail will head northwest approximately 1000 feet along the shoreline. This segment of the trail will require new construction of both trail way and security fencing.

The trail is proposed to extend into Lake St. Clair as a boardwalk / causeway (see Conceptual Causeway Design, Appendix B) over an existing breakwater structure. Approximately 2,200 feet of the trail would be constructed over the bottomlands of Lake St. Clair. The boardwalk is proposed to be 16-foot wide at a minimum and built to standards able to provide access for an ambulance or similarly-sized vehicle in case of emergency.

After returning to the shoreline, the trail continues to the north along the shoreline converging with the south SANGB marina channel. The proposed trail will be constructed around the



western perimeter of the marina including a grade separation and security fencing to maintain base security (See South Grade Crossing Plan, Appendix B).

As an option within this alternative, a new high-bridge was also considered. The bridge would cross the channel near the shoreline and require a 35-foot clearance for passage of SANGB watercraft into the south SANGB marina. Due to security issues related to the height of the bridge, and engineering issues with the approach grades, this option is no longer being considered.

The trail continues from the marina back to the shoreline and then north along the east side of the existing DNR fish ponds to where it meets a local drain channel. This segment of the proposed trail will be redeveloped from an existing trail within the narrow corridor. Security fencing will be installed along the west side of the trail at the edge of the DNR fish ponds to restrict access along this segment.

The proposed trail will then head slightly east and over a constructed foot bridge (see Conceptual Bridge Design, Appendix B), and continue north along the location of the existing shoreline trail until approaching the north SANGB marina and associated structures.

New trail will be constructed around the western perimeter of the marina and continue north along the SANGB and west along the DNR marina channel. Grade separation crossings will be included near the marina and security fencing included along this entire trail segment (See North Grade Crossing Plan, Appendix B). A second foot bridge crossing is planned near the westernmost end of the DNR marine channel and the trail will follow the west edge of the DNR public access site at William P. Rosso Highway where the path will merge into the proposed Jefferson Trail.

Preliminary layout estimates include approximately 0.46 miles of newly constructed trail, and 2.321 miles of redeveloped existing trail, two 90 foot bridge spans over a local drain and marina channel, and 2,200 feet of path on an elevated boardwalk above Lake St. Clair. The estimated total length of trail to be constructed in Phase II is 3.24 miles (See Proposed Action Location Map, Appendix B).

During the construction phase MCDR will be the lead agency and oversee the implementation of the proposed action. Construction activities will be confined to the path corridor with temporary materials and equipment staging areas being detailed in the final engineering plans. Communication and coordination between MCDR and SANGB will be critical during the initial construction phases, prior to completion of all security fencing. Continued coordination and cooperation between MCDR and SANGB will be required following construction, in the ongoing operation and maintenance of the trail. The MCDR will be financially responsible for all construction costs and maintenance activities associated with the trail way, with no costs to the USAF. One possible exception is the maintenance of a keyed or card entry system associated with the SANGB access points to the trail.



Tasks that need to be accomplished prior to the start of construction on the proposed trail include:

- all necessary approvals, including a Finding of No Significant Impact (FONSI)/Finding of No Practicable Alternative (FONPA) signed by the National Guard Bureau (NGB)
- recording of a real property easement over the proposed trail location
- completion of final engineering plans and specifications
- all necessary permits from federal, state, tribal, and local agencies
- selection of a construction contractor and staging of materials

2.3 Alternatives Eliminated from Further Consideration

2.3.1 North River Road West

The North River Road West alternative route begins at the intersection of Bridgeview Street and North River Road and proceeds west along North River Road to the intersection with Irwin Drive. The proposed trail route would continue north along Irwin Drive to the intersection with Henry B. Joy Boulevard, where it would turn west and continue to the I-94 corridor. The proposed trail would then head north along the I-94 corridor to the intersection with M-59/Hall Road, where it would continue east and terminate at Jefferson Avenue, connecting to the proposed Jefferson Trail (see North River Road West Alternative Map, Appendix B). The total approximate length of new trail construction for this alternative is 5.75 miles.

The North River Road West alternative was proposed in the Macomb County Trailways Master Plan that was published in 2004. The concept eliminates the shoreline aspect of the proposed Lake St. Clair Shoreline Trail Project and reroutes the north-south portion of the proposed trail to the I-94 corridor, west of the SANGB. This alternative would require location of the trail way within a Clear Zone (CZ) as described in the Department of Defense (DoD) Instruction 4165.57, Air Installations Compatible Use Zones. A bike path or pedestrian trail is not considered a compatible use within a CZ.

This alternative was rejected because it does not fulfill the stated purpose of the project which is to provide a non-motorized, scenic trail way along the shore of Lake St. Clair that provides connectivity to the proposed larger, local system of trail ways.

2.3.2 South River Road West

The South River Road West alternative route begins at the intersection of Bridgeview Street near North River Road and proceeds south to a proposed connection with E. Duluth Street. The proposed trail will continue west along E. Duluth Street and continue on Duluth Street to the intersection with S. River Road. The proposed trail would then continue west along S. River Road to the I-94 corridor. The proposed trail turns north along the I-94 corridor, crosses the Clinton River and then heads east along North River Road to the intersection with Irwin Drive.



The proposed trail continues north along Irwin Drive to the intersection with Henry B. Joy Boulevard, where it would turn west and continue to the I-94 corridor. The trail would then head north along the I-94 corridor to the intersection with M-59/Hall Road, head east and terminate at Jefferson Avenue, connecting to the proposed Jefferson Trail (see South River Road West Alternative Map, Appendix B). The total approximate length of new trail construction for this alternative is 6.5 miles.

The South River Road West concept was proposed in the 2004 Macomb County Trailways Master Plan. In this alternative, the proposed trail would be located in an Accident Potential Zone and fails to provide the aesthetic benefits of access to the Lake St. Clair.

This alternative was also rejected because it does not fulfill the stated purpose of the project which is to provide a non-motorized, scenic trail way along the shore of Lake St. Clair that provides connectivity to the proposed larger, local system of trail ways.

3.0 AFFECTED ENVIRONMENT AND CONSEQUENCES

There are several potential environmental impacts that are examined within the EA document. SANGB security issues are a primary concern associated the proposed action, and further details on ANG security requirements are included in the EA. Discussion on the potential impacts to land use, geology and soils, vegetation, wildlife and aquatic resources, threatened and endangered species, hydrology and groundwater, wetlands, floodplain areas, air quality, noise, cultural resources, climate, utilities and infrastructure, roadways and parking, aesthetic and visual resources, hazardous and toxic substances, socioeconomics, environmental justice, human health and safety, and sustainability and greening will be examined based on the proposed trail way design and construction method. These impacts, both positive and negative, will be determined based on the input of stakeholders, environmental features present, the final trail way design, and proposed construction methods.

3.1 Selfridge Air National Guard Base Security

3.1.1 Affected Environment

Base Security at SANGB is operated and maintained in a manner consistent with practices established for facilities such as SANGB. The security measures on the Base are focused on the security of AF missions and operations. The aspects of security measures that are relevant to the proposed trail way relate to the perimeter security measures. The Base Security perimeter fencing and perimeter road exist on three sides of the Base that are adjacent to existing roadways or open areas. The lake shore area has a perimeter security road (ie. existing trail), but a fence is not present along the lakeshore. Recreational boaters can approach the lakeshore edge of SANGB, but security personnel patrolling the perimeter security road can prevent such users from entering the Base property. Base security forces have indicated that with the addition of a public bike path along the shoreline, new security fencing will be required in this area.



The Department of Defense (DoD) administers a Unified Facilities Criteria (UFC) under UFC 4-010-02-February 9, 2012. This regulation represents the DoD Minimum Anti-Terrorism Standoff Distance for Buildings at DoD facilities. For SANGB, a minimum standoff distance of 150 feet is required from all installation buildings. Currently there are several buildings located within 150 feet of the shoreline, specifically near the proposed causeway over Lake St. Clair. Building numbers 310, 325, 328 and 350 are currently used by the ANG or its tenants for active operations and are all located within 150 feet of the Lake St. Clair Shoreline. A public access trail on the shoreline will not be permitted in this area, and this UFC regulation is the driver for the proposed causeway across a portion of Lake St. Clair bottomlands. The proposed causeway will be located over 150 feet from the above referenced buildings, and therefore no relocations of existing SANGB facilities will be required.

3.1.2 Consequences

Alternative 1: No Action Alternative

Under the No Action Alternative there will not be any alterations to the existing SANGB security procedures. No increases in pedestrian and bike traffic will occur around the perimeter of SANGB. New fencing and new perimeter security roads included in the Proposed Action will also not be constructed.

Alternative 2: Proposed Action

Reconstructing existing trails and connecting them together with newly constructed trail segments will increase the pedestrian and bike traffic on the trails. There will be a higher density of people gaining access to the Lake St. Clair shoreline on SANGB property, and increased circulation around the perimeter of SANGB. These pedestrians and bikers will not have access to the Base due to the construction and maintenance of a security fence and a new perimeter road.

SANGB security forces have indicated that the security fence must be a minimum of 8 feet high. A final determination of fence type and fence top structure (ie. 3-strand barbed wire or similar) will be included in the final engineering plans for the trail. Lighting is not currently included in the proposed trail design. Under any circumstance, the security fencing will meet the requirements specified by SANGB. Installation of the security fencing will occur prior to opening of the trail to the public and will be the financial responsibility of the MCDR.

Potential adverse impacts associated with the security fencing include excluding base personnel from accessing the shoreline area. Currently the perimeter security road is regularly used by personnel as a walking and running trail, and they would lose this ability with continuous fencing, absent some access points. Additionally, security forces would not be able access the shoreline in the event of a threat. These potential impacts have been discussed in planning meetings and have resulted in the planned inclusion of two vehicle access points to the trail, under the control of SANGB security forces. Locations of vehicle access points near the north and south ends of the trail will be coordinated with SANGB in the final site plans. Additionally,



smaller gates suitable for pedestrian entry and including a card entry system can be included to minimize or avoid any adverse impacts to base personnel resulting from fence installation. The final number and locations of SANGB access points to the trail will be determined based on the recommendations of base personnel, security forces and wildlife control officers.

Final engineering plans need to include further details of the new perimeter security road. SANGB staff and security forces will be directly involved in determining the final design and location of this road. Construction of the new security road will be conducted concurrently with the construction of the proposed trail way and will be the financial responsibility of the MCDR.

The DoD Anti-Terrorism Standoff Distances have been a topic of discussion in several planning meetings. The elevated causeway in Lake St. Clair is included in the design of the trail for the specific purpose of maintaining an adequate standoff distance under these regulations. The proposed trail location reflects compliance with the required standoff distances.

Under the Proposed Action, there will be no significant adverse impact to base security because although the public will have greater access to the perimeter of SANGB, the new and improved security fence and perimeter road will enhance security measures. A positive impact of the Proposed Action is to limit access to the Base by members of the public due to the new fence and perimeter security road.

3.2 Land Use

3.2.1 Affected Environment

Development trends in Macomb County have been relatively constant since 1958 with urban land use increasing in size, and undeveloped lands decreasing in size. Since 1958, there has been a 293 percent increase in residential land use, a 519 percent growth in commercial land use from 1958 to 2003, and an 89% growth in industrial land use. Vacant land including cultivated land, grassland, and shrublands still account for approximately 38% of the county's total land area despite the decrease in vacant land. Despite these decreases, which have been attributed to urbanization and the decline of farming, vacant land is still the largest percentage of land use and cover (SANGB 2001, Macomb County 2007).

Harrison Township, with SANGB located almost entirely within its boundaries, has the largest portion of land use dedicated to public and semi-public land use in of all the townships in the area, See Land Use Map, Appendix A. (Harrison 2010).

Table 3.2: 2010 Harrison Township Land Use



COVER TYPE	AREA (AC)	% TOTAL
Public/Semi-Public/Park	4044	43.3%
Residential	2233	23.9%
Transportation	1241	13.3%
Vacant	1293	13.9%
Commercial	91	1.0%
Marinas	238	2.6%
Industrial	191	2.0%
TOTAL	9331	100.0%

Interstate Highway 94 (I-94) is located to the west of the Base and the eastern side of the Base is defined by Lake St. Clair. The majority of the land to the south of the Base is single- and two-family residential and vacant open space, currently zoned for residential use. The majority of the land to the west of the Base is retail, wholesale, trade, industrial and service industries, currently zoned for commercial use (SANGB 2010).

SANGB contains approximately 3,075 acres of land. There are four general categories of land use existing on the Base: open space, airfield and mission areas, special categories, and command and support areas.

SANGB supports multiple agencies and tenant organizations and includes administrative, residential, recreational, and industrial land uses. The airfield complex and aircraft maintenance and support facilities are located on both the east and west sides of the installation. Recreational resources on the installation include a golf course and athletic fields. The installation perimeter including the proposed trail location is composed primarily of open space and recreational areas.

AFPD 32-70, *Environmental Quality*, identifies requirements to develop, implement, and maintain the Air Installation Compatible Use Zone (AICUZ) program.

Department of Defense (DoD) Instruction 4165.57, Air Installations Compatible Use Zones, November 8, 1977 applies to all Air Force installations with active runways located in the United States and its territories, including government-owned, contractor-operated facilities. It defines required restrictions on the uses and heights of natural and manmade objects in the vicinity of air installations to provide for safety of flight and to ensure that people and facilities are not concentrated in areas susceptible to aircraft accidents. It also defines desirable restrictions on land use to ensure its compatibility with characteristics, including noise, of air installation operations. The Clear Zone Rules state that “Base Civil Engineers should relocate people-intensive facilities and facilities for other than flight-operations outside the clear zones where possible”.



According to the Clear Zone Rules (USAF 2005), the Air Force (or others under Air Force permit) must not plan, locate, or construct a new use or facility within the boundaries of the CZ except for the following allowed uses:

- Agriculture, with the exception of orchards (trees), grains, or other crops or vegetation that unnecessarily attract birds or wildlife.
- Livestock grazing (excluding feed and dairy lots).
- Permanent open space.
- Existing or new water areas provided they do not create bird strike hazards.
- Rights-of way for single track railroads and fenced, two-lane highways without sidewalks or bicycle trails, provided they do not violate obstacle clearance criteria.
- Rights-of-way for communications and utilities provided all facilities are at grade level or underground.
- Essential navigation aids and operational facilities provided there are no feasible alternatives (MAJCOM/CE approval is required).

The AICUZ program addresses encroachment from external landowners and land use compatibility with respect to flight operations. It promotes specific land uses in off-base areas by discouraging the development of new incompatible developments. An important component of the land use adjacent to SANGB is the implementation of Clear Zones. Clear Zones are defined as a 3,000 foot by 3,000 foot square area located at each end of a runway center. Adjacent to each Clear Zone are two (2) Accident Potential Zones (APZ). APZ Zone I & Zone II each measure an additional 3,000 foot by 5,000 foot, for a total of a 3,000 foot by 13,000 foot restrictive zone. It has been determined that based on these Compatible Use Zone program requirements, a trail way is not an appropriate use to be built within the Clear Zones. Although Accident Potential Zones remain restrictive in terms of compatible construction, a pedestrian trail way is considered a compatible use within Accident Potential Zones I & II (APZ I & II). Given the above listed restrictions, the proposed trail way is proposed in a location which will avoid clear zones and APZ's throughout its length (See Clear Zones Map, Appendix A).

3.2.2 Consequences

Alternative 1: No Action Alternative

No impacts to land use would occur under the No Action Alternative. Under this alternative, no construction of a bike path would occur and land use would remain unchanged.

Alternative 2: Proposed Action

The Proposed Action involves the construction of a regional bike path only and does not include the construction of buildings or facilities, and is consistent with the existing land use at the site. A large portion of the proposed route utilizes already existing pathway that will be repaved. Clear Zones have been defined and mapped for the active runway in the airfield on the Base. The proposed trail layout will avoid Clear Zones to minimize risk to trail users in proximity to the



airfield. A boat ramp is located within the proposed causeway. SANGB personnel have stated on multiple occasions that the use of the boat ramp is not part of current or future missions. However, a removable section of proposed causeway will be incorporated into the final engineering design of the causeway. This will allow for removal of a section of the causeway in emergency situations.

Future buildings at SANGB will be required to be set back from the proposed trail based on the standoff distances described in Section 3.1. However there is sufficient available land to accommodate the required setbacks in regards to future construction. The proposed trail will not have a significant adverse impact on current or future land use in the proximity of SANGB.

3.3 Geology and Soils

3.3.1 Affected Environment

Harrison Township is located on the southeastern edge of the Michigan Basin geologic province. The Michigan Basin includes the entire Lower Peninsula of Michigan along with portions of several other states and Canada. Characteristics of this area include relatively flat terrain with a combination of natural features formed by glacial, lacustrine, and fluvial processes. Subsurface features consist largely of shales, limestones, and sandstones that are 14,000 feet thick and rest on top of a Precambrian surface (MSU 2001). These sedimentary rocks are soft and incredibly vulnerable to the movement and weight of glaciers. These glaciers formed basins in this sedimentary rock base which eventually became the Great Lakes.

SANGB lies in a relatively flat area of an ancient lake bed covered by glacial lake bottom deposits. The extinct glacial lake formed what is now known as the Erie-St. Clair Plain, which stretches from Lake Huron on the north to Toledo on the south, east into Canada, and 25 miles to the west of the SANGB. The Base is very flat, with surface elevations ranging from approximately 575 feet above mean sea level (msl), North American Vertical Datum of 1988 (NAVD), near the lake's shoreline to approximately 585 feet msl, NAVD, near the northwest corner of the Base. Natural influences on the area's relief include glacial, lacustrine, and fluvial processes; however, man has intensely modified the area by building a seawall and by excavation and backfill, as well as other construction activities. Approximately 30 acres of the Base were reclaimed from Lake St. Clair through dredge and fill activities (ANG 2001, Harrison 2010).

The soils underlying the project area originated from three depositional environments: lacustrine, glacial, and fluvial. Soils associated with lacustrine clays from Lake St. Clair are the most common occurring on the Base. These soils are generally poorly drained and low permeability soils (Selfridge SANGB 2010).

The U.S. Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS) developed the Soil Survey of Macomb County. Categories of soils with different characteristics



and physical properties were identified as part of the survey. Individual categories were grouped together into several more generalized classifications of soils that share similar characteristics. A total of 9 of these grouped categories are present in Macomb County, two of which are present in Harrison Township. Both of the soil categories are present on SANGB: The Toledo-Paulding and the Lenawee-Corunna-Lamson. Soil series or soil mapping units are smaller subsets of these grouped categories.

The NRCS soil mapping for the project area shows several soil textures ranging from sand to clay, with clay and loam predominating (Soils Map, Appendix A). The dominant soil mapping unit on the Base is Made land. Made land consists of soils that have been altered as a result of excavation, placement of fill material, and contouring associated with construction or other earthwork activities.

Paulding clay soils are found in the northern half of SANGB. This soil grouping is comprised of poorly-drained, flat soils that formed in lake-laid clay deposits. Farming and building and road construction on these soils is limited due to high clay content, which makes drainage difficult and supports high shrink-swell dynamics in the soil. Lamson fine sandy loam is found in the southern half of SANGB. This soil group also has poor drainage characteristics, and poses limitations to development.

3.3.2 Consequences

Alternative 1: No Action Alternative

No impacts to geology or soils would occur under the No Action Alternative because no development would occur, and no alterations would be made to the site.

Alternative 2: Proposed Action

Temporary impacts to the soils along the proposed path route would occur during construction. These impacts would occur as a result of finish grading and earth moving to level the ground and fill with gravel base, specifically in areas of newly constructed trail. To offset these impacts, a soil erosions and sedimentation control (SESC) plan will be prepared and implemented during construction activities. Control measures such as silt fencing, check dams, sediment traps, dust control, and re-vegetation of the disturbed soils will be implemented to minimize the impacts of soil erosion during and following construction. Based on EPA comments, these project specific best management practices will also be included in the SESC plan:

- A maintenance schedule for all drainage structures and sumps
- Details of all proposed temporary SESC measures
- Filter fabric (silt fence) to be install adjacent to all existing wetlands
- No work to be performed in aquatic environments between October 1 and May 1
- A schedule for conducting SESC inspections weekly and following rain events



Most of the soils affected by construction activities are classified as Made Land, or have already been impacted by prior developments. All best management practices shown in the SESC plan will be inspected and maintained throughout the duration of construction activities. No long term, or significant impacts to soil quality will occur as a result of the proposed alternative. For impacts to contaminated soils, please see Section 3.17 Hazardous and Toxic Substances.

3.4 Vegetation

3.4.1 Affected Environment

Vegetation at SANGB and surrounding areas is primarily maintained lawn and landscaped areas with fragmented wetlands that occasionally support scrub species. Forests are limited on the Base in order to maintain safe airspace and flight lines and as a result of base development. Artificial drainage, dredge and fill operations, and general construction activities have altered the vast majority of natural vegetation on the Base. The trail way location on SANGB property consists almost entirely of existing trail and/or maintained lawn areas.

The Lake St. Clair shoreline adjacent the trail way location is defined by a combination of different steel and concrete seawalls. Emergent wetland vegetation is found in the near shore areas including cattails (*Typha spp.*), sedges (*Carex spp.*), and rushes (*Juncus spp.*). However an invasive species, common reed (*Phragmites australis*), is the most frequently found vegetation along the shoreline. In the causeway section of trail, which extends over Lake St. Clair bottomlands, no significant areas of submerged aquatic vegetation were found.

3.4.2 Consequences

Alternative 1: No Action Alternative

No impacts to vegetation would occur under the No Action Alternative because no construction or improvements will occur at SANGB.

Alternative 2: Proposed Action

Under the Proposed Action, no significant adverse impacts to vegetation would occur along the path alignment. In areas of new trail construction, the vegetation directly under the trail would be removed, and vegetation adjacent to the trail would be temporarily impacted. Temporary impacts from construction would be minimized by implementing a soil erosion and sedimentation control plan, and immediate restoration of the affected vegetation after construction. In areas of reconstructed trail, impacts to vegetation would be minimal. In addition, the trail alignment design will respect established trees, wetlands, and wooded areas both to minimize impacts on existing vegetation, and to improve the aesthetic value of the trail way. Alterations to the shoreline cannot be made without SANGB, USAF and USACOE approval.



3.5 Wildlife and Aquatic Resources

3.5.1 Affected Environment

The habitat at SANGB has been highly altered by human development and activities. Areas of suitable wildlife habitat on the Base are restricted to patches of forest, open grassland, and wetlands. The majority of the forested areas are found on the west end of the Base of near I-94. The Base is adjacent to shallow water areas of Lake St. Clair which borders the Base. The wildlife habitat along the shoreline may be used by wildlife for resting, feeding, and nesting.

Lists of wildlife species documented on SANGB were included in the Integrated Natural Resource Management Plan completed in October 2010 (INRMP). These lists are grouped by category, and included below as Table 3.5a - 3.5c.

Mammals

Common small mammals with the potential to reside at SANGB include the meadow vole (*Microtus pennsylvanicus*), raccoon (*Procyon lotor*) and Virginia opossum (*Dedelphis marsupialis*). Documented mammals known to occur on SANGB are listed below in Table 3.5a.

Table 3.5a Documented mammal species that occur on Selfridge Air National Guard Base

COMMON NAME	SCIENTIFIC NAME
Coyote	<i>Canis latrans</i>
Eastern Cottontail	<i>Sylvilagus floridanus</i>
Eastern Gray Squirrel	<i>Sciurus carolinensis</i>
Feral Cat	<i>Felis catus</i>
Fox Squirrel	<i>Sciurus niger</i>
Muskrat	<i>Ondatra zibethica</i>
Red Fox	<i>Vulpes vulpes</i>
Striped Skunk	<i>Mephitis mephitis</i>
White-tailed Deer	<i>odocoileus virginianus</i>
Woodchuck	<i>Marmota monax</i>

Reptiles and Amphibians

Based on the habitat present several herpetological species have the potential to reside at SANGB. These include the blue racer (*Coluber constrictor foxi*), eastern fox snake (*Elaphe vulpine gloydi*), wood frog (*Rana sylvatica*), and the western chorus frog (*Pseudacris triseriata*). Documented reptiles and amphibian known to occur on SANGB are listed below in Table 3.5b.



Table 3.5b Documented reptiles and amphibians species that occur on Selfridge Air National Guard Base.

Common Name	Scientific Name
American toad	<i>Bufo americanus</i>
Northern leopard frog	<i>Rana pipiens</i>
Green frog	<i>Rana clamitans</i>
Garter snake	<i>Thamnophis sirtalis</i>
Snapping turtle	<i>Chelydra serpentina</i>

Birds

With the proximity of Lake St. Clair, there is potential for a large variety of wading birds, shorebirds, and waterfowl to migrate through or reside at within the project area. Raptors (i.e., birds of prey) such as various owls, the sharp-shinned hawk (*Accipiter striatus*), American kestrel (*Falco sparverius*) and turkey vulture (*Cathartes aura*) may also migrate through or reside at SANGB and the surrounding area. Documented avian species known to occur on SANGB are listed below in Table 3.5c.

Table 3.5c Documented bird species that occur on Selfridge Air National Guard Base.

COMMON NAME	SCIENTIFIC NAME	SUMMER or MIGRANT	YEAR ROUND
American Crow	<i>Corvus brachyrhynchos</i>		X
American Goldfinch	<i>Carduelis tristis</i>		X
American Robin	<i>Turdus migratorius</i>		X
Bald Eagle	<i>Haliaeetus leucocephalus</i>	X	
Blue Jay	<i>Cyanocitta cristata</i>		X
Canada Goose	<i>Branta canadensis</i>		X
Common Grackle	<i>Quiscalus quiscula</i>	X	
Cooper's Hawk	<i>Accipiter cooperii</i>		X
European Starling	<i>Sturnus vulgaris</i>		X
Grasshopper Sparrow	<i>Ammodramus savannarum</i>	X	
Great Blue Heron	<i>Ardea herodias</i>	X	
Killdeer	<i>Charadrius vociferus</i>	X	
Mallard	<i>Anas platyrhynchos</i>	X	
Red-tailed Hawk	<i>Buteo jamaicensis</i>		X
Snowy Owl	<i>Bubo scandiacus</i>	X	
Song Sparrow	<i>Melospiza georgiana</i>		X
Yellow Warbler	<i>Dendroica petechia</i>	X	



Operations and maintenance activities at SANGB include wildlife management control measures to manage the risk of bird strikes by aircraft. Bird hazard control measures are performed by base personnel as well as wildlife control personnel from the United States Department of Agriculture (USDA). The wildlife control measures are centered on the Base as well as along the shoreline and include eliminating attractions for wildlife, wildlife harassment measures, and as a last resort, lethal measures. All of the wildlife management measures are undertaken under permit and in accordance with the Bird-Aircraft Strike Hazard (BASH) Plan. Portions of the trail project and the security fencing are proposed in areas where wildlife control measures are implemented.

Aquatic Resources

Fisheries habitat is available in three constructed ponds adjacent to Lake St. Clair on SANGB. Two of the ponds are used to raise walleyes. The third pond has fish, but is not used for rearing walleyes. The Lake St. Clair Walleye Association (Association), which is administered by the MDNR, is responsible for stocking the ponds with fish, and for maintaining the ponds (i.e., maintaining water levels and repairing leaks). Grounds maintenance personnel from SANGB assist the Association in maintaining the ponds. The two walleye ponds are drained into Lake St. Clair following removal of the fish each year (ANG 2001). The two walleye ponds and third pond are bordered by emergent wetland vegetation, however, each of the ponds is currently dominated by common reed (*Phragmites australis*). Security fencing is planned on the east side of the ponds thereby restricting trail users access to the ponds.

Aquatic habitat is also located in the near shore areas of Lake St. Clair proximate to the trail location, beneath the causeway section of trail, and in two channels which will be bridged as part of the trail project. These areas have the potential to harbor any aquatic species known to occur in Lake St. Clair. On-site investigation and bathymetry mapping of these areas, conducted as part of this environmental assessment, did not reveal any significant submergent vegetation or other aquatic species present in these areas. The aquatic habitat in the vicinity of the proposed causeway is considered low quality. This determination is based on the lack of aquatic structure, lack of aquatic vegetation, water depths, substrate composition, proximity of adjacent vertical seawalls, existing breakwater structure, historic dredging activity and discussions with MDNR biologists.

3.5.2 Consequences

Alternative 1: No Action Alternative

No impacts to wildlife or wildlife habitat would occur under the No Action Alternative because no construction activities would occur on the site.

Alternative 2: Proposed Action

Under the Proposed Action the majority of the trail will be reconstructed from a previously existing security road. Newly constructed trail will be built in already developed areas and



maintained turfgrass areas. Increased numbers of trail users may lead to more disturbance events with wildlife making use of the shoreline area. Wildlife disturbance events by trail users could potentially supplement the overall BASH program. Any benefits to BASH wildlife controls or adverse impacts of disturbance on wildlife are expected to be minor based on the trail distance from, and elevation above Lake St. Clair. The existing seawall and areas of vegetation also act as a buffer in portions of the trail. Construction of the trail, perimeter road and security fence will pose no significant adverse impacts wildlife populations or wildlife habitats.

An agency review letter date June 5, 2012 was received from MDEQ with concerns about the potential for the causeway to "isolate the public from using those waters between the shore and the structure." This comment was received prior to the on-site meeting. The current site conditions include an existing breakwater which will be incorporated into the causeway design. Additionally this area falls within the ATRP standoff distances and use of this area by the public is not encouraged by ANG. The open pile design of the causeway will allow for continued flow and circulation of Lake St. Clair water on shoreline side of the causeway.

The Proposed Action will impact Lake Saint Clair temporarily during construction of the causeway portion of the trail. This portion of the trail will be built over Lake Saint Clair for approximately 2,200 feet. Increased sedimentation, noise, an equipment will temporarily impact the bottomlands of Lake St. Clair. During construction, pilings will be driven into the substrate of the lake, and any necessary construction equipment will be used. This construction activity will temporarily increase sediment suspension in the water column, which may temporarily affect local aquatic habitats. A permanent structure over the bottomlands will also be present over the length of the causeway when complete. A MDNR Fisheries Biologist was included in the on-site pre-application meetings and reviewed the conceptual plans. MDNR expressed no objections or major concerns with the project regarding fisheries or Lake St. Clair impacts. Once construction is complete the causeway will not have a significant adverse impact on aquatic habitat, and may have a minor positive impact by providing a shade cover for fish feeding and spawning. Additionally, on-going maintenance activities will follow best management practices as recommended by USACE such as:

- No herbicides/chemicals used in or near surface waters, if floating vegetation is problematic, only mechanical or hand removal of vegetation shall be conducted.
- Cut vegetation will be removed from water and disposed of properly.
- Edges of trail to be constructed with stone treatment over geotextile fabric, in order to minimize the need for maintenance of vegetation immediately adjacent to the trail.
- Maintenance mowing during the growing season will be implemented along the edges (2-3 feet width) of the trail. This mowing is proposed approximately five times during the growing season.
- Only low growing plant species will be utilized in the restoration of any areas adjacent to the trail which are disturbed during construction.



Additional discussion on the wildlife controls measures included in the BASH program and implications of the Proposed Action on that program is included in Section 3.20 Health and Human Safety.

3.6 Threatened and Endangered Species

3.6.1 Affected Environment

The USFWS and MDNR were contacted in 2010 in reference to SANGB’s Natural Resource Management Plan regarding the presence of threatened and endangered species pursuant to the requirements of Section 7(c) of the Endangered Species Act (ESA) (16 U.S.C. 1536) and Michigan Endangered and Threatened Species Laws (Michigan Administrative Code R 299.1021 – R 299.1028). In subsequent correspondence the USFWS and MDNR stated that the installation lies within the potential range of some federally listed species. However, their records do not indicate the presence of listed species or critical habitat in or near the installation.

Table 3-6a following lists Federally-listed threatened, endangered, and candidate species documented to occur in Macomb County, Michigan.

Table 3-6a. Federally-listed species found Macomb County, Michigan

Indiana bat (<i>Myotis sodalis</i>)	Endangered	Summer habitat includes small to medium river and stream corridors with well developed riparian woods; woodlots within 1 to 3 miles of small to medium rivers and streams; and upland forests. Caves and mines as hibernacula.
Eastern massasauga (<i>Sistrurus catenatus</i>)	Candidate	Wet areas including wet prairies, marshes and low areas along lakes and rivers.
Rayed bean (<i>Villosa fabalis</i>)	Endangered	Shallow rivers, in and near riffles; also found in shallow, waveswept shores of Lakes
Snuffbox (<i>Epioblasma triquetra</i>)	Endangered	Small to medium-sized creeks and some larger rivers, in areas with a swift current

The potential for SANGB to contain Indiana bat roosting habitat has previously been investigated; field surveys conducted on the Base did not indicate the presence of the Indiana bat or identify any potentially suitable roost trees (ANG 2004). Additionally, no trees are currently planned for removal as part of the proposed trail way. Based on the lack of significant wetland areas proximate to the trail way or along the Lake St. Clair shoreline, suitable habitat for the Eastern massasauga does not appear to be present.

The rayed bean and snuffbox are mussel species which are generally found in small and medium sized rivers, though individuals have been found in Lake Erie and the St. Clair River. Their preferred habitat usually has sand, gravel, or cobble substrate with a swift current and



shallow water depths. A bathymetry study was conducted as part of this environmental assessment (See Lake St. Clair Bathymetry Map, Appendix A). Substrate in the causeway portion of the trail was found to generally consist of a uniform hard clay layer and water depths greater than four feet. Suitable habitat for either of these species was not present.

On July 30, 2012, the location for the proposed project was checked against known localities for rare species and unique natural features, which are recorded in the Michigan Natural Features Inventory (MNFI) natural heritage database. This continuously updated database is a comprehensive source of existing data on Michigan's endangered, threatened, or otherwise significant plant and animal species, natural plant communities, and other natural features. Records in the database indicate that a qualified observer has documented the presence of special natural features. The absence of records in the database for a particular site may mean that the site has not been surveyed.

Table 3-6b following shows the MNFI Natural Heritage Database results for both legally protected (threatened and endangered) and special concern species that have been observed within 1.5 miles of the project location, including the date they were last observed.

Table 3-6b: Threatened, Endangered, and Special Concern within 1.5 miles of the Project Location

SCIENTIFIC NAME	COMMON NAME	CATEGORY	STATUS	LAST OBSERVED
<i>Chlidonias niger</i>	Black tern	Bird	SC	1981
<i>Circus cyaneus</i>	Northern harrier	Bird	SC	1974
<i>Clemmys guttata</i>	Spotted turtle	Reptile	T	Jul-80
<i>Macrhybopsis storeria</i>	Silver chub	Fish	SC	10/19/1979
<i>Nycticorax nycticorax</i>	Black-crowned night-heron	Bird	SC	1980
<i>Pantherophis gloydi</i>	Eastern fox snake	Reptile	T	1980
<i>Rallus elegans</i>	King rail	Bird	E	5/13/1986
<i>Sterna forsteri</i>	Forster's tern	Bird	T	Jun-81
<i>Sterna hirundo</i>	Common tern	Bird	T	1962

Given the nature of the proposed project, and the natural history of the species in question, the only protected species that may be affected is the state threatened Eastern fox snake (*Pantherophis gloydi*) (See MNFI Review Letter, Appendix C).

The Eastern fox snake's (*Pantherophis gloydi*) entire range is within the Great Lakes basin. It inhabits coastal marshes and other near-shore habitats (i.e. vegetated dunes and beaches), although it sometimes wanders into nearby farm fields, pastures, and woodlots. This snake will bask or forage on raised dikes, muskrat houses, and road embankments but only rarely climbs into trees or shrubbery. Although not strictly aquatic, they are good swimmers capable of moving considerable distances over open offshore waters and between islands. Small mammals, particularly meadow voles (*Microtus*) and deer mice (*Peromyscus*), make up the largest part of this snake's diet.



In a typical year Eastern fox snakes are active from mid-April until late October but are most often seen abroad during May and June. Whether they are truly inactive during the summer or simply become more nocturnal in response to warmer temperatures is unclear. Females lay their eggs in rotted stumps or shallow burrows, or under logs, boards, or mats of decaying vegetation. They hibernate during the winter months in abandoned mammal burrows or other frost-free shelters.

The Eastern fox snake is harmless to humans, and its rodent-eating habits make it an economically useful species in agricultural areas. Human-related threats (harassment and killing) and continued habitat loss of Great Lakes marshes are the main threats pressuring Michigan's Eastern fox snake population.

Although the Eastern fox snake's habitat requirements and natural history make it a candidate for being affected by the proposed project, it was last observed within 1.5 miles of the project location in 1980. Lack of sightings in the last 32 years does not eliminate the possibility of its presence on the site, but makes it highly unlikely, especially given the highly impacted nature of the site. The majority of the impacted area is existing trail and mowed lawn, neither of which are suitable Eastern fox snake habitat. The broken concrete portion of seawall provides the most suitable habitat and area of use.

3.6.2 Consequences

Alternative 1: No Action Alternative

Threatened, endangered, and special concern species would not be affected under this alternative because no construction would take place on the site.

Alternative 2: Proposed Action

No impacts to threatened or endangered species or their habitats would occur under the Proposed Action. Impacts would not occur to the Indiana bat, Eastern massasauga, Rayed bean, snuffbox, black tern, northern harrier, spotted turtle, silver chub, black-crowned night-heron, king rail, Forster's tern, or common tern because the project area does not support the habitat required for these species. No impact would occur to the eastern fox snake because it is highly unlikely that this species inhabits the project area based on its last observed date of 1980. Correspondence from MNFI indicates that this project is not expected to impact significant wildlife or aquatic resources in the area.

3.7 Hydrology and Groundwater

3.7.1 Affected Environment

Groundwater beneath SANGB generally occurs within 15 feet below land surface within clayey and silty unconsolidated sediments of glacial and lacustrine origin. Yields from these layers are sufficient for domestic water sources; however, the irregular distribution of these sources



makes them unreliable as a groundwater resource. Additionally, some wells in the area have produced mineralized water containing elevated levels of chloride, magnesium, sodium, and potassium but still meet safe drinking water standards (SANGB 2000).

Groundwater also occurs in underlying Antrim Shale, and the Traverse Group bedrock formations; however, yields are less than 10 gallons per minute (gpm) and withdrawn water is highly mineralized (SANGB 2001). SANGB has institutional controls that prohibit the installation of drinking water wells and crock wells on the installation. The control was put in place to obtain closure for various clean-up sites under the restorations program (SANGB 2010).

3.7.2 Consequences

Alternative 1: No Action Alternative

Under the No Action Alternative, there will be no groundwater impacts because no development will occur and there will be no alterations to the site.

Alternative 2: Proposed Action

Under the Proposed Action, there will be no significant groundwater impacts. There will be no excavation that would directly impact groundwater quality or flow paths. All of the construction of the trail will occur on the soil surface. There will be an increase of approximately two acres of impermeable surface with the construction of new trail and reconstruction of existing trail. Therefore EISA Section 438 and the DoD UFC 3-210-10 for low impact development will likely be triggered. A stormwater management plan will be prepared as part of the final engineering design for the project and include measures such as bioswales or sediment traps that channel, capture, and treat runoff from asphalt surfaces in areas where new trail is being constructed. Stormwater management and the general requirements of EISA Section 438 and the DoD UFC are further discussed in Section 3.14 Utilities and Infrastructure.

3.8 Wetlands and Waters of the United States

3.8.1 Affected Environment

Lakes, Rivers and Streams

The only lake in proximity to the project location is Lake Saint Clair, directly to the east and adjacent to the trail. Lake Saint Clair is a fresh water lake part of the Great Lakes complex between Lake Erie and Lake Huron. It is approximately 275,000 acres large, with a maximum depth of 21 feet.

The Clinton River, to the south of SANGB, is the largest river in proximity to the site. The river drains into Lake Saint Clair near the southeast corner of the Base (CRWC 2007). There are no streams located on the Base property, but there are two drainage/lake access channels that will



be crossed with clear span bridges. The causeway portion of the trail crosses bottomlands of Lake St. Clair for a length of approximately 2,200 feet.

Michigan lakes and streams are protected under Part 301 Inland Lakes and Streams, and Part 325 Great Lakes Submerged Lands of Public Act 451 of 1994, Natural Resources and Environmental Protection Act and by USACE under Section 404 of the Clean Water Act. The Michigan Department of Environmental Quality (MDEQ) assumes authority over natural or artificial inland streams that have definite banks, a bed, and visible evidence of a continued flow or continued occurrence of water. The proposed bridges and causeway will require permit application and issuance under these regulations prior to construction.

The following activities are prohibited within regulated lakes and streams without a MDEQ permit:

1. Dredging or filling bottomland;
2. Constructing, enlarging, extending, removing or placing a structure on bottomland;
3. Erecting, maintaining or operating a marina;
4. Creating, enlarging or diminishing an inland lake or stream;
5. Structurally interfering with the natural flow of an inland lake or stream;
6. Constructing, dredging, commencing, extending or enlarging an artificial canal, channel, ditch, lagoon, pond, lake, or similar waterway where the purpose is ultimate connection with an existing inland lake or stream, or where any part of the artificial waterway is located within 500 feet of the ordinary high water mark of an existing inland lake or stream;
7. Connecting any natural or artificially constructed waterway, canal, channel, ditch, lagoon, pond, lake or similar water with an existing inland lake or stream for navigation or any other purpose.

Wetlands

Wetlands are defined by USACE and the U.S. Environmental Protection Agency (USEPA) as “those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include marshes, bogs, and similar areas” (33 CFR 328.3[b]; 1984). Wetlands in Michigan are regulated by the Michigan Department of Environmental Quality (MDEQ) under PA 451 of 1994, Part 303 and by USACE under Section 404 of the Clean Water Act. In addition, the ANG is directed under EO 11990 to minimize the destruction, loss, and degradation of regulated wetland environments. The EO also directs the preservation and enhancement of the natural and beneficial values of the regulated wetland environments.

Under Part 303 Wetland Protection, of Public Act 451 of 1994, the Natural Resources and Environmental Protection Act (NREPA, as amended), MDEQ assumes authority over wetlands that are 5 acres or greater in area; contiguous (directly adjacent to) to an inland lake, pond, or



stream; within 500 feet of an inland lake, pond, or stream; or within 1,000 feet of a Great Lake, Lake Saint Clair, Saint Mary's River, Saint Clair River, or Detroit River.

The MDEQ may also exert regulatory control over isolated wetlands less than five acres in size: "...if the department determines that protection of the area is essential to the preservation of the natural resources of the state from pollution, impairment, or destruction and the department has so notified the owner."

The following activities are prohibited within regulated wetlands without a MDEQ permit:

- 1 The placement of fill material;
- 2 Dredging;
- 3 Construction within; and/or
- 4 The draining of surface water from a wetland

SANGB is characterized by flat topography, poorly drained soils, and poor surface drainage, and is partially built upon filled wetlands. Shoring and filling have raised the elevation throughout most of the installation, with the exception of undeveloped areas adjacent to the Clinton River. In the areas adjacent to the river, seasonal high water table levels during periods of high rainfall range results in intermittent standing water in some low-lying areas. In all other areas of the installation, the water table remains below the surface year-round as a result of continuous pumping (SANGB 2000).

Wetland delineations and mapping were conducted at SANGB in July and August 2006 (SANGB 2007). The wetland types found on the Base were described according to the USFWS Wetland Classification System (Cowardin et al. 1979) as lacustrine and palustrine (SANGB 2008).

In the fall of 2013, the wetland boundaries were again delineated and surveyed and a request for jurisdictional determination was submitted to the USACE (Wetland Maps, Appendix A). Wetland T is included in the mapping, but is located over 300 feet from the trail way location. There are four wetlands located in proximity to the proposed trail way.

Wetland Area L is located adjacent to the Base golf course near the southeastern corner of SANGB, and contains approximately 0.16 acres of emergent wetland, including a drain/ditch. The wetland habitat value is limited due to its size, significant modification from historic filling, and its relative isolation from other wetlands and aquatic environments. The functions of this wetland include limited flood and stormwater control, groundwater recharge, water quality treatment of surface waters, limited ecosystem diversity, and a small refugia to wildlife for breeding, nesting, feeding, and cover habitat. (SANGB 2007)

Wetland Area J is located at the eastern boundary of SANGB, adjacent to the shoreline of Lake St. Clair. It contains approximately 1.3 acres of wetland including a mix of emergent and scrub-shrub wetland which surrounds an approximately 0.5 acres of open water pond. These wetlands are likely man-made by historic excavation, and have been modified by clearing,



adjacent development, and filling. This wetland is also relatively isolated from any other wetlands on the site. The functions and values for this wetland are limited, but include flood and stormwater control, groundwater recharge, water quality treatment of surface waters, some small-scale ecosystem diversity to an area containing large spans of mowed grasslands and industrial development, a small refugia to wildlife for breeding, nesting, feeding, and cover habitat (SANGB 2007).

Wetland Area U is located at the eastern boundary of SANGB, and adjacent to Lake St. Clair. It contains approximately 1.6 acres of forested wetland. It has been significantly modified by historic excavating and filling, and the filling of adjacent areas. Much of this area is dominated by Phragmites and river-bank grape. The functions and values of Wetland Area U are limited, but may provide some localized flood and stormwater control, groundwater recharge, water quality treatment of surface waters, some ecosystem diversity to the surrounding developed areas, and some value to wildlife in terms of breeding, nesting, feeding, and cover habitat (SANGB 2007).

Mapped Wetland Area R is located at the northeastern corner of SANGB. It has been mapped as containing approximately 0.5 acres of emergent wetland. Wetland Area R has been significantly modified by historic filling of adjacent areas, and it is isolated from Lake Saint Clair by means of a large earthen berm.

3.8.2 Consequences

Alternative 1: No Action Alternative

No rivers, streams, lakes or wetlands would be impacted in the No Action Alternative because no construction would take place.

Alternative 2: Proposed Action

The Proposed Action will include the placement of clear span bridges over two existing drainage/lake access channels and the construction of an elevated causeway over Lake St. Clair bottomlands. These activities are regulated under state and federal laws and will require the approval of a MDEQ/USACE Joint Permit Application. A pre-application meeting was conducted with these and other agencies and no objections or major concerns were expressed regarding the placement of these structures. Previous comments received from MDEQ regarding locating the causeway as close to the shoreline as possible (review letter found in Appendix C) were addressed and the current location accepted as prudent in the context of SANGB security requirements. The pre-application meeting notes can be found in Appendix D.

The Proposed Action would impact Lake Saint Clair temporarily during construction of the causeway portion of the trail. This portion of the trail will be built over Lake Saint Clair for approximately 2,200 feet. During construction, pilings will be driven into the substrate of the lake, and any necessary construction equipment will be used. This construction activity will



temporarily increase sediment suspension in the water column, which may temporarily affect local aquatic habitats. Once construction is complete the causeway should not have a negative impact on aquatic habitat, and may have a positive impact by providing a shade cover for fish feeding and spawning. A MDNR Fisheries Biologist was included in the on-site pre-application meetings and reviewed the conceptual plans. MDNR expressed no objections or major concerns with the structure placement during the pre-application meeting regarding fisheries management or Lake St. Clair impacts.

There are four wetland areas in proximity to the proposed trail. All four of these wetland areas are highly disturbed with relatively low biodiversity and habitat value. They have been highly impacted by historic filling and excavating activities, and are filled with invasive species.

SANGB submitted updated wetland delineation information for all identified wetland areas on the installation in order to obtain current jurisdictional determinations from the USACE. A letter dated November 27, 2013 was received from USACE confirming the delineated boundaries and regulatory status of wetlands J, R, and U. In addition, a MDEQ Wetland Identification Program (WIP) application should be submitted as soon as final engineering plans have been completed.

The majority of trail near wetland areas has existing trail way that will be reconstructed in the same location, outside of wetlands. The trail way near Wetland R will consist of new trail construction, however it appears that there is a minimum of 30 feet of upland available in the area for construction of the 12 foot wide trail.

A Joint Permit Application will be submitted for the causeway structure on Lake St. Clair bottomlands and the two bridge crossings of existing drainage/lake access channels. Based on the USACE confirmed wetland boundaries, the Proposed Action should have no impact on wetlands. The Proposed Action will not have significant adverse impacts waters of the United States.

3.9 Floodplains

3.9.1 Affected Environment

In Harrison Township most of the areas adjacent to the Clinton River and Lake St. Clair are located within the designated 100-year or 500-year floodplain. Floodplains are defined as areas adjoining inland or coastal waters that are prone to flooding during seasonal snowmelt and spring or other high rainfall events.

Flood hazard areas and 100-year floodplains occur on and in the vicinity of the Base (Floodplain Map, Appendix A). Much of the eastern section of the Base occurs within the 100-year floodplain. The 500-year floodplain extends to the west of the 100 year floodplain and also encompasses much of the southern section of the Base. Fluctuation of water levels and periodic flooding along the shorelines of Lake St. Clair are a concern at SANGB (SANGB 2010).



Several sections of trail way will occur within the 100-year floodplain, and the entire trail way is located within the 500-year floodplain.

EO 11988, *Floodplains Management* requires all Federal agencies to provide leadership and take action to reduce the risk of flood loss; minimize the impacts of floods on human safety, health, and welfare; and restore and preserve the natural and beneficial values of floodplains when acquiring, managing, or disposing of Federal lands. SAF/MIQ or another designated official must sign a FONPA before any action within a floodplain may proceed, as specified in Secretary of the Air Force Order 790.1.

Construction activities within the 100-year floodplain of the Clinton River are regulated by the Michigan Department of Environmental Quality (MDEQ) under NREPA of 1994, Part 31 Water Resources Protection. Placement of fill material and construction of new structures in those areas will require the issuance of a joint MDEQ/USACE permit.

3.9.2 Consequences

Alternative 1: No Action Alternative

Under the No Action Alternative, there will be no impact to the floodplain or floodway of either Lake St. Clair or the Clinton River because no development will occur.

Alternative 2: Proposed Action

The majority of the proposed action will occur within a 100-year floodplain. However, the areas of reconstructed trail will have no significant impact in the floodplains because design elevations are expected to be similar to existing trail elevations. In areas of newly developed trail, there will be no net impact (fill) within the 100-year floodplain, because the new trail segments will be designed at or below existing grades. Therefore the proposed action will include only negligible impacts within floodplains, and compensating cuts should not be required. Details on the design elevations and floodplain boundaries will be included for review purposes in the DEQ/USACE joint permit application.

3.10 Air Quality

3.10.1 Affected Environment

The Clean Air Act (CAA) requires the USEPA to set National Ambient Air Quality Standards (NAAQS) for pollutants considered harmful to public health and the environment. NAAQS include two types of air quality standards. Primary standards protect public health, including the health of sensitive populations such as asthmatics, children, and the elderly. Secondary standards protect public welfare, including protection against decreased visibility, damage to animals, crops, vegetation, and buildings (USEPA 2007a). USEPA has established NAAQS for six principal pollutants, which are called “criteria pollutants”. The criteria pollutants include carbon monoxide, lead, nitrogen dioxide, particulate matter, ozone, and sulfur dioxide. Areas



that meet the air quality standard for the criteria pollutants are designated as being “in attainment.” Areas that do not meet the air quality standard for one of the criteria pollutants may be subject to the formal rule-making process and designated as being “in nonattainment” for that standard.

The release of air pollutants is regulated under both Federal and Michigan statutes. NAAQS are the Federal standards and are established by USEPA. The USEPA has given attainment status (in compliance) or nonattainment status (out of compliance) to county areas for designated criteria pollutants including ozone, carbon monoxide (CO), particulate matter less than 10 microns in diameter (PM₁₀), sulfur dioxide (SO₂), nitrogen oxides (NO_x), and volatile organic compounds (VOCs). The State of Michigan has adopted the Federal NAAQS for all criteria pollutants, as well as a standard for total suspended particulates (SANGB 2000).

SANGB is in the Metro Detroit–Port Huron Intrastate Air Quality Management Area (AQMA). This AQMA is not within the boundaries of the CO non-attainment area; and is located in attainment for ozone, but in non-attainment for fine particle matter (PM_{2.5}).

Potential emissions at SANGB are a major source for Title V permitting purposes. The installation is classified as a Category I Facility because it has the potential to emit greater than 100 tons per year of nitrogen dioxide (NO₂) and SO₂. SANGB limits its actual annual emissions to levels beneath the major source thresholds by obtaining a Title V Synthetic Minor permit. Emissions at the installation are controlled via specific practices according to fuel type and process. If emissions were to increase and exceed the Title V thresholds, a Title V Operating Permit must be obtained (SANGB 2000).

Air emissions at SANGB include those from stationary (combustion sources such as generators fired by gasoline and diesel, diesel-, gasoline-, and JP-8-fired AGE; and aircraft engine tests) and mobile (vehicle and aircraft operations) sources. The Base-wide potential emissions from SANGB Base exceeded the Title V major source threshold; however, the emissions are capped through permit limits (SANGB 2008). Air emissions at SANGB are regulated under a Synthetic Minor Permit (Number 523-96A), issued by MDEQ in March 2005, acting as the agent for USEPA.

The new permit contains federally enforceable operational limits, process-specific emission limits, and base-wide emission limits that effectively reduce potential emissions of all criteria pollutants and Hazardous Air Pollutants (HAPs) to below the applicable Title V major source thresholds. SANGB is in compliance with all emission limits contained in its permit.

3.10.2 Consequences

Alternative 1: No Action Alternative

No impacts to air quality are expected to occur under the No Action Alternative because the proposed construction of new trail and reconstruction of existing trail would not occur and no new air emissions sources would be added to SANGB.



Alternative 2: Proposed Action

No long-term significant impacts to air quality are expected to occur under the Proposed Action. There may be some minimal adverse impacts on air quality during the construction phase of the project due to contractors driving to the site, use of gasoline or diesel in construction equipment, and the emissions associated with laying asphalt, these impacts are minimal both in duration and quantity. In regards to diesel emissions during construction, the following EPA best management practices will be implemented:

- Positioning exhaust pipes so that fumes are directed away from the operator and nearby workers, thereby reducing the fume concentration to which personnel are exposed.
- Using catalytic converters to reduce carbon monoxide, aldehydes, and hydrocarbons in diesel fumes (must be used with low sulfur fuels).
- Regular maintenance of diesel engines to keep exhaust emissions low. Follow the manufacturer's recommended maintenance schedule and procedures. Smoke color can signal the need for maintenance.
- Reducing exposure through work practices and training, such as turning off engines when vehicles are stopped for more than a few minutes, training diesel equipment operators to perform routine inspection, and maintaining filtration devices.

Because SANGB is in a non-attainment area for PM 2.5, general conformity applicability determination must be accomplished for the proposed action (40 CFR Part 51, Subpart W). This would include air emissions from construction equipment.

Rule 201 of the Michigan Air Pollution Control Rules requires a person to obtain an approved Permit to Install /New Source Review (PTI/NSR) for any potential source of air pollution unless the source is exempt from the permitting process. We believe that the proposed action meets the criteria under R 336.1289 Permit to install exemption; for asphalt and concrete production equipment.

3.11 Noise

3.11.1 Affected Environment

Based on the October 2009 Air Installation Compatible Use Zone (AICUZ) Report for SANGB, approximately 108 airfield operations per average busy day (ABD) will be flown at SANGB once all flying units are at full-strength around 2011 (SANGB 2009). An airfield operation is defined as one takeoff/departure, one approach/landing, or half a closed pattern. The AICUZ reports are developed for the community to assist them in preparing local land use plans. AICUZ study preparers developed noise contours by using aircraft operational, maintenance, and other required data from the installations (Noise Contours Map, Appendix A). The contours represent DNL which are symbolized mathematically as Ldn. AICUZ study preparers plot contours for DNLs of 65, 70, 75, and 80-plus dBs for AICUZ maps (USAF 2005). The noise from the airfield



can be very high and have a negative effect upon pedestrians and bicyclists. The highest noise levels are found north and south of the Base runway.

Although users of the trail may talk to one another or occasionally yell loudly, this would not affect the Base noise levels as a whole, especially when compared to the noise generated from the airfield and aircraft maintenance activities. Noises generating from the trail users is generally expected to be very minor with most users riding, walking or running silently.

3.11.2 Consequences

Alternative 1: No Action Alternative

Under the No Action Alternative, there would be no impact on noise levels on the Base because no development will occur and no alterations of the site will occur.

Alternative 2: Proposed Action

Phase One of the proposed action will create a new trail segment along North River Road, crossing through an area of 70dBs noise levels. The vast majority of the trail is located in areas with less than 65db noise levels, and should not be negatively affected by airfield operations. Under the Proposed Action, there would be no significant impact on noise levels on the Base.

3.12 Cultural Resources

3.12.1 Affected Environment

Cultural Resources are identified as archaeological sites, historic buildings and structures, traditional cultural places, and other places or objects that are important to Michigan's history and to a social, ethnic, cultural, or occupational group's shared identity, existence as a community, or necessity for continuation of traditional life ways. Protection of these resources either listed in or eligible to be listed in the National Register of Historic Places (NRHP) is mandated by the National Historic Preservation Act (NHPA) as amended in 1992 (16 U.S.C. 470 et seq.), NEPA, the State Historic Preservation Act (SHPA) and AFI 32-7065.

The potential for cultural resources and the inadvertent discovery of these unknown resources during ground-disturbing activities always exist. Certain areas (e.g., stream banks and bottoms, hilltops, and near rock outcrops) have a higher potential to yield cultural resources and at a greater density than others (e.g., steep slopes). The MCDR shall ensure that in the event of the inadvertent discovery of archeological resources, measures are taken promptly to protect the find from disturbance, assess the significance of the discovery, and implement appropriate mitigation measures for significant resources. In the event of discovery of human remains, funerary objects, sacred objects, or objects of cultural patrimony, the MCDR shall ensure that all appropriate measures are implemented to protect the remains and any other protected cultural items. All appropriate tribes and agencies will be promptly notified of the find, and all applicable Federal, tribal, and state procedures followed. (AFI 32-7065 requires the



development of an Integrated Cultural Resources Management Plan (ICRMP). The Plan includes procedures for managing known cultural resources, responding to inadvertent discoveries, the responsibility of the ANG regarding Native American concerns and issues, and additional cultural resources surveys and projects needed for regulatory compliance. The ICRMP provides information for the preservation and management of cultural resources at SANGB. Specifically it is a five-year planning and management tool for the SANGB cultural resource program. The ICRMP (1) provides guidance to achieve regulatory compliance; (2) integrates cultural resource management with the SANGB mission and installation plans; (3) lessens or avoids adverse effects to cultural resources from installation projects; (4) and increases interaction with Federal, state, and local agencies, including Native American groups.

Fundamental to the ICRMP is the identification of cultural resources and determination of the eligibility of these resources for listing in the National Register of Historic Places (NRHP). Resources that meet one or more NRHP criteria are considered historic properties for the purposes of compliance with Section 106 of the National Historic Preservation Act (NHPA). A successful cultural resource management program requires the identification and evaluation of resources, implementation of protection and compliance actions for historic properties, and collaboration with internal and external stakeholders.

In addition to the requirement for the development of an Integrated Cultural Resources Management Plan, Section 106 of the National Historic Preservation Act requires Federal agencies to take into account the effects of their undertakings on historic properties and afford the Council a reasonable opportunity to comment on such undertakings. The section 106 process seeks to accommodate historic preservation concerns with the needs of Federal undertakings through consultation among the agency official and other parties with an interest in the effects of the undertaking on historic properties, commencing at the early stages of project planning. The goal of consultation is to identify historic properties potentially affected by the undertaking, assess its effects and seek ways to avoid, minimize or mitigate any adverse effects on historic properties.

To evaluate their eligibility on the NRHP, cultural resources are divided into the following three major categories:

- Archeological resources;
- Architectural/Built resources; and
- Traditional cultural properties.

Archeological Resources

An archaeological site is a location that contains artifacts, features, or other archaeological indications of past human life or activities from which archaeologists interpret information about history or prehistory. Archaeological sites may contain natural features modified by human use; manmade structures; artifacts such as stone tools, pottery, basketry, bottles, weapons, weapon projectiles, or shell; or all of these. A prehistoric campsite may include a



lithic scatter related to the manufacture of stone tools and/or presence of stone tools; hearth features with fire-cracked rock, charcoal, seeds, and other materials; or even stone alignments. Generally, an archaeological site is considered to be eligible for the NRHP if it is at least 50 years of age, has archaeological integrity, and has the potential to contribute information important in history or prehistory. If so, it would be considered to be a historic property and the provisions of the NHPA would apply. Additionally, the same site would be protected by the provisions of ARPA if it is located on federally fee-owned lands. The site also may contain Native American cultural items, and NAGPRA may be applicable. Furthermore, a site may be a sacred site or a Traditional Cultural Property (TCP) important to a Tribe or other group.

SANGB comprises a total of 3,075 acres, of which a portion of the property has been surveyed for archaeological resources. In 1994, approximately 83 acres of the Naval Air Facility located at SANGB were surveyed for archeological resources in which one site was identified during this survey. In 1996, the Michigan SHPO evaluated the site as not eligible for the NRHP. In 2002, an archaeological assessment of the 520 acres previously under control of the U.S. Army Garrison - Selfridge was performed. No sites were identified. The survey concluded that the 520 acres had a low likelihood for archaeological resources meeting the NRHP criteria for eligibility. The Michigan SHPO concurred with this conclusion in correspondence dated 2002.

Two archeological sites have been identified on site through documentation review. The first (Site 20MB256) is located in the southeast portion of the Base along the north side of the Clinton River, within what is currently the Base's golf course (SANG Base 2003a). This site is believed to be a "circular earthwork", but has not been verified or located, or evaluated for its eligibility to be included on the NRHP. The second archeological site (Site 20MB481) is located within the 1400 series of buildings in the western portion of the Base. One lithic flake and core were recovered from this site on the surface of a garden plot. This site has been surveyed by the Base and the findings have been coordinated with the Michigan SHPO, which determined that the site is not eligible for inclusion on the NRHP.

Although there is a potential for more archeological sites to be located on the site since a base-wide archeological survey has not been completed, this potential is very unlikely considering the extent of earth moving and land alterations that have occurred over the past 85 years of military occupancy. Any additional archeological sites that may have been present have likely had their site integrity destroyed.

Architectural/Built Resources

Built resources include buildings, structures, landscapes, and objects that document the history of an installation and possibly the history that predates the installation. These resources include both military and non-military assets. They may relate to the military mission of the installation, historical uses or events not related to the military or broader events that affected both the military and non-military.



Built resources are generally considered for eligibility to the NRHP when they reach 50 years of age. (If built resources older than 50 years have not been evaluated for eligibility, they must be treated and managed as eligible until a formal determination has been made.) However, a district, site, building, structure, or object may achieve “exceptional” significance within the last 50 years (Criteria Consideration G) and be considered eligible for the NRHP. For military installations, this could include important Cold War resources, defined as built resources constructed between 1946 and 1989.

Approximately 530 buildings and structures are located at SANGB. Of these, 162 were constructed before 1945, 126 were constructed between 1946 and 1959, and 156 were constructed between 1960 and 1989. Two hundred and five (205) built resources have been identified as historic resources, while 79 have been identified as non-historic resources. Thirty-one (31) resources have been mitigated under Program Comments. Fifty (50) built resources require National Register evaluation, while the status of an additional thirteen (13) built resources needs clarification. These sites include housing and various military properties consisting of aircraft support, barracks, storage, power plants, radar sites, and electrical systems. Most of the buildings were constructed between 1925 and 1933 when the Base became a permanent facility and between 1941 and 1945 during World War II.

Buildings 301, 302, 303, 304, 305, and 327 at the Moving Target Machine Gun Range (SR749) have been identified as historically significant buildings (Selfridge, 2009).

Based on additional information provided by SANGB Staff, there are several other buildings, aside from those listed above, which are NHPA eligible, are significant and are listed in the ICRMP as well as the Programmatic Agreement.

Traditional Cultural Properties

SANGB continues to maintain open communications with Tribal Historic Preservation Offices (THPOs)/Tribes in Michigan. SANGB is not located on land currently identified as tribal lands. Furthermore, the installation is not strongly associated with the ancestral lands of the federally-recognized Tribes in Michigan. Previous contact with the Tribes has not resulted in expressions of interest in the U.S. Air Force property at SANGB. However, SANGB will continue to consult with Tribes as appropriate.

There are 12 federally-recognized tribes in Michigan, which are represented by the following tribal councils:

- Bay Mills Indian Community of the Sault Ste. Marie Band of Chippewa Indians;
- Grand Traverse Band of Ottawa and Chippewa Indians of Michigan;
- Hannahville Indian Community of Wisconsin Potawatomi Indians of Michigan;
- Huron Potawatomi, Inc.,



- Keweenaw Bay Indian Community of L'Anse and Ontonagon Bands of Chippewa Indians of the L'Anse Reservation;
- Lac Vieux Desert Band of Lake Superior Chippewa Indians of Michigan;
- Little River Band of Ottawa Indians of Michigan;
- Little Traverse Bay Bands of Odawa Indians of Michigan;
- Match-e-be-nash-she-wish Band of Pottawatomis Indians of Michigan;
- Pokagon Band of Potawatomi Indians (Michigan and Indiana);
- Saginaw Chippewa Indian Tribe of Michigan;
- Sault Ste. Marie Tribe of Chippewa Indians of Michigan.

Should a cultural resources plan be undertaken or major construction projects anticipated, these groups shall be consulted.

3.12.2 Consequences

Alternative 1: No Action Alternative

Under the No Action Alternative, no construction would take place, and therefore no cultural resources would be impacted.

Alternative 2: Proposed Action

It is anticipated that no impacts to cultural resources would occur under the Proposed Action. The trail does not come near either of the identified archeological sites or any historic buildings on the site. In addition the proposed pathway will be 150' (minimum) from any existing buildings in accordance with the 150' (minimum) anti-terrorism stand-off distance requirements.

The potential for the discovery of cultural resources during the construction of the proposed path is unlikely. Temporary impacts to the soils along the proposed path route would occur during construction. These impacts would occur as a result of finish grading and earth moving to level the ground and fill with gravel base, specifically in areas of newly constructed trail. A large portion of the proposed route utilizes already existing pathway that will be repaved. In areas of new trail construction, no major excavation or earth moving activities will take place. Most of the soils affected by construction activities are classified as Made Land, or have already been impacted by prior developments.

A request for Section 106 Review has been submitted to the State Historic Preservation Office, Environmental Review Office at the Michigan Historical Center in Lansing, Michigan. In a response dated May 14, 2013 the Deputy State Historic Preservation Officer has stated the opinion that no adverse effect on cultural resources is expected. Please refer to Appendix C for documentation of the Section 106 Review.



3.13 Climate

3.13.1 Affected Environment

The climate of Macomb County is classified as humid continental to semi-marine and is characterized by long cold winters and short warm summers. Nevertheless, the local climate is somewhat moderated by Lake St. Clair and Lake Erie (ANG 2001). Continental polar air masses pass through during the winter, while tropical air masses pass through in the summer. The interaction of these air masses, along with cold fronts associated with east moving cyclones; create extreme contrasting seasonal temperature changes, highly variable weather, and abundant precipitation throughout the year (SANGB 2001).

SANGB has an average of 166 days between the last freeze of spring and the first freeze of fall. Mean winter and summer temperatures are 25 degrees Fahrenheit in January and 73 degrees Fahrenheit in July. The average yearly temperature is 49 degrees. Annual precipitation at the SANGB averages 27.6 inches, while snowfall averages about 30 inches per year, varying considerably from year to year (SANGB 2001). Prevailing winds at SANGB are westerly, however, during the summer months the predominant wind direction is southwesterly. During the winter months, the prevailing wind direction shifts to a westerly-northwesterly pattern. Daily and weekly wind directions shift frequently due to the sizable variation of high and low pressure systems moving across the Midwest (SANGB 2010).

3.13.2 Consequences

Alternative 1: No Action Alternative

The No Action Alternative would have no impacts on climate because no construction would occur.

Alternative 2: Proposed Action

The Proposed Action would have no impact on climate because construction of a trail would not have impact on the climate of the region. There will be no significant increase in the release of any greenhouse gasses during construction or during the future use of the trail way. The trail way may even slightly reduce the release of greenhouse gas emissions by encouraging bike use rather than automobiles for some users.

3.14 Utilities and Infrastructure

3.14.1 Affected Environment

Drinking Water

SANGB has institutional controls that prohibit the installation of drinking water wells and crock wells on the installation. The control was put in place to obtain closure for various cleanup sites under the restorations program (SANGB 2010). The site has insufficient groundwater resources



to support water supply wells. The water table is very high on the site, and much of the site consists of made land. Drinking water is supplied to the Base and surrounding community through municipal sources, namely the City of Mt. Clemens.

The drinking water at SANGB meets primary, but not secondary, SDWA standards. Secondary standards are not met because of the age of the existing distribution system. Federal law does not require that water systems be in compliance with secondary drinking water standards, which provide goals regarding taste, odor, color, and other non-health related characteristics of drinking water (SANGB 2006a). No water fountains or water line installation is currently planned as part of the proposed action.

Wastewater

The majority of SANGB has a sanitary sewer system connected with the Harrison Township sewer system. Remote areas of the Base still have septic systems that use sanitary leach fields and / or septic holding tanks on the Base (SANGB 2006a). No sanitary facilities are currently planned as part of the proposed action.

Stormwater

The majority of the land at Selfridge has been disturbed or built up over the years of operation to support the mission. Very little if any storm water drains from the installation that is not conveyed through manmade ditches or storm water conveyances system that have been established (SANGB 2001).

A series of catch basins, storm sewers, and pump/lift stations have also been installed to remove storm water runoff, channeling storm water to collection points throughout the installation. All runoff from the northern and eastern portions of the installation is channeled into Lake St. Clair through three storm water pump/lift stations. The rest of the installation is drained to the south into the Clinton River by two storm water pump/lift stations (SANGB 2001).

Other Utilities

Other base utilities have been mentioned in planning meetings as potentially being impacted by the Proposed Action. Existing fiber optic lines, communication lines, and pedestals in the northeast corner of the Base and along the southern boundary adjacent to North River Road.

3.14.2 Consequences

Alternative 1: No Action Alternative

There will be no impacts to utilities and infrastructure on the site under the No Action Alternative because no construction will occur, and no changes will be made on the site.

Alternative 2: Proposed Action



The Proposed Action will not have any impacts to drinking or wastewater systems on the site. The majority of the trail will be reconstructed from an existing trail. The portions of newly constructed trail will not involve any rough grading, excavation, or earth moving activities that may affect underground utilities or change drainage patterns. A total of approximately two acres of new impervious surface will result from construction of the trail way. The impervious surface of a new security road is not included as the preferred road location has not been determined at this point. Because new impervious surfaces will exceed 5,000 square feet, requirements found in Section 438 of the Energy Independence and Security Act 2007, and the DoD Unified Facilities Criteria (UFC 3-210-10) Low Impact Development will be triggered.

These requirements state that “the sponsor of any development or redevelopment project involving a Federal facility with a footprint that exceeds 5,000 square feet shall use site planning, design, construction, and maintenance strategies for the property to maintain or restore, to the maximum extent technically feasible, the predevelopment hydrology of the property with regard to the temperature, rate, volume, and duration of flow.”

A stormwater management plan will be prepared as part of the final engineering designs for the project and will include measures such as bioswales or sediment traps that channel, capture, and treat runoff from asphalt surfaces in areas where new trail is being constructed. Near the areas of proposed grade crossings, the final plans will need to include engineering details to effectively drain those areas. Stormwater will be managed according to Macomb County Public Works Office procedures and design standards which comply with the requirements for water conveyance, and lake or river discharges as described in Section 438 of the Energy Independence and Security Act 2007, and UFC 3-210-10.

Other infrastructure such as fiber optic lines, communication lines, and pedestals that may be impacted by the Proposed Action will be relocated as required and/or protected as needed during trail way construction, at the expense of the project proponent. The number of structures that need to be relocated appears minimal, and plans for those relocations will be included in the final engineering plans. The Proposed Action will not have a significant adverse impact on Utilities or Infrastructure.

3.15 Roadways / Traffic / Parking

3.15.1 Affected Environment

SANGB is located in the greater Detroit metropolitan area, and has direct access to associated interstates, expressways, arterial roads, collector roads, and local roads. Directly to the west of the Base is I-94, which connects Port Huron to Detroit to Chicago. Directly to the north of the Base is the William P Rosso Highway, which becomes M-59 Hall Road west of I-94, and serves as the Base’s main connection to I-94.

The existing road network within the Base includes collector and local roads, bridges, and traffic-controlled intersections. The road network within the Base is used for a variety of



military operations, and provides access to all buildings and gathering areas. The large airfield in the center of the Base prevents direct travel across the Base, and traffic must use perimeter roads to travel from one side to the other.

The construction of the North River Road trail segment will increase overall circulation to the shoreline trail segment. There is no parking available for trail users near the south access point between George Ave and Sea Ray Blvd. There is likely to be an increase in circulation at the north end of the trail, off of the William P Rosso Highway. The parking lots in this area are currently serving the MDNR boat launch area, and are likely to see a slight increase in traffic and parking demand as a result of trail users. Parking and traffic concerns have been a topic of discussion in a number of planning meetings. Improvements to the William P. Rosso and Jefferson Avenue intersection will likely be necessary in the future regardless of trail way construction, but should be considered in final construction planning of the trail way.

3.15.2 Consequences

Alternative 1: No Action Alternative

There will be no impact to roadways, traffic, and parking under the No Action Alternative because there will be no construction occurring on the site, nor any changes made to the site.

Alternative 2: Proposed Action

The Proposed Action will not impact any major roadways on SANBG. The Phase 1 trail segment will be located on the north side of North River Road and will require relocation of existing security fencing closer to South Perimeter Road. No changes to South Perimeter should be required.

The parking area near the south base marina will be impacted by trail way construction (see South Grade Crossing, Appendix B). The area contains 24 parking spaces which can be relocated nearby as deemed necessary by SANGB. There are several other parking areas in the vicinity which could otherwise be enlarged.

There will also be slight changes to site access, circulation and parking demands in public parking areas at the north and south ends of the shoreline trail segment. However, the Proposed Action is a non-motorized trail way and not a park or gathering area. Users of the trail will often be passing through with no need for parking. Those users parking near the north and south ends of the shoreline trail segment are expected to only park for short time periods and will not pose a significant impact.

The trail way will cross the south/golf course entrance drive to SANGB. The traffic entering the Base is generally stopped or moving slow in this location because the security checkpoint is located here. However, yield signs can be posted on the trail way at this location as a safety measure. Pedestrian and bike traffic on the trail is not expected to be heavy enough to pose a significant impact to traffic entering the Base.



As previously mentioned, a new perimeter security road will be also be constructed inside the Base security fence. The new security road will be a benefit of the Proposed Action.

3.16 Aesthetic and Visual Resources

3.16.1 Affected Environment

SANGB is located on Lake St. Clair. The military base is the dominant land use in the immediate area, encompassing 3,075 acres. The majority of the Base consists of industrial buildings, an airfield, and mowed lawn. Some historic buildings and the Base golf course offer aesthetic views within the Base.

Lake St. Clair is obviously the major aesthetic and visual resource present. Large segments of the shoreline and extended views across Lake St. Clair are present along portions of the project area. The trail way is being proposed in this location largely because of the aesthetics of this shoreline area and attractive views of Lake St. Clair.

3.16.2 Consequences

Alternative 1: No Action Alternative

No impacts to aesthetic and visual resources would occur under the No Action Alternative. Under this alternative, no construction of a bike path would occur and the site would remain unchanged.

Alternative 2: Proposed Action

The majority of the trail will be on grade with the ground, and have no visual impact. The reconstruction and repaving of existing security road would improve the aesthetics of the trail for trail users. Fencing installed adjacent the trail may negatively affect views of the lake from the Base interior. Multiple access points to the trail will mitigate any aesthetic impacts by allowing continued trail way and Lake St. Clair shoreline access for base personnel. Boaters in Lake St. Clair viewing the shoreline may be able to see the fence, but will be separated by an elevation change and a significant vertical distance as the fence will be placed on the interior side of the trail way. The view from Lake St. Clair into the base is also not considered especially scenic. Final site plans will depict exact locations and type of new security fencing. Screening vegetation or painted fencing can also be used to minimize visual impacts.

At the causeway location, the trail is proposed to be built above-grade over water, and will be visible in the immediate vicinity. This structure should not negatively impact visibility or aesthetics because the causeway will not be high enough to block lake views from the Base.

The Proposed Action is expected to increase the public's interaction with Lake St. Clair and the surrounding natural features by providing access to the lake for a greater number of people. Visual resources and aesthetics in the area will be maximized by the public and maintained by SANGB personnel under the Proposed Action.



3.17 Hazardous and Toxic Substances

3.17.1 Affected Environment

The operation of aircraft, vehicles, and equipment requires the use of various hazardous materials including fuels, solvents, and lubricants. If released, these materials have the potential to harm the environment by impacting air, soil, and water quality.

Hazardous materials are used at SANGB in aircraft and ground vehicle maintenance activities, operation of utility systems, and installation operation and maintenance activities. Hazardous materials stored and used at SANGB include solvents (such as toluene and trichloroethane), alcohols, dry chemicals (chlorine), compressed gases, herbicides, fertilizers, insecticides, disinfectants, lubricant oils, antifreeze, de-icing fluids, cleaning supplies, paints, adhesives, epoxy, brake/hydraulic fluids, and batteries (SANGB 2000).

Hazardous waste generated at SANGB is disposed of through the Defense Logistics Agency (DLA) Disposition Services, or by waste disposal contractors. SANGB hazardous waste management follows all Federal, state and local regulations pertaining to handling, storage, and disposal of hazardous waste generated at the installations. On-installation generators of waste are responsible for identifying and accounting for hazardous wastes in proper containers at approved hazardous waste satellite accumulation points. Containers are labeled and moved to 90-day hazardous waste accumulation areas. Hazardous materials consumed in large quantities, such as fuel oil, jet fuel, gasoline, and diesel oil, are stored in above ground storage tanks (ASTs) at the installation. As of 2010 there was one regulated underground storage tank at the Army and Air Force Exchange Service (AAFES) gas station (SANGB 2010).

The United States Air Force (USAF) and the ANG have devised the Installation Restoration Program (IRP), designed to identify, investigate, and cleanup contamination associated with past activities at installations. IRP activities are conducted in accordance with the requirements of either the Federal Superfund Cleanup Process or the RCRA corrective action process, as appropriate. The IRP cleanup process closely follows the requirements of the National Contingency Plan (NCP) as promulgated under the CERCLA, as amended. The IRP seeks to minimize public health and environmental hazards associated with contaminated sites. The Military Munitions Response Program (MMRP) addresses the potential explosives safety, health, and environmental issues caused by past DOD munitions related activities. The MMRP provides a focused program to address the challenges presented at sites called munitions response sites that are located on other than operational ranges. The program addresses the potential explosives safety hazards presented by munitions and explosives of concern with concentrations high enough to pose an explosive hazard and potential environmental contamination. Munitions responses are response actions, including investigation, removal actions and remedial actions that address the explosives safety, human health or environmental risks presented by unexploded ordinance (UXO), discarded military munitions (DMM), and munitions constituents (MC).



The ANG began conducting environmental restoration activities at SANGB in 1982 to address environmental site contamination on the installation, and numerous investigations and studies have been completed since that time. To date, the ANG and the MDNRE have been working corporately to address the state regulator's specific environmental requirements at the Base. The majority of the sites has already been remediated and received no further action (NFA) determinations from the state. Some of these sites include the Southwest Landfill, Tucker Creek Landfill, East Ramp, and the Base Coal Storage Area.

3.17.2 Consequences

Alternative 1: No Action Alternative

There would be no impacts on hazardous and toxic substances under the No Action Alternative because there would be no construction or changes on the site.

Alternative 2: Proposed Action

The Proposed Action does not include significant excavation or rough grading. While contaminants of concern (COC) are present in or in proximity to the subsurface soil and groundwater along the proposed trail, compliance with Part 201 Section 20107a, as amended, will be undertaken to prevent exacerbation of existing contaminated soils and groundwater; that is, a Due Care Plan (DCP) and Operations & Maintenance (O&M) manual will be prepared and submitted to the regulatory agencies. In the areas of DRMO-AOC, MacRay Marina, 700 Marina, IRP Site 5, Rifle Range, and 903 Marina where relocation of soils is restricted, if the impacted soil or groundwater is encountered during the construction phase of the trail, then the soils/groundwater will be identified, analyzed for COCs, and properly removed from the area(s) for disposal in the appropriate landfill. The DCP and O&M manual will also address those areas along the proposed trail that have been identified as "No Restrictions", "No Further Action" (NFA) with "Unrestricted Closures", and areas where "lead soil contamination identified was below relevant screening levels during CSE Phase II". The soil and groundwater in these areas, i.e., the Pistol Range, Sub MG Range, OF5-AOC, et cetera will also be subject to the DCP and O&M manual in the unlikely event that contaminants are encountered. The DCP and O&M manual will remain in perpetuity for future guidance of the O&M of the trail.

3.18 Socioeconomics

3.18.1 Affected Environment

Socioeconomics are defined as the basic attributes and resources associated with the human environment, particularly population and economic activity. Regional birth and death rates and immigration and emigration affect population levels. Economic activity typically encompasses employment, personal income, and industrial or commercial growth. Changes in these two fundamental socioeconomic indicators can be accompanied by changes in other components such as housing availability and the provision of public services. Socioeconomic data at county,



state, and national levels permit characterization of baseline conditions in the context of regional, state, and national trends (SANGB 2010).

Demographics and Employment

Between the years of 1980 and 2010, Harrison Township’s population has experienced a population increase of 4.6% to 24,587 people, compared to a 17.4% population increase for Macomb County. Overall, the Southeast Michigan region experienced a 0.5% increase in population within this time period. **Table 3-18a** presents a summary of relevant regional population information (SEMCOG 2012).

Table 3-18a: Regional Population Statistics

Region	1980	1990	2000	2010	% Change
Harrison Township	23,464	24,685	24,461	24,587	4.6%
Macomb County	694,600	717,400	788,149	840,978	17.4%
Southeast Michigan	4,682,726	4,590,468	4,833,368	4,704,743	0.5%

Although Macomb County experienced growth in its overall job market as the number of jobs increased from 305,983 in 2002 to an estimated 311,366 in 2005 (an increase of 1.7%), the Southeast Michigan region experienced a 2.9% job loss. Harrison Township also experienced a 0.8% job loss during this period. Retail trade and educational services industries experienced the most reductions in job opportunities and the transportation and warehouse industries experienced job growth during this period by adding 130 jobs. **Table 3-18b** presents a summary of the regional employment statistics for the region (SEMCOG 2012).

Table 3-18b: Regional Employment Statistics

Region	2002	2005	Change	% Change
Harrison Township	5,643	5,593	-50	-0.8%
Macomb County	305,983	311,366	5,383	1.7%
Southeast Michigan	2,128,773	2,067,669	-61,104	-2.9%

The highest percentage of income range for households within Harrison Township is the \$50,000 to \$125,000 range which constitutes approximately 38% of total households. The highest income range of \$200,000 includes 3% of households, and 6% of households are



categorized as households generating less than \$10,000 of income. **Table 3-18c** presents a summary of household income within Harrison Township (SEMCOG 2012).

Table 3-18c: 2010 Household Income for Harrison Township

Income Range	# Units	% of Total
\$200,000 or more	318	3%
\$150,000 - \$199,999	631	6%
\$125,000 - \$149,999	670	6%
\$100,000 - \$124,000	997	9%
\$75,000 - \$99,999	1,348	12%
\$60,000 - \$74,999	1,226	11%
\$50,000 - \$59,999	638	6%
\$45,000 - \$49,999	478	4%
\$40,000 - \$44,999	549	5%
\$35,000 - \$39,999	650	6%
\$30,000 - \$34,999	661	6%
\$25,000 - \$29,999	617	6%
\$20,000 - \$24,999	617	6%
\$15,000 - \$19,999	597	5%
\$10,000 - \$14,999	477	4%
Less than \$10,000	679	6%
Total	11,153	

Housing

As of 2010, Harrison Township had 12,956 households, which is an 11.4% increase from the 11,435 households documented in 2000. All household types experienced growth during this time period with exception of mobile homes, which dropped by 11.4%. **Table 3-18d** presents a summary of the housing statistics by type for Harrison Township (SEMCOG 2012).

Table 3-18d: Housing Type Statistics for Harrison Township

Type	2000	2010	Change	% Change
Single Family	6,144	6,808	664	9.8%
Duplex	77	137	60	43.8%
Townhouse/Condo	956	1,441	485	33.7%
Apartment	3,422	3,830	408	10.7%
Mobile Home	835	740	-95	-11.4%
Other	51	0	-51	-100.0%
Total	11,485	12,956	1,471	11.4%

During the 2000-2010 periods, Harrison Township experienced a 13% change in housing ownership and tenure. Of note, there was a 48.1% increase in vacant properties and a 19.1%



drop in seasonally owned homes. Owner occupied and renter occupied household increase slightly by 2.9% and 5.3% respectively. **Table 3-18e** presents a summary of the housing tenure statistics for Harrison Township (SEMCOG 2012).

Table 3-18e: Housing Tenure Statistics for Harrison Township

Tenure	2000	2010	Change	% Change
Owner Occupied	7,481	7,708	227	2.9%
Renter Occupied	3,239	3,420	181	5.3%
Vacant	766	1,476	710	48.1%
Seasonal	199	160	-39	-19.6%
Other	567	1,316	749	56.9%
Total	12,252	14,080	1,828	13.0%

Property Values

The median value of owner-occupied housing units in Harrison Township was \$178,900 in 2010, a \$20,071 decrease (10.1%) from the values recorded in 2000. Additionally, median rent values also dropped 9.8% over this period. **Table 3-18f** presents a summary of the housing value statistics for Harrison Township (SEMCOG 2012).

Table 3-18f: Housing Value Statistics for Harrison Township

Housing Value	2010	2000-2010 Change	% Change
Median Housing Value	\$178,900	-\$20,071	-10.1%
Median Gross Rent	\$750	-\$81	-9.8%

3.18.2 Consequences

Alternative 1: No Action Alternative

There would be no socioeconomic impact to the No Action Alternative because there would not be any development or alteration to the site.

Alternative 2: Proposed Action



The Proposed Action would have minimal impact on socioeconomics in the local area. The development of a trail system through the SANGB would not affect demographics, employment, or housing. It may have a minimal impact on property values because it is an amenity to the community, providing public access to the shoreline of Lake Saint Clair. A regional trail way system provides recreation, circulation, and aesthetic value to an area, and makes it a more desirable place to live.

3.19 Environmental Justice

3.19.1 Affected Environment

EO 12898 is titled, *Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations*. The purpose of this EO is to identify, address, and avoid disproportionately high and adverse human health or environments effects on minority populations or low-income population. This EO requires that Federal agencies' actions substantially affecting human health or the environment do not exclude persons, deny persons benefits, or subject persons to discrimination because of their race, color, or national origin. Consideration of environmental justice concerns includes race, ethnicity, and the poverty status of populations in the vicinity of where a proposed action would occur.

The U.S. Census Bureau defines a poverty area as one where at least 20% of the residents live below the poverty level. In Harrison Township, over the period of 2000 to 2010, there was an increase of 4.7% of persons in poverty, and 4.3% of households in poverty, to totals of 10.4% and 9.8% respectively. The increases are similar to poverty level increases for Macomb County and the southeast Michigan region. **Table 3-19** presents a regional summary of poverty statistics in Harrison Township, Macomb County, and southeast Michigan (SEMCOG 2012).

Table 3.19: Poverty Statistics for Harrison Township

Housing Value	2000	% Poverty 2000	2010	% Poverty 2010	% Change
<i>Southeast Michigan</i>					
Persons in Poverty	503,599	10.6%	668,869	14.3%	3.7%
Households in Poverty	183,181	9.9%	237,494	13.0%	3.1%
<i>Macomb County</i>					
Persons in Poverty	44,010	5.6%	81,239	9.8%	4.2%
Households in Poverty	18,341	5.9%	31,490	9.5%	3.6%
<i>Harrison Township</i>					
Persons in Poverty	1,396	5.7%	2,597	10.4%	4.7%



Households in Poverty	587	5.5%	1,092	9.8%	4.3%
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(U.S. Census Bureau 2010)

EO 13045 is titled, *Protection of Children from Environmental Health Risks and Safety Risks*. This EO requires Federal agencies to identify and assess environmental health and safety risks that might disproportionately affect children. The EO further requires Federal agencies to ensure that their policies, programs, activities, and standards address disproportionate risks related to health or to safety that are attributable to products or substances that the child is likely to come in contact with or ingest.

3.19.2 Consequences

Alternative 1: No Action Alternative

There are no disproportional impacts on minority or low-income populations associated with the no action alternative because there is no alteration or development occurring.

Alternative 2: Proposed Action

The Proposed Action will not create disproportional adverse impacts on minority or low-income populations. In addition, the Proposed Action is not expected to create any adverse risks to children or any other portion of the public. The proposed trail way will be an amenity to the community.

3.20 Human Health and Safety

3.20.1 Affected Environment

Day-to-day operations and maintenance activities conducted on SANGB are performed in accordance with applicable USAF safety regulations, published Air Force Technical Orders, and standards prescribed by Air Force occupational Safety and Health Orders, and standards prescribed by Air Force Occupational Safety and Health requirements. Emergency response activities including fire safety, spill response, and evacuation procedures are covered in the Facility Response Plan (Ensafe 2006).

The primary public concern regarding flight safety is the potential for aircraft mishaps and bird-aircraft strikes. Aircraft mishaps can occur as a result of mid-air collisions, collisions with manmade structures or terrain, weather-related accidents, mechanical failure, or pilot error. Bird-aircraft strikes constitute a safety concern because of the potential for damage to aircraft or injury to aircrews or local populations if an aircraft crash should occur in a populated area (USAF 2005.2). Migratory waterfowl such as ducks, geese, swans, are the most hazardous birds to low-flying aircraft because of their relatively large size and their propensity for migrating in large flocks over a variety of elevations and at all times of the day. Raptors, shorebirds, gulls, herons, and songbirds also pose a hazard.



Operations and maintenance activities at SANGB include wildlife management control measures to manage the risk of bird strikes by aircraft. Bird hazard control measures are performed by base personnel as well as wildlife control personnel from the United States Department of Agriculture (USDA). The wildlife control measures are centered on the Base as well as along the shoreline and include eliminating attractions for wildlife, wildlife harassment measures, and as a last resort lethal measures. All of the wildlife management measures are undertaken under permit and in accordance with the Bird-Aircraft Strike Hazard (BASH) Plan. Portions of the trail project and the security fencing are proposed in areas where wildlife control measures are implemented.

The proposed trail location does not cross or include any explosives storage safety zones. Another public safety concern regarding the proposed trail is access in the event of a medical emergency along the trail way including the causeway portion of trail. Designs of structures are still being reviewed and evaluated for placement at the north and south ends of the Phase 2 trail way segment. These structures would allow emergency vehicle access to the trail, but block the public from being able to get a vehicle through the access point. Alternatively, public emergency vehicle access could be allowed access through the proposed SANGB vehicle access points, if deemed acceptable by ANG.

3.20.2 Consequences

Alternative 1: No Action Alternative

Under the No Action Alternative, there would be no impact to Human Health and Safety because there will be no development, and therefore no alterations to current conditions at SANGB.

Alternative 2: Proposed Action

Under the Proposed Action, Clear Zones for the airfield will be avoided, and security fencing will prevent unauthorized pedestrians and bikers from accessing the Base. Access points for emergency response vehicles are being planned as part of the final trail way design. The Proposed Action may provide a minor benefit to Human Health by increasing physical and recreational outdoor opportunities.

There will be a stretch of proposed trail that will be only accessible to the public at the ends. Distance markers shall be installed along the trail in order to assist emergency responders in determining the necessary location in case of an emergency. The installation of single button native VoIP emergency phones is also being considered along this trail segment.

Impacts to the BASH program have been identified as a significant concern in planning meetings. The proposed trail, perimeter road and security fencing will require wildlife management personnel to alter the current routine associated with wildlife management practices. Wildlife management measures along the lake shore consist of non-lethal harassment and lethal control. The majority of harassment and depredation is conducted away



from the shoreline (Tim Forsys, personal communication), and the proposed trail will likely affect those activities, however this cannot be fully determined until the trail is constructed.

Activities along the shoreline in proximity to the proposed trail that involve non-lethal methods of controlling wildlife can continue as before by implementing harassment measures from the new perimeter security road or from the trail itself. To minimum impacts to the BASH program, multiple access points including two vehicle access gates, will be provided along the perimeter fence to allow base personnel continued access to the shoreline. The final number and locations of these access points will be coordinated with SANGB security and wildlife control personnel and included in the final site plans.

Under certain circumstances, wildlife harassment measures are ineffective at controlling wildlife populations that pose a risk to aircraft. Under those circumstances, wildlife control may need to use lethal measures to eliminate the risk. Wildlife control officers will be able to access the trail way and shoreline area by making use of the closest access point. In order to insure the safety of trail users we suggest a three man team be involved in implementing lethal wildlife control along the shoreline. One officer can directly address the wildlife issue. The other two officers can establish a safe zone around the action by temporarily stopping any trail user traffic at a safe distance. The details of safe zone distances and lethal force protocols will be determined by SANGB. In the event that a larger area of lethal wildlife control effort must be made, the trail can be temporarily closed at the north and south ends of the Phase 2 segment to ensure public safety.

Signage will be placed at the north and south ends of the Phase 2 segment and other strategic locations explaining the purpose of wildlife management measures and the need and importance of the bird-aircraft strike hazard mitigation program. The signs should also include a description of the methods SANGB will use in implementing the program including noisemakers, blanks, and temporary trail closures during use of lethal methods. Signage shall also be provided that explains that the feeding of wildlife is prohibited. Feeding of wildlife could result in a significant BASH concern.

The use of lethal measures to control wildlife in proximity to the trail will require modification of current practices. Impacts to the BASH program associated with the installation of security fencing will be mitigated by the inclusion of multiple, base controlled access points to the trail way. This access will allow continued management of wildlife in a safe and effective manner. Therefore under the Proposed Action, there will be no significant adverse impact on Health and Human Safety.

3.21 Sustainability and Greening

3.21.1 Affected Environment

SANGB, through implementation of an Integrated Natural Resource Management Plan (INRMP), works to conserve, protect, and manage natural resources present on the installation, and has



integrated the interests and missions of the agencies charged with conservation, protection, and management of the natural resources in the public interest. However, in some cases the continuation of existing missions at the installation does sacrifice improvements that can be made to SANGB's natural resources in deference to the safety and efficiency of the various missions at the installation. The INRMP presents various management practices designed to mitigate negative impacts and enhance the positive effects of the installation's mission on regional ecosystems, which are implemented to the maximum extent that agency resources permit.

The development and implementation of SANGB's Integrated Natural Resources Management Plan indicates and details a commitment to natural resources management and conservation. The MCDR also has a strong commitment to natural resources and conservation. The Macomb County Trailways Master Plan and the proposed development of the Lake St. Clair Shoreline trail and a regional network of trails is an example of this commitment.

3.21.2 Consequences

Alternative 1: No Action Alternative

Under the No Action Alternative, there will be no impact on Sustainability and Greening because there will be no development, and therefore no alteration to the existing conditions of SANGB.

Alternative 2: Proposed Action

Under the Proposed Action, there will be no significant impact on Sustainability and Greening. The development of the trail is not proposed to include any sustainable and greening technology. The use of recycled asphalt and crushed concrete for trail construction is being considered for use in the final construction plans. A potential benefit in constructing the trail way and increasing accessibility to the lake may increase the desire and interest in sustainability and restoration efforts in Lake St. Clair and throughout the region.

4.0 CUMULATIVE IMPACTS

All physical construction of the Proposed Action will be completed in a maximum of two phases, Phase 1 and Phase 2 as previously described in the EA. Future connections to other trail ways in the Macomb County trail network are anticipated which may slightly increase overall use of the trail network and the Lake St. Clair Shoreline Trail. No other specific construction projects are known to be planned at this time. Any environmental impacts associated with potential future trail segments would be expected to be minor in nature given that MCDR trails are often constructed in existing road right of ways and always planned in a manner to avoid and minimize impacts to nature resources. A slight increase in overall use of the Lake St. Clair Shoreline Trail would not have significant adverse environmental impacts.



No cumulative impacts are anticipated as a result Proposed Action.

5.0 MITIGATION AND MONITORING

The goal of conducting measures to minimize impacts is to preserve, to the greatest extent possible, existing neighborhoods, land use, and natural resources, and in this case SANG base operations, while conducting the Proposed Action. On-site inspections and research conducted as part of this environmental assessment have been incorporated to avoid impacts and protect as many social and environmental systems as possible. Permitting, specifically a MDEQ/USACE Joint Permit Application will be required for construction of the trail way under NREPA of 1994.

Although some minor impacts are unavoidable, MCDR and ANG have minimized impacts through routing and design adjustments. Minimization of the most significant potential impacts, base security and wildlife control operations, will be achieved by providing multiple locations where ANG personnel can continue to access the trail way and Lake St. Clair shoreline.

Evaluations in this EA have determined that no significant environmental impacts will result from the implementation of the Proposed Action, and therefore no additional mitigation measures are required.



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7.0 ACRONYMS AND ABBREVIATIONS

AAFES	Army and Air Force Exchange Service
AFI	Air Force Instruction
AICUZ	Air Installation Compatible Use Zone
ANG	Air National Guard
ANGB	Air National Guard Base
AQMA	Air Quality Management Area
ARPA	Archeological Resources Protection Act of 1979
ASTs	Above Ground Storage Tanks
BASH	Bird-Aircraft Strike Hazard
CAA	Clean Air Act
CEQ	Council on Environmental Quality
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act of 1980
CFR	Code of Federal Regulations
CRWC	Clinton River Watershed Council
CWA	Clean Water of Act
CWB	Certified Wildlife Biologist
DBCRC	Defense Base Closure and Realignment Commission
DHS	Department of Homeland Security
DMM	Discarded Military Munitions
DNL	Day/Night Noise Level
DoD	Department of Defense
DoDI	Department of Defense Instruction
DRMO	Defense Reutilization and Marketing Office
EA	Environmental Assessment
EMS	Environmental Management System
EO	Executive Order
ESA	Endangered Species Act of 1973
FICUN	Federal Interagency Committee on Urban Noise
FONPA	Finding of No Practical Alternative
FONSI	Finding of No Significant Impact
FRP	Facility Response Plan
GLIN	Great Lakes Information Network
GPM	Gallons per Minute
HAPs	Hazardous Air Pollutants
HCMA	Huron Clinton Metropark Authority
HQ USAF	Headquarters U.S. Air Force
ICRMP	Integrated Cultural Resources Management Plan
INRMP	Integrated Natural Resource Management Plan
IRP	Installation Restoration Program



ITC	International Transmission Corporation
MAJCOM/CE	Major Command
MBTA	Migratory Bird Treaty Act
MC	Munitions Constituents
MCDR	Macomb County Department of Roads
MCHD	Macomb County Health Department
MDOT	Michigan Department of Transportation
MDNR	Michigan Department of Natural Resources
MDEQ	Michigan Department of Environmental Quality
MIANG	Michigan Air National Guard
MMRP	Military Munitions Response Program
MNFI	Michigan Natural Features Inventory
MRA	Multiple Resource Area
MSL	Mean Sea Level
MSU	Michigan State University
NAAQS	National Ambient Air Quality Standards
NAVD	North American Vertical Datum
NCA	Noise Control Act of 1972
NCP	National Contingency Plan
NEPA	National Environmental Policy Act
NFA	No Further Action
NHPA	National Historic Preservation Act of 1966
NRCS	Natural Resources Conservation Service
NRHP	National Register of Historic Places
NREPA	Natural Resources and Environmental Protection Act
PE	Professional Engineer
PWS	Professional Wetland Scientist
RCRA	Resource Conservation and Recovery Act
SAF/MIQ	Secretary of the Air Force for Environmental Quality
SAIC	Science Applications International Corporation
SANG	Selfridge Air National Guard
SANGB	Selfridge Air National Guard Base
SARA	Superfund Amendments and Reauthorization Act of 1986
SDWA	Safe Drinking Water Act
SEMCOG	Southeast Michigan Council of Governments
SHPA	State Historic Preservation Act
SHPO	State Historic Preservation Office
SPCC	Spill Prevention Control and Countermeasures
TCP	Traditional Cultural Property
THPO	Tribal Historic Preservation Office
TSCA	Toxic Substances Control Act
UFC	Unified Facilities Criteria
USACE	United States Army Corps of Engineers



USACOE	United States Army Corps of Engineers
USAF	United States Air Force
USC	United States Code
USCB	United States Census Bureau
USDA	United States Department of Agriculture
USEPA	United States Environmental Protection Agency
USFWS	United States Fish & Wildlife Service
USGBC	United States Green Building Council
UXO	Unexploded Ordinance
WIP	Wetland Identification Program
WQA	Water Quality Act of 1987



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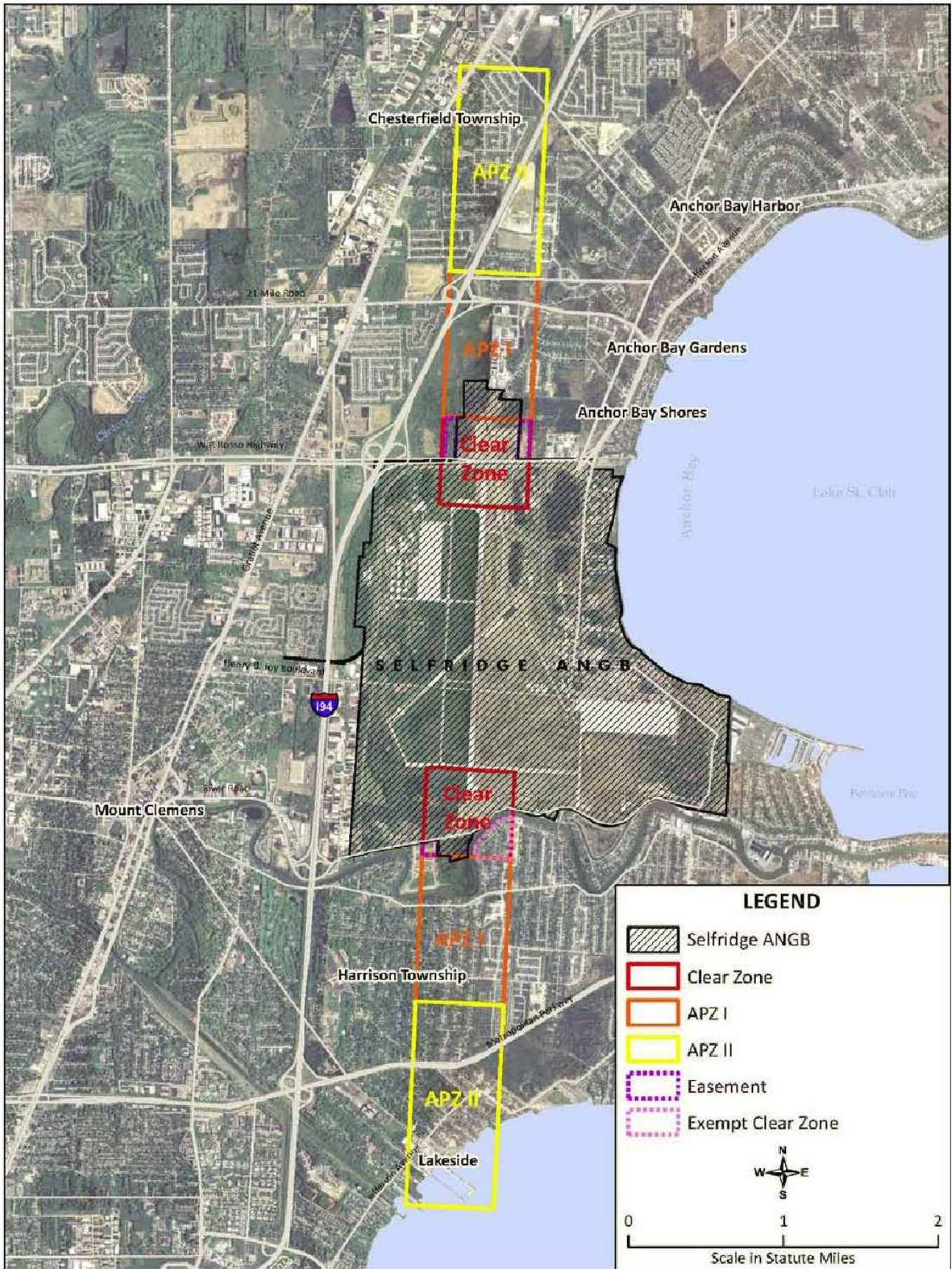
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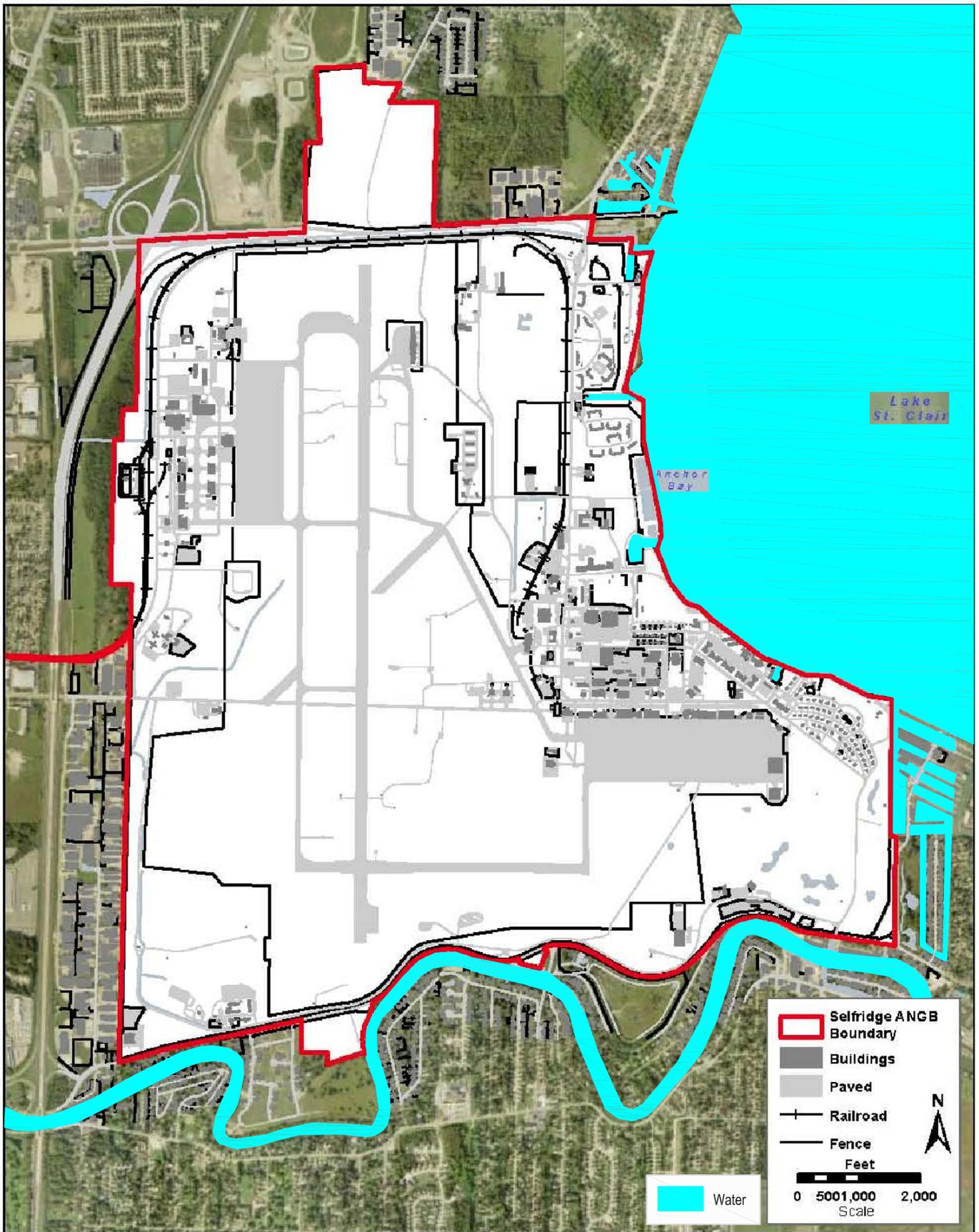
Appendix A

Site Location Maps/Existing Site Data





SOURCE: AIR INSTALLATION COMPATIBLE USE ZONE REPORT, SELFRIDGE IR NATIONAL GUARD BASE, MICHIGAN AIR NATIONAL GUARD, MOUNT CLEMENS, MICHIGAN, OCTOBER 2009.



Sources: Base Data: ANGB Selfridge 2007
 Aerial Photo: ESRI Microsoft Virtual Earth Premium Online Service, 2009.

SOURCE: INTEGRATED NATURAL RESOURCES MANAGEMENT PLAN/ENVIRONMENTAL ASSESSMENT, SELFDRIDGE AIR NATIONAL GUARD BASE, MACOMB COUNTY, MICHIGAN. PREPARED FOR AIR NATIONAL GUARD READINESS CENTER AND MICHIGAN AIR NATIONAL GUARD, OCTOBER 2010.

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**LAKE ST. CLAIR
 SHORELINE TRAIL PROJECT**



MACOMB COUNTY, MICHIGAN



ECT PROJECT NO: 120036

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ENVIRONMENTAL ASSESSMENT

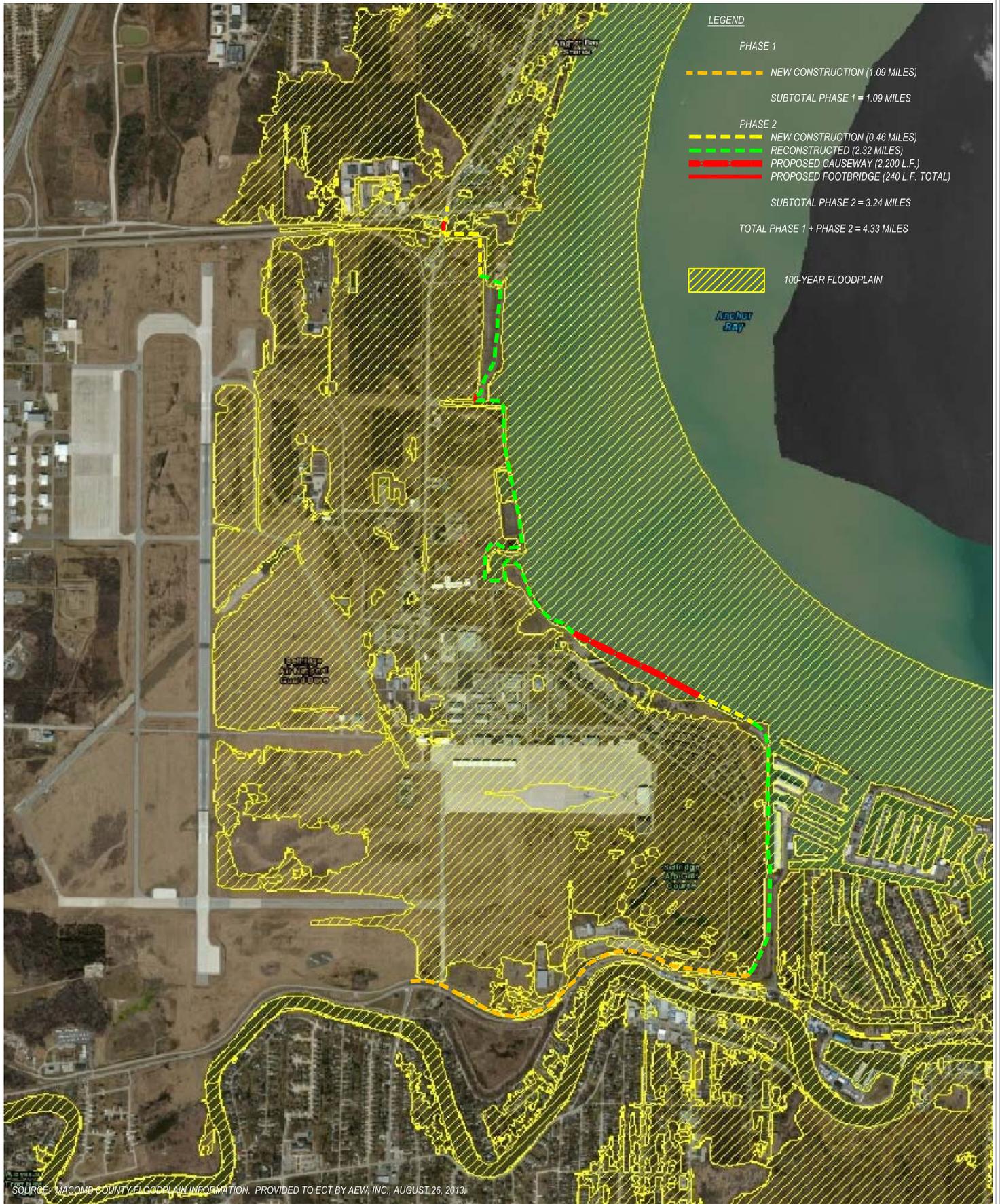
MARCH 2013

SHEET NAME:
DETAIL MAP OF SELFDRIDGE ANGB

SCALE: AS SHOWN



SHEET
 NUMBER
1 OF 1



LEGEND

PHASE 1

- - - NEW CONSTRUCTION (1.09 MILES)
- SUBTOTAL PHASE 1 = 1.09 MILES

PHASE 2

- - - NEW CONSTRUCTION (0.46 MILES)
- - - RECONSTRUCTED (2.32 MILES)
- - - PROPOSED CAUSEWAY (2,200 L.F.)
- - - PROPOSED FOOTBRIDGE (240 L.F. TOTAL)

SUBTOTAL PHASE 2 = 3.24 MILES

TOTAL PHASE 1 + PHASE 2 = 4.33 MILES



100-YEAR FLOODPLAIN

Macomb Bay

Selling Point Amphitheater

Selling Point Amphitheater Courts

SOURCE: MACOMB COUNTY FLOODPLAIN INFORMATION, PROVIDED TO ECT BY AEW, INC., AUGUST 26, 2013

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**LAKE ST. CLAIR
SHORELINE TRAIL PROJECT**



MACOMB COUNTY, MICHIGAN



ECT PROJECT NO: 120036

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ENVIRONMENTAL ASSESSMENT

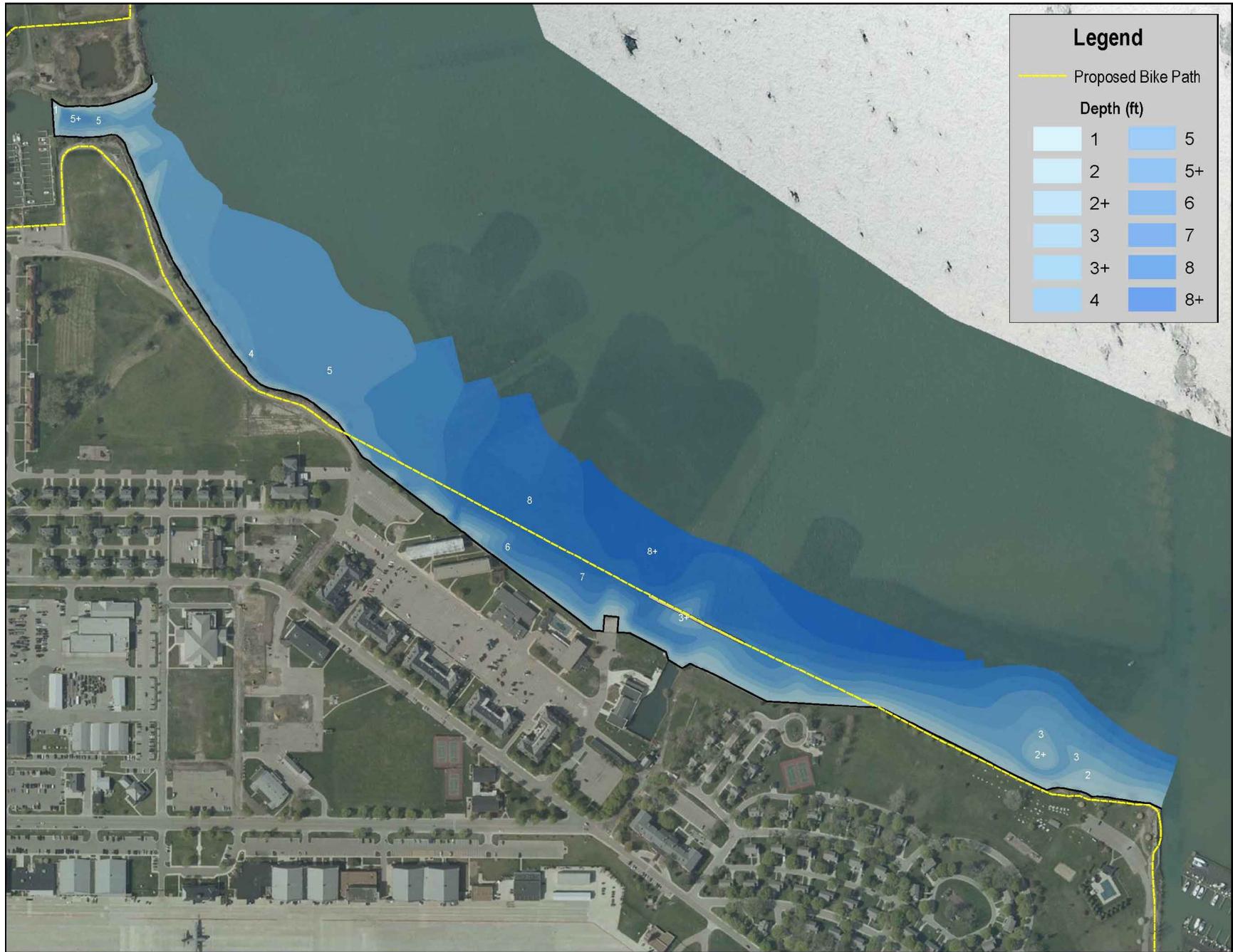
AUG 2013

SHEET NAME:
FLOODPLAIN MAP

SCALE: 1" = 2,000' (@ 8.5" x 11")



SHEET
NUMBER
1 OF 1



Legend	
— Proposed Bike Path	
Depth (ft)	
1	5
2	5+
2+	6
3	7
3+	8
4	8+

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**LAKE ST. CLAIR
 SHORELINE TRAIL PROJECT**
 **MACOMB COUNTY, MICHIGAN**
 ECT PROJECT NO: 120036 

PROJECT NUMBERS:
 ECT PROJECT NO: 120036

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 586.726.1234

ENVIRONMENTAL ASSESSMENT

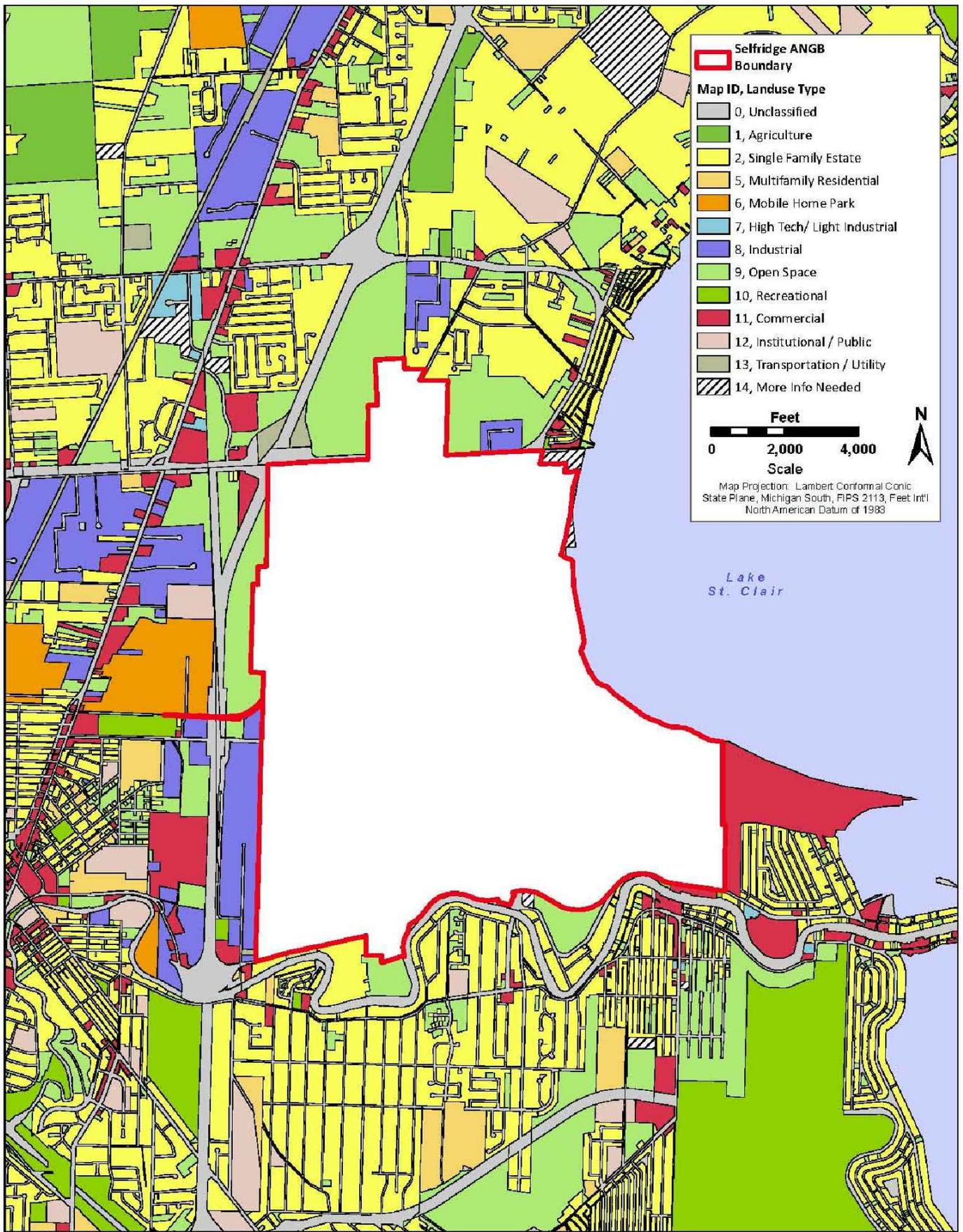
MARCH 2013

SHEET NAME:
**LAKE ST. CLAIR SHORE
 BATHYMETRY MAP**

SCALE: 1" = 500' (@ 8.5" x 11")



SHEET
 NUMBER
1 OF 1



Sources: Landuse: Copyright 2001 Macomb County, Michigan

SOURCE: INTEGRATED NATURAL RESOURCES MANAGEMENT PLAN/ENVIRONMENTAL ASSESSMENT, SELFDRIGE AIR NATIONAL GUARD BASE, MACOMB COUNTY, MICHIGAN. PREPARED FOR AIR NATIONAL GUARD READINESS CENTER AND MICHIGAN AIR NATIONAL GUARD, OCTOBER 2010.



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**LAKE ST. CLAIR
SHORELINE TRAIL PROJECT**



MACOMB COUNTY, MICHIGAN
ECT PROJECT NO: 120036



ENVIRONMENTAL ASSESSMENT

MARCH 2013

SHEET NAME:
**LAND USE SURROUNDING
SELFDRIGE ANGB**

SCALE: AS SHOWN



SHEET
NUMBER
1 OF 1



Sources: Roads: ESRI Street Map U SA 2005; Base Data, Streams: Selfridge ANGB 2009,
Noise Contours: Selfridge ANGB 2010.

SOURCE: INTEGRATED NATURAL RESOURCES MANAGEMENT PLAN/ENVIRONMENTAL ASSESSMENT, SELFTRIDGE AIR NATIONAL GUARD BASE, MACOMB COUNTY, MICHIGAN. PREPARED FOR AIR NATIONAL GUARD READINESS CENTER AND MICHIGAN AIR NATIONAL GUARD, OCTOBER 2010.

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**LAKE ST. CLAIR
SHORELINE TRAIL PROJECT**



MACOMB COUNTY, MICHIGAN

ECT PROJECT NO: 120036



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Engineering Strong Communities
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ENVIRONMENTAL ASSESSMENT

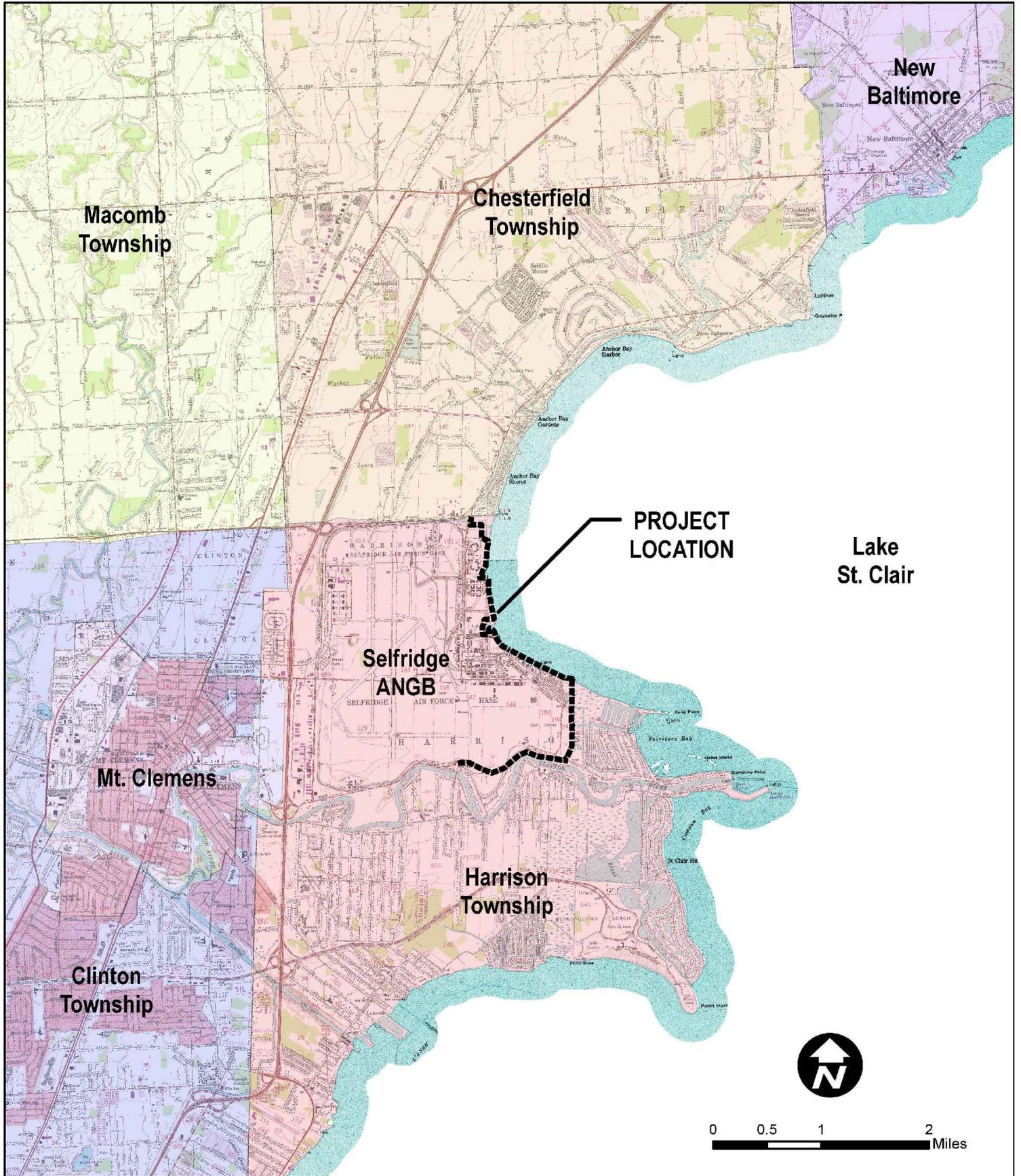
MARCH 2013

SHEET NAME:
**NOISE CONTOURS
OF SELFTRIDGE ANGB**

SCALE: AS SHOWN



SHEET
NUMBER
1 OF 1



SOURCE: ECT, INC., 2012.



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ENVIRONMENTAL ASSESSMENT

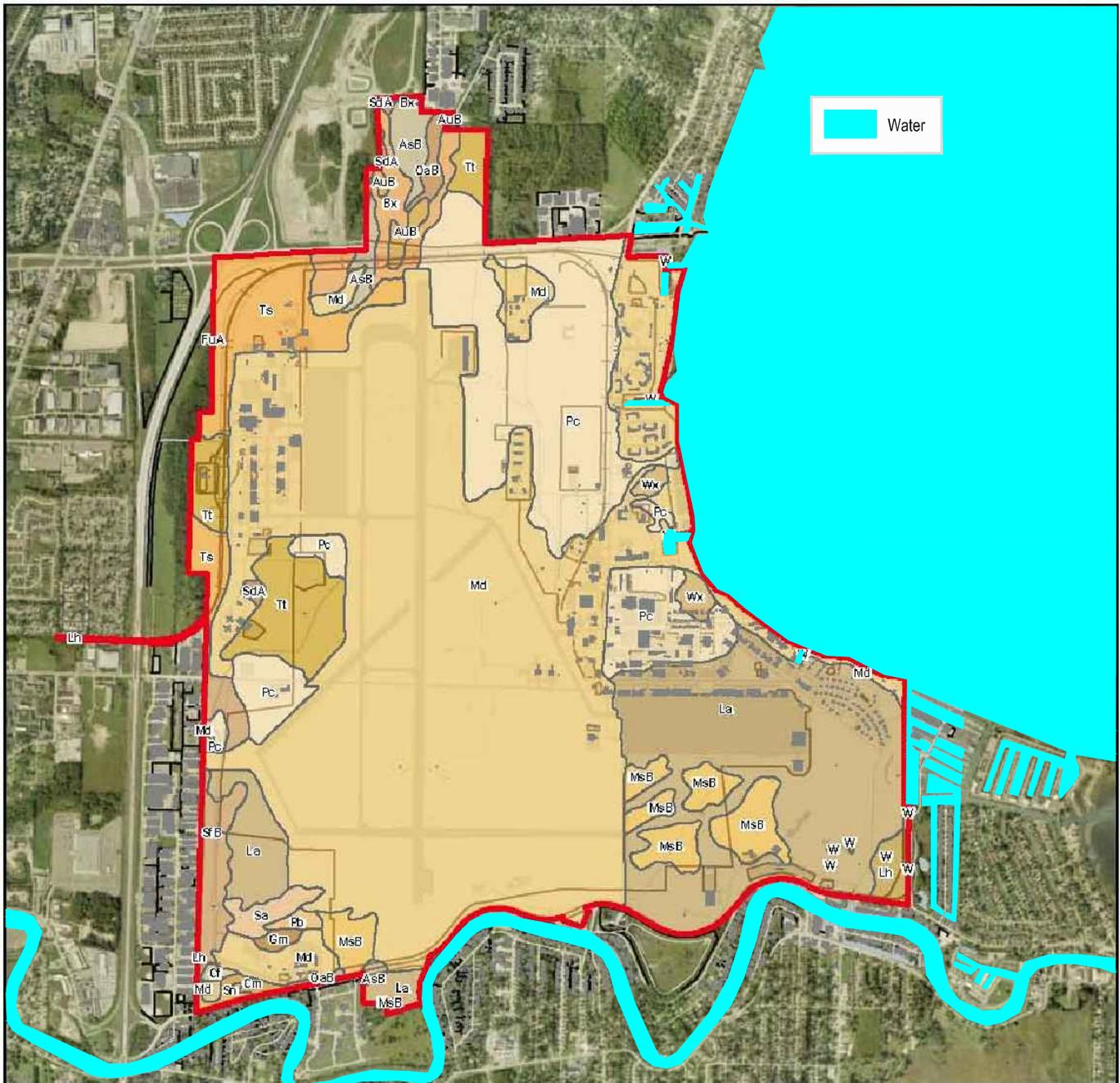
MARCH 2013

SHEET NAME:
PROJECT LOCATION MAP

SCALE: AS SHOWN



SHEET
NUMBER
1 OF 1



Soil Types

- AsB, Au Gres sand, 0 to 6 percent slopes
- AuB, Au Gres sand, loamy substratum, 0 to 6 percent slopes
- Bx, Brevort-Selfridge complex
- Cf, Ceresco fine sandy loam
- FuA, Fulton loam, 0 to 2 percent slopes
- Gm, Granby loamy fine sand
- La, Lamson fine sandy loam
- Lh, Lenawee clay loam
- Md, Made land
- MsB, Minoa fine sandy loam, 0 to 4 percent slopes

- OaB, Oakville fine sand, 0 to 6 percent slopes
- Pb, Pits, borrow
- Pc, Paulding clay
- Sa, Sanitary land fill
- SdA, Selfridge fine sand, 0 to 2 percent slopes
- SFB, Selfridge-Lenawee complex, 0 to 4 percent slopes
- Sn, Sloan loam
- Ts, Toledo silty clay loam
- Tt, Toledo clay
- W, Water
- Wx, Willette muck

- Selfridge ANGB Boundary
- Buildings
- Fence
- Railroad
- Paved



Sources; Soils Data: NRCS 2006; Aerial Photo: ESRI Microsoft Virtual Earth Premium Online Service, 2009.

SOURCE: INTEGRATED NATURAL RESOURCES MANAGEMENT PLAN/ENVIRONMENTAL ASSESSMENT, SELFTRIDGE AIR NATIONAL GUARD BASE, MACOMB COUNTY, MICHIGAN. PREPARED FOR AIR NATIONAL GUARD READINESS CENTER AND MICHIGAN AIR NATIONAL GUARD, OCTOBER 2010.

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ENVIRONMENTAL ASSESSMENT MARCH 2013

SHEET NAME:
**SOIL MAPPING UNITS
ON SELFTRIDGE ANGB**

SCALE: AS SHOWN

SHEET
NUMBER
1 OF 1



SOURCE: ECT, INC., 2012.

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ENVIRONMENTAL ASSESSMENT FEB. 2014

SHEET NAME:
WETLAND MAP

SCALE: 1" = 1,000' (@11"x17")

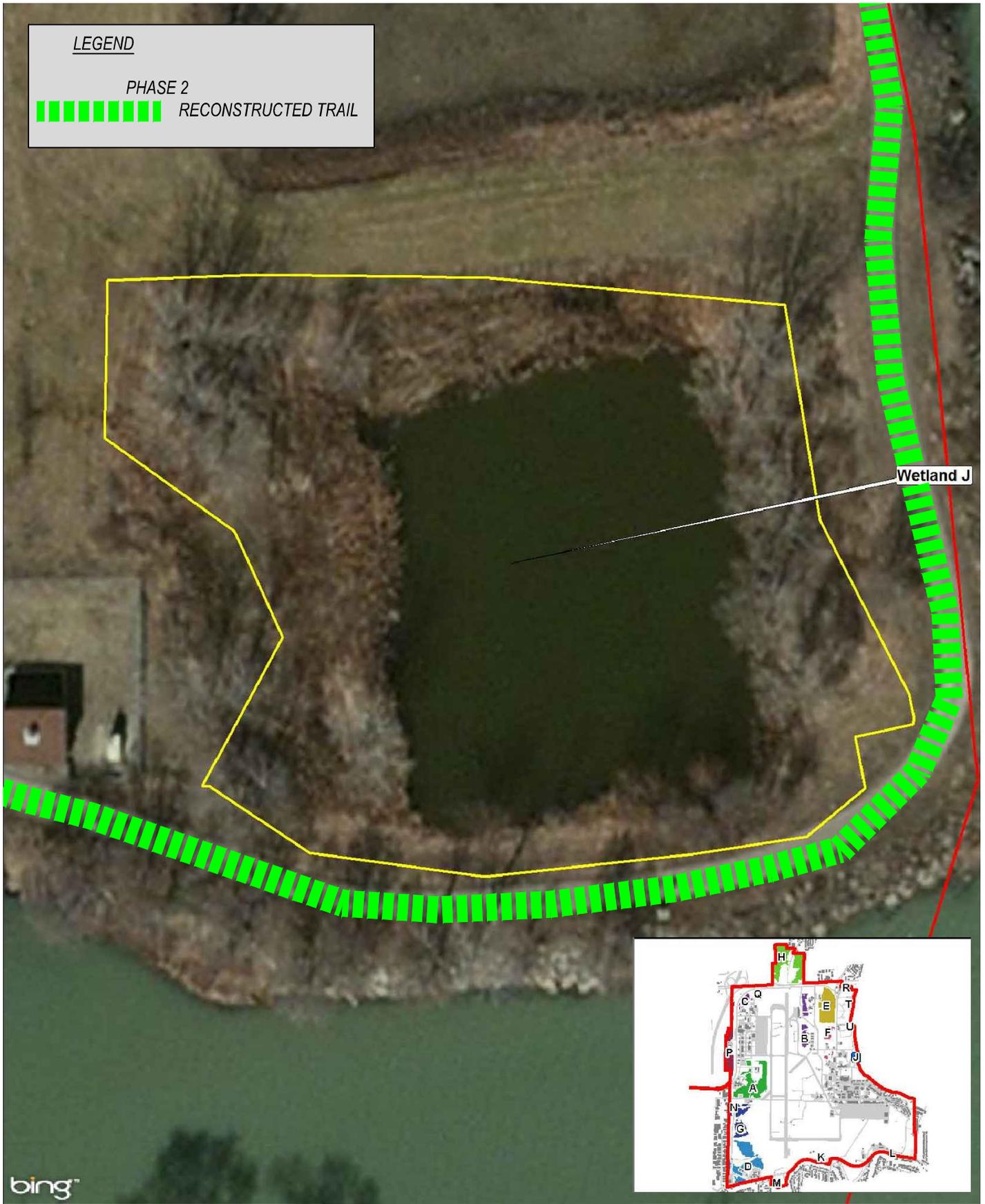
0 500 1,000 FEET



SHEET
 NUMBER
1 OF 1

LEGEND

PHASE 2
RECONSTRUCTED TRAIL



bing™

SOURCE: HDR, INC., DECEMBER 2013.

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ENVIRONMENTAL ASSESSMENT

FEB. 2014

SHEET NAME:
WETLAND J MAP

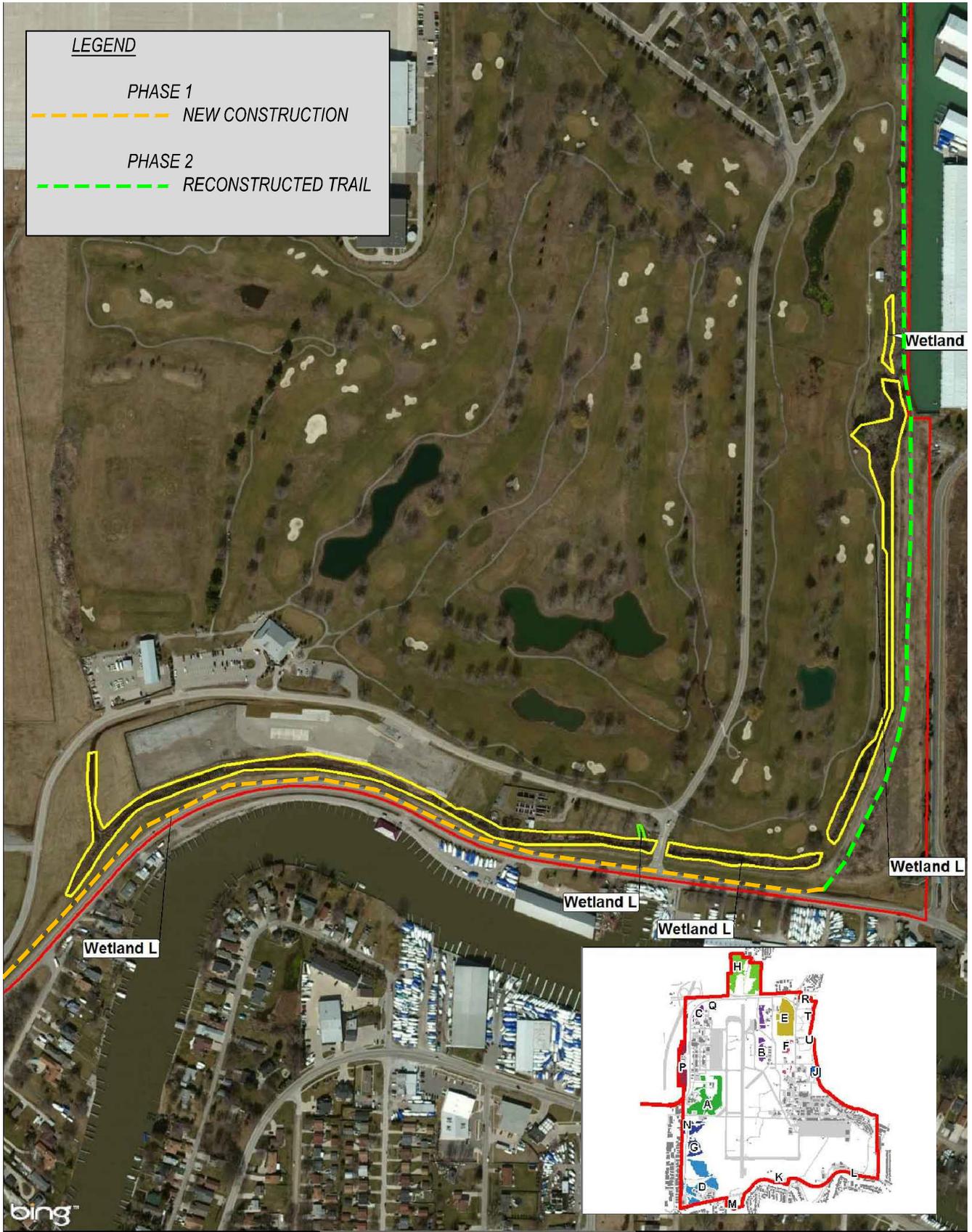


SHEET
NUMBER
1 OF 1

LEGEND

PHASE 1
 --- NEW CONSTRUCTION

PHASE 2
 --- RECONSTRUCTED TRAIL



SOURCE: HDR, INC., DECEMBER 2013.

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MACOMB COUNTY, MICHIGAN

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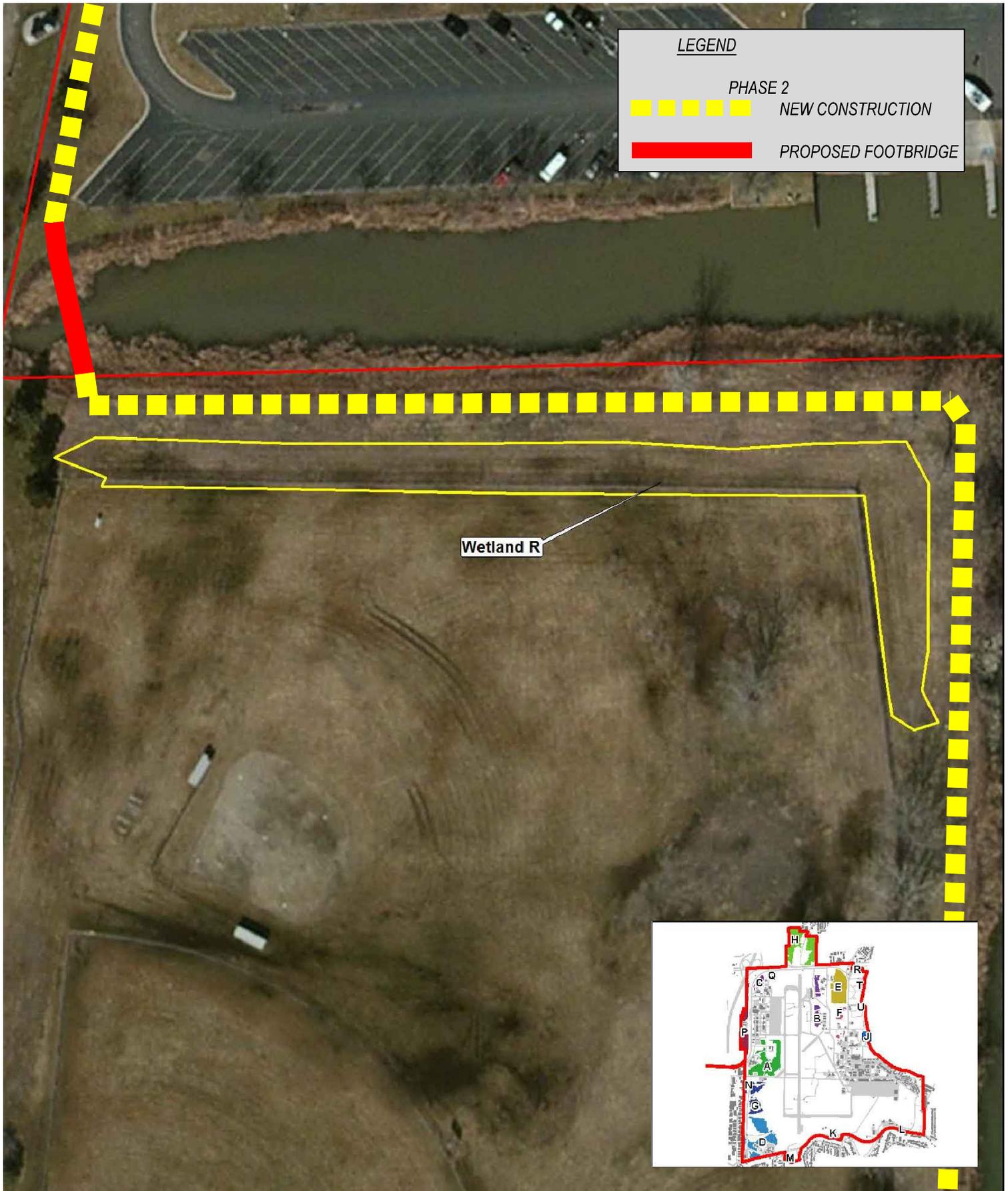
ENVIRONMENTAL ASSESSMENT

FEB. 2014

SHEET NAME:
WETLAND L MAP



SHEET
 NUMBER
1 OF 1



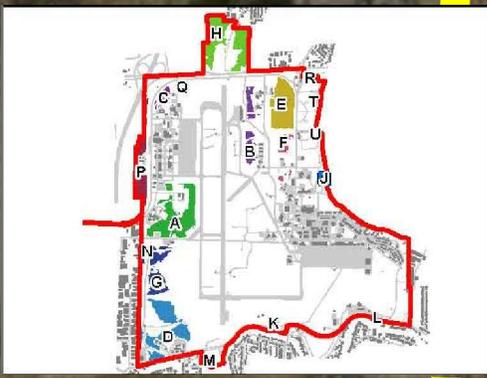
LEGEND

PHASE 2

NEW CONSTRUCTION

PROPOSED FOOTBRIDGE

Wetland R



SOURCE: HDR, INC., DECEMBER 2013.

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SHEET NAME:
WETLAND R MAP

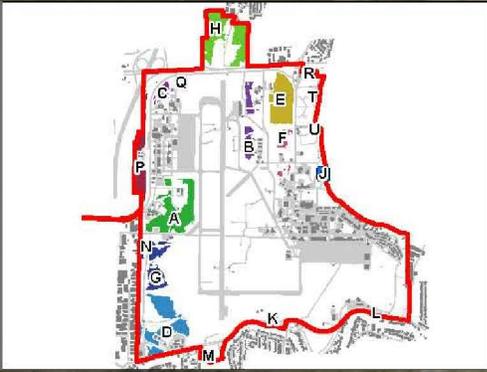
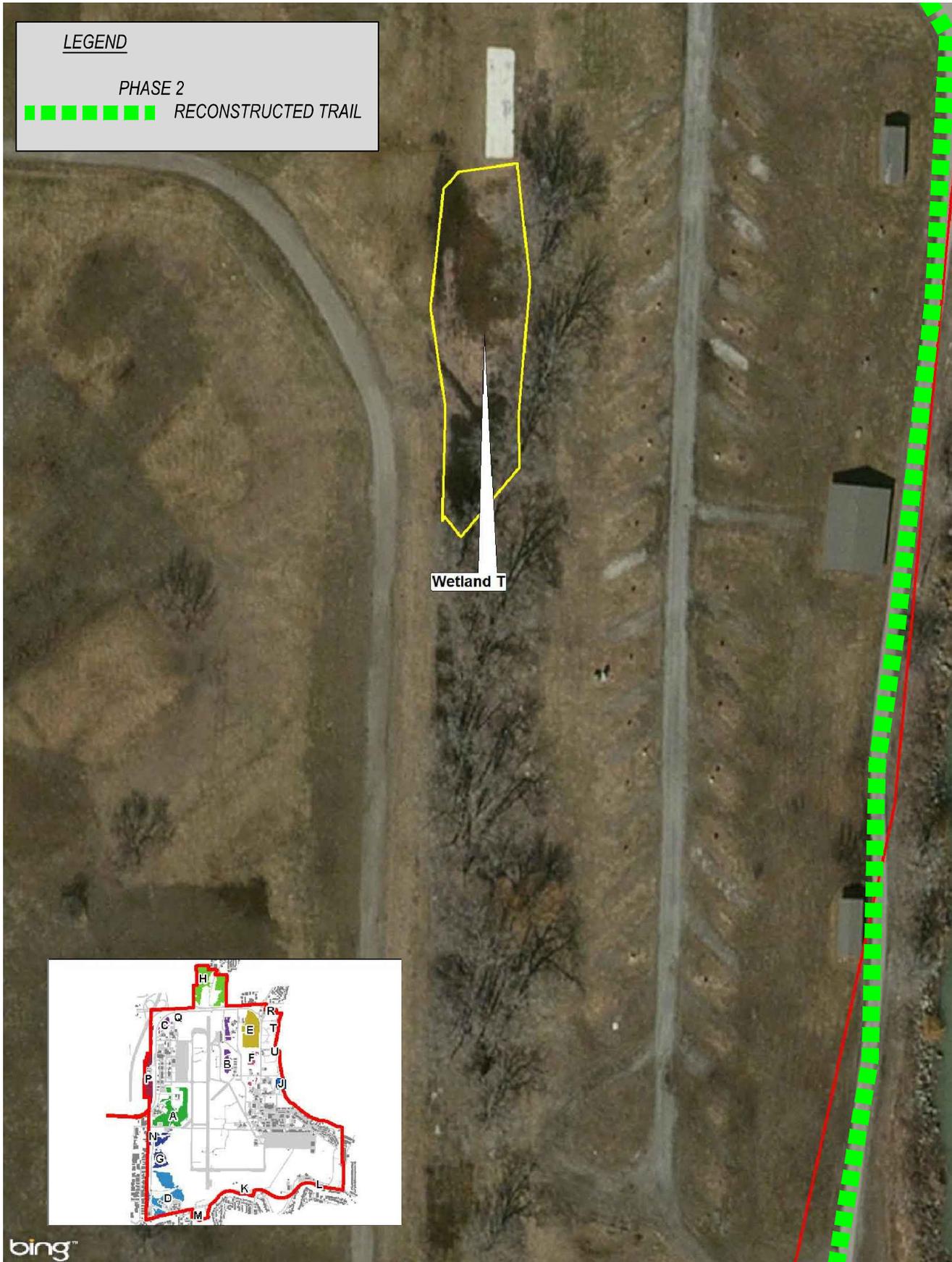


SHEET
NUMBER
1 OF 1

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LEGEND

PHASE 2
RECONSTRUCTED TRAIL



SOURCE: HDR, INC., DECEMBER 2013.



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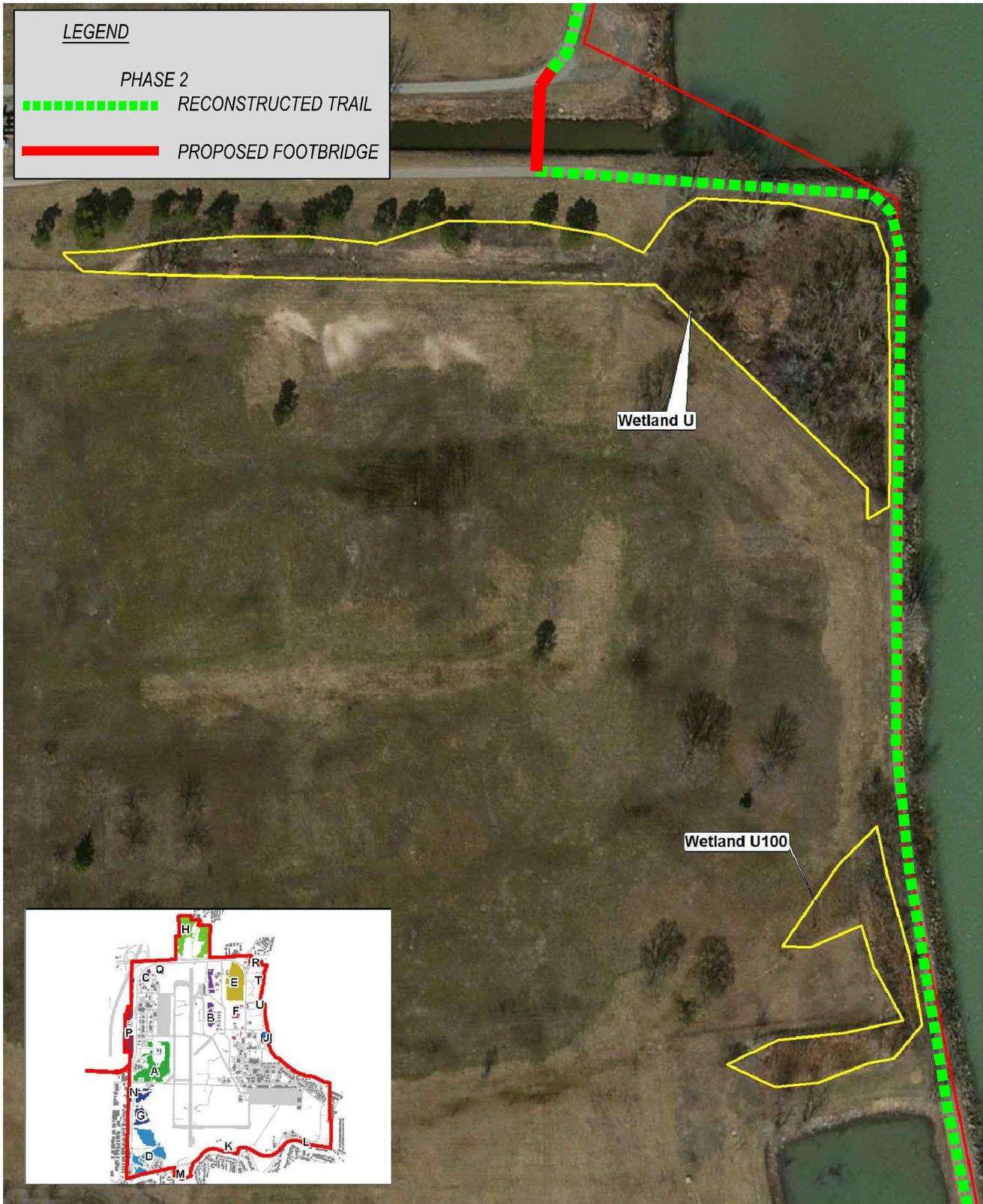
ENVIRONMENTAL ASSESSMENT

FEB. 2014

SHEET NAME:
WETLAND T MAP



SHEET
NUMBER
1 OF 1



SOURCE: HDR, INC., DECEMBER 2013.



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MACOMB COUNTY, MICHIGAN
ECT PROJECT NO: 120036



ENVIRONMENTAL ASSESSMENT

FEB. 2014

SHEET NAME:
WETLAND U MAP

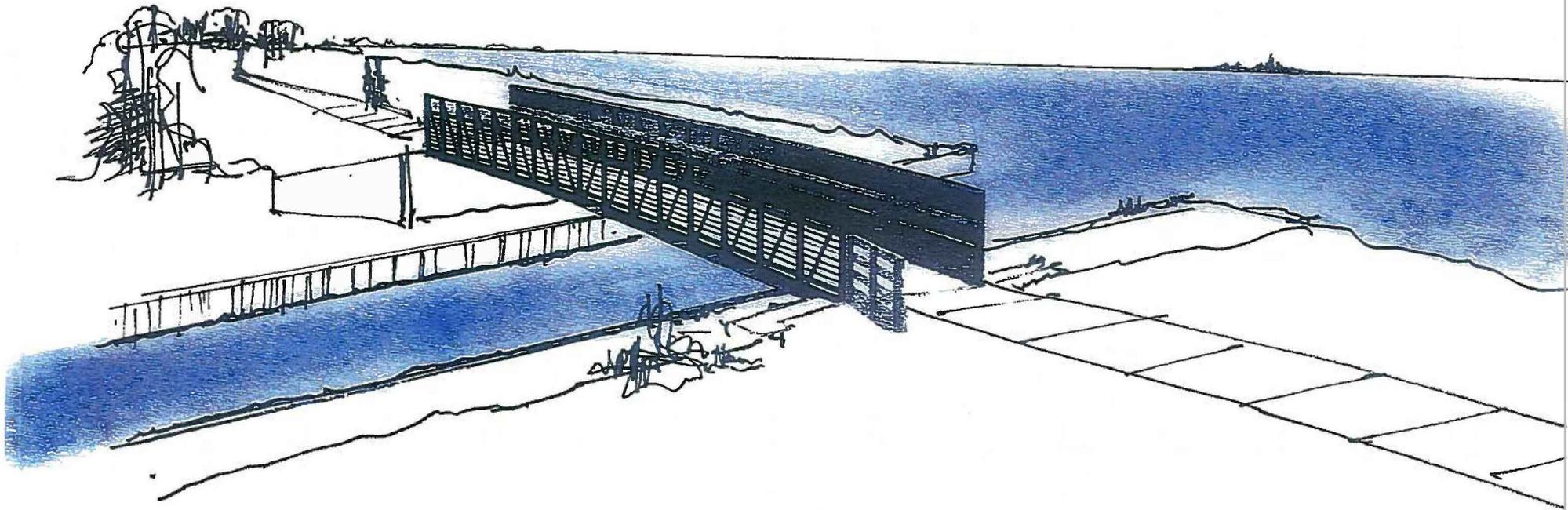


SHEET
NUMBER
1 OF 1

Appendix B

Proposed Design





SOURCE: ANDERSON, ECKSTEIN & WESTRICK.

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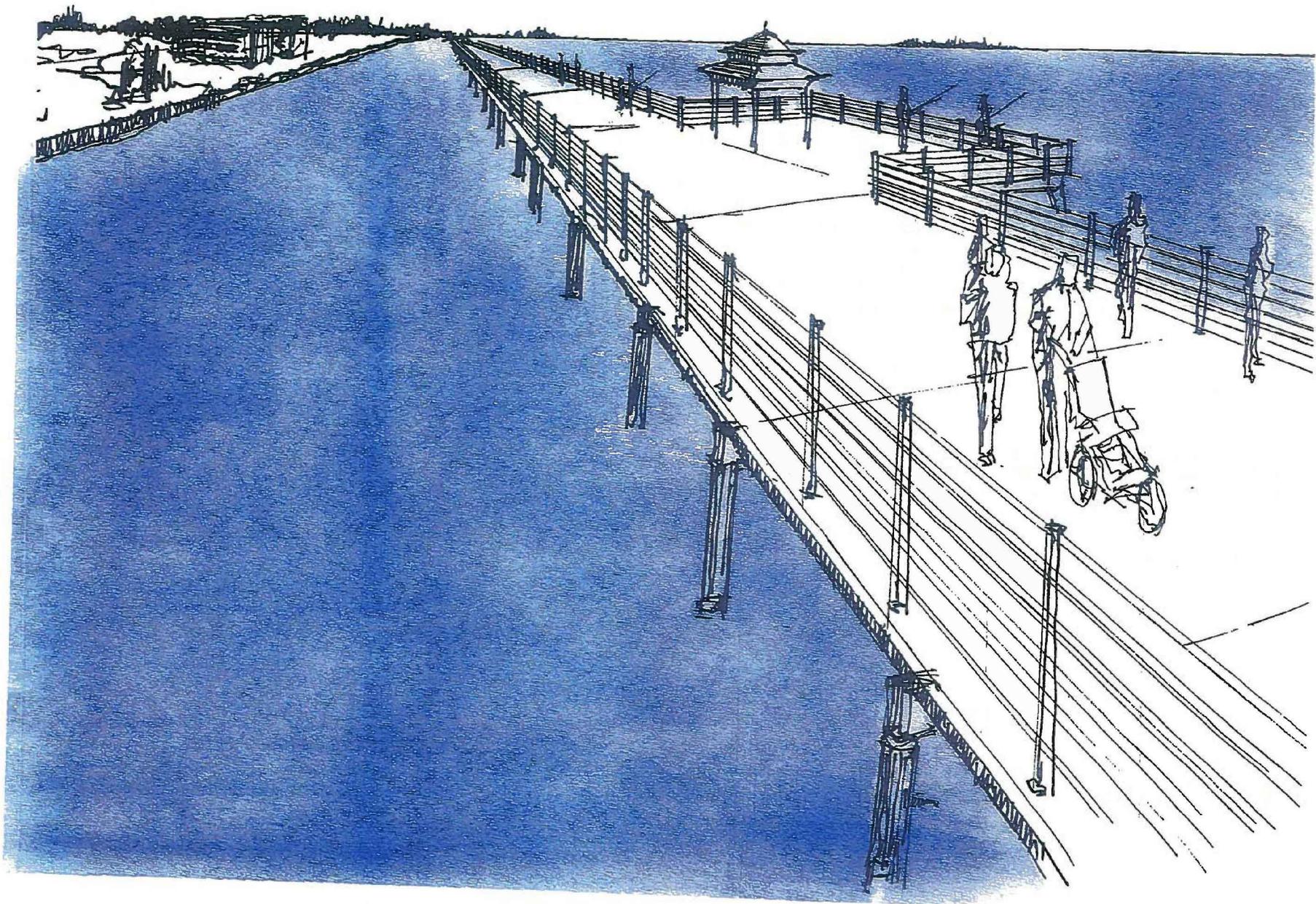
MARCH 2013

SHEET NAME:
CONCEPTUAL BRIDGE DESIGN

NOT TO SCALE



SHEET
 NUMBER
1 OF 1



SOURCE: ANDERSON, ECKSTEIN & WESTRICK.

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 **MACOMB COUNTY, MICHIGAN** 
 ECT PROJECT NO: 120036

PROJECT NUMBERS:
 ECT PROJECT NO: 120036


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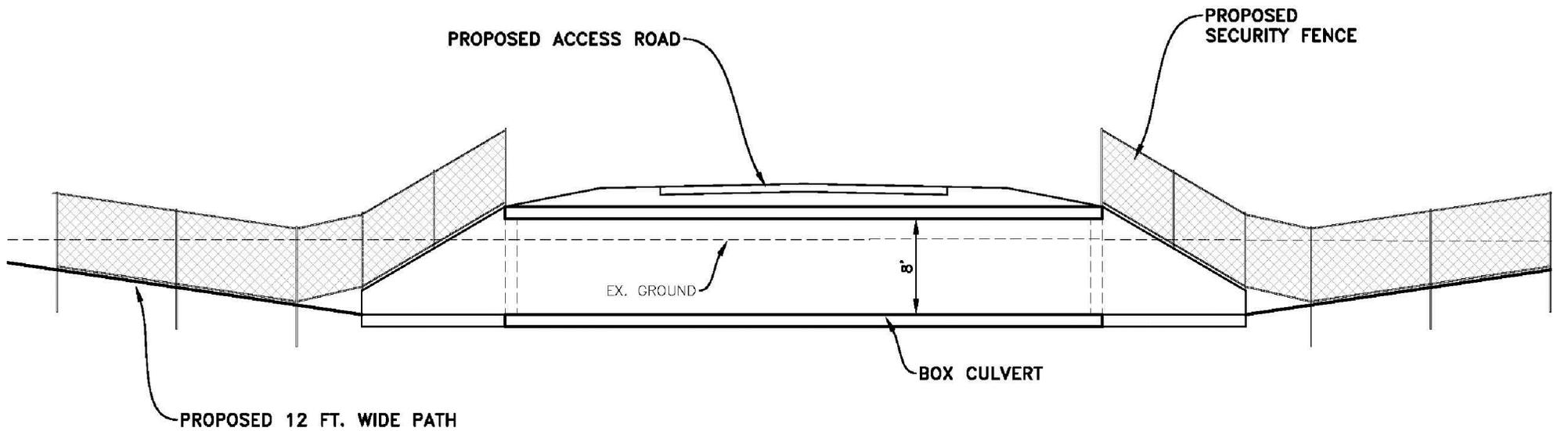
ENVIRONMENTAL ASSESSMENT

MARCH 2013

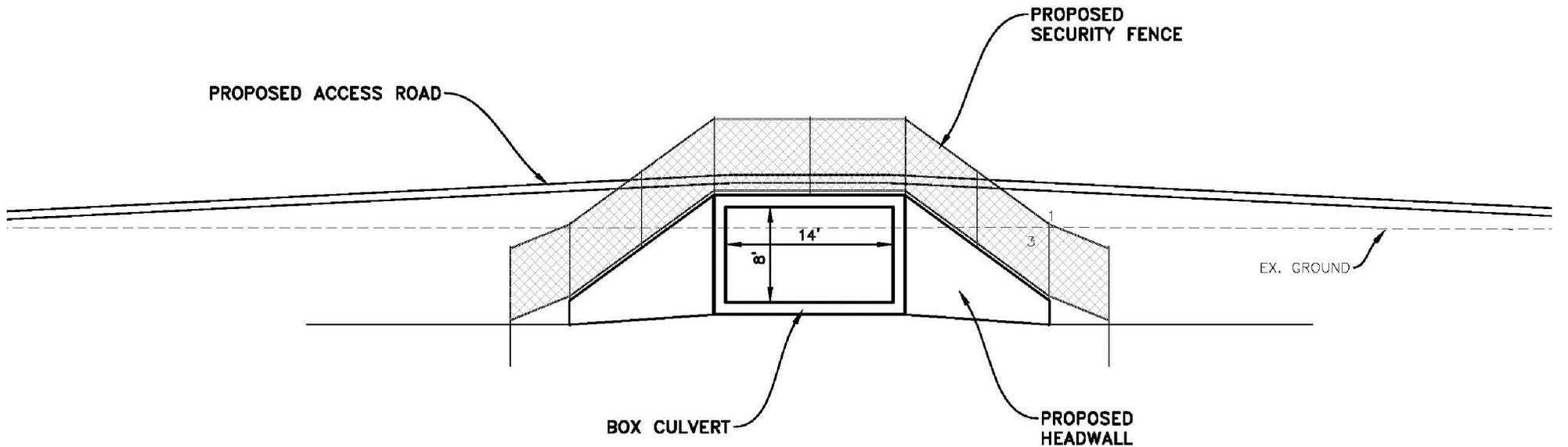
SHEET NAME:
CONCEPTUAL CAUSEWAY DESIGN

NOT TO SCALE


 SHEET
 NUMBER
1 OF 1



PROFILE OF GRADE CROSSING



CROSS SECTION OF GRADE CROSSING

SOURCE: ANDERSON, ECKSTEIN & WESTRICK.

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ECT PROJECT NO: 120036

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ENVIRONMENTAL ASSESSMENT

MARCH 2013

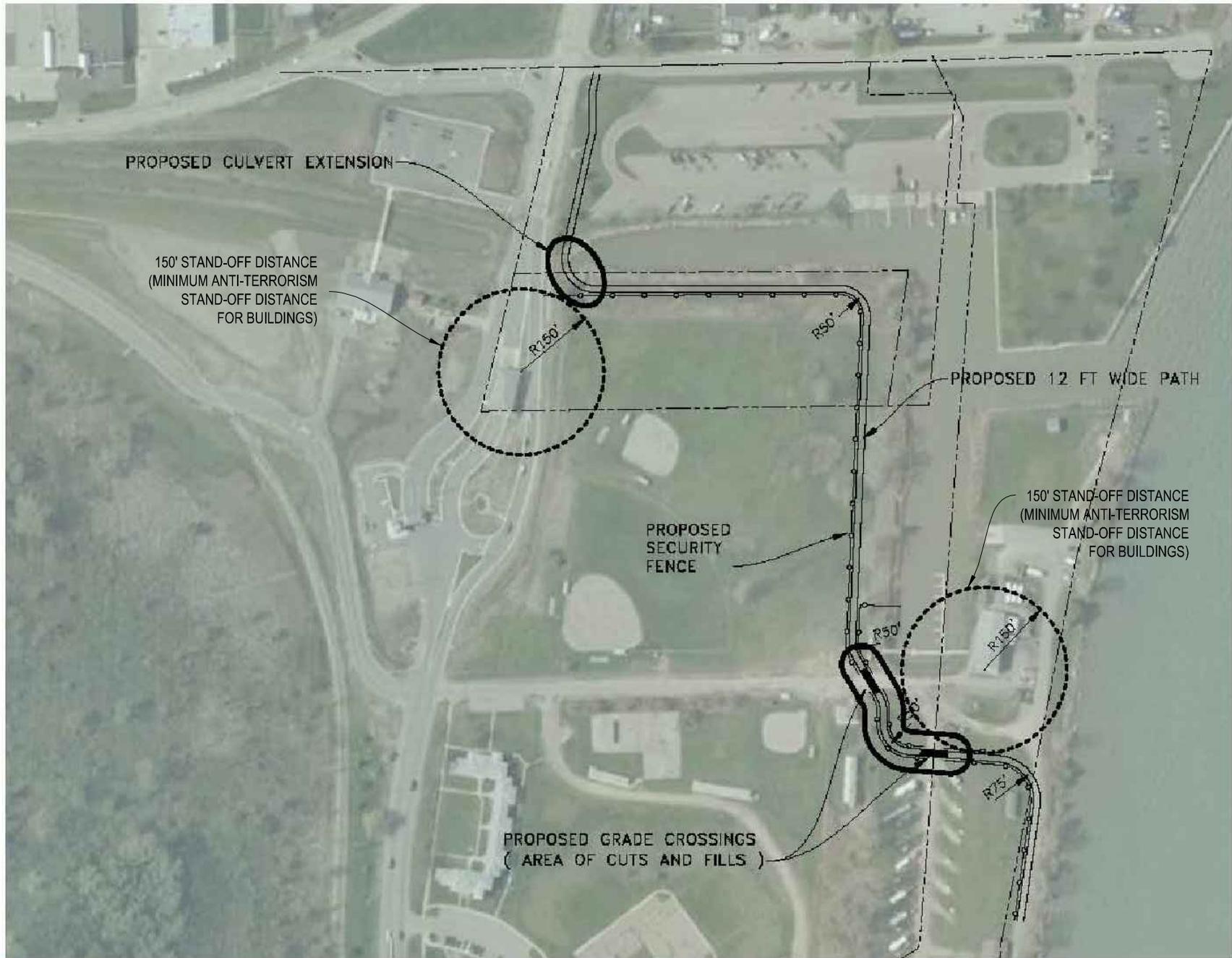
SHEET NAME:
GRADE CROSSING DETAILS

SCALE: 1" = 250' (@ 8.5" x 11")

0 125 250 FEET



SHEET
NUMBER
1 OF 1



SOURCE: ANDERSON, ECKSTEIN & WESTRICK.

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 **MACOMB COUNTY, MICHIGAN**

 ECT PROJECT NO: 120036

PROJECT NUMBERS:
 ECT PROJECT NO: 120036

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ENVIRONMENTAL ASSESSMENT

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SHEET NAME:
NORTH GRADE CROSSING

SCALE: 1" = 250' (@ 8.5" x 11")
 FEET



SHEET
 NUMBER
1 OF 1



SOURCE: ECT, INC., 2012.



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MACOMB COUNTY, MICHIGAN

ECT PROJECT NO: 120036



ENVIRONMENTAL ASSESSMENT

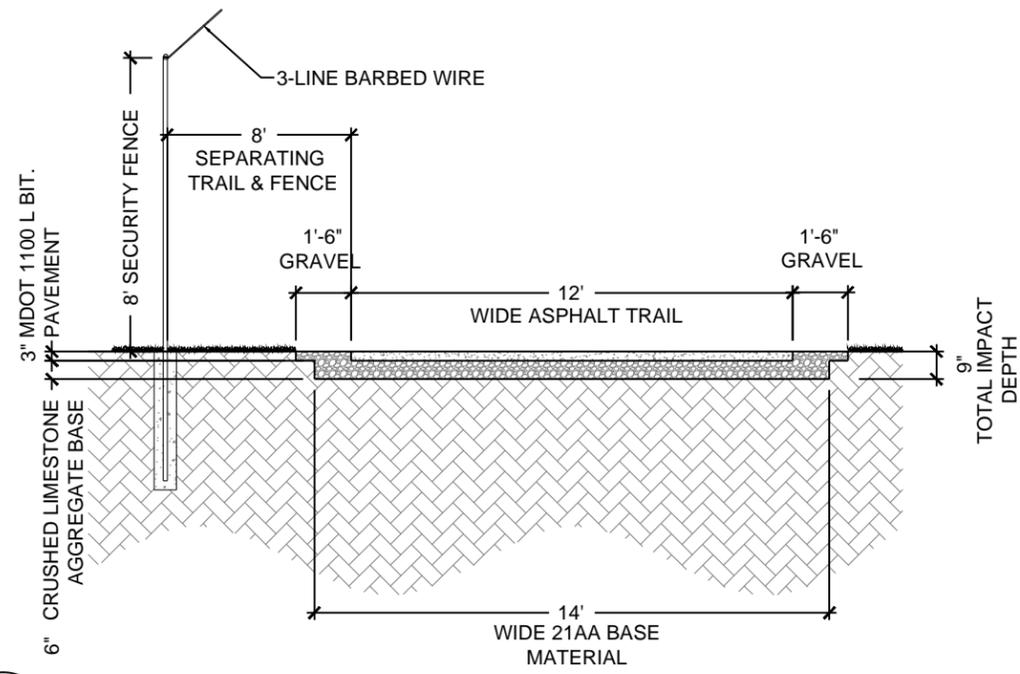
MARCH 2013

SHEET NAME:
**NORTH RIVER ROAD WEST
ALTERNATIVE MAP**

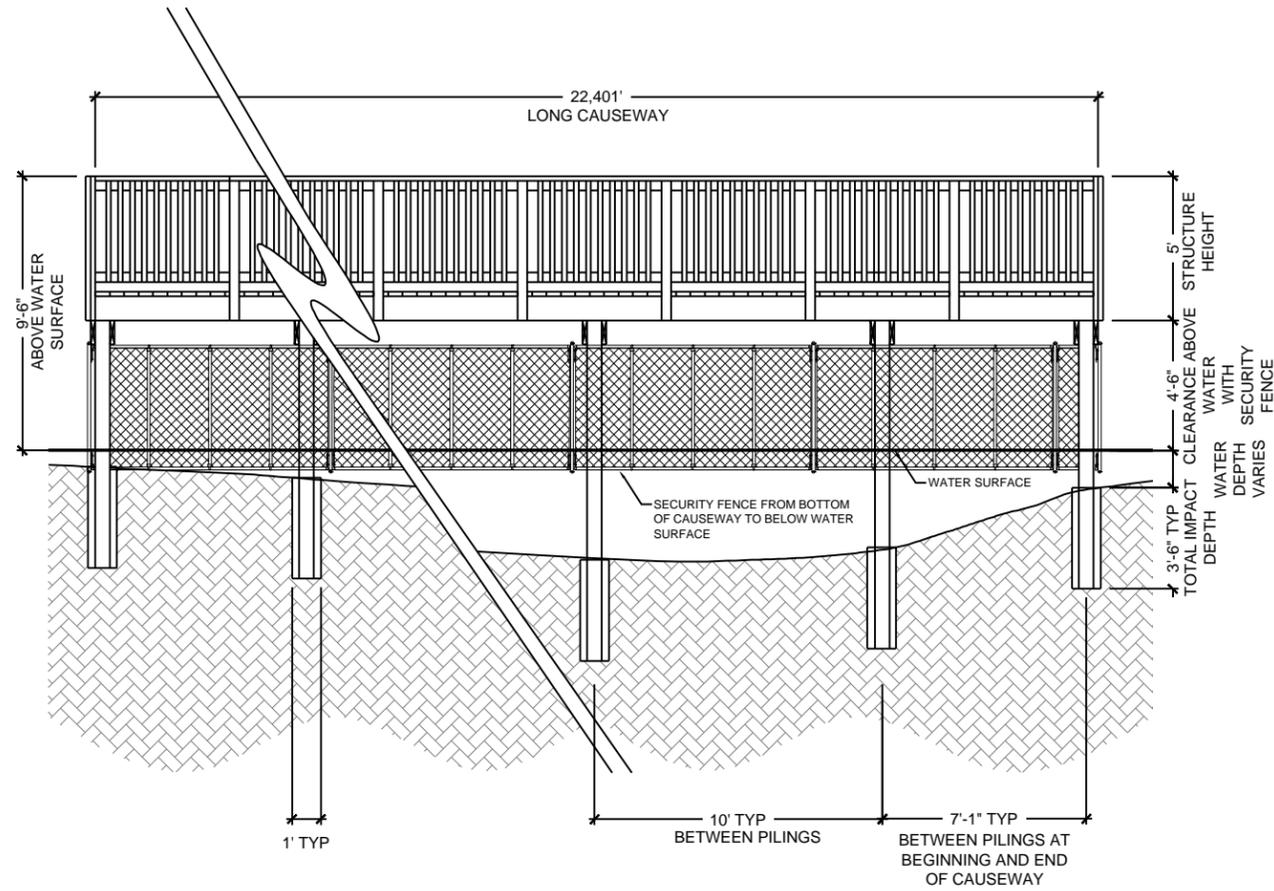
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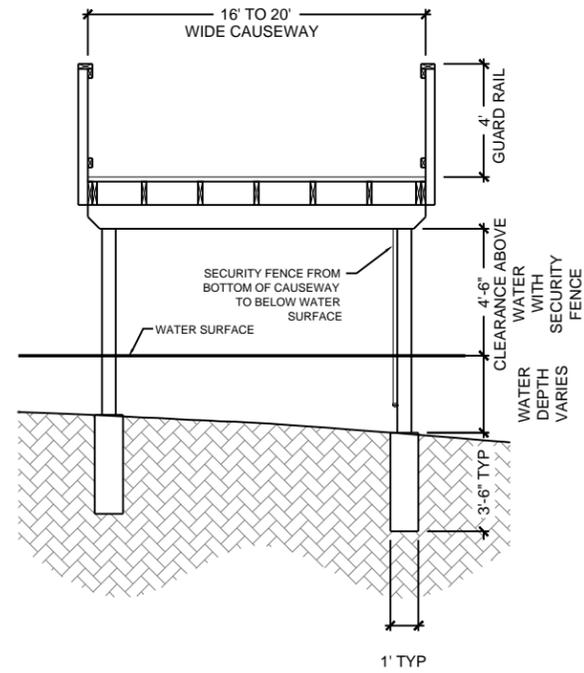
SHEET
NUMBER
1 OF 1



12' WIDE ASPHALT TRAIL SECTION



2,200' LONG CAUSEWAY SECTION



16' - 20' WIDE CAUSEWAY SECTION

	Reconstructed Path Impact CY	New Path Impact CY	Causeway Impact CY	TOTAL
PHASE 1: North River Road Bike Path	364.6	6031.9	N/A	6396.5
PHASE 2: Shoreline Bike Path	4635.4	4321.5	136.8	9093.7
PROJECT TOTAL	5000	10353.4	136.8	15490.2

IMPACT CALCULATIONS



SHEET NUMBER
1 OF 1

SHEET NAME:
PATHWAY DETAILS

NOT TO SCALE



MARCH 2013

ENVIRONMENTAL ASSESSMENT

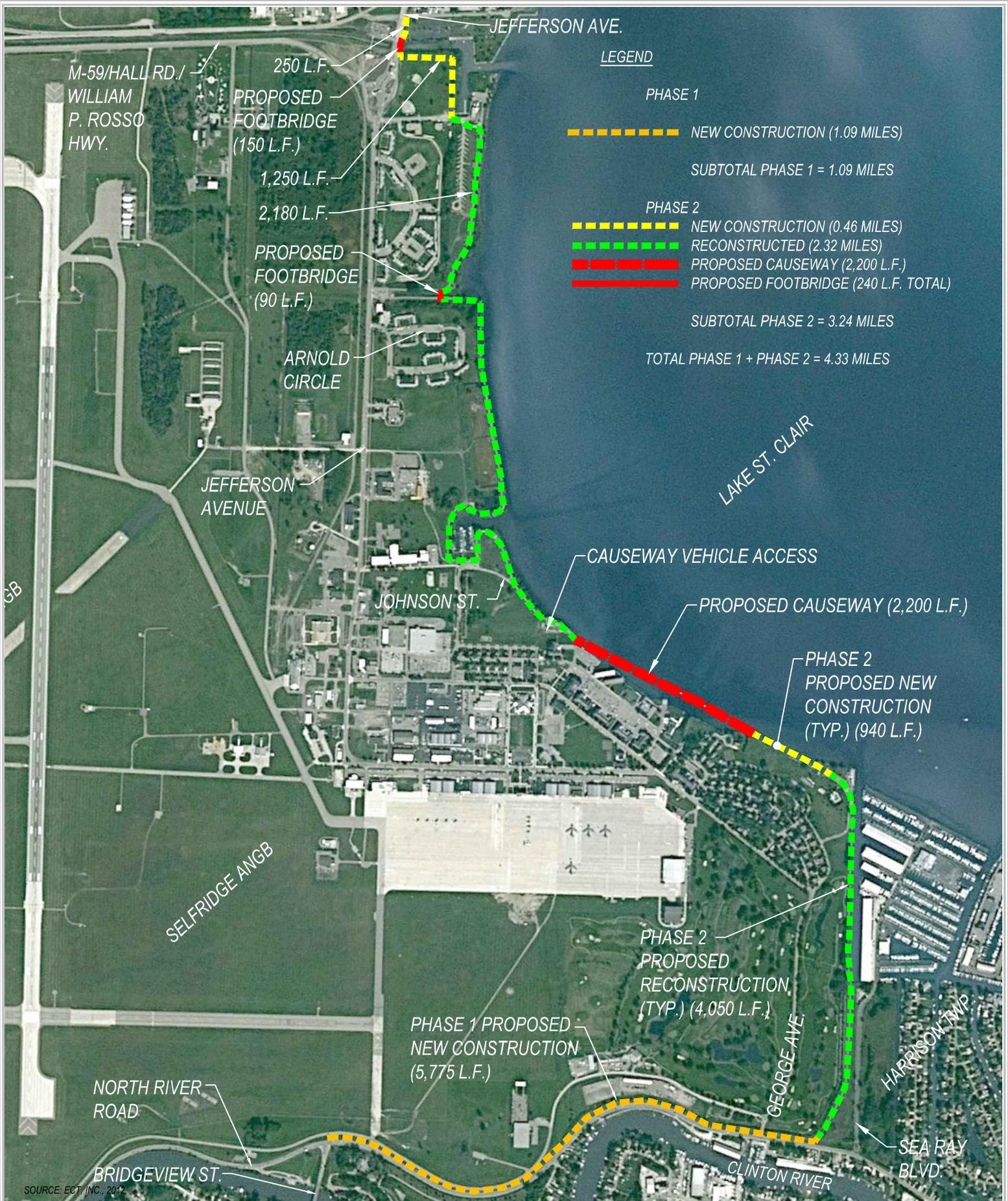
LAKE ST. CLAIR
SHORELINE TRAIL PROJECT



MACOMB COUNTY, MICHIGAN
ECT PROJECT NO: 120036

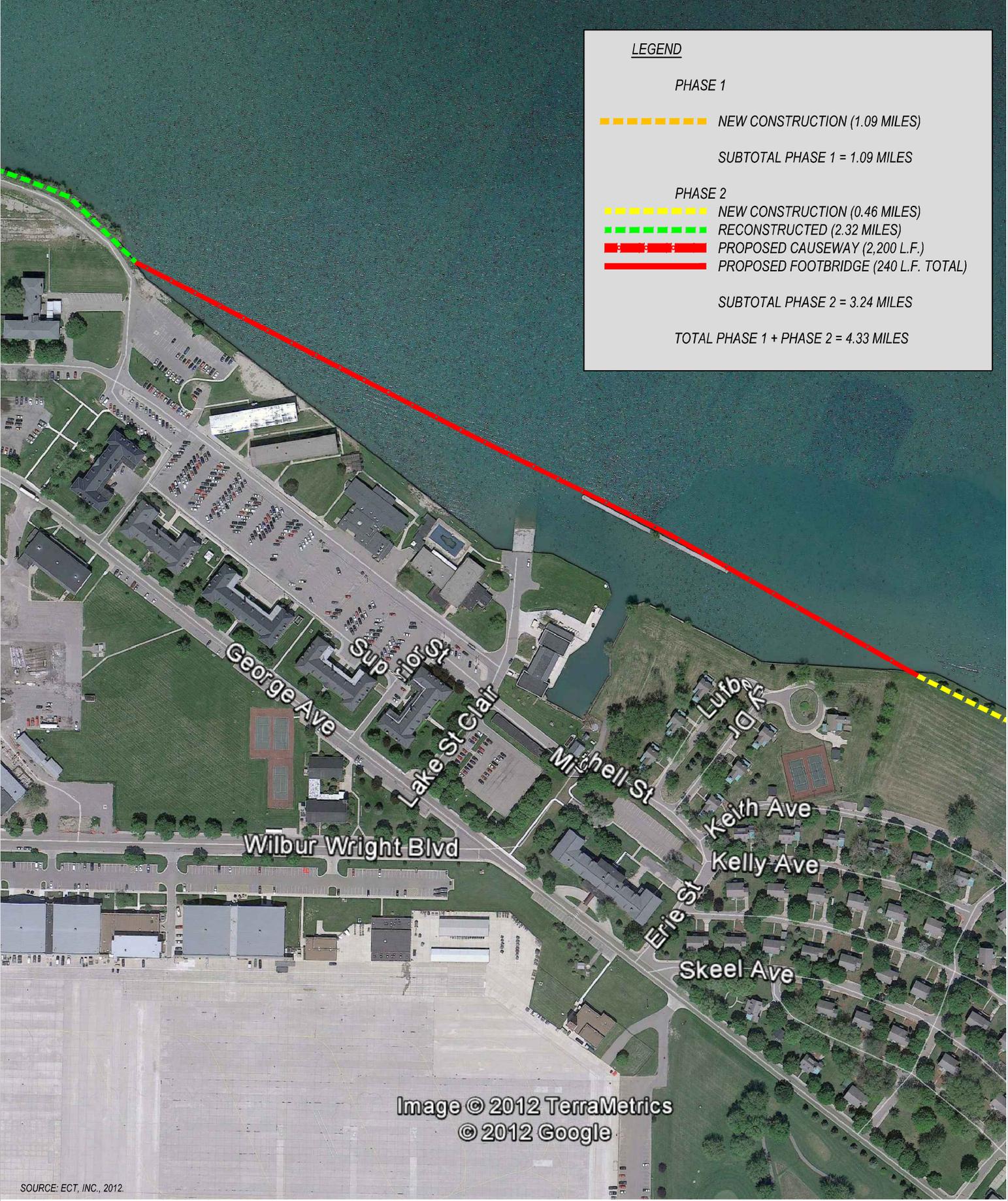


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SOURCE: ECT, INC., 2012





LEGEND

PHASE 1

NEW CONSTRUCTION (1.09 MILES)

SUBTOTAL PHASE 1 = 1.09 MILES

PHASE 2

NEW CONSTRUCTION (0.46 MILES)

RECONSTRUCTED (2.32 MILES)

PROPOSED CAUSEWAY (2,200 L.F.)

PROPOSED FOOTBRIDGE (240 L.F. TOTAL)

SUBTOTAL PHASE 2 = 3.24 MILES

TOTAL PHASE 1 + PHASE 2 = 4.33 MILES

Image © 2012 TerraMetrics
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SOURCE: ECT, INC., 2012.

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ENVIRONMENTAL ASSESSMENT

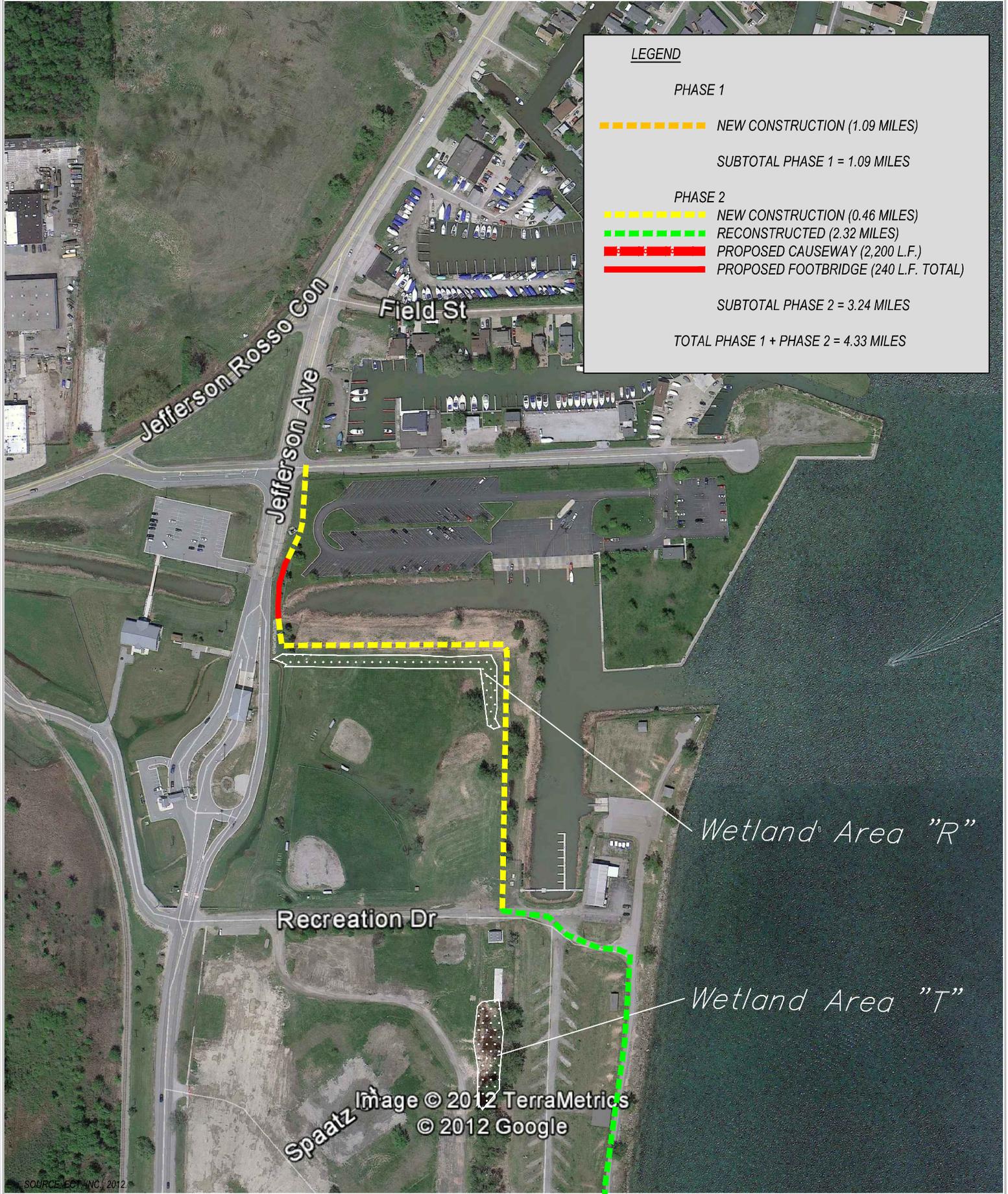
FEB. 2014

SHEET NAME:
**PROPOSED ACTION MAP
CAUSEWAY AREA**

SCALE: 1" = 300' (@ 8.5" x 11")

0 150 300 FEET

**SHEET NUMBER
1 OF 1**



LEGEND

PHASE 1

NEW CONSTRUCTION (1.09 MILES)

SUBTOTAL PHASE 1 = 1.09 MILES

PHASE 2

NEW CONSTRUCTION (0.46 MILES)

RECONSTRUCTED (2.32 MILES)

PROPOSED CAUSEWAY (2,200 L.F.)

PROPOSED FOOTBRIDGE (240 L.F. TOTAL)

SUBTOTAL PHASE 2 = 3.24 MILES

TOTAL PHASE 1 + PHASE 2 = 4.33 MILES

Jefferson Rosso Con

Jefferson Ave

Field St

Recreation Dr

Wetland Area "R"

Wetland Area "T"

Spaatz

Image © 2012 TerraMetrics
© 2012 Google

SOURCE: ECT, INC., 2012

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MACOMB COUNTY, MICHIGAN

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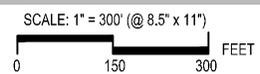
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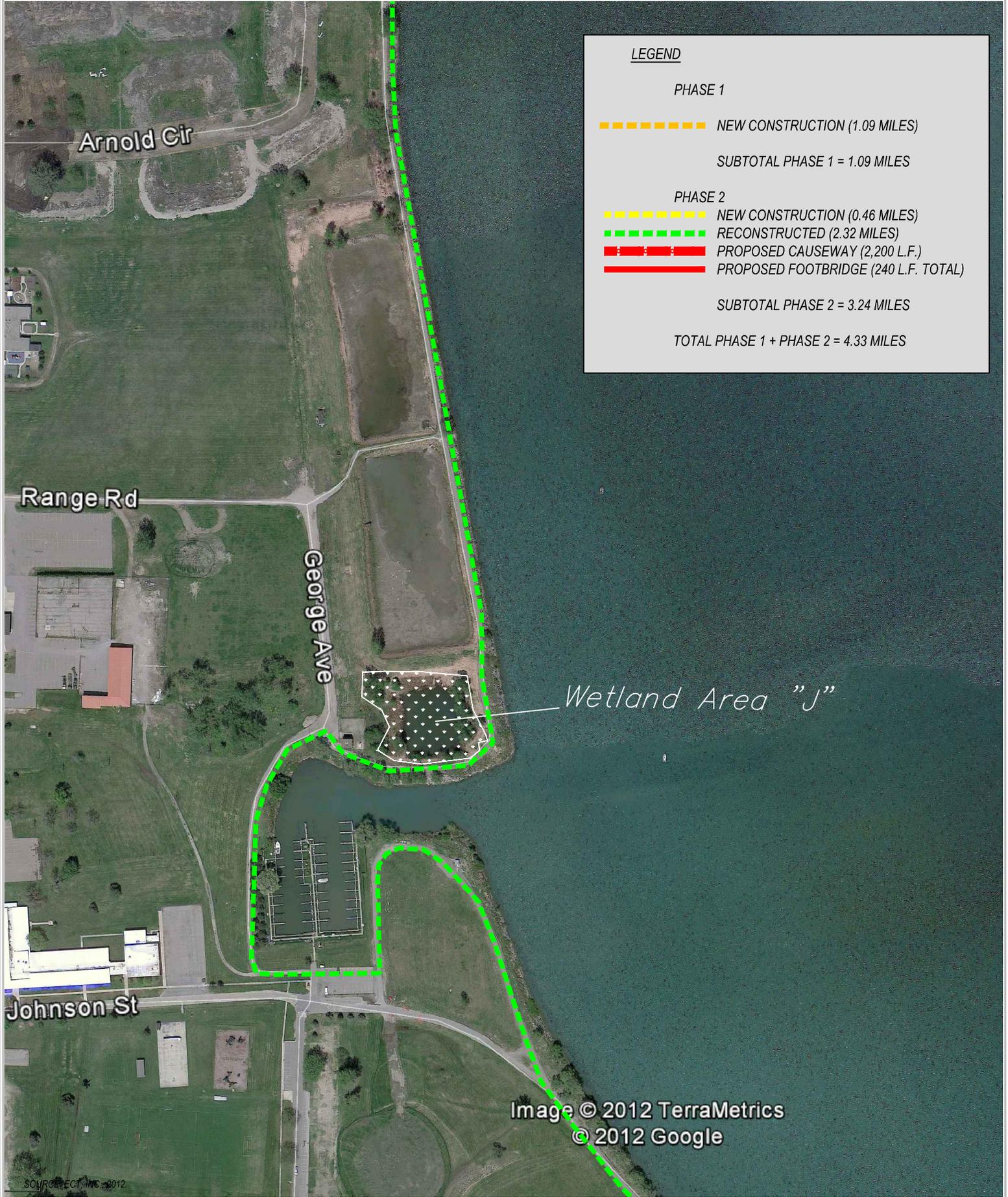
ENVIRONMENTAL ASSESSMENT

SHEET NAME:
**PROPOSED ACTION MAP
NORTH MARINA AREA**



SHEET
NUMBER
1 OF 1

FEB. 2014



LEGEND

PHASE 1

NEW CONSTRUCTION (1.09 MILES)

SUBTOTAL PHASE 1 = 1.09 MILES

PHASE 2

NEW CONSTRUCTION (0.46 MILES)

RECONSTRUCTED (2.32 MILES)

PROPOSED CAUSEWAY (2,200 L.F.)

PROPOSED FOOTBRIDGE (240 L.F. TOTAL)

SUBTOTAL PHASE 2 = 3.24 MILES

TOTAL PHASE 1 + PHASE 2 = 4.33 MILES

Wetland Area "J"

Image © 2012 TerraMetrics
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SOURCE: ECT, INC., 2012

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**LAKE ST. CLAIR
SHORELINE TRAIL PROJECT**

MACOMB COUNTY, MICHIGAN

ECT PROJECT NO: 120036



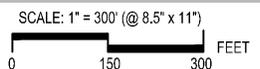
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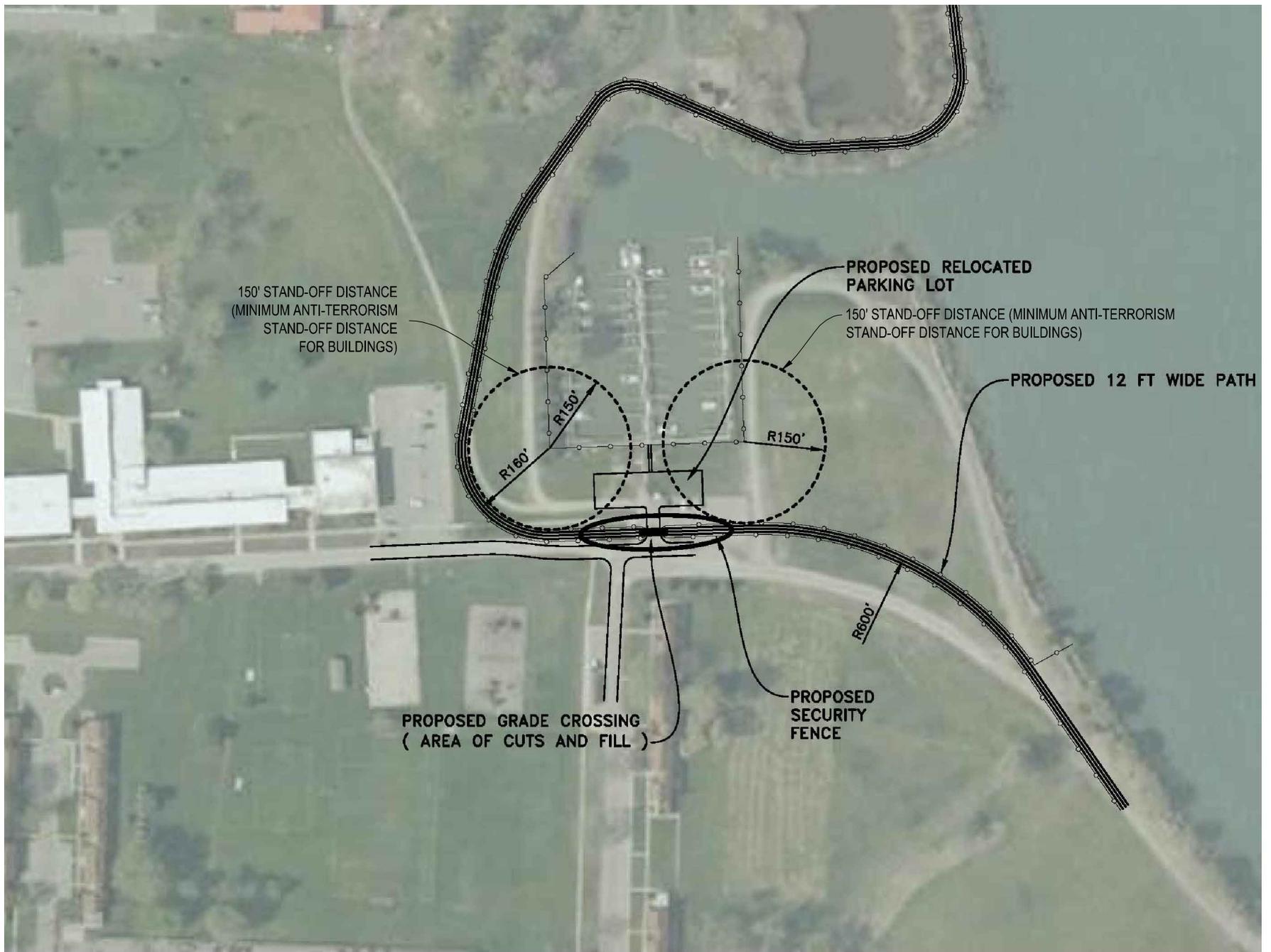
ENVIRONMENTAL ASSESSMENT

FEB. 2014

SHEET NAME:
**PROPOSED ACTION MAP
WALLEYE PONDS AREA**



SHEET
NUMBER
1 OF 1



SOURCE: ANDERSON, ECKSTEIN & WESTRICK.

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**LAKE ST. CLAIR
 SHORELINE TRAIL PROJECT**
 **MACOMB COUNTY, MICHIGAN**

 ECT PROJECT NO: 120036

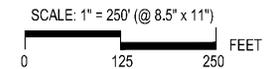
PROJECT NUMBERS:
 ECT PROJECT NO: 120036

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ENVIRONMENTAL ASSESSMENT

MARCH 2013

SHEET NAME:
SOUTH GRADE CROSSING



SHEET
 NUMBER
1 OF 1



SOURCE: ECT, INC., 2012.

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 **MACOMB COUNTY, MICHIGAN**

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 ENVIRONMENTAL ASSESSMENT MARCH 2013

SHEET NAME:
**SOUTH RIVER ROAD WEST
 ALTERNATIVE MAP**
 NOT TO SCALE


 SHEET
 NUMBER
1 OF 1

Appendix C

Correspondence (Agency Consultation & Public Involvement)





Environmental Consulting & Technology, Inc.

May 18, 2012

Mr. Andrew Hartz
Michigan Department of Environmental Quality
27700 Donald Court
Warren, MI 48092

RE: Proposed Shoreline Bike Path at Selfridge Air National Guard Base

Dear Mr. Hartz:

The Macomb County Department of Roads (MCDR) is proposing to construct 3.26 miles of bike path along the shoreline of Lake St. Clair, on the eastern edge of the Selfridge Air National Guard Base (SANGB) and along North River Road, north of the Clinton River Spillway. The project has been split into two separate phase. Phase 1 includes the construction of the path system along N. River Road, and Phase 2 includes the remainder of the path located along the Lake St. Clair shoreline within SANGB. Site location and layout maps and conceptual design drawings are enclosed for your review.

MCDR has retained the services of Environmental Consulting and Technology, Inc. (ECT) to address the potential environmental impacts of the proposed path to the affected environment. The environmental assessment will analyze the potential impacts resulting from construction and operation of the new path.

MCDR has identified the route of the path system as the preferred alternative because it provides the potential for several local path connections, has the highest aesthetic value, includes the Lake St. Clair shoreline which is a focal point for the local community, and provides a connection for several local marinas.

The purpose of this letter is to request your comments with regard to any issues of concern relevant for consideration in the NEPA analysis. Specifically we would like to request any information or comments you have regarding land and water management in or near the project area. Upon completion of the draft environmental assessment, your office will be provided with a copy for your review and comment. Please review the enclosed information and respond with any comments to our office location listed below. Thank you for your assistance.

Sincerely,

Matthew Carmer
Senior Scientist

Enclosures: Site Location Map
Site Layout Map
Preliminary Trail Design
Conceptual Bridge and Causeway Designs

100 Commonwealth
Blvd., Suite 300
Ann Arbor, MI
48105

(734)
769-3004

FAX (734)
769-3164



Environmental Consulting & Technology, Inc.

May 18, 2012

Mr. Dan Kennedy
Michigan Department of Natural Resources
P.O. Box 30444
530 W. Allegan
Lansing, MI 48909-7944

RE: Proposed Shoreline Bike Path at Selfridge Air National Guard Base

Dear Mr. Mensing:

The Macomb County Department of Roads (MCDR) is proposing to construct 3.26 miles of bike path along the shoreline of Lake St. Clair, on the eastern edge of the Selfridge Air National Guard Base (SANGB) and along North River Road, north of the Clinton River Spillway. The project has been split into two separate phase. Phase 1 includes the construction of the path system along N. River Road, and Phase 2 includes the remainder of the path located along the Lake St. Clair shoreline within SANGB. Site location and layout maps and conceptual design drawings are enclosed for your review.

MCDR has retained the services of Environmental Consulting and Technology, Inc. (ECT) to address the potential environmental impacts of the proposed path to the affected environment. The environmental assessment will analyze the potential impacts resulting from construction and operation of the new path.

MCDR has identified the route of the path system as the preferred alternative because it provides the potential for several local path connections, has the highest aesthetic value, includes the Lake St. Clair shoreline which is a focal point for the local community, and provides a connection for several local marinas.

The purpose of this letter is to request your comments with regard to any issues of concern relevant for consideration in the NEPA analysis. Specifically we would like to request any information you have regarding threatened or endangered species found in or near the project area. Upon completion of the draft environmental assessment, your office will be provided with a copy for your review and comment. Please review the enclosed information and respond with any comments to our office location listed below. Thank you for your assistance.

Sincerely,

Matthew Carmer
Senior Scientist

Enclosures: Site Location Map
Site Layout Map
Preliminary Trail Design
Conceptual Bridge and Causeway Designs

200 Commonwealth
Blvd., Suite 300
Ann Arbor, MI
48105

(734)
769-3004

FAX (734)
769-3164



Environmental Consulting & Technology, Inc.

May 18, 2012

Mr. Jim Francis
Michigan Department of Natural Resources
2600 W. Eight Mile Road
Southfield, MI 48034-5916

RE: Proposed Shoreline Bike Path at Selfridge Air National Guard Base

Dear Mr. Francis:

The Macomb County Department of Roads (MCDR) is proposing to construct 3.26 miles of bike path along the shoreline of Lake St. Clair, on the eastern edge of the Selfridge Air National Guard Base (SANGB) and along North River Road, north of the Clinton River Spillway. The project has been split into two separate phase. Phase 1 includes the construction of the path system along N. River Road, and Phase 2 includes the remainder of the path located along the Lake St. Clair shoreline within SANGB. Site location and layout maps and conceptual design drawings are enclosed for your review.

MCDR has retained the services of Environmental Consulting and Technology, Inc. (ECT) to address the potential environmental impacts of the proposed path to the affected environment. The environmental assessment will analyze the potential impacts resulting from construction and operation of the new path.

MCDR has identified the route of the path system as the preferred alternative because it provides the potential for several local path connections, has the highest aesthetic value, includes the Lake St. Clair shoreline which is a focal point for the local community, and provides a connection for several local marinas.

The purpose of this letter is to request your comments with regard to any issues of concern relevant for consideration in the NEPA analysis. Specifically we would like to request any information or comments you have regarding fisheries use in or near the project area. Upon completion of the draft environmental assessment, your office will be provided with a copy for your review and comment. Please review the enclosed information and respond with any comments to our office location listed below. Thank you for your assistance.

Sincerely,

Matthew Carmer
Senior Scientist

Enclosures: Site Location Map
Site Layout Map
Preliminary Trail Design
Conceptual Bridge and Causeway Designs

200 Commonwealth
Blvd., Suite 300
Ann Arbor, MI
48105

(734)
769-3004

FAX (734)
769-3164



Environmental Consulting & Technology, Inc.

May 18, 2012

Mr. Timothy Payne
Michigan Department of Natural Resources
2600 W. Eight Mile Road
Southfield, MI 48034-5916

RE: Proposed Shoreline Bike Path at Selfridge Air National Guard Base

Dear Mr. Payne:

The Macomb County Department of Roads (MCDR) is proposing to construct 3.26 miles of bike path along the shoreline of Lake St. Clair, on the eastern edge of the Selfridge Air National Guard Base (SANGB) and along North River Road, north of the Clinton River Spillway. The project has been split into two separate phase. Phase 1 includes the construction of the path system along N. River Road, and Phase 2 includes the remainder of the path located along the Lake St. Clair shoreline within SANGB. Site location and layout maps and conceptual design drawings are enclosed for your review.

MCDR has retained the services of Environmental Consulting and Technology, Inc. (ECT) to address the potential environmental impacts of the proposed path to the affected environment. The environmental assessment will analyze the potential impacts resulting from construction and operation of the new path.

MCDR has identified the route of the path system as the preferred alternative because it provides the potential for several local path connections, has the highest aesthetic value, includes the Lake St. Clair shoreline which is a focal point for the local community, and provides a connection for several local marinas.

The purpose of this letter is to request your comments with regard to any issues of concern relevant for consideration in the NEPA analysis. Specifically we would like to request any information or comments you have regarding wildlife use in or near the project area. Upon completion of the draft environmental assessment, your office will be provided with a copy for your review and comment. Please review the enclosed information and respond with any comments to our office location listed below. Thank you for your assistance.

Sincerely,

Matthew Carmer
Senior Scientist

Enclosures: Site Location Map
Site Layout Map
Preliminary Trail Design
Conceptual Bridge and Causeway Designs

200 Commonwealth
Blvd., Suite 300
Ann Arbor, MI
48105

(734)
769-3004

FAX (734)
769-3164



RICK SNYDER
GOVERNOR

STATE OF MICHIGAN
DEPARTMENT OF ENVIRONMENTAL QUALITY
LANSING



DAN WYANT
DIRECTOR

June 5, 2012

RECEIVED

JUN 14 2012

ECT - ANN ARBOR

Mr. Mathew Carmer
Environmental Consulting and Technology Inc.
2200 Commonwealth Boulevard
Suite 300
Ann Arbor, MI 48105

Dear Mr. Carmer,

Subject: Shoreline bike path at Selfridge ANGB/Lake St. Clair

Thank you for your letter of May 18, 2012 requesting our comments on the proposed bike path along the shoreline of Lake St. Clair.

The Department of Environmental Quality (DEQ), Water Resource Division, administers Part 325, Great Lakes Submerged Lands, of the Natural Resources and Environmental Protection Act, PA 451 of 1994, as amended. This statute requires DEQ review and approval prior to executing any construction activity below the Ordinary High Water Mark of Lake St. Clair. The portions of the path proposed to be built as a causeway requires permits under Part 325. The sketch included with your letter labeled "Conceptual Causeway Design" was reviewed. We are concerned about the area of open water that may exist between the shoreline and the causeway structure. The placement of the structure as depicted could isolate the public from using those waters between the shore and the structure. We suggest that if a causeway structure is ultimately determined to be the best alternative, that it be located as close to the shoreline as possible.

The width of structure over the waters of the lake must also be considered. As with any structure that covers public waters, we are concerned about impacts to the public trust associated with those waters. We would encourage the placement of the bike path along the uplands adjacent to the shoreline wherever feasible.

This project will encourage citizens to use and enjoy our great Lake St. Clair; we should work towards that goal together. Thank you for including us in your solicitation of comments.

We look forward to a review of the draft environmental assessment for this project. Please forward it to this office, to my attention, when complete.

Mr. Matthew Carmer

6/5/2012

Page 2

Should you require further information, please contact me at 586-753-3867;
Hartza@Michigan.gov; or Department of Environmental Quality, 27700 Donald Court, Warren,
Michigan 48092.

Sincerely,



Andrew J. Hartz
District Supervisor
Water Resources Division

cc: Mr. Walter Gauthier, USACE
Harrison Township Community file

Lauren L. Hoffman
Environmental Consulting
& Technology, Inc.
2200 Commonwealth Blvd.
Suite 300
Ann Arbor, MI 48105

July 30, 2012

Re: Rare Species Review #1121 – Lake St. Clair Bike Trail

Dear Lauren:

The location for the proposed project was checked against known localities for rare species and unique natural features, which are recorded in the Michigan Natural Features Inventory (MNFI) natural heritage database. This continuously updated database is a comprehensive source of existing data on Michigan's endangered, threatened, or otherwise significant plant and animal species, natural plant communities, and other natural features. Records in the database indicate that a qualified observer has documented the presence of special natural features. The absence of records in the database for a particular site may mean that the site has not been surveyed. The only way to obtain a definitive statement on the status of natural features is to have a competent biologist perform a complete field survey.

Under Act 451 of 1994, the Natural Resources and Environmental Protection Act, Part 365, Endangered Species Protection, "a person shall not take, possess, transport, ...fish, plants, and wildlife indigenous to the state and determined to be endangered or threatened," unless first receiving an Endangered Species Permit from the Michigan Department of Natural Resources (MDNR), Wildlife Division. Responsibility to protect endangered and threatened species is not limited to the lists below. Other species may be present that have not been recorded in the database.

According to the natural heritage database, it is **possible** that listed species will be impacted by this activity. However, MNFI cannot fully assess potential impacts without an on-site survey. Be mindful that MNFI is not a regulatory agency. MDNR Wildlife Division is responsible for issuing permits and enforcement relative to the take of state listed endangered and threatened species. These data can be submitted to the Wildlife Division should it be determined this project requires an endangered species permit. Their contact person is Lori Sargent, MDNR Wildlife Division, P.O. Box 30180, Lansing, MI 48909. Phone: 517.373.1263, email: SargentL@michigan.gov. Should MDNR require more information regarding your project, MNFI offers more detailed reviews including field surveys which I would be happy to discuss with you.

Sincerely,

Michael Sanders
Environmental Review Specialist/Zoologist
Michigan Natural Features Inventory



MSU EXTENSION

**Michigan Natural
Features Inventory**

PO Box 13036
Lansing MI 48901

(517) 373-1552
Fax (517) 373-9566

mnfi.anr.msu.edu

Table 1: Legally protected species within 1.5 miles of #1121

SNAME	SCOMNAME	FIRSTOBS	LASTOBS	USESA	SPROT	GRANK	SRANK	ELCAT
<i>Sterna forsteri</i>	Forster's tern	1981	1981-06		T	G5	S2	Animal
<i>Pantherophis gloydi</i>	Eastern fox snake	1948	1980		T	G3	S2	Animal
<i>Clemmys guttata</i>	Spotted turtle	1980	1980-07		T	G5	S2	Animal
<i>Sterna hirundo</i>	Common tern	1962	1962		T	G5	S2	Animal
<i>Rallus elegans</i>	King rail	1960-05-14	1986-05-13		E	G4	S1	Animal

Table 2: Special concern* species or other features within 1.5 miles of #1121

SNAME	SCOMNAME	FIRSTOBS	LASTOBS	USESA	SPROT	GRANK	SRANK	ELCAT
<i>Nycticorax nycticorax</i>	Black-crowned night-heron	1980	1980		SC	G5	S2S3	Animal
<i>Circus cyaneus</i>	Northern harrier	1974	1974		SC	G5	S3	Animal
<i>Chlidonias niger</i>	Black tern	1979	1981		SC	G4	S3	Animal
<i>Great Lakes Marsh</i>		1981-08-17	1988-08			G2	S3	Community
<i>Macrhybopsis storeria</i>	Silver chub	1939-11-30	1979-10-19		SC	G5	S2S3	Animal

*Special concern species and natural communities are not protected under endangered species legislation but efforts should be made to minimize any or all impacts.

Comments for Table 1:

The state threatened **Eastern fox snake** (*Pantherophis gloydi*) has been known to occur near the project area. This species entire range is within the Great Lakes basin. It inhabits coastal marshes and other near-shore habitats (i.e. vegetated dunes and beaches), although it sometimes wanders into nearby farm fields, pastures, and woodlots. This snake will bask or forage on raised dikes, muskrat houses, and road embankments but only rarely climbs into trees or shrubbery. Although not strictly aquatic, they are good swimmers capable of moving considerable distances over open offshore waters and between islands. Small mammals, particularly meadow voles (*Microtus*) and deer mice (*Peromyscus*), make up the largest part of this snake’s diet.

In a typical year Eastern fox snakes are active from mid-April until late October but are most often seen abroad during May and June. Whether they are truly inactive during the summer or simply become more nocturnal in response to warmer temperatures is unclear. Females lay their eggs in rotted stumps or shallow burrows, or under logs, boards, or mats of decaying vegetation. They hibernate during the winter months in abandoned mammal burrows or other frost-free shelters.

The Eastern fox snake is a boldly marked, nonpoisonous species with dark blotches patterned on a yellowish to light brown background. Alternating with the larger back markings are smaller ones along the sides. The head is reddish and the underside is yellowish with dark markings. Adults measure an average of 3 to 5 feet. Juveniles are paler in color than adults.

The Eastern fox snake is harmless to humans, and its rodent-eating habits make it an economically useful species in agricultural areas. Human-related threats (harassment and killing) and continued habitat loss of Great Lakes marshes are the main threats pressuring Michigan’s Eastern fox snake population.

Codes to accompany Tables 1 & 2:

State Protection Status Code Definitions (SPROT)

E: Endangered

T: Threatened

SC: Special concern

Global Heritage Status Rank Definitions (GRANK)

The priority assigned by NatureServe's national office for data collection and protection based upon the element's status throughout its entire world-wide range. Criteria not based only on number of occurrences; other critical factors also apply. Note that ranks are frequently combined.

G1 = critically imperiled globally because of extreme rarity (5 or fewer occurrences range-wide or very few remaining individuals or acres) or because of some factor(s) making it especially vulnerable to extinction.

G2 = imperiled globally because of rarity (6 to 20 occurrences or few remaining individuals or acres) or because of some factor(s) making it very vulnerable to extinction throughout its range.

G3: Either very rare and local throughout its range or found locally (even abundantly at some of its locations) in a restricted range (e.g. a single western state, a physiographic region in the East) or because of other factor(s) making it vulnerable to extinction throughout its range; in terms of occurrences, in the range of 21 to 100.

G4: Apparently secure globally, though it may be quite rare in parts of its range, especially at the periphery.

G5: Demonstrably secure globally, though it may be quite rare in parts of its range, especially at the periphery.

Q: Taxonomy uncertain

State Heritage Status Rank Definitions (SRANK)

The priority assigned by the Michigan Natural Features Inventory for data collection and protection based upon the element's status within the state. Criteria not based only on number of occurrences; other critical factors also apply. Note that ranks are frequently combined.

S1: Critically imperiled in the state because of extreme rarity (5 or fewer occurrences or very few remaining individuals or acres) or because of some factor(s) making it especially vulnerable to extirpation in the state.

S2: Imperiled in state because of rarity (6 to 20 occurrences or few remaining individuals or acres) or because of some factor(s) making it very vulnerable to extirpation from the state.

S3: Rare or uncommon in state (on the order of 21 to 100 occurrences).

S4 = apparently secure in state, with many occurrences.

S5 = demonstrably secure in state and essentially ineradicable under present conditions.

SX = apparently extirpated from state.



Environmental Consulting & Technology, Inc.

October 1, 2012

Mr. Andrew Hartz
Michigan Department of Environmental Quality
Southeast Michigan District Office
27700 Donald Court
Warren, MI 48092-2793

**RE: Pre-Application Meeting Request
Lake St. Clair Shoreline Trail Project
Macomb County, Michigan**

Mr. Hartz:

Environmental Consulting & Technology, Inc. (ECT), on behalf of the Macomb County Department of Roads (John Crumm) is submitting a pre-application meeting request for the work associated with the proposed Lake St. Clair Shoreline Trail Project, Macomb County, Michigan.

The Macomb County Department of Roads (MCDR) is proposing to construct approximately 4.3 miles of bike path along the shoreline of Lake St. Clair, on the eastern edge of the Selfridge Air National Guard Base (SANGB) and along North River Road, north of the Clinton River Spillway. The project has been split into two separate phase. Phase 1 includes the construction of the path system along N. River Road, and Phase 2 includes the remainder of the path located along the Lake St. Clair shoreline within SANGB. Site location and layout maps and conceptual design drawings are enclosed for your review.

MCDR has retained the services of Environmental Consulting and Technology, Inc. (ECT) to address the potential environmental impacts of the proposed path. The environmental assessment will analyze the potential impacts resulting from construction and operation of the new path.

MCDR has identified the route of the path system as the preferred alternative because it provides the potential for several local path connections, has the highest aesthetic value, includes the Lake St. Clair shoreline which is a focal point for the local community, and provides a connection for several local marinas.

We would like to include the additional requested attendees from MDEQ, MDNR and USACE as listed on the Pre-Application Meeting Request form and copied on this letter. The meeting location can be at the Welcome Center near the Selfridge Air National Guard Base (SANGB) North Entrance. The site inspection will be along the Lake St. Clair shoreline as shown on the attached maps/figures.

We would like to include MDNR and USACE staff in the meeting given the multiple agencies involved and proposed project location which is directly adjacent to Lake St. Clair and to an MDNR boat launch facility.

2200 Commonwealth
Blvd., Suite 300
Ann Arbor, MI
48105

(734)
769-3004

FAX (734)
769-3164

Pre-Application Meeting Request
Macomb County Department of Roads
Proposed Lake St. Clair Shoreline Trail Project, Macomb County, Michigan
October 1, 2012
Page 2

A summary of the enclosed materials is as follows:

- ❖ Pre-Application Meeting Request Form (2 pages);
- ❖ Check for Pre-Application Meeting Fee of \$450.00;
- ❖ Lake St. Clair Shoreline Trail Project Figures:
 - Project Location Map;
 - Proposed Action Location Map;
 - Conceptual Bridge Design;
 - Conceptual Causeway Design;
 - Wetland Map;
 - Surface Water and Wetlands Map.

We appreciate your review of this pre-application meeting request and look forward to scheduling a meeting in the near future. Please feel free to contact our office 734-769-3004 should you have any questions.

Respectfully Submitted,

ENVIRONMENTAL CONSULTING & TECHNOLOGY, INC.



Matthew Carmer
Senior Scientist

Enclosures

cc: Lyle Winn, AEW, Inc. (lwinn@aewinc.com)
Kenneth Baker, ANG (Kenneth.baker@ang.af.mil)
Kimberly Bewersdorff, ANG (Kimberly.bewersdorff@agn.af.mil)
John Crumm, Macomb Co. Dept. of Roads (jcrumm@rcmcweb.org)
Anne Hokanson, MDEQ (hokansona@michigan.gov)
Adam Bump, MDNR (BUMPA@michigan.gov)
Jim Francis, MDNR (FRANCISJ@michigan.gov)
Timothy Payne, MDNR (PAYNET@michigan.gov)
Wally Gauthier, USACE (Walter.A.Gauthier@usace.army.mil)
Henry Rosenfield, USACE (Henry.Rosenfield@usace.army.mil)

**DEPARTMENT OF ENVIRONMENTAL QUALITY
LAND AND WATER MANAGEMENT DIVISION
PRE-APPLICATION MEETING REQUEST FORM**

DEQ FILE NO.-FOR OFFICIAL USE

Applicant Name
Macomb County Dept. of Roads Attn: John Crumm
Address
117 S. Groesbeck Hwy
City **State** **Zip**
Mount Clemens MI 48043
Area Code/Telephone
586-463-8671
Fax Number

E-mail
jcrumm@rcmcweb.org

Agent Name
ECT, Inc. Attn: Matt Carmer
Address
2200 Commonwealth Blvd; Suite 300
City **State** **Zip**
Ann Arbor MI 48105
Area Code/Telephone
734-769-3004
Fax Number

E-mail
mcarmer@ectinc.com

Owner Name
Selfridge Air National Guard (SANG) Base
Address
Mount Clemens, MI

Location Information
* Please see attached location map
Additional Requested Attendees:
Adam Bump, Jim Francis, Timothy Payne - MDNR

SANG Base Contact: Kim Bewersdorff
Telephone / Email
586-239-4522 kimberly.bewersdorff.ang.af.mil

Anne Hokanson, MDEQ
Wally Gauthier, Henry Rosenfield - USACE

Directions (nearest major intersection and directions from major intersection): _____

Meeting location will be at the welcome center near the SANG Base north entrance. Site Inspection will be along shoreline as shown on attached location map.

PRE-APPLICATION MEETING REQUEST

- The meeting is requested at the Project site or DEQ district office
- DEQ staff should contact the Applicant or Agent
- Is the proposed project a single family residential lot one acre or less in size? Yes No

GENERAL INFORMATION

Project description (use additional sheets if necessary): _____

Proposed Lake St. Clair Shoreline Trail. Site inspection will include an approximate 2-mile long portion of shoreline within Selfridge Air National Guard Base. Project area is approximately 20-foot in width.

Estimated total project area (acres): ~4.8 Acres

Will wetlands be involved? (Yes) No, Unsure) Circle one

Estimated acreage of impact <1 Acre, TBD

Has a wetland delineation been conducted? (Yes) No) Circle one

Estimated cubic yards of fill TBD

Will inland lakes and streams be involved? (Yes, No, Unsure) Circle one

Waterbody name Lake St. Clair

Will floodplains be involved? (Yes, No, Unsure) Circle one

Other resources involved (Critical Dunes, High Risk Erosion Areas, etc.): Great Lakes (Lake St. Clair) Bottomlands

SIGNATURE

I hereby certify that I am familiar with the information contained in this application, that it is true and accurate. I understand that there are penalties for submitting false information and that any finding pursuant to this request may be revoked if information on this request is untrue.

Signed Matthew Carmer

Date 10-1-2012

DEQ FILE NUMBER _____

MEETING HELD

ATTENDEES

Date _____

Location _____

STAFF COMMENTS

FINDINGS REGARDING THE NEED FOR A PERMIT UNDER PART 303, WETLANDS PROTECTION, OF THE NATURAL RESOURCES AND ENVIRONMENTAL PROTECTION ACT, 1994 PA 451, AS AMENDED

The Department of Environmental Quality has determined that:

- A permit is required. Please reference the file number at the top of this form when submitting a permit application.
- A permit is not required. **(This can only be determined for meetings on the project site.)**
- It can not be determined whether a permit is required given the information presented.

This determination is based on the attached project plans prepared by _____ and dated _____ and other attached information provided at the time of this meeting only. Provided that the proposed project and location are not altered, this determination is binding for a period of two years from the date of this meeting.

DEQ Staff Signature

Date

THIS DOCUMENT IS NOT A PERMIT Staff can not indicate during a pre-application meeting whether or not a permit will be issued. The DEQ cannot make a decision regarding a permit until it has considered all of the information provided in the final permit application, and, in some instances, has also considered comments received in response to a public notice of the project. Therefore, staff cannot legally tell you whether your project will be authorized in advance of a permit application. They can, however, give you information that will improve the likelihood that it will meet regulatory standards, and thus be authorized, or they may also be able to identify issues which will be of significant concern.

LAKE ST. CLAIR SHORELINE TRAIL
ENVIRONMENTAL ASSESSMENT DISTRIBUTION LIST

Contact	Phone	E-Mail
CHESTERFIELD TOWNSHIP		
Mr. Jim Ellis, Supervisor Chesterfield Township 47275 Sugarbush Road Chesterfield, Michigan 48047	(586) 949-0400	jellis@chesterfieldtp.org
FEDERAL AVIATION ADMINISTRATION		
Mr. Carl Reed Federal Aviation Administration 8800 Beck Road Eastside Belleville, Michigan 48111	(734) 487-7222	
HARRISON TOWNSHIP		
Mr. Anthony G. Forlini, Supervisor Harrison Township 38151 L'Anse Creuse Harrison Township, Michigan 48045		
Mr. Ken Verkest Harrison Township	(586) 466-1445	kverkest@harrison-township.org
MACOMB COUNTY		
Mr. Steve Cassin, Executive Director Macomb County Department of Planning and Economic Development Macomb County Administration Building One South Main Street, 7 th Floor Mount Clemens, Michigan 48043		
Mr. William Crouchman Macomb County Board of Commissioners, Chairman 115 South Groesbeck Highway Mount Clemens, Michigan 48043		
Mr. John Crumm Macomb County Department of Roads	(586) 463-1982	jcrumm@rcmcweb.org
Ms. Lara Sucharski Macomb County Soil Erosion Office	(586) 307-8271	
Ms. Melissa Roy Macomb County	(313) 407-5729	roy@macombgov.org
Mr. Vince Viviano Macomb County	(586) 463-8674	vviviano@rcmcweb.org
MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY		
Mr. Peter Quackenbush Michigan Department of Environmental Quality Hazardous Waste Section Office of Waste Management and Radiological	(517) 284-6568	quackenbushp@michigan.gov

LAKE ST. CLAIR SHORELINE TRAIL
ENVIRONMENTAL ASSESSMENT DISTRIBUTION LIST

Protection Constitution Hall, 4 th Floor South 525 West Allegan Street P.O. Box 30241 Lansing, MI 48909-7741		
Mr. Andrew J. Hartz District Supervisor Water Resource Unit Water Resources Division MDEQ Southeast Michigan District Office 27700 Donald Court	(586) 753-3867	Hartza@michigan.gov
MICHIGAN DEPARTMENT NATURAL FEATURES INVENTORY		
Mr. Michael Sanders Environmental Review Specialist/Zoologist Michigan Natural Features Inventory	(517) 373-1522	
MICHIGAN DEPARTMENT OF NATURAL RESOURCES		
Mr. Adam Bump Michigan Department of Natural Resources		bumpa@michigan.gov
Mr. Jim Francis Michigan Department of Natural Resources Fisheries Division	(734) 953-1539	francisj@michigan.gov
Mr. Jack Hodge Michigan Department of Natural Resources Fishery Services Lake St. Clair POC	(586) 465-4771 ext. 25	
Mr. Adam Lepp Michigan Department of Natural Resources Parks & Recreation	(586) 465-2160	leppa@michigan.gov
Mr. Timothy Payne Michigan Department of Natural Resources 26000 West Eight Mile Road Southfield, Michigan 48034		
Ms. Lori Sargent Michigan Department of Natural Resources Wildlife Division P.O. Box 30180 Lansing, MI 48909	(517) 373-1263	SargentL@michigan.gov
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION		
Lance Roddy Cartographer Nautical Data Branch Marine Chart Division	(301) 713-2737 ext. 126	
NATIVE AMERICAN TRIBAL ORGANIZATIONS		

LAKE ST. CLAIR SHORELINE TRAIL
ENVIRONMENTAL ASSESSMENT DISTRIBUTION LIST

Bay Mills Chippewa Indian Community 12140 W. Lakeshore Drive Brimley, Michigan 49715	(906)248-3241	www.baymills.org
Ms. Isabel Scollon The Burt Lake Band of Ottawa and Chippewa Indians, Inc. 6461 East Brutus Road P.O. Box 206 Brutus, Michigan 49716	(231) 529-2006	blbtc@burtlakeband.org
The Grand River Bands of Ottawa Indians P.O. Box 2937 Grand Rapids, Michigan 49501		
Grand Traverse Band of Ottawa and Chippewa Indians 2605 N.W. Bayshore Drive Suttons Bay, Michigan 49682	(231) 534-7750	www.gtbindians.org
Hannahville Potawatomi Indian Community N-14911 Hannahville B-1 Road Wilson, Michigan 49896-9728	(906) 466-9234	www.hannahville.net
Ms. Laura Spurr The Huron Potawatomi-Nottawaseppi Huron Band of Potawatomi 2221 1 ½ Mile Road Fulton, Michigan 49052	(269) 782-9625	www.nhbpi.com
Ms. Susan LaFerner The Keewanaw Bay Indian Community 107 Beartown Road Baraga, Michigan 49908		
Ms. Summer Sky Cohen, THPO Keweenaw Bay Indian Community 16429 Beartown Road Baraga, Michigan 49908	(906) 353-6623	www.ojibwa.com
Ms. giwewiizhigookway Martin, THPO Lac Vieux Desert Band of Lake Superior Chippewa Indians 23968 East Pow Wow Trail P.O. Box 249 Watersmeet, Michigan 49969	(906) 358-4577	www.lvdtribal.com
Mr. Patrick Wilson The Little River Band of Ottawa Indians 375 River Street Manistee, Michigan 49660	(231) 723-8288	www.lrboi.com
Mr. Frank Ettawageshik The Little Traverse Bay Band of Odawa Indians 7500 Odawa Circle Harbor Springs, Michigan 49660	(231) 242-1400	www.ltbodawa-nsn.gov

LAKE ST. CLAIR SHORELINE TRAIL
ENVIRONMENTAL ASSESSMENT DISTRIBUTION LIST

Mr. David K. Sprague Match-e-be-nash-she-wish Band of Potawatomi Indians of Michigan 1743 142 nd Avenue P.O. Box 218 Dorr, Michigan 49323	(616) 681-8830	www.mpi.org
Mr. John Miller The Pokagon Band of Potawatomi Indians 58620 Sink Road P.O. Box 180 Dowagiac, Michigan 49047		
Mr. Mark Parrish, THPO The Pokagon Band of Potawatomi Indians 58620 Sink Road P.O. Box 180 Dowagiac, Michigan 49047	(269) 782-6323	www.pokagon.com
Saginaw Chippewa Indian Tribe 7070 E. Broadway Mt. Pleasant, Michigan 48858	(517) 775-4000	www.sagchip.org
Mr. Aaron Payment The Sault Ste. Marie Tribe of Chippewa Indians 523 Ashmun Street Sault Ste. Marie, Michigan 49783	(906) 635-6050	www.saulttribe.com
SELFRIDGE MILITARY AIR MUSEUM/MICHIGAN AIR GUARD HISTORICAL SOCIETY		
Selfridge Military Air Museum/Michigan Air Guard Historical Society 127 WG/MU 27333 C Street, Bldg 12011 Selfridge ANG Base, Michigan 48045	(586) 239-5035	air.museum@miself.ang.af.mil
SHELBY TOWNSHIP		
Ms. Jennifer Chehab Anderson, Eckstein and Westrick, Inc. 51301 Schoenherr Road Shelby Township, Michigan 48315	(586) 726-1234	jchehab@awinc.com
Mr. Lyle Winn Anderson, Eckstein and Westrick, Inc. 51301 Schoenherr Road Shelby Township, Michigan 48315	(586) 726-1234	lwinn@awinc.com
STATE HISTORIC PRESERVATION OFFICE (MICHIGAN)		
Mr. Brian Grennell Cultural Resource Management Specialist State Historic Preservation Office Michigan State Housing Development Authority	(517) 335-2721	Grennellb@michigan.gov

LAKE ST. CLAIR SHORELINE TRAIL
ENVIRONMENTAL ASSESSMENT DISTRIBUTION LIST

702 W. Kalamazoo Street P.O. Box 30740 Lansing, Michigan 48909-8240		
U.S. ARMY CORPS OF ENGINEERS		
Mr. Wally Gauthier U.S. Army Corps of Engineers	(313) 226-6812	Walter.A.Gauthier@usace.army.mil
Mr. Henry Rosenfield U.S. Army Corps of Engineers	(313) 226-6706	henry.rosenfield@usace.army.mil
U.S. ENVIRONMENTAL PROTECTION AGENCY		
Ms. Jerri-Anne Garl U.S. Environmental Protection Agency, Region 5 77 West Jackson Boulevard (B-19J) Chicago, Illinois 60604		
U.S. FISH AND WILDLIFE SERVICE		
Mr. Scott Hicks U.S. Fish and Wildlife Service Region 3 – Midwest East Lansing – Ecological Field Office 2651 Coolidge Road East Lansing, Michigan 48823		
U.S. HOUSE OF REPRESENTATIVES (MICHIGAN)		
The Honorable Candice Miller United States House of Representatives, 10 th District 48653 Van Dyke Avenue Shelby Township, Michigan 48317		
U.S. SENATE (MICHIGAN)		
The Honorable Debbie Stabenow United States Senate 221 W. Lake Lansing Road, Suite 100 East Lansing, MI 48823		
The Honorable Carl Levin United States Senate 124 W. Allegan, Suite 1810 Lansing, Michigan 48933-1716		

**PUBLIC HEARING PROCESS FOR SHORELINE TRAIL EA
TASKS COMPLETED BY MACOMB DEPARTMENT OF ROADS
NOVEMBER 22, 2013**

1. Macomb County Department of Roads (MCDR) received an email from the engineering group at Selfridge ANGB that granted MCDR to start the public comment period for the **Lake St. Clair Shoreline Trail Project, Environmental Assessment (EA), Draft Final September 2013.**
2. MCDR printed two copies of the report, as well as, the Draft FONSI and FONPA.
3. A Public Notice was drafted and approved and ran in the October 2, 2013 addition of the Macomb Daily Newspaper. It also was posted on the Macomb Daily web page.
4. The Public Notice identified three sites where the EA and supporting documents could be reviewed. Two hard copies were placed at public locations, while the third site was on the MCDR web site. www.rcmcweb.org
5. On August 30, 2013 the printed reports and the Draft FONSI and FONPA were placed at the Harrison Township Public Library and at the front desk of the Macomb County Road Department Offices. The Macomb Daily listed the address for these two locations, as well as, information on how to access the document on the departmental web site. Further, the Macomb Daily and the web site provided contact information for Mr. John Crumm, Director of Planning at the MCDR, and encouraged any person to contact him if they had any comments or concerns about the project.
6. The EA and supporting documents, Public Notice, and sign-in sheet were left at the two sites for 30 days. The same material was placed on the front page of the Road Department web site.
7. During the 30 day review period, no citizens made comments either by meeting with John Crumm, by phone, in writing, or through email.
8. The Public Review process closed and the Public Involvement Section of the EA was completed and the document and supporting materials were forwarded to the military for signatures on the FONSI AND FONPA.

WWW.RCMCWEB.ORG –

September 28 to November 15, 2013

MACOMB COUNTY DEPARTMENT OF ROADS



The Macomb County Department of Roads (MCDR) is the road agency in Macomb County. MCDR maintains more than 1,700 miles of road with more than 900 traffic signals and 60,000 signs.

HOT TOPICS:



[Shoreline Trail Environmental Assessment Document](#)

[New 23 Mile Road Bridge Opened in Macomb Township](#)

[Macomb County Announces Plans For New Operations And Communications Center](#)



[CLICK HERE FOR INFO ON ADOPTING A COUNTY ROAD AND OUR 1,000 MILE CHALLENGE!](#)

[MDOT Traffic Cameras - "Jam-Cams" -](#)
Check Traffic in Real Time on MDOT Highway Cameras.



INDEPENDENT NEWSPAPERS, INC.
100 MACOMB DAILY DR.
MT. CLEMENS, MI 48043
AFFIDAVIT OF PUBLICATION

MACOMB COUNTY DEPT OF ROADS
117 S GROESBECK HWY
MT CLEMENS MI 48043

REFERENCE: INI10802
4209541

STATE OF MICHIGAN

COUNTY OF MACOMB

The undersigned, being duly sworn that she is the principal clerk of INDEPENDENT NEWSPAPERS, INC published in the English language for the dissemination of local or transmitted news & intelligence of a general character, which are duly qualified newspapers, and that annexed hereto is a copy of a certain order taken from these newspapers in which the order was published on specified day.

Robin Demuth
Principal Clerk

Subscribed and sworn to before me on

October 7, 2013

Ellen Sassanella
Notary Public

Commission Expires
PUBLISHED:
10/02/13
INI Macomb Daily
full

11/3/2018

TOTAL COST: 514.95 AD SPACE: 14.000 INCH
FILED ON: 10/07/2013

PUBLIC NOTICE

Availability of Draft Environmental Assessment (EA) and Draft Finding of No Significant Impact (FONSI), Finding of No Practical Alternative (FONPA) for the Lake St. Clair Shoreline Trail Project, Harrison Township, Michigan

The Macomb County Department of Roads (MCDOR) has conducted an Environmental Assessment (EA) for the Department of the Air Force, Air National Guard (ANG). The purpose of the EA was to identify, evaluate and document the potential environmental, socioeconomic and human health effects associated with the proposed Lake St. Clair Shoreline Trail Project.

The purpose of the proposed project is to provide a non-motorized, scenic trail along the shore of Lake St. Clair that provides connectivity to a proposed larger local system of trails. The proposed public access trail will consist of a 12-foot wide; 3-inch deep strip of asphalt, overlaid on a gravel bed approximately 14-foot wide and 6 inches deep.

The proposed project is located in Harrison Township, Macomb County, Michigan, approximately two miles northeast of Mount Clemens, Michigan. The proposed project consists of two phases with Phase 1 being an east-west trail segment approximately 1.13 miles in length along the north side of North River Road. Phase 2 is a trail segment approximately 3.24 miles in length, the majority of which is located on the east side of Selfridge Air National Guard Base and includes a segment of trail that traverses an open water area of Lake St. Clair via an elevated wood and/or composite boardwalk. The Air Force would grant easements for the establishment of these trails.

The results, as found in the Draft EA, show that the Proposed Action would not have a significant adverse impact on the environment. At the conclusion of the public comment period, it is anticipated that a FONSI/ FONPA would be appropriate and would be signed for the Proposed Action. An Environmental Impact Statement therefore, is not necessary to implement the Proposed Action.

Copies of the Draft EA and Draft FONSI/FONPA are available online at www.rcmcweb.org. The documents are available for review at the Harrison Township Public Library, 38151 L'Anse Creuse, Harrison Twp., MI. Copies may also be obtained by contacting John Crumm, Macomb County Department of Roads, 117 South Groesbeck Highway, Mount Clemens, MI 48043, by email at jcrumm@rcmcweb.org, or by phone at 586-463-8671.

Written comments on the Draft EA and Draft FONSI/FONPA must be submitted to Mr. Crumm at the above mail or e-mail addresses no later than 30 days from the publication of this notice.

M.D. 10/2/13

4209541



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5
77 WEST JACKSON BOULEVARD
CHICAGO, IL 60604-3590

JAN 09 2014

REPLY TO THE ATTENTION OF:
E-19J

Kenneth Baker
127 CES/CEV
Selfridge Air National Guard Base, Michigan 48045

RE: Draft Environmental Assessment: Lake St. Clair Shoreline Trail Project: Macomb County, Michigan

Dear Mr. Baker:

The United States Environmental Protection Agency (EPA) has received the Air National Guard's (ANG) correspondence dated December 9th, 2013, requesting EPA's comments on the Draft Environmental Assessment (hereafter referred to as the Draft EA) and its associated documents, plans, and appendices for the proposed shoreline trail project located in Macomb County, Michigan.

The goal of the project is to provide a non-motorized scenic trail along the shoreline of Lake St. Clair. The plan will also provide connectivity to a proposed larger local system of trails.

EPA has reviewed the Draft EA for the aforementioned project. This letter provides our comments on the Draft EA pursuant to the National Environmental Policy Act (NEPA), the Council of Environmental Quality's NEPA Implementing Regulations (40 CFR 1500-1508), and Section 309 of the Clean Air Act.

Wetlands

1. The Wetland Map in Appendix A identifies "Wetland T" having an area of 1.02 acres. The map displays that this wetland is in close proximity to the project area; however, there is no mention of "Wetland T" in pages 28 thru 31 when wetlands are discussed in further detail. The Final EA/Finding of No Significant Impact (FONSI) should reconcile this discrepancy.
2. Wetland L identified on page 29 of the text is not listed in the Wetland Map in Appendix A. The Final EA/FONSI should reconcile this discrepancy.

Floodplains

Under the Floodplains section on page 32, the last sentence notes: “*Final construction designs will need to quantify impacts and plan for mitigation of any impacts...*” The Final EA/FONSI should include a quantification of impacts to the floodplain area and discuss planned mitigation.

Land Use

Under the Land Use section on page 16, the penultimate sentence notes: “*This current and future missions requiring the use of boat ramp should be identified and evaluated further.*” The Final EA/FONSI should include this evaluation.

Soil Erosion and Sediment Control Plan

EPA applauds the Air National Guard’s soil erosion and sediment control practices as outlined on page 18 of the Draft EA. EPA recommends the following best management practices (BMPs) be included, wherever applicable, in the Final EA/FONSI.

- All drainage structures with sumps discharging to Lake St. Clair, applicable wetlands, and other aquatic resources should have a maintenance schedule and be cleaned out regularly to prevent sediment and other pollutants from reaching natural resources. Sumps should be monitored for a sufficient period of time to determine a cleanout schedule.
- Temporary soil erosion control measures should be implemented during all earth change stages. Stone checkdams, diversion ditches, or other similar devices should be utilized to control runoff and prevent sediment from reaching the affected aquatic resources.
- If the project, or any portion, is stopped and lies uncompleted for any length of time other than that encountered in a normal work week, every precaution should be taken to protect the uncompleted work from erosion, including the placement of temporary sandbags, gravel bars, riprap, or other acceptable temporary protection.
- Prior to the initiation of any permitted construction activities, a “fabric” erosion control fence (straw bales are not recommended) should be constructed immediately adjacent to the wetland boundary along the entire length of the wetland boundary on the construction site. This erosion barrier should be maintained in good working order throughout the duration of the project. Upon project completion, the accumulated materials should be removed and disposed of at an appropriate upland site. The erosion barrier should then be removed in its entirety and the area restored to its original configuration and cover.
- No work should be performed in any aquatic resources between October 1st and May 1st to avoid fish spawning periods.

Soil Erosion and Sediment Control BMPs (cont.)

- When silt fencing is utilized, it should be properly trenched and maintained. Any accumulation of sediment should be removed from the fencing daily and disposed of at an appropriate upland site to ensure proper functioning.
- Erosion control measures should be in place at the end of every working day.
- Erosion control measures should be inspected, and any necessary repairs or maintenance performed at least once per week and after every rainfall exceeding ½ inch.

Stormwater Pollution Control Plan

- The proposed project will result in increases of impervious surface in the project area. This will increase the amount of stormwater runoff that will need to be treated. The Final EA/FONSI should include measures that channel, capture, and treat asphalt runoff in areas where the trail is being constructed.

Diesel Emissions

EPA recommends the following BMPs be employed during construction activities.

- Using ultra-low sulfur diesel fuel (less than 15 parts per million sulfur).
- Positioning the exhaust pipe so that the diesel fumes are directed away from the operator and nearby workers, thereby reducing the fume concentration to which personnel are exposed.
- Using catalytic converters to reduce carbon monoxide, aldehydes, and hydrocarbons in diesel fumes (these devices must be used with low sulfur fuels).
- Using enclosed, climate-controlled cabs pressurized and equipped with high efficiency particulate air (HEPA) filters to reduce the operator's exposure to diesel fumes. HEPA filters ensure that any incoming air is filtered first.
- Regularly maintaining diesel engines, which is essential to keep exhaust emissions low. Follow the manufacturer's recommended maintenance schedule and procedures. Smoke color can signal the need for maintenance. For example, blue/black smoke indicates that an engine requires servicing or tuning.
- Reducing exposure through work practices and training, such as turning off engines when vehicles are stopped for more than a few minutes, training diesel equipment operators to perform routine inspection, and maintaining filtration devices.

Diesel Emissions BMPs (cont.)

- Purchasing new vehicles that are equipped with the most advanced emissions control systems available.
- Using electric starting aids, such as block heaters, to warm the engines of older equipment and vehicles, thereby reducing emissions.
- Using respirators, which are only an interim measure to control exposure to diesel emissions. In most cases, a N95 respirator is adequate. Workers must be trained and fit-tested before they wear respirators. Depending on the work being conducted, and if oil is present, concentrations of particulates present will determine the efficiency and type of mask and respirator. Personnel familiar with the selection, care, and use of respirators must perform the fit testing. Respirators must bear a National Institute of Occupational Safety and Health (NIOSH) approval number. Do not use paper or surgical masks without NIOSH approval numbers.

Cultural Resources

1. On page 37's last paragraph, the Draft EA identifies two archaeological sites, one being 20MB256. The Final EA/FONSI should include documentation regarding the evaluation of this archaeological site as to its eligibility for inclusion to the National Register of Historic Places.
2. On page 40 of subsection 3.12.2, under Consequences-Alternative 2, a response from the Michigan Deputy State Historic Preservation Officer dated May 14th, 2013 is referenced. The Final EA/FONSI should include a copy of that document in the agency coordination appendix.

Thank you for the opportunity to review and comment upon this Draft EA. We are available to discuss our comments with you in further detail if requested. We look forward to reviewing future NEPA documents prepared for this project. If you have any further questions about this letter, please contact Robert O'Brien of my staff at 312-886-3283 or via e-mail at Obrien.robert@epa.gov.

Sincerely,



Kenneth A. Westlake, Chief
NEPA Implementation Section
Office of Enforcement and Compliance Assurance

Cc: John Crumm, Macomb County Department of Roads

Pete Hill

From: Matthew E. Carmer [mcarmer@ectinc.com]
Sent: Friday, January 17, 2014 9:36 AM
To: Pete Hill
Subject: Fwd: Proposed shoreline bike path at Selfridge Air National Guard Base

-----Original Message-----

From: "Dandridge, Tameka" <tameka_dandridge@fws.gov>
To: <mcarmer@ectinc.com>
Date: Mon, 13 Jan 2014 14:03:04 -0500
Subject: Proposed shoreline bike path at Selfridge Air National Guard Base

Mr. Carmer,

Please review <http://ecos.fws.gov/ipac/> to determine if and what federally listed species are in or near project area and potential impacts to the species.

Thank you.

--

Tameka N. Dandridge
U.S. Fish and Wildlife Service
East Lansing Field Office
2651 Coolidge Road
Suite 101
East Lansing, Michigan 48823
tameka_dandridge@fws.gov

My schedule: M: 7-4:30; T: 7-12; W: 7-3:30; Th: 7-11; F (telework): 7-11



DEPARTMENT OF THE ARMY
DETROIT DISTRICT, CORPS OF ENGINEERS
477 MICHIGAN AVENUE
DETROIT, MICHIGAN 48226-2550

January 14, 2014

REPLY TO
ATTENTION OF:

Engineering & Technical Services
Regulatory Office
Permit No. LRE-2012-00661-10

John Crumm
Macomb County Department of Roads
117 South Groesbeck Highway
Mount Clemens, Michigan 48043

Dear Mr. Crumm:

These comments refer to the Draft Environmental Assessment (DEA) for a Proposed Shoreline Bike Path at Selfridge Air National Guard Base (SANGB) for the Macomb County Department of Roads (MCDR). We attended a pre-application meeting for this project in October, 2012. We have not received an application for a DA permit. The cover letter from Environmental Consulting & Technology, Inc. (EC&T) dated December 9, 2013, was received December 16, 2013, and provided a link for electronic retrieval of the DEA. The process you appear to be pursuing is similar to that in which we become a cooperating agency during the development of an Environmental Impact Statement (EIS), providing input to a proposed project at multiple points so that by the time a final EIS is prepared and an application is submitted for a permit, our concerns have been considered and/or incorporated into the project development and we are able to adopt the final EIS for our permit process review with all expediency. We attempt to provide similar input for your DEA, but please be aware that we can only evaluate a proposal after we receive an application. Until then, please consider all comments as constructive, but impartial to the outcome of the permit process.

1. We are unfamiliar with the acronym FONPA, Finding of No Practical Alternative, or the definition for Practical in the title of your DEA. To our knowledge, this acronym does not appear anywhere in the NEPA laws or regulations, nor in Executive Order 11988, although we did find it in documents associated with Air Force actions (note the given reference to Secretary of the Air Force Order 780.1, Wetlands). However, there was usage of a Finding of No Practicable Alternative, and Practicable does have a definition in the Clean Water Act regulations (40 CFR 230.3q), 404(b)(1) Guidelines. The review and evaluation of practicable alternatives are part of the required 404(b)(1) sequencing to avoid, minimize, or compensate for impacts to the aquatic resources, and is the FONSI document requiring signature (if there is no significant impact).
2. Conclusions derived in the Alternatives paragraph(s) under Section 3.8.2 Consequences appear to be attributed to Agency determinations. We have not made any determinations as yet. We attended a pre-application meeting and have seen no other data or details regarding this project. Our permit process is identified in our

regulations (33 CFR § 320 - 332), and for a Standard Permit includes a public notice before any evaluations and conclusions can be made. Our understanding is that your EA document should identify in detail the resources, the alternatives considered and adopted to avoid and minimize the various types of impacts to those resources, and the resulting unavoidable impacts to those resources, and then draw conclusions. As explained in the opening paragraph of this letter, above, such an EA would presumably provide the basis for our review and evaluation. The DEA document attributing your conclusions to us as the basis for your evaluation and eventual permit application is circular and we would not be able to base our permit decision on it when we receive your application.

3. We note that field wetland delineation data is referenced in the enumeration of the wetlands present. We expect all of the original wetland delineation data sheets and delineation sample point maps for all of the wetland delineations conducted for the project would be included in the appendices of the DEA in order to support the condition descriptions and document the conclusions made in the DEA. Please note that wetland delineations more than 5 years old are considered to be too old. The option for our field verification of determinations, if needed, would then be possible.

4. While the set of plans in the DEA may not be the same as the ones that accompany a permit application, we are unable to find clarification of how SANGB will access Lake St. Clair beyond the proposed offshore pedestrian causeway from the sea plane and boat slip facilities within the enclosed portion of the lake. Our concerns would be as yet unidentified additional impacts to the aquatic resources in the design of this access. Perhaps we missed these details in our review.

5. Impacts to the various public interest factors are treated for Alternative 1: No Action, and for Alternative 2: Proposed Action. The impacts were not used to determine the least damaging alternative as required by NEPA, but we do recognize how the alternate pathway routings were untenable. For our review of your Proposed Action, when submitted, we would look for details that do not seem to be included in the DEA review. How specific proposed tasks are accomplished usually influences the type or degree of impacts to the aquatic resources. The DEA treats these with generic statements. For example, in Section 3.5 Wildlife and Aquatic Resources, the DEA should identify proposed methodology to remove vegetative debris that may impinge upon the pedestrian causeway screening, and perhaps the timing of such repeatable actions may be important, as well.

6. When we process an application, we have the requirement to review the federally threatened and endangered species status of the areas and the cultural resources status and potential of the areas where there would be project impacts. It would appear that you have already researched some of these issues. If you wish letters from

agencies and electronic copies of supporting documentation to be considered, they should be provided with the application.

Thank you for the opportunity to review the DEA document. We emphasize that the fact that we attended an overview pre-application meeting and walked the site, and did not object to, correct, or alter aspects of the project details during the overall project presentation does not place us in a position of support or otherwise with regard to the final decision. We must follow the permit process as stipulated in the regulations, remaining as removed and neutral as possible until the process itself generates our decision outcome. Should you have any questions, please contact Henry Rosenfield at the above address, by E-Mail at Henry.Rosenfield@usace.army.mil, or by telephone at 313-226-6706. In all communications, please refer to File Number LRE-2012-00661-10.

Sincerely,

John Konik
Chief, Regulatory Office
Engineering & Technical Services

Copy Furnished

Environmental Consulting & Technology, Inc., Matthew Carmer
MDEQ, Andy Hartz



RICK SNYDER
GOVERNOR

STATE OF MICHIGAN
DEPARTMENT OF ENVIRONMENTAL QUALITY
LANSING



DAN WYANT
DIRECTOR

January 15, 2014

RECEIVED

JAN 21 2014

ECT-ANNARBOR

Mr. Matthew Carmer
Environmental Consulting & Technology, Inc.
3200 Commonwealth Boulevard, Suite 300
Ann Arbor, Michigan 48105

Dear Mr. Carmer:

SUBJECT: Proposed Shoreline Bicycle Path; Selfridge Air National Guard (ANG) Base;
MID 099 113 128

The Michigan Department of Environmental Quality (MDEQ), Office of Waste Management and Radiological Protection (OWMRP), has reviewed the Environmental Assessment (EA) provided with your letter that was submitted on December 9, 2013, pursuant to Part 111, Hazardous Waste Management, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended. Based upon our review, the OWMRP has no concerns with regard to the EA for the proposed shoreline bicycle path at the Selfridge ANG Base.

Should you have any questions regarding this information, please contact me at 517-284-6568; quackenbushp@michigan.gov; or MDEQ, OWMRP, P.O. Box 30241, Lansing, Michigan 48909-7741.

Sincerely,

Peter Quackenbush
Hazardous Waste Section
Office of Waste Management and
Radiological Protection

cc: Mr. Fred A. Kimble, Andrews ANG Base
Mr. Ken Baker, Selfridge ANG Base
Mr. Aaron Etnyre, BB&E, LLC
Ms. Virginia Himich /Mr. David Slayton/Mr. Art Ostaszewski, MDEQ
Corrective Action File

Faint mirrored text bleed-through from the reverse side of the page.



RICK SNYDER
GOVERNOR

STATE OF MICHIGAN
MICHIGAN STATE HOUSING DEVELOPMENT AUTHORITY
STATE HISTORIC PRESERVATION OFFICE

SCOTT WOOSLEY
EXECUTIVE DIRECTOR

January 10, 2014

RECEIVED

JAN 17 2014

ECT-ANNARBOR

MATTHEW CARMER
ENVIRONMENTA CONSULTING & TECHNOLOGY INC
200 COMMONWEALTH BLVD SUITE 300
ANN ARBOR MI 48105

RE: ER-9079.13 Lake St. Clair Shoreline Trail Project - Selfridge Air National Guard Base,
T2N, R14E, Harrison Township, Macomb County

Dear Mr. Carmer:

The State Historic Preservation Officer (SHPO) received your preliminary coordination notification and request for comment for the above-cited undertaking at the location noted above. It appears that you are initiating consultation with the State Historic Preservation Office (SHPO) under Section 106 of the National Historic Preservation Act of 1966 (NHPA), as amended. If in fact you are being asked to carry out Section 106 consultation on an agency's behalf, the mandatory application form and instructions for submitting projects for review under Section 106 may be downloaded in MS Word format from our website at www.michigan.gov/shposection106.

According to our records, it appears that we may already have commented on this undertaking under the authority of Section 106 of the NHPA in our letter to Heidi Vogt at Selfridge Air National Guard Base dated May 14, 2013 (enclosed). Please note that the Section 106 regulations indicate that for undertakings involving multiple Federal agencies, one agency should be designated as the lead agency for complying with the National Historic Preservation Act (§800.2(a)(2)). This agency, acting in cooperation with the other federal agencies, is responsible for fulfilling their collective-responsibilities under Section 106. Coordination through the designation of a lead agency eliminates the redundancy of multiple reviews by the SHPO for the same project, and ensures consistency and accuracy in the consultation process. Furthermore The SHPO receives approximately 3,500 projects for review annually.

We therefore advise that applicants seeking assistance from more than one federal agency should notify said agencies of other federal involvement before initiating consultation with the SHPO so that a lead agency can be designated to coordinate consultation. We also request that, in instances where additional federal assistance is being sought whereby Section 106 consultation has already been completed, that federal agencies accept a record of prior consultation as proof of fulfilling their Section 106 responsibilities; **provided there is no change whatsoever in the scope of work for that project.**

If at this time, you are merely seeking information on above-ground historic resources that are listed in the National Register of Historic Places or in the State Register of Historic Sites, please refer to the Michigan Sites Online website at:

<http://www.michiganhistory.org/preserve/michsite/index.html>., or on the National Register Information System database at: <http://www.nr.nps.gov/>. The SHPO cannot conduct such



research on your behalf. For information regarding archaeological sites, please contact the State Archaeologist, Dr. Dean Anderson, at (517) 373-1618.

The State Historic Preservation Office is not the office of record for this undertaking. You are therefore asked to maintain a copy of this letter with your environmental review record for this undertaking. If the scope of work changes in any way, or if artifacts or bones are discovered, please notify this office immediately.

If you have any questions, please contact Brian Grennell, Cultural Resource Management Specialist, at (517) 335-2721 or by email at grennellb@michigan.gov. Please reference our project number in all communication with this office regarding this undertaking. Thank you for this opportunity to review and comment, and for your cooperation.

Sincerely,



Martha MacFarlane-Faes
Deputy State Historic Preservation Officer

BGG:MMF

Copy: Heidi Vogt, Selfridge ANGB

Enclosure(s)



RICK SNYDER
GOVERNOR

STATE OF MICHIGAN
MICHIGAN STATE HOUSING DEVELOPMENT AUTHORITY
STATE HISTORIC PRESERVATION OFFICE

SCOTT WOOSLEY
EXECUTIVE DIRECTOR

May 14, 2013

HEIDI A VOGT
SELFRIDGE AIR NATIONAL GUARD
127 WG/EM
40741 SCHOOLHOUSE ROAD
SELFRIDGE ANGB MI 48045-49219

RE: ER-9079.13 Lake St. Clair Shoreline Trail Project - Selfridge Air National Guard Base, T2N, R14E,
Harrison Township, Macomb County (USANG)

Dear Ms. Vogt:

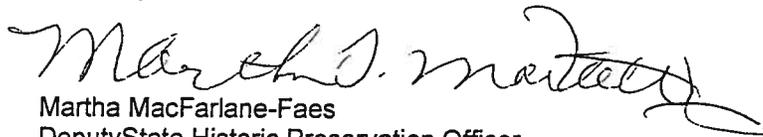
Under the authority of Section 106 of the National Historic Preservation Act of 1966, as amended, we have reviewed the above-cited undertaking at the location noted above. Based on the information provided for our review, it is the opinion of the State Historic Preservation Officer (SHPO) that the effects of the proposed undertaking do not meet the criteria of adverse effect [36 CFR § 800.5(a)(1)]. Therefore, the project will have **no adverse effect** [36 CFR § 800.5(b)] on Selfridge Field, which appears to meet the criteria for listing in the National Register of Historic Places.

This letter evidences the USANG's compliance with 36 CFR § 800.4 "Identification of historic properties" and 36 CFR § 800.5 "Assessment of adverse effects," and the fulfillment of the USANG's responsibility to notify the SHPO, as a consulting party in the Section 106 process, under 36 CFR § 800.5(c) "Consulting party review." **If the scope of work changes in any way, or if artifacts or bones are discovered, please notify this office immediately.**

If you have any questions, please contact Brian Grennell, Cultural Resource Management Specialist, at (517) 335-2721 or by email at GrennellB@michigan.gov. **Please reference our project number in all communication with this office regarding this undertaking.**

Finally, the State Historic Preservation Office is not the office of record for this undertaking. You are therefore asked to maintain a copy of this letter with your environmental review record for this undertaking. Thank you for this opportunity to review and comment, and for your cooperation.

Sincerely,


Martha MacFarlane-Faes
Deputy State Historic Preservation Officer

MMF:SAT:REM:bgg

copy: Matt Carmer, ECT, Inc.





REPLY TO
ATTENTION OF:

DEPARTMENT OF THE ARMY
DETROIT DISTRICT, CORPS OF ENGINEERS
REGULATORY OFFICE
477 MICHIGAN AVENUE
DETROIT MI 48226-2550

November 27, 2013

Engineering & Technical Services
Regulatory Office
File No. LRE-2006-01185-250-J13

Kenneth Baker
Selfridge Air National guard Base
28900 Selfridge Avenue
Harrison Township, Michigan 48045

Dear Mr. Baker:

This is in response to your recent request regarding the Corps of Engineers' jurisdiction on property adjacent to Lake St. Clair at 28900 Selfridge Avenue (otherwise known as Selfridge Air National Guard Base) in Harrison Twp., Michigan (Sections 5-18, Township 2N, Range 14E and Sections 31-32, Township 3N, Range 14E). Specifically, your request included approximately 387 acres of wetlands on approximately 3075 acres of property, which were designated by your consultant as Areas A, B, C, D, E, F, G, H, J, K, L, M, N, P, Q, R, T, and U.

We recently inspected the property and determined that Areas J, R, and U contain wetlands adjacent to Lake St. Clair, which is a navigable water of the United States. Lake St. Clair and its adjacent wetlands are under the regulatory jurisdiction of the Corps of Engineers. The wetlands in Areas J, R, and U are under the Corps' jurisdiction are depicted on the enclosed drawings. We also concur with the delineations of the wetlands within Areas J, R, and U that you submitted contained in the document "Final Wetland Delineation Report and Associated Mapping, Selfridge Air National Guard Base, Michigan," prepared by your consultant, HDR, Inc.

The Corps of Engineers' authority to regulate certain activities on and adjacent to the property in question is found in Section 10 of the Rivers and Harbors Act (Section 10), and Section 404 of the Clean Water Act (Section 404).

Under Section 10, a Corps permit is required for any structures or work in navigable waters of the United States, such as Lake St. Clair, to what is called the Ordinary High Water Mark (OHWM). In Lake St. Clair, the OHWM extends to the elevation contour of 576.3 International Great Lakes Datum 1985. Additionally, a Section 10 permit is required for structures or work outside this limit if they affect the course, location, or condition of the waterbody as to its navigable capacity. Some typical examples of structures or work requiring Section 10 permits within this jurisdictional area include beach nourishment, boat ramps, breakwaters, bulkheads, dredging, filling or discharging material such as sand, gravel or stones, groins and jetties, mooring buoys, piers (seasonal or permanent), placement of riprap for wave protection or streambank stabilization, boat hoists, pilings and construction of marina facilities.

Section 404 requires a Corps permit for the discharge of dredged or fill material into navigable waters of the United States and in wetlands adjacent to those waters. The area of Corps jurisdiction under Section 404 extends to the OHWM, and to the upland boundary of any adjacent wetlands. Projects involving discharges typically include placement of fill material for homes and landscaping, impoundments, causeways, road fills, dams and dikes, riprap, groins, breakwaters, revetments, and beach nourishment. Section 404 also regulates discharges of dredged material incidental to certain activities such as grading, mechanized landclearing, ditching or other excavation activity, and the installation of certain pile-supported structures.

If you anticipate discharging any dredged or fill material in Lake St. Clair or in wetlands adjacent to Lake St. Clair, you will need to apply for and receive authorization from the Corps prior to starting such work. Likewise, any construction or other work waterward of the OHWM will require prior Corps authorization. The necessary permit application can be found on our website at <http://www.lre.usace.army.mil/Missions/RegulatoryProgramandPermits.aspx>. Please complete and return the application following the procedures set forth in the application. Plan view and cross-sectional view drawings, in 8½" x 11" format, should accompany the application. Drawings and a narrative on the form should specifically identify and describe all of the structures, work, and discharges which we regulate as described above, including temporary or construction measures.

Our assertion of jurisdiction is based on the following criteria: (1) our documentation that the wetlands within areas identified as Areas J, R, and U meet our technical definition of a wetland per the criteria in the *1987 Corps of Engineers Wetlands Delineation Manual* and the appropriate Regional Supplement.

Furthermore, in 1984 a portion of the Corps' regulatory responsibilities was assumed by the Michigan Department of Environmental Quality (MDEQ). Areas A-H, K-Q, and T are within the assumed area. Unless otherwise notified, a separate authorization from the Corps is not required; however, a permit must be obtained from the MDEQ. Therefore, we recommend that you contact Mr. Luke Golden of the Michigan Department of Environmental Quality, Land and Water Management Division, 27700 Donald Court, Warren, Michigan, 48092, (586) 753-3761 for a determination of State permit requirements

This letter contains an approved jurisdictional determination for the property in question. If you object to this determination, you may request an administrative appeal under Corps regulations at 33 Code of Federal Regulations (CFR) Part 331. We have enclosed a Notification of Appeal Process (NAP) fact sheet and a Request for Appeal (RFA) form. If you request to appeal this determination you must submit a completed RFA form to the Corps' Great Lakes and Ohio River Division office at following address:

Appeals Review Officer
U.S. Army Corps of Engineers
Great Lakes and Ohio River Division
550 Main Street
Rm 10-524
Cincinnati, Ohio 45202-3222

In order for an RFA to be accepted by the Corps, the Corps must determine that the RFA is complete, that it meets the criteria for appeal under 33 CFR Part 331.5, and that it has been received by the Division office within 60 days of the date of the NAP sheet. If you decide to submit an RFA form, it must be received at the above address by January 27, 2013. It is not necessary to submit an RFA form to the Division office if you do not object to the determination in this letter. You may contact the Appeals Review Officer at (513) 684-6212 and send a facsimile at (513) 684-2460.

This jurisdiction determination is valid for a period of five years from the date of this letter unless new information warrants revision of the delineation before the expiration date. Should you have any questions, please contact me at the above address, by E-Mail at Eric.J.Warda@usace.army.mil, or by telephone at 313-226-5382. In all communications, please refer to File Number LRE-2006-01185-250-J13.

We are interested in your thoughts and opinions concerning your experience with the Detroit District, Corps of Engineers Regulatory Program. If you are interested in letting us know how we are doing, you can complete an electronic Customer Service Survey from our web site at: <http://per2.nwp.usace.army.mil/survey.html>. Alternatively, you may contact us and request a paper copy of the survey that you may complete and return to us by mail or fax. Thank you for taking the time to complete the survey, we appreciate your feedback.

Sincerely,

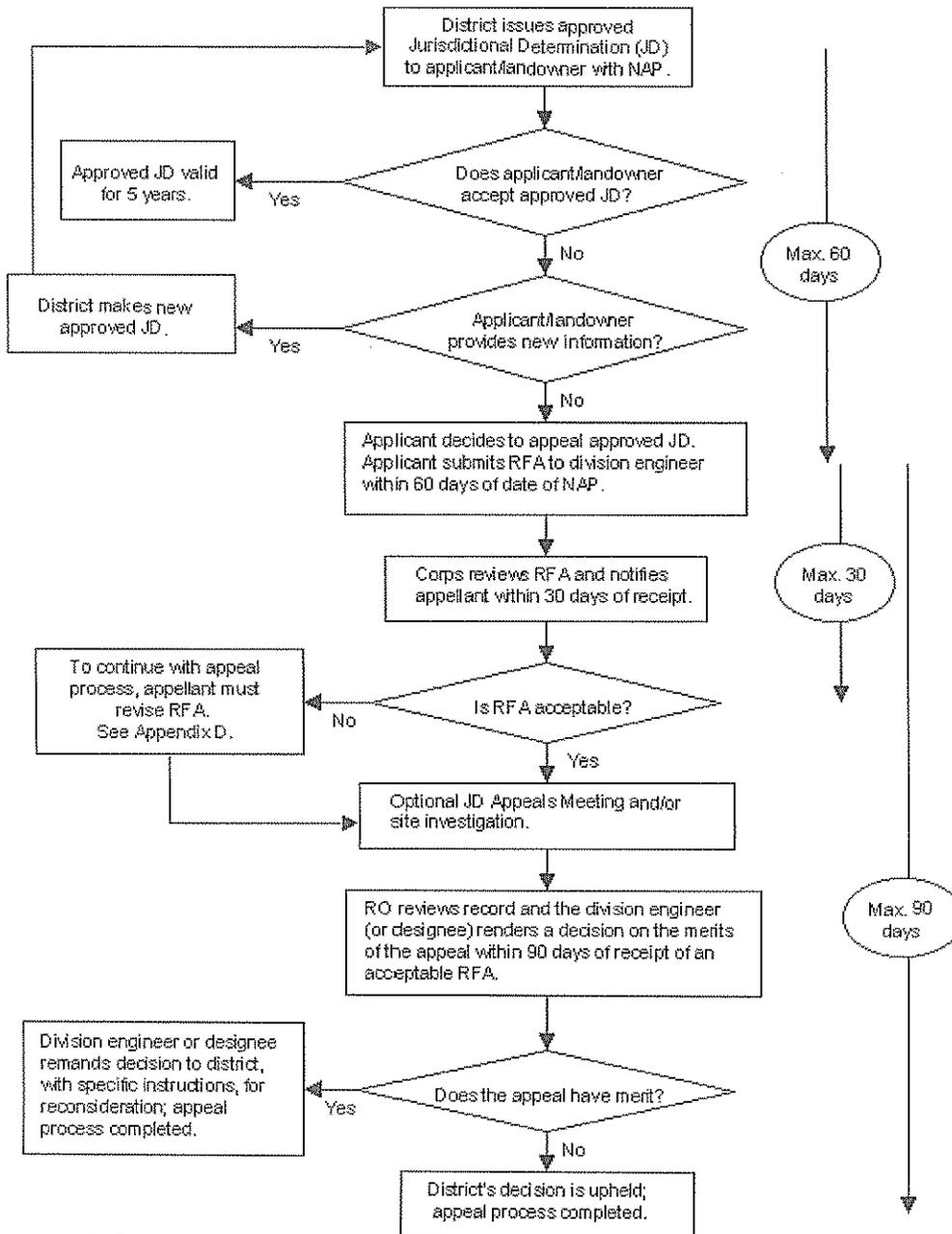


Eric J. Warda
Regulatory Project Manager
Compliance & Enforcement Branch
Regulatory Office

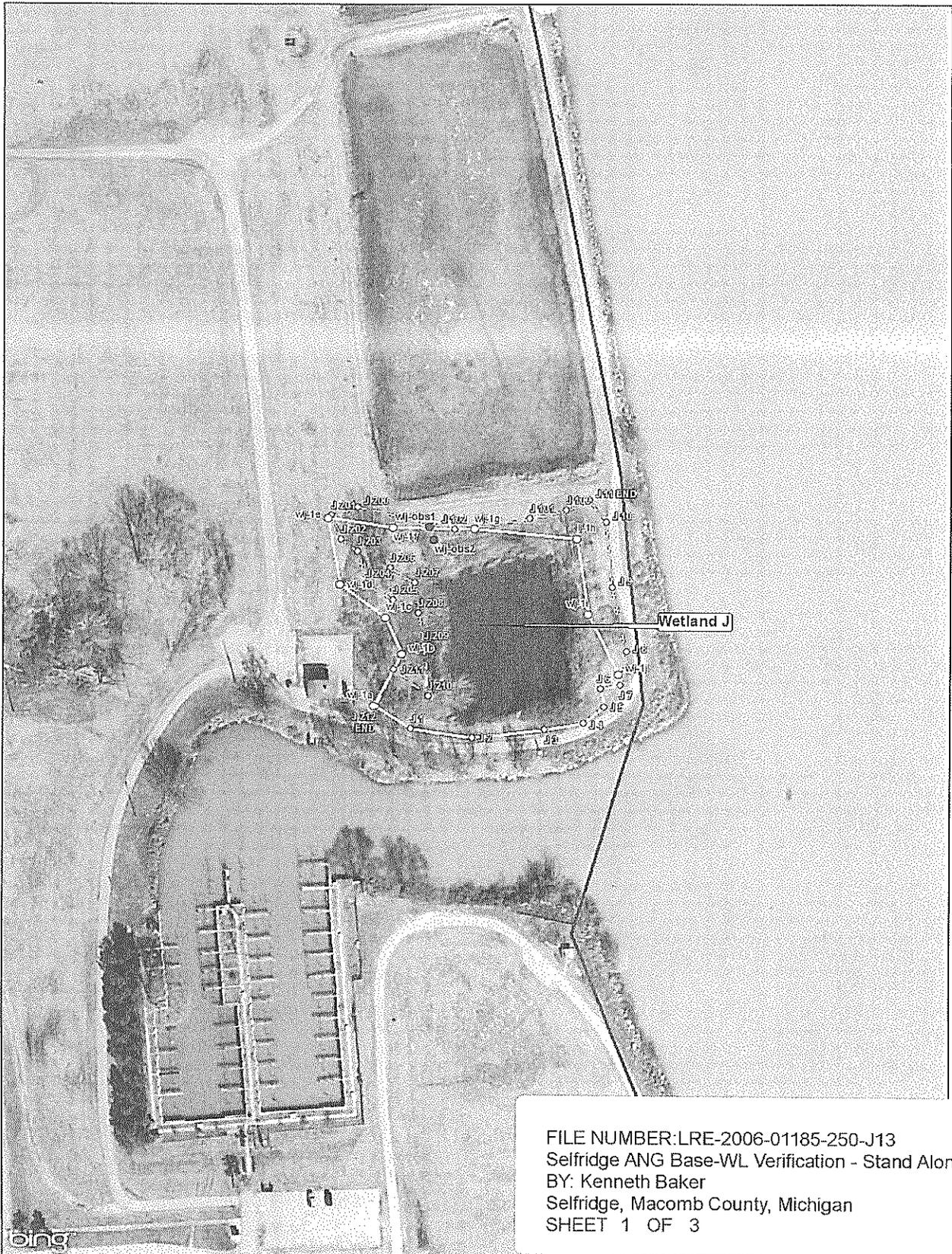
Enclosure

Copy Furnished
MDEQ, Southeast Michigan Office

Administrative Appeal Process for Approved Jurisdictional Determinations



Appendix C



FILE NUMBER: LRE-2006-01185-250-J13
 Selfridge ANG Base-WL Verification - Stand Alone JD
 BY: Kenneth Baker
 Selfridge, Macomb County, Michigan
 SHEET 1 OF 3

Page 38 of 50

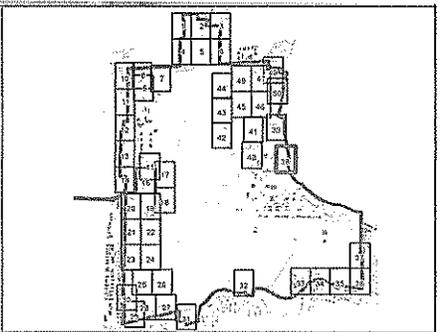
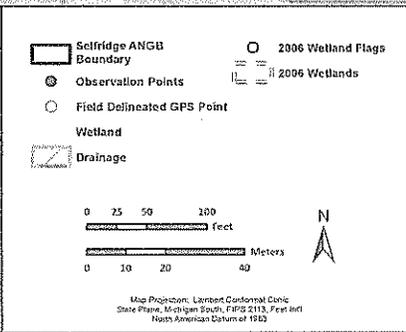
**Wetlands and Waters
 of the U.S. Delineation Map
 Selfridge ANGB, Michigan**

**Prepared By:
 HDR, Inc.**

Drawn By: SG
 Checked By: MG

Scale: 1" = 100'

Date: December 2012





FILE NUMBER: LRE-2006-01185-250-J13
 Selfridge ANG Base-WL Verification - Stand Alone JD
 BY: Kenneth Baker
 Selfridge, Macomb County, Michigan
 SHEET 2 OF 3

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Page 49 of 50	
Wetlands and Waters of the U.S. Delineation Map Selfridge ANGB, Michigan	
Prepared By: HDR, Inc.	
Drawn By: SG Checked By: MG	Scale: 1" = 100'
Date: December 2012	

Selfridge ANGB Boundary
 Observation Points
 Field Delineated GPS Point
 Wetland
 Drainage

2006 Wetland Flags
 2006 Wetlands

0 25 50 100 Feet
 0 10 20 40 Meters

N

Map Projection: Lambert Conformal Conic
 State Plane, Michigan South, FIPS 2113, Feet 100
 North American Datum of 2011





FILE NUMBER: LRE-2006-01185-250-J13
 Selfridge ANG Base-WL Verification - Stand Alone JD
 BY: Kenneth Baker
 Selfridge, Macomb County, Michigan
 SHEET 3 OF 3

Page 39 of 50

Wetlands and Waters
 of the U.S. Delineation Map
 Selfridge ANGB, Michigan

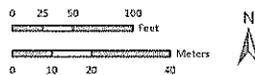
Prepared By:
 HDR, Inc.

Drawn By: SG
 Checked By: MG

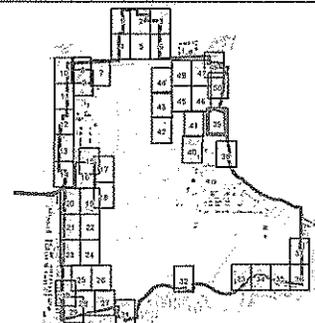
Scale: 1" = 100'

Date: December 2012

- Selfridge ANGB Boundary
- Observation Points
- Field Delineated GPS Point
- Wetland
- Drainage
- 2006 Wetland Flags
- 2006 Wetlands



Map Projection: Lambert Conformal Conic
 State Plane, Michigan South, FIPS 2113, Feet Unit
 North American Datum of 1983



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**NOTIFICATION OF ADMINISTRATIVE APPEAL OPTIONS AND PROCESS AND
REQUEST FOR APPEAL**

Applicant: Kenneth Baker	File Number: LRE-2006-01185-250-J13	Date: November 27, 2013
Attached is:		See Section below
	INITIAL PROFFERED PERMIT (Standard Permit or Letter of permission)	A
	PROFFERED PERMIT (Standard Permit or Letter of permission)	B
	PERMIT DENIAL	C
XX	APPROVED JURISDICTIONAL DETERMINATION	D
	PRELIMINARY JURISDICTIONAL DETERMINATION	E

SECTION I - The following identifies your rights and options regarding an administrative appeal of the above decision. Additional information may be found at http://www.usace.army.mil/cecw/pages/reg_materials.aspx or Corps regulations at 33 CFR Part 331.

A: INITIAL PROFFERED PERMIT: You may accept or object to the permit.

- **ACCEPT:** If you received a Standard Permit, you may sign the permit document and return it to the district engineer for final authorization. If you received a Letter of Permission (LOP), you may accept the LOP and your work is authorized. Your signature on the Standard Permit or acceptance of the LOP means that you accept the permit in its entirety, and waive all rights to appeal the permit, including its terms and conditions, and approved jurisdictional determinations associated with the permit.
- **OBJECT:** If you object to the permit (Standard or LOP) because of certain terms and conditions therein, you may request that the permit be modified accordingly. You must complete Section II of this form and return the form to the district engineer. Your objections must be received by the district engineer within 60 days of the date of this notice, or you will forfeit your right to appeal the permit in the future. Upon receipt of your letter, the district engineer will evaluate your objections and may: (a) modify the permit to address all of your concerns, (b) modify the permit to address some of your objections, or (c) not modify the permit having determined that the permit should be issued as previously written. After evaluating your objections, the district engineer will send you a proffered permit for your reconsideration, as indicated in Section B below.

B: PROFFERED PERMIT: You may accept or appeal the permit.

- **ACCEPT:** If you received a Standard Permit, you may sign the permit document and return it to the district engineer for final authorization. If you received a Letter of Permission (LOP), you may accept the LOP and your work is authorized. Your signature on the Standard Permit or acceptance of the LOP means that you accept the permit in its entirety, and waive all rights to appeal the permit, including its terms and conditions, and approved jurisdictional determinations associated with the permit.
- **APPEAL:** If you choose to decline the proffered permit (Standard or LOP) because of certain terms and conditions therein, you may appeal the declined permit under the Corps of Engineers Administrative Appeal Process by completing Section II of this form and sending the form to the division engineer. This form must be received by the division engineer within 60 days of the date of this notice.

C: PERMIT DENIAL: You may appeal the denial of a permit under the Corps of Engineers Administrative Appeal Process by completing Section II of this form and sending the form to the division engineer. This form must be received by the division engineer within 60 days of the date of this notice.

D: APPROVED JURISDICTIONAL DETERMINATION: You may accept or appeal the approved JD or provide new information.

- **ACCEPT:** You do not need to notify the Corps to accept an approved JD. Failure to notify the Corps within 60 days of the date of this notice, means that you accept the approved JD in its entirety, and waive all rights to appeal the approved JD.
- **APPEAL:** If you disagree with the approved JD, you may appeal the approved JD under the Corps of Engineers Administrative Appeal Process by completing Section II of this form and sending the form to the division engineer. This form must be received by the division engineer within 60 days of the date of this notice.

E: PRELIMINARY JURISDICTIONAL DETERMINATION: You do not need to respond to the Corps regarding the preliminary JD. The Preliminary JD is not appealable. If you wish, you may request an approved JD (which may be appealed), by contacting the Corps district for further instruction. Also you may provide new information for further consideration by the Corps to reevaluate the JD.

SECTION II - REQUEST FOR APPEAL or OBJECTIONS TO AN INITIAL PROFFERED PERMIT

REASONS FOR APPEAL OR OBJECTIONS: (Describe your reasons for appealing the decision or your objections to an initial proffered permit in clear concise statements. You may attach additional information to this form to clarify where your reasons or objections are addressed in the administrative record.)

ADDITIONAL INFORMATION: The appeal is limited to a review of the administrative record, the Corps memorandum for the record of the appeal conference or meeting, and any supplemental information that the review officer has determined is needed to clarify the administrative record. Neither the appellant nor the Corps may add new information or analyses to the record. However, you may provide additional information to clarify the location of information that is already in the administrative record.

POINT OF CONTACT FOR QUESTIONS OR INFORMATION:

If you have questions regarding this decision and/or the appeal process you may contact:

Eric Warda
U.S. Army Corps of Engineers
Regulatory Office
REGULATORY OFFICE
477 MICHIGAN AVENUE
DETROIT MI 48226-2550

313-226-5382

If you only have questions regarding the appeal process you may also contact:

Appeal Review Officer
U.S. Army Corps of Engineers
Great Lakes and Ohio River Division
550 Main Street, Room 10-524
Cincinnati, Ohio 45202-3222

Tel. (513) 684-6212 Fax (513) 684-2460

RIGHT OF ENTRY: Your signature below grants the right of entry to Corps of Engineers personnel, and any government consultants, to conduct investigations of the project site during the course of the appeal process. You will be provided a 15 day notice of any site investigation, and will have the opportunity to participate in all site investigations.

Signature of appellant or agent.

Date:

Telephone number:

APPROVED JURISDICTIONAL DETERMINATION FORM
U.S. Army Corps of Engineers

This form should be completed by following the instructions provided in Section IV of the JD Form Instructional Guidebook.

SECTION I: BACKGROUND INFORMATION

A. REPORT COMPLETION DATE FOR APPROVED JURISDICTIONAL DETERMINATION (JD): 25 November 2013

B. DISTRICT OFFICE, FILE NAME, AND NUMBER: Selfridge ANG Base, LRE-2006-01185-250-J13

C. PROJECT LOCATION AND BACKGROUND INFORMATION:

State: MICH County/parish/borough: Macomb City: Harrison Twp
Center coordinates of site (lat/long in degree decimal format): Lat. 42.61654° N, Long. -82.83319° W
Universal Transverse Mercator:

Name of nearest waterbody: Lake St. Clair

Name of nearest Traditional Navigable Water (TNW) into which the aquatic resource flows:

Name of watershed or Hydrologic Unit Code (HUC):

- Check if map/diagram of review area and/or potential jurisdictional areas is/are available upon request.
 Check if other sites (e.g., offsite mitigation sites, disposal sites, etc...) are associated with this action and are recorded on a different JD form.

D. REVIEW PERFORMED FOR SITE EVALUATION (CHECK ALL THAT APPLY):

- Office (Desk) Determination. Date: 25 November 2013
 Field Determination. Date(s): 6 August 2013

SECTION II: SUMMARY OF FINDINGS

A. RHA SECTION 10 DETERMINATION OF JURISDICTION.

There Are no "navigable waters of the U.S." within Rivers and Harbors Act (RHA) jurisdiction (as defined by 33 CFR part 329) in the review area. [Required]

- Waters subject to the ebb and flow of the tide.
 Waters are presently used, or have been used in the past, or may be susceptible for use to transport interstate or foreign commerce.
Explain:

B. CWA SECTION 404 DETERMINATION OF JURISDICTION.

There Are "waters of the U.S." within Clean Water Act (CWA) jurisdiction (as defined by 33 CFR part 328) in the review area. [Required]

1. Waters of the U.S.

a. Indicate presence of waters of U.S. in review area (check all that apply):¹

- TNWs, including territorial seas
 Wetlands adjacent to TNWs
 Relatively permanent waters² (RPWs) that flow directly or indirectly into TNWs
 Non-RPWs that flow directly or indirectly into TNWs
 Wetlands directly abutting RPWs that flow directly or indirectly into TNWs
 Wetlands adjacent to but not directly abutting RPWs that flow directly or indirectly into TNWs
 Wetlands adjacent to non-RPWs that flow directly or indirectly into TNWs
 Impoundments of jurisdictional waters
 Isolated (interstate or intrastate) waters, including isolated wetlands

b. Identify (estimate) size of waters of the U.S. in the review area:

Non-wetland waters: linear feet: width (ft) and/or acres.
Wetlands: 3 wetlands for a total of 3.4 acres.

c. Limits (boundaries) of jurisdiction based on: 1987 Delineation Manual

Elevation of established OHWM (if known): 576.3 IGLD 1985.

2. Non-regulated waters/wetlands (check if applicable):³

- Potentially jurisdictional waters and/or wetlands were assessed within the review area and determined to be not jurisdictional.
Explain:

¹ Boxes checked below shall be supported by completing the appropriate sections in Section III below.

² For purposes of this form, an RPW is defined as a tributary that is not a TNW and that typically flows year-round or has continuous flow at least "seasonally" (e.g., typically 3 months).

³ Supporting documentation is presented in Section III.F.

SECTION III: CWA ANALYSIS

A. TNWs AND WETLANDS ADJACENT TO TNWs

The agencies will assert jurisdiction over TNWs and wetlands adjacent to TNWs. If the aquatic resource is a TNW, complete Section III.A.1 and Section III.D.1. only; if the aquatic resource is a wetland adjacent to a TNW, complete Sections III.A.1 and 2 and Section III.D.1.; otherwise, see Section III.B below.

1. TNW

Identify TNW: **Lake St. Clair.**

Summarize rationale supporting determination:

2. Wetland adjacent to TNW

Summarize rationale supporting conclusion that wetland is "adjacent": Each of the wetlands ("J," "R," and "U" are adjacent to Lake St. Clair as they are only separated by berms, thuly making them Waters of the US (33CFR 328.3(c)).

B. CHARACTERISTICS OF TRIBUTARY (THAT IS NOT A TNW) AND ITS ADJACENT WETLANDS (IF ANY):

This section summarizes information regarding characteristics of the tributary and its adjacent wetlands, if any, and it helps determine whether or not the standards for jurisdiction established under *Rapanos* have been met.

The agencies will assert jurisdiction over non-navigable tributaries of TNWs where the tributaries are "relatively permanent waters" (RPWs), i.e. tributaries that typically flow year-round or have continuous flow at least seasonally (e.g., typically 3 months). A wetland that directly abuts an RPW is also jurisdictional. If the aquatic resource is not a TNW, but has year-round (perennial) flow, skip to Section III.D.2. If the aquatic resource is a wetland directly abutting a tributary with perennial flow, skip to Section III.D.4.

A wetland that is adjacent to but that does not directly abut an RPW requires a significant nexus evaluation. Corps districts and EPA regions will include in the record any available information that documents the existence of a significant nexus between a relatively permanent tributary that is not perennial (and its adjacent wetlands if any) and a traditional navigable water, even though a significant nexus finding is not required as a matter of law.

If the waterbody⁴ is not an RPW, or a wetland directly abutting an RPW, a JD will require additional data to determine if the waterbody has a significant nexus with a TNW. If the tributary has adjacent wetlands, the significant nexus evaluation must consider the tributary in combination with all of its adjacent wetlands. This significant nexus evaluation that combines, for analytical purposes, the tributary and all of its adjacent wetlands is used whether the review area identified in the JD request is the tributary, or its adjacent wetlands, or both. If the JD covers a tributary with adjacent wetlands, complete Section III.B.1 for the tributary, Section III.B.2 for any onsite wetlands, and Section III.B.3 for all wetlands adjacent to that tributary, both onsite and offsite. The determination whether a significant nexus exists is determined in Section III.C below.

1. Characteristics of non-TNWs that flow directly or indirectly into TNW

(i) General Area Conditions:

Watershed size: **Pick List**
Drainage area: **Pick List**
Average annual rainfall: inches
Average annual snowfall: inches

(ii) Physical Characteristics:

(a) Relationship with TNW:

- Tributary flows directly into TNW.
 Tributary flows through **Pick List** tributaries before entering TNW.

Project waters are **Pick List** river miles from TNW.
Project waters are **Pick List** river miles from RPW.
Project waters are **Pick List** aerial (straight) miles from TNW.
Project waters are **Pick List** aerial (straight) miles from RPW.
Project waters cross or serve as state boundaries. Explain:

Identify flow route to TNW⁵:

⁴ Note that the Instructional Guidebook contains additional information regarding swales, ditches, washes, and erosional features generally and in the arid West.

⁵ Flow route can be described by identifying, e.g., tributary a, which flows through the review area, to flow into tributary b, which then flows into TNW.

Tributary stream order, if known:

(b) General Tributary Characteristics (check all that apply):

Tributary is: Natural
 Artificial (man-made). Explain:
 Manipulated (man-altered). Explain:

Tributary properties with respect to top of bank (estimate):

Average width: feet
Average depth: feet
Average side slopes: **Pick List**.

Primary tributary substrate composition (check all that apply):

Silts Sands Concrete
 Cobbles Gravel Muck
 Bedrock Vegetation. Type/% cover:
 Other. Explain:

Tributary condition/stability [e.g., highly eroding, sloughing banks]. Explain:

Presence of run/riffle/pool complexes. Explain:

Tributary geometry: **Pick List**

Tributary gradient (approximate average slope): %

(c) Flow:

Tributary provides for: **Pick List**

Estimate average number of flow events in review area/year: **Pick List**

Describe flow regime:

Other information on duration and volume:

Surface flow is: **Pick List**. Characteristics:

Subsurface flow: **Pick List**. Explain findings:

Dye (or other) test performed:

Tributary has (check all that apply):

Bed and banks
 OHWM⁶ (check all indicators that apply):
 clear, natural line impressed on the bank the presence of litter and debris
 changes in the character of soil destruction of terrestrial vegetation
 shelving the presence of wrack line
 vegetation matted down, bent, or absent sediment sorting
 leaf litter disturbed or washed away scour
 sediment deposition multiple observed or predicted flow events
 water staining abrupt change in plant community
 other (list):
 Discontinuous OHWM.⁷ Explain:

If factors other than the OHWM were used to determine lateral extent of CWA jurisdiction (check all that apply):

High Tide Line indicated by: Mean High Water Mark indicated by:
 oil or scum line along shore objects survey to available datum;
 fine shell or debris deposits (foreshore) physical markings;
 physical markings/characteristics vegetation lines/changes in vegetation types.
 tidal gauges
 other (list):

(iii) Chemical Characteristics:

Characterize tributary (e.g., water color is clear, discolored, oily film; water quality; general watershed characteristics, etc.).

Explain:

Identify specific pollutants, if known:

⁶A natural or man-made discontinuity in the OHWM does not necessarily sever jurisdiction (e.g., where the stream temporarily flows underground, or where the OHWM has been removed by development or agricultural practices). Where there is a break in the OHWM that is unrelated to the waterbody's flow regime (e.g., flow over a rock outcrop or through a culvert), the agencies will look for indicators of flow above and below the break.

⁷Ibid.

(iv) **Biological Characteristics. Channel supports (check all that apply):**

- Riparian corridor. Characteristics (type, average width):
- Wetland fringe. Characteristics:
- Habitat for:
 - Federally Listed species. Explain findings:
 - Fish/spawn areas. Explain findings:
 - Other environmentally-sensitive species. Explain findings:
 - Aquatic/wildlife diversity. Explain findings:

2. **Characteristics of wetlands adjacent to non-TNW that flow directly or indirectly into TNW**

(i) **Physical Characteristics:**

(a) General Wetland Characteristics:

Properties:

Wetland size: acres

Wetland type. Explain:

Wetland quality. Explain:

Project wetlands cross or serve as state boundaries. Explain:

(b) General Flow Relationship with Non-TNW:

Flow is: Pick List. Explain:

Surface flow is: Pick List

Characteristics:

Subsurface flow: Pick List. Explain findings:

Dye (or other) test performed:

(c) Wetland Adjacency Determination with Non-TNW:

Directly abutting

Not directly abutting

Discrete wetland hydrologic connection. Explain:

Ecological connection. Explain:

Separated by berm/barrier. Explain:

(d) Proximity (Relationship) to TNW

Project wetlands are Pick List river miles from TNW.

Project waters are Pick List aerial (straight) miles from TNW.

Flow is from: Pick List.

Estimate approximate location of wetland as within the Pick List floodplain.

(ii) **Chemical Characteristics:**

Characterize wetland system (e.g., water color is clear, brown, oil film on surface; water quality; general watershed characteristics; etc.). Explain:

Identify specific pollutants, if known:

(iii) **Biological Characteristics. Wetland supports (check all that apply):**

- Riparian buffer. Characteristics (type, average width):
- Vegetation type/percent cover. Explain:
- Habitat for:
 - Federally Listed species. Explain findings:
 - Fish/spawn areas. Explain findings:
 - Other environmentally-sensitive species. Explain findings:
 - Aquatic/wildlife diversity. Explain findings:

3. **Characteristics of all wetlands adjacent to the tributary (if any)**

All wetland(s) being considered in the cumulative analysis: Pick List

Approximately () acres in total are being considered in the cumulative analysis.

For each wetland, specify the following:

Directly abuts? (Y/N)

Size (in acres)

Directly abuts? (Y/N)

Size (in acres)

Summarize overall biological, chemical and physical functions being performed:

C. SIGNIFICANT NEXUS DETERMINATION

A significant nexus analysis will assess the flow characteristics and functions of the tributary itself and the functions performed by any wetlands adjacent to the tributary to determine if they significantly affect the chemical, physical, and biological integrity of a TNW. For each of the following situations, a significant nexus exists if the tributary, in combination with all of its adjacent wetlands, has more than a speculative or insubstantial effect on the chemical, physical and/or biological integrity of a TNW. Considerations when evaluating significant nexus include, but are not limited to the volume, duration, and frequency of the flow of water in the tributary and its proximity to a TNW, and the functions performed by the tributary and all its adjacent wetlands. It is not appropriate to determine significant nexus based solely on any specific threshold of distance (e.g. between a tributary and its adjacent wetland or between a tributary and the TNW). Similarly, the fact an adjacent wetland lies within or outside of a floodplain is not solely determinative of significant nexus.

Draw connections between the features documented and the effects on the TNW, as identified in the *Rapanos* Guidance and discussed in the Instructional Guidebook. Factors to consider include, for example:

- Does the tributary, in combination with its adjacent wetlands (if any), have the capacity to carry pollutants or flood waters to TNWs, or to reduce the amount of pollutants or flood waters reaching a TNW?
- Does the tributary, in combination with its adjacent wetlands (if any), provide habitat and lifecycle support functions for fish and other species, such as feeding, nesting, spawning, or rearing young for species that are present in the TNW?
- Does the tributary, in combination with its adjacent wetlands (if any), have the capacity to transfer nutrients and organic carbon that support downstream foodwebs?
- Does the tributary, in combination with its adjacent wetlands (if any), have other relationships to the physical, chemical, or biological integrity of the TNW?

Note: the above list of considerations is not inclusive and other functions observed or known to occur should be documented below:

1. **Significant nexus findings for non-RPW that has no adjacent wetlands and flows directly or indirectly into TNWs.** Explain findings of presence or absence of significant nexus below, based on the tributary itself, then go to Section III.D:
2. **Significant nexus findings for non-RPW and its adjacent wetlands, where the non-RPW flows directly or indirectly into TNWs.** Explain findings of presence or absence of significant nexus below, based on the tributary in combination with all of its adjacent wetlands, then go to Section III.D:
3. **Significant nexus findings for wetlands adjacent to an RPW but that do not directly abut the RPW.** Explain findings of presence or absence of significant nexus below, based on the tributary in combination with all of its adjacent wetlands, then go to Section III.D:

D. DETERMINATIONS OF JURISDICTIONAL FINDINGS. THE SUBJECT WATERS/WETLANDS ARE (CHECK ALL THAT APPLY):

1. **TNWs and Adjacent Wetlands.** Check all that apply and provide size estimates in review area:
 TNWs: linear feet width (ft), Or, acres.
 Wetlands adjacent to TNWs: 3 wetlands ("J," "R," and "U") comprising of a total of 3.4 acres.
2. **RPWs that flow directly or indirectly into TNWs.**
 Tributaries of TNWs where tributaries typically flow year-round are jurisdictional. Provide data and rationale indicating that tributary is perennial:
 Tributaries of TNW where tributaries have continuous flow "seasonally" (e.g., typically three months each year) are jurisdictional. Data supporting this conclusion is provided at Section III.B. Provide rationale indicating that tributary flows seasonally:

Provide estimates for jurisdictional waters in the review area (check all that apply):

Tributary waters: linear feet width (ft).

Other non-wetland waters: acres.

Identify type(s) of waters: .

3. Non-RPWs⁸ that flow directly or indirectly into TNWs.

- Waterbody that is not a TNW or an RPW, but flows directly or indirectly into a TNW, and it has a significant nexus with a TNW is jurisdictional. Data supporting this conclusion is provided at Section III.C.

Provide estimates for jurisdictional waters within the review area (check all that apply):

Tributary waters: linear feet width (ft).

Other non-wetland waters: acres.

Identify type(s) of waters: .

4. Wetlands directly abutting an RPW that flow directly or indirectly into TNWs.

- Wetlands directly abut RPW and thus are jurisdictional as adjacent wetlands.
- Wetlands directly abutting an RPW where tributaries typically flow year-round. Provide data and rationale indicating that tributary is perennial in Section III.D.2, above. Provide rationale indicating that wetland is directly abutting an RPW: .
- Wetlands directly abutting an RPW where tributaries typically flow "seasonally." Provide data indicating that tributary is seasonal in Section III.B and rationale in Section III.D.2, above. Provide rationale indicating that wetland is directly abutting an RPW: .

Provide acreage estimates for jurisdictional wetlands in the review area: acres.

5. Wetlands adjacent to but not directly abutting an RPW that flow directly or indirectly into TNWs.

- Wetlands that do not directly abut an RPW, but when considered in combination with the tributary to which they are adjacent and with similarly situated adjacent wetlands, have a significant nexus with a TNW are jurisdictional. Data supporting this conclusion is provided at Section III.C.

Provide acreage estimates for jurisdictional wetlands in the review area: acres.

6. Wetlands adjacent to non-RPWs that flow directly or indirectly into TNWs.

- Wetlands adjacent to such waters, and have when considered in combination with the tributary to which they are adjacent and with similarly situated adjacent wetlands, have a significant nexus with a TNW are jurisdictional. Data supporting this conclusion is provided at Section III.C.

Provide estimates for jurisdictional wetlands in the review area: acres.

7. Impoundments of jurisdictional waters.⁹

As a general rule, the impoundment of a jurisdictional tributary remains jurisdictional.

- Demonstrate that impoundment was created from "waters of the U.S.," or
- Demonstrate that water meets the criteria for one of the categories presented above (1-6), or
- Demonstrate that water is isolated with a nexus to commerce (see E below).

E. ISOLATED [INTERSTATE OR INTRA-STATE] WATERS, INCLUDING ISOLATED WETLANDS, THE USE, DEGRADATION OR DESTRUCTION OF WHICH COULD AFFECT INTERSTATE COMMERCE, INCLUDING ANY SUCH WATERS (CHECK ALL THAT APPLY):¹⁰

- which are or could be used by interstate or foreign travelers for recreational or other purposes.
- from which fish or shellfish are or could be taken and sold in interstate or foreign commerce.
- which are or could be used for industrial purposes by industries in interstate commerce.
- Interstate isolated waters. Explain: .
- Other factors. Explain: .

Identify water body and summarize rationale supporting determination: .

⁸See Footnote # 3.

⁹To complete the analysis refer to the key in Section III.D.6 of the Instructional Guidebook.

¹⁰ Prior to asserting or declining CWA jurisdiction based solely on this category, Corps Districts will elevate the action to Corps and EPA HQ for review consistent with the process described in the Corps/EPA Memorandum Regarding CWA Act Jurisdiction Following Rapanos.

Provide estimates for jurisdictional waters in the review area (check all that apply):

- Tributary waters: linear feet width (ft).
- Other non-wetland waters: acres.
Identify type(s) of waters: .
- Wetlands: acres.

F. NON-JURISDICTIONAL WATERS, INCLUDING WETLANDS (CHECK ALL THAT APPLY):

- If potential wetlands were assessed within the review area, these areas did not meet the criteria in the 1987 Corps of Engineers Wetland Delineation Manual and/or appropriate Regional Supplements.
- Review area included isolated waters with no substantial nexus to interstate (or foreign) commerce.
 - Prior to the Jan 2001 Supreme Court decision in "SWANCC," the review area would have been regulated based solely on the "Migratory Bird Rule" (MBR).
- Waters do not meet the "Significant Nexus" standard, where such a finding is required for jurisdiction. Explain: .
- Other: (explain, if not covered above): .

Provide acreage estimates for non-jurisdictional waters in the review area, where the sole potential basis of jurisdiction is the MBR factors (i.e., presence of migratory birds, presence of endangered species, use of water for irrigated agriculture), using best professional judgment (check all that apply):

- Non-wetland waters (i.e., rivers, streams): linear feet width (ft).
- Lakes/ponds: acres.
- Other non-wetland waters: acres. List type of aquatic resource: .
- Wetlands: acres.

Provide acreage estimates for non-jurisdictional waters in the review area that do not meet the "Significant Nexus" standard, where such a finding is required for jurisdiction (check all that apply):

- Non-wetland waters (i.e., rivers, streams): linear feet, width (ft).
- Lakes/ponds: acres.
- Other non-wetland waters: acres. List type of aquatic resource: .
- Wetlands: acres.

SECTION IV: DATA SOURCES.

A. SUPPORTING DATA. Data reviewed for JD (check all that apply - checked items shall be included in case file and, where checked and requested, appropriately reference sources below):

- Maps, plans, plots or plat submitted by or on behalf of the applicant/consultant: Dated April 2013.
- Data sheets prepared/submitted by or on behalf of the applicant/consultant.
 - Office concurs with data sheets/delineation report.
 - Office does not concur with data sheets/delineation report.
- Data sheets prepared by the Corps: .
- Corps navigable waters' study: .
- U.S. Geological Survey Hydrologic Atlas: .
 - USGS NHD data.
 - USGS 8 and 12 digit HUC maps.
- U.S. Geological Survey map(s). Cite scale & quad name: 1:24K MI-New Haven.
- USDA Natural Resources Conservation Service Soil Survey. Citation: .
- National wetlands inventory map(s). Cite name: ORM2.
- State/Local wetland inventory map(s): .
- FEMA/FIRM maps: .
- 100-year Floodplain Elevation is: (National Geodectic Vertical Datum of 1929)
- Photographs: Aerial (Name & Date): ORM2 Maps.
or Other (Name & Date): .
- Previous determination(s). File no. and date of response letter: .
- Applicable/supporting case law: .
- Applicable/supporting scientific literature: .
- Other information (please specify): .

B. ADDITIONAL COMMENTS TO SUPPORT JD: Each of the wetlands ("J," "R," and "U" are adjacent to Lake St. Clair as they are only separated by berms, thuly making them Waters of the US (33CFR 328.3(c)).

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1	28-31 & Appendix A		Section 3.8 & Wetland Map	The Wetland Map in Appendix A identifies “Wetland T” having an area of 1.02 acres. The map displays that this wetland is in close proximity to the project area; however, there is no mention of “Wetland T” in pages 28 thru 31 when wetlands are discussed in further detail. The Final EA/Finding of No Significant Impact (FONSI) should reconcile this discrepancy.	Kenneth Westlake, EPA	Individual Wetland Maps (prepared by HDR, Inc.) have been added to Appendix A. The Wetland T Map (dated December 2013) indicates that the existing pathway is located over 300 feet east of Wetland T. Based on USACE Wetland Jurisdictional Determination no wetland impacts are associated with the proposed shoreline bicycle path.
2	29 & Appendix A		Section 3.8 & Wetland Map	Wetland L identified on page 29 of the text is not listed in the Wetland Map in Appendix A. The Final EA/FONSI should reconcile this discrepancy.	Kenneth Westlake, EPA	Individual Wetland Maps (prepared by HDR, Inc.) have been added to Appendix A. The Wetland L Map (dated December 2013) indicates that the existing pathway is located outside of the limits of Wetland L. Based on USACE Wetland Jurisdictional Determination no wetland impacts are associated with the proposed shoreline bicycle path. Section 3.8 has been revised accordingly.
3	32		Floodplains	Under the Floodplains section on page 32, the last sentence notes: “ <i>Final construction designs will need to quantify impacts and plan for mitigation of any impacts...</i> ” The Final EA/FONSI should include a quantification of impacts to the floodplain area and discussed planned mitigation.	Kenneth Westlake, EPA	The proposed shoreline bicycle path is intended to be at or below existing grade. Therefore no net floodplain fill is proposed and no compensating cut will be required.
4	16		Section 3.2 Land Use	This section notes: “ <i>This current and future missions requiring the use of boat ramp should be identified and evaluated further</i> ”. The Final EA/FONSI should include this evaluation.	Kenneth Westlake, EPA	SANGB Personnel have stated on multiple occasions that the use of the boat ramp is not part of current or future missions. A removable section of proposed causeway will be incorporated into the final design of the causeway. This will allow for removal of a section of the causeway in emergency situations. Section 3.2 has been revised accordingly.
5	18		Soil Erosion & Sediment Control Plan	EPA recommends the following best management practices (BMPs) be included, wherever applicable, in the Final EA/FONSI: <ul style="list-style-type: none"> • All drainage structures with sumps discharging to 	Kenneth Westlake, EPA	All applicable and appropriate soil erosion & sedimentation control BMPs will be incorporated into the final design of the shoreline bicycle path and will be adhered to

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				<p>Lake St. Clair, applicable wetlands, and other aquatic resources should have a maintenance schedule and be cleaned out regularly to prevent sediment and other pollutants from reaching natural resources. Sumps should be monitored for a sufficient period of time to determine a cleanout schedule</p> <ul style="list-style-type: none"> • Temporary soil erosion control measures should be implemented during all earth change stages. Stone checkdams, diversion ditches, or other similar devices should be utilized to control runoff and prevent sediment from reaching the affected aquatic resources. • If the project or any portion, is stopped and lies uncompleted for any length of time other than that encountered in a normal work week, every precaution should be taken to protect the uncompleted work from erosion, including the placement of temporary sandbags, gravel bars, riprap, or other acceptable temporary protection. • Prior to the initiation of any permitted construction activities, a “fabric” erosion control fence (straw bales are not recommended) should be constructed immediately adjacent to the wetland boundary along the entire length of the wetland boundary on the construction site. This erosion barrier should be maintained in good working order throughout the duration of the project. Upon project completion, the accumulated materials should be removed and disposed of at an appropriate upland site. The erosion barrier should then be removed in its entirety and the area restored to its original configuration and cover. • No work should be performed in any aquatic resources between October 1st and May 1st to avoid fish spawning periods • When silt fencing is utilized, it should be properly trenched and maintained. Any accumulation of 		<p>during the construction process.</p> <p>An application for SESC Permit from Macomb County will be submitted concurrently with the Final Construction Plans. All requirements of Macomb County will be followed.</p>

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				<p>sediment should be removed from the fencing daily and disposed of at an appropriate upland site to ensure proper functioning.</p> <ul style="list-style-type: none"> • Erosion control measures should be in place at the end of every working day. • Erosion control measures should be inspected, and any necessary repairs or maintenance performed at least once per week and after every rainfall exceeding ½ inch. 		
6			(3.7 Hydrology and Groundwater) r) Storm Water Pollution Control Plan	The proposed project will result in increases of impervious surface in the project area. This will increase the amount of stormwater runoff that will need to be treated. The Final EA/FONSI should include measures that channel, capture, and treat asphalt runoff in areas where the trail is being constructed.	Kenneth Westlake, EPA	<p>All applicable and appropriate soil erosion & sedimentation control BMPs will be incorporated into the final design of the shoreline bicycle path and will be adhered to during the construction process.</p> <p>An application for SESC Permit from Macomb County will be submitted concurrently with the Final Construction Plans. All requirements of Macomb County will be followed.</p> <p>Where practical, bioswales, sediment traps, etc. will be proposed and implemented. Section 3.7 has been revised accordingly.</p>
7			3.10 (Air Quality)	<p>Regarding Diesel Emissions: EPA recommends the following BMPs be employed during construction activities:</p> <ul style="list-style-type: none"> • Using ultra-low sulfur diesel fuel (less than 15 ppm sulfur). • Positioning the exhaust pipe so that the diesel fumes are directed away from the operator and nearby workers, thereby reducing the fume concentration to which personnel are exposed. • Using catalytic converters to reduce carbon monoxide, aldehydes, and hydrocarbons in diesel fumes (these devices must be used with low sulfur fuels). • Using enclosed, climate-controlled cabs pressurized 	Kenneth Westlake, EPA	<p>All recommended EPA BMPs shall be followed during the construction of the shoreline bicycle path.</p> <p>Section 3.10 of the EA document has been revised to include additional EPA recommendations regarding air quality.</p>

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				<p>and equipped with high efficiency particulate air (HEPA) filters to reduce the operator's exposure to diesel fumes. HEPA filters ensure that any incoming air is filtered first.</p> <ul style="list-style-type: none"> • Regularly maintaining diesel engines, which is essential to keep exhaust emissions low. Follow the manufacturer's recommended maintenance schedule and procedures. Smoke color can signal the need for maintenance. For example, blue/black smoke indicates that an engine requires servicing or tuning. • Reducing exposure through work practices and training, such as turning off engines when vehicles are stopped for more than a few minutes, training diesel equipment operators to perform routine inspection, and maintaining filtration devices. • Purchasing new vehicles that are equipped with the most advanced emissions control systems available. • Using electric starting aids, such as block heaters, to warm the engines of older equipment and vehicles, thereby reducing emissions. • Using respirators, which are only an interim measure to control exposure to diesel emissions. In most cases, a N95 respirator is adequate. Workers must be trained and fit-tested before they wear respirators. Depending on the work being conducted, and if oil is present, concentrations of particulates present will determine the efficiency and type of mask and respirator. Personnel familiar with the selection, care and use of respirators must perform the fit testing. Respirators must bear a National Institute of Occupational Safety and Health (NIOSH) approval number. Do not use paper or surgical masks without NIOSH approval numbers. 		
8	37		Cultural Resources	On page 37's last paragraph, the Draft EA identifies two archaeological sites, on being 20MB256. The Final EA/FONSI should include documentation regarding the	Kenneth Westlake, EPA	Two (2) letters from the Michigan State Historic Preservation Office (SHPO) have been included in Appendix C of the EA.

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				evaluation of this archaeological site as to its eligibility for inclusion to the National Register of Historic Place.		These letters are dated May 14, 2013 and January 10, 2014. The letters state that the proposed project will have No Adverse Effect on cultural resources/historic places.
9	40		3.12.2 (Cultural Resources)	On page 40 of subsection 3.12.2, under Consequences-Alternative 2, a response from the Michigan Deputy State Historic Preservation Officer dated May 14 th , 2013 is referenced. The Final EA/FONSI should include a copy of that document in the agency coordination appendix.	Kenneth Westlake, EPA	Two (2) letters from the Michigan State Historic Preservation Office (SHPO) have been included in Appendix C of the EA. These letters are dated May 14, 2013 and January 10, 2014. The letters state that the proposed project will have No Adverse Effect on cultural resources/historic places.
10			3.6 (Threatened and Endangered Species)	Please review http://ecos.fws.gov/ipac/ to determine if and what federally listed species are in or near project area and potential impacts to the species.	Tameka Dandridge, USFWS	E-mail correspondence from the U.S. Fish and Wildlife Service has been added to the Agency Response Section (Appendix C) of the EA. This correspondence (from Tameka Dandridge, dated January 13, 2014) requests that the USFWS IPAC system (The Information, Planning and Conservation System) be reviewed in order to determine if and what federally listed species are in or near the project area. This process has previously been completed and the results are included in Section 3.6 (Threatened and Endangered Species).
11				We are unfamiliar with the acronym FONPA, Finding of No Practical Alternative, or the definition for Practical in the title of your DEA. To our knowledge, this acronym does not appear anywhere in the NEPA laws or regulations, nor in Executive Order 11988, although we did find it in documents associated with Air Force actions (note the given reference to Secretary of the Air Force Order 780.1, Wetlands). However, there was usage of a Finding of No Practicable Alternative, and Practicable does have a definition in the Clean Water Act regulations (40 CFR 230.3q), 404(b)(1) Guidelines. The review and evaluation of practicable alternatives are part of the required 404(b)(1) sequencing to avoid, minimize, or compensate for impacts to the aquatic resources, and is the	John Konik, USACE	No changes to the EA are required at this time.

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				FONSI document requiring signature (if there is no significant impact).		
12			Section 3.8	Conclusions derived in the Alternatives paragraph(s) under Section 3.8.2 Consequences appear to be attributed to Agency determinations. We have not made any determinations as yet. We attended a pre-application meeting and have seen no other data or details regarding this project. Our permit process is identified in our regulations (33 CFR § 320 - 332), and for a Standard Permit includes a public notice before any evaluations and conclusions can be made. Our understanding is that your EA document should identify in detail the resources, the alternatives considered and adopted to avoid and minimize the various types of impacts to those resources, and the resulting unavoidable impacts to those resources, and then draw conclusions. As explained in the opening paragraph of this letter, above, such an EA would presumably provide the basis for our review and evaluation. The DEA document attributing your conclusions to us as the basis for your evaluation and eventual permit application is circular and we would not be able to base our permit decision on it when we receive your application.	John Konik, USACE	Section 3.8 has been revised and new wetland maps have been added to the EA document (Appendix A). A USACE wetland jurisdictional determination letter (dated November 27, 2013) has been received (see Appendix C). Based on this determination, no wetland impacts are associated with the proposed shoreline bicycle path.
13			3.8 (Wetlands and Waters of the United States)	We note that field wetland delineation data is referenced in the enumeration of the wetlands present. We expect all of the original wetland delineation data sheets and delineation sample point maps for all of the wetland delineations conducted for the project would be included in the appendices of the DEA in order to support the condition descriptions and document the conclusions made in the DEA. Please note that wetland delineations more than 5 years old are considered to be too old. The option for our field verification of determinations, if needed, would then be possible.	John Konik, USACE	Section 3.8 has been revised and new wetland maps have been added to the EA document (Appendix A). A USACE wetland jurisdictional determination letter (dated November 27, 2013) has been received (see Appendix C). Based on this determination, no wetland impacts are associated with the proposed shoreline bicycle path.
14				While the set of plans in the DEA may not be the same as the ones that accompany a permit application, we are unable to	John Konik, USACE	SANGB Personnel have stated on multiple occasions that the use of the boat ramp is not

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				find clarification of how SANGB will access Lake St. Clair beyond the proposed offshore pedestrian causeway from the sea plane and boat slip facilities within the enclosed portion of the lake. Our concerns would be as yet unidentified additional impacts to the aquatic resources in the design of this access. Perhaps we missed these details in our review.		part of current or future missions. A removable section of proposed causeway will be incorporated into the final design of the causeway. This will allow for removal of a section of the causeway in emergency situations. Section 3.2 has been revised accordingly.
15			3.5 (Wildlife and Aquatic Resources)	Impacts to the various public interest factors are treated for Alternative 1: No Action, and for Alternative 2: Proposed Action. The impacts were not used to determine the least damaging alternative as required by NEPA, but we do recognize how the alternate pathway routings were untenable. For our review of your Proposed Action, when submitted, we would look for details that do not seem to be included in the DEA review. How specific proposed tasks are accomplished usually influences the type or degree of impacts to the aquatic resources. The DEA treats these with generic statements. For example, in Section 3.5 Wildlife and Aquatic Resources, the DEA should identify proposed methodology to remove vegetative debris that may impinge upon the pedestrian causeway screening, and perhaps the timing of such repeatable actions may be important, as well.	John Konik, USACE	Section 3.5 has been revised to include impact minimization techniques such as: <ul style="list-style-type: none"> • No herbicides/chemicals used in/near water • Cut vegetation will be disposed of properly; will be removed from water • Edges of trail to be constructed with stone treatment over geotextile fabric, in order to minimize the need for maintenance of vegetation immediately adjacent to pathway • If floating vegetation is problematic, only mechanical or hand removal of vegetation will be used (no chemicals to be used in or adjacent to water) • Maintenance mowing during the growing season will be implemented along the edges (2-3 feet width) of the trail. This mowing is proposed approximately 5 times throughout the growing season. • Only low-growing plant species will be utilized in the restoration of any areas adjacent to the trail that are disturbed during construction.
16				When we process an application, we have the requirement to review the federally threatened and endangered species status	John Konik,	All response letters received from reviewing agencies have been added to the EA (see

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				of the areas and the cultural resources status and potential of the areas where there would be project impacts. It would appear that you have already researched some of these issues. If you wish letters from agencies and electronic copies of supporting documentation to be considered, they should be provided with the application.	USACE	updated Appendix C).

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	<i>Comment POCs</i>					
	<p>Mr. Kenneth A. Westlake, Chief NEPA Implementation Section Office of Enforcement and Compliance Assurance United States Environmental Protection Agency Region 5 77 West Jackson Boulevard Chicago, IL 60604-3590 Contact: Mr. Robert O'Brien, Environmental Engineer Phone (312) 886-3283 Obrien.robert@epa.gov</p>					
	<p>Ms. Tameka Dandridge U.S. Fish and Wildlife Service East Lansing Field Office 2651 Coolidge Road Suite 101 East Lansing, Michigan 48823 Phone: (517) 351-2555 Fax: (517) 351-1443 tameka_dandridge@fws.gov</p>					
	<p>Mr. John Konik, Chief Regulatory Office Engineering & Technical Services Department of the Army Detroit District, Corps of Engineers 477 Michigan Avenue Detroit, Michigan 48226-2550 Contact: Mr. Henry Rosenfield, Project Manger Detroit District Regulatory Office Phone: (313) 226-6706 Henry.Rosenfield@usace.army.mil</p>					

Appendix D

Coordination Meeting Agendas and Minutes



Shoreline Trail Environmental Assessment

Project Kick-off

February 23, 2012

AEW # 0213-0110

February 2012						
S	M	T	W	T	F	S
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29			

March 2012						
S	M	T	W	T	F	S
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	31

April 2012						
S	M	T	W	T	F	S
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30					

May 2012						
S	M	T	W	T	F	S
		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30	31		

June 2012						
S	M	T	W	T	F	S
					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30

July 2012						
S	M	T	W	T	F	S
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	31				

1) Introductions

2) Project Overview

3) Base Access

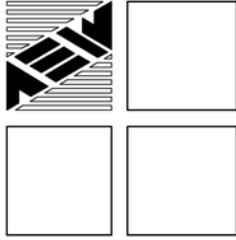
- Notifications
- Photos

4) **Project Schedule**

5) **Project Scoping Document**

6) **Progress Meeting**

7) **Key Contacts**



ANDERSON, ECKSTEIN AND WESTRICK, INC.

51301 Schoenherr Road, Shelby Township, Michigan 48315
Civil Engineers • Surveyors • Architects 586-726-1234

Project Kick-off Meeting Minutes
February 24, 2012

Shoreline Trail

Macomb County

AEW Project No. 0213-0110

<i>NAME</i>	<i>COMPANY</i>	<i>PHONE</i>	<i>E-MAIL</i>
Lyle Winn	AEW	(586) 726-1234	lwinn@awinc.com
John Crumm	MCDOR	(586) 463-1982	jcrumm@rcmcweb.org
Margaret Steketee	FirstROW	(616) 560-4088	firstrow@grar.com
Jennifer Chehab	AEW	(586) 726-1234	jchehab@awinc.com
Kenneth Baker	SANGB	(586) 237-5741	kenneth.baker.2@ang.af.mil
Anne Hoeninghausen	SANGB	(586) 239-4244	anne.hoeninghausen@ang.af.mil
Matt Carmer	ECT, Inc.		mcarmer@ectinc.com
Chris Platz	SANGB	(586) 239-5888	christopher.platz@ang.af.mil
Ken Verkest	Harrison Township	(586) 466-1445	kverkest@harrison-township.org
Col. Mac Crawford	SANGB	(586) 239-5456	mac.crawford@ang.af.mil
Kim Bewersdorff	SANGB	(586) 239-4522	kimberly.bewersdorff@ang.af.mil
Major Thomas Sierakowski	SANGB	(586) 239-5631	thomassierakowski@ang.af.mil
Melissa Roy	Macomb County	(313) 407-5729	roy@macombgov.org

The following is a synopsis of the discussion that took place at the Project Kick-off meeting. No attempt has been made to quote the discussion exactly as it was stated. The intent of this document is to reiterate all items of relevance that were stated during the meeting. With that in mind each of the participants has the opportunity to add, delete, and/or modify the statements herein. We ask that any additions, deletions, and/or corrections be submitted in writing to:

Jennifer Chehab, PE
Anderson, Eckstein and Westrick, Inc.
51301 Schoenherr Road
Shelby Township, Michigan 48315

by March 9, 2012 otherwise these minutes will stand.



Project Overview

- Lyle Winn- The project generally involves the preparation of an Environmental Assessment for the proposed bike trail along the north side of North River Road, from Bridgeview to the east side of the SANGB, and through the SANGB along the lake, from North River Road to M-59.

The general concept is to utilize the existing security road as the bike trail, construct a replacement security road and install security fencing between the trail and the security road.

ECT will perform the Environmental Assessment and will be the primary sub-consultant onsite performing physical evaluations and documenting existing conditions.

FirstROW will be performing a property evaluation for the area of land to be utilized for a bike trail.

SANGB Access

- Chris Platz is the contact for security. Prefers a 3-day notice prior to individuals entering the Base to perform environmental evaluations. An individual from the Base may accompany consultants during evaluations.
- Public affairs does not have the man power to provide an escort for the planning visits. The project reps should keep a badge, ID, pass/ID paperwork with them at all times for getting onto the base.
- Photographic documentation of the existing security trail and the shore line is permitted for planning purposes only, not for public release (i.e., no posting to FB or other websites showing where the bike path is proposed. This remains a security issue until fencing, etc. is installed.). Photography of the front gate and back gate areas is not permitted without a pre-arranged escort from Public Affairs (586) 239-5576.
- The current letter of access expires April 14, 2012. An updated access letter is in the process of being approved within the next few weeks and should occur prior to the expiration of the current letter.
- ECT will need approximately 10 days of onsite evaluation.



Project Schedule

- ECT will immediately begin collecting and compiling existing information.
- ECT will not be onsite until approximately May 1st, allowing growth of upland and wetland vegetation.
- The project schedule, prepared by ECT, will be updated to allow for review processes and property evaluations.

Project Scoping Document

- Ken Baker proceeded to discuss the various agencies and contact individuals that should be contacted by ECT during the preparation of the EA.
- Ken Baker identified potential areas of environmental concern as identified in the SANGB guidance document, Natural Resources Management Plan and Cultural Resources Management Plan.
- The 100 year flood plain was discussed. Minor modifications on-base may eliminate areas identified as flood zones. Ken Verkest indicated that Harrison Township is awaiting a FEMA determination on the coastal floodplain elevation. A revised elevation could help a lot of areas in the community as well as the Base.
- Ken will meet with ECT immediately following the meeting to review the available documents and will forward the documents to ECT. ECT will forward the documents to AEW.
- Shovel testing will be performed by CCRG. A dig permit will be required from SANGB prior to any digs. The dig permits should be coordinated with the Civil Engineering Work Control Desk (586) 239-4354. Either Mr. Robert Philipp or Ms. Loretta Siplin will be able to assist with the dig permit process.
- Discussion centered on the process for submitting a scoping document on an informal basis as the EA proceeds or must we wait until the entire document is prepared. Col Mac Crawford agreed that we should be reviewing documents as they are being prepared. It would help everyone to determine as early as possible any issued or concerns that should be evaluated in the assessment process.
- ECT outlined that they will prepare the initial report outline and detailed description of the project. This document is to be submitted approximately March 23rd, 2012.



Kick-off Meeting Minutes
0213-0110 Shoreline Trail
Page 4

- Several parameters were discussed to define where a path could be located.
 - Must maintain 148 feet from the isolation fence to onsite structures
 - The clear zone at the north and south end of the runway prohibits the installation of a bike path. The existing road was grandfathered to allow its use. SANGB personnel will locate this interpretation for reference in the EA.
 - Bridges will be needed at the onsite marina and the MDNR marina
 - A causeway is needed to maintain clearances in the vicinity of the existing break wall. The causeway shall not block off flow of lake water
 - Security fencing will be required for the entire length
 - The marina bridges will need 35 feet of clearance to the water surface. Security concerns with this height. May need to look at a tunnel.
 - North end of the project may need to evaluate alternate alignments, including an intersection improvement at M-59.
 - Considerations to modifying the fish ponds may include fresh water pumps and modifying the ponds

- Real Estate efforts will occur later in the EA process. Kim Bewersdorff will be the Base contact person.

- Discussed the possibility of segmenting the EA to allow for the possibility of proceeding with the construction of the North River Road trail in 2013. Ken Baker and Macomb County will research this possibility and report findings at the next progress meeting.

- John Crumm indicated that the County Road Department has explored the possibility of constructing a round-a-bout at M-59/Jefferson/SANGB entrance. Will forward sketches for information.

Progress Meeting

- Next meeting is scheduled for March 30, 2012, 9:30 am at the Macomb County Department of Roads, 117 S. Groesbeck Hwy, Mt. Clemens

PROGRESS MEETING 1
Shoreline Trail
Environmental Assessment

AEW Job No.: 0213-0110

March 30, 2012
9:30 A.M.

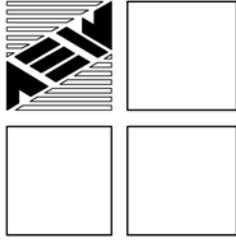
Department of Roads
Macomb County

117 S. Groesbeck, Mount Clemens, MI 48043

Agenda

1. Project Timeline
 - a. Review schedules
 - b. Milestones
2. Report Phasing
 - a. Impact on use appraisals
 - b. Impact on use agreements
3. Scoping Document/Report Outline
4. Clear Zone Documentation
5. Site Visit
 - a. Entry Passes
 - b. Start Date
6. Additional Items
7. Next Meeting

NAME	ORGA	PHONE	E-MAIL
Kim BEWERSDORFF	127/CERL	239-4522	kimberly.bewersdorff@ang.af.mil
Kenneth Baker	127 CES/CEV	239-5741	kenneth.baker.2@ang.af.mil
Matt Carmer	ECT, Inc.	734-769-3004	mcarmer@ectinc.com
MARK EARL	127/CER	239-4993	markearl@ang.af.mil
Thomas Sierakowski	127 CES/CC	239-5637	thomas.sierakowski@ang.af.mil
KEN VERKEST	HARRISON TWP.	586-466-1445	kverksteharrison-township.org
ADAM LEPP	D.N.R. PARKS+REC.	586-465-2138	leppa@mihighway.gov
Melissa Roy	Macomb City	586-469-0781	Roy@macomb.gov
Janice Stockett	127SFS	586-239-5081	Janice.Stockett@ang.af.mil
Lyle Winn	AEW	586-724-1234	lwinn@newinc.com
Lawrence Crowder	127W6/AFD	586-239-6633	lawrence.crowder@ang.af.mil
John Crumm	Macomb City	586-463-6787	john.crumm@ang.af.mil jcrumm@renewweb.org



ANDERSON, ECKSTEIN AND WESTRICK, INC.

51301 Schoenherr Road, Shelby Township, Michigan 48315
Civil Engineers • Surveyors • Architects 586-726-1234

Progress Meeting #1 Minutes
March 30, 2012

Shoreline Trail

Macomb County

AEW Project No. 0213-0110

<i>NAME</i>	<i>COMPANY</i>	<i>PHONE</i>	<i>E-MAIL</i>
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John Crumm	MCDOR	(586) 463-1982	jcrumm@rcmcweb.org
Kenneth Baker	SANGB	(586) 237-5741	kenneth.baker.2@ang.af.mil
Mark Earl	SANGB	(586) 239-4993	mark.earl@ang.af.mil
Matt Carmer	ECT, Inc.	(734) 769-3004	mcarmer@ectinc.com
Chris Platz	SANGB	(586) 239-5888	christopher.platz@ang.af.mil
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Mark Paasche	SANGB	(586) 239-5456	mark.paasche@ang.af.mil
Kim Bewersdorff	SANGB	(586) 239-4522	kimberly.bewersdorff@ang.af.mil
Major Thomas Sierakowski	SANGB	(586) 239-5631	thomassierakowski@ang.af.mil
Melissa Roy	Macomb County	(313) 407-5729	roy@macombgov.org
Gary Crawford	ECT, Inc.	(734) 272-0290	gcrawford@ectinc.com

The following is a synopsis of the discussion that took place at Progress Meeting No 1. No attempt has been made to quote the discussion exactly as it was stated. The intent of this document is to reiterate all items of relevance that were stated during the meeting. With that in mind each of the participants has the opportunity to add, delete, and/or modify the statements herein. We ask that any additions, deletions, and/or corrections be submitted to:

Jennifer Chehab, PE, or Lyle E. Winn, PE
Anderson, Eckstein and Westrick, Inc.
51301 Schoenherr Road
Shelby Township, Michigan 48315

by April 11, 2012 otherwise these minutes will stand.



Progress Meeting No 1
0213-0110 Shoreline Trail
Page 2

Project Timeline

- Gary Crawford and Matt Carmer provided copies of the updated schedule. The schedule includes additional review times for ANG. The updated schedule extends the ECT completion to the middle of November of 2012.
- Ken Baker requested that one month should be allowed for the DOPPA document review by ANG. Task 3: Fieldwork can continue concurrently with the review.
- Lyle Winn mentioned that the appraisal and real estate efforts will occur near the end of the EA process. Therefore the total timeline appears to extend into January/February of 2013.
- AEW will provide an overall timeline for the project for the next meeting.

Report Phasing

- It was agreed that a single EA document will be produced that will include 2 phases
 - One phase to address the north river road section
 - Second phase to address the trail through the base.
- The 2 phase approach could allow the North River Road portion to proceed forward while EA approval and funding sources are secured for phase 2.
- Ken Verkest has funding in place for phase 2 with federal demonstration project earmarks, and is planning for construction in 2013.
- AEW noted that in order to proceed forward independently with phase 1, separate appraisals and agreements with the Air Force would be needed and would likely result in additional efforts that were not included in the original proposal.
- Kim Bewersdorff indicated that the HRC design, along North River Road, identified certain areas where the fence is located in the road right-of-way. The fence was to be placed on the right-of-way line to create room for the fence. It was unclear if additional property was needed beyond the right-of-way to construct the trail. AEW to review plans for discussion at next progress meeting.
- John Crumm recalled that the poles and guy wires were to be replaced with structurally designed poles to eliminate the guy wires.

Project Scoping Document

- ECT reviewed the purpose of the scoping document
 - Sets outline for the report
 - Identifies the critical areas at the beginning of the project
 - The EA will follow the MDOT requirements and process



- ECT discussed the formal and informal process to gather data from interested parties
 - The formal process involves a series of public hearings to gather information from interested stakeholders
 - The informal process allows the consultant to contact and meet with stakeholders to discuss the project and to gather input
- It was generally agreed that the informal process should be followed
- It was noted that there may be objections from base personnel and veterans due to the reduction in access to the lake frontage when construction the trail and security fence. ECT should meet with base personnel. Coordinate this effort with Public Affairs.
- Representatives from the project team should be included in the informal meetings.
- The marina has both mission critical and recreational components. Homeland security must be involved during evaluation of alternatives at the marina.

Clear Zone Documentation

- The document restriction the uses within the Clear Zone, AFI 32-7063, was discussed. It was agreed that the document restricts the Air Force from planning or considering the use of a sidewalk or a bicycle trail within the Clear Zone.
- Ken Baker mentioned that the noise levels can be very high and have a negative effect upon pedestrians and bicyclists. Noise levels have less of an impact upon cars due to the shorter duration and a reduction in the noise level by being enclosed within the vehicle.

Site Visits

- The current site access letter expires April 15th. A revised letter is in process.
- Per ECT, it will be approximately May 1st before they plan on beginning their site inspections and evaluations.
- A three working day notice is required prior to proceeding with on-base evaluations.
- Those individuals performing the evaluation will need to keep a pass with them at all times. Passes must be obtained at the visitor center.
- ECT plans on utilizing a boat to make some of their evaluations. Cannot use the base marina. The ECT boat should be launched at the MDNR marina. The base must be notified when the evaluations are being done with a boat.



Progress Meeting No 1
0213-0110 Shoreline Trail
Page 4

Additional Items

- MDNR field office is located on Old North River Road, just east of Bridgeview. Mr. Petz can be a useful contact and resource in the EA process. Mr. Petz is also involved in the MDNR boat launch and should be contact when looking at the alternatives for the trail routing near the launch and marina.
- ECT would like to utilize various maps that have been included in several of the Base documents. This is generally ok, but the use of any of the base figures and maps must be cleared through Public Affairs.
- ECT will develop a list of stakeholders and distribute to the team for review and comment.
- John Crumm to send electronic copies of master plan mapping to ECT.

Progress Meeting

- Next meeting is scheduled for Thursday, April 26, 2012, 9:30 am at SANGB building 127.

PROGRESS MEETING 2

**Shoreline Trail
Environmental Assessment**

AEW Job No.: 0213-0110

**April 26, 2012
9:30 A.M.**

**SANG Base
Building #127**

Agenda

1. Project Timeline
 - a. Review overall schedule

2. Report Phasing
 - a. Impact on use appraisals
 - b. Impact on use agreements

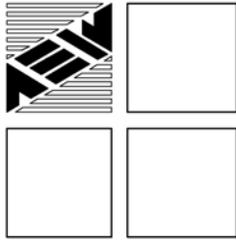
3. ECT site evaluations

4. North River Road Easements

5. Bridge Sketches
 - a. MDNR boat launch
 - b. Drain crossing
 - c. Marina
 - d. Causeway

6. Additional Items

7. Next Meeting



ANDERSON, ECKSTEIN AND WESTRICK, INC.

51301 Schoenherr Road, Shelby Township, Michigan 48315
Civil Engineers • Surveyors • Architects 586-726-1234

Progress Meeting #2 Minutes
April 26, 2012

Shoreline Trail

Macomb County

AEW Project No. 0213-0110

<i>NAME</i>	<i>COMPANY</i>	<i>PHONE</i>	<i>E-MAIL</i>
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John Crumm	MCDOR	(586) 463-1982	jcrumm@rcmcweb.org
Kenneth Baker	SANGB	(586) 237-5741	kenneth.baker.2@ang.af.mil
Mark Earl	SANGB	(586) 239-4993	mark.earl@ang.af.mil
Matt Carmer	ECT, Inc.	(734) 769-3004	mcarmer@ectinc.com
Col. Mac A. Crawford	SANGB	(586) 239-5456	mac.crawford@ang.af.mil
Ken Verkest	Harrison Township	(586) 466-1445	kverkest@harrison-township.org
Mark Paasche	SANGB	(586) 239-5456	mark.paasche@ang.af.mil
Kim Bewersdorff	SANGB	(586) 239-4522	kimberly.bewersdorff@ang.af.mil
Mohammad Arif	SANGB	(586) 239-0259	mohammad.arif@ang.af.mil
Steve Krajnik	SANGB	(586) 239-2013	steve.krajnik@ang.af.mil
Penny Caroll	SANGB	(586) 239-5576	penelope.carroll@ang.af.mil
Angela Pope	SANGB	(586) 239-4735	angela.pope@ang.af.mil
Gary Crawford	ECT, Inc.	(734) 272-0290	gscrawford@ectinc.com

The following is a synopsis of the discussion that took place at Progress Meeting No 2. No attempt has been made to quote the discussion exactly as it was stated. The intent of this document is to reiterate all items of relevance that were stated during the meeting. With that in mind each of the participants has the opportunity to add, delete, and/or modify the statements herein. We ask that any additions, deletions, and/or corrections be submitted to:

Jennifer Chehab, PE, or Lyle E. Winn, PE
Anderson, Eckstein and Westrick, Inc.
51301 Schoenherr Road
Shelby Township, Michigan 48315

by May 11, 2012 otherwise these minutes will stand.



Project Timeline

- Lyle Winn provided updated copies of the schedule that includes the appraisal and real estate efforts. The updated schedule shows the project completion to occur in February 2013.
- Four (4) weeks will be allowed for the DOPAA document review by ANG. Task 3: Fieldwork can continue concurrently with the review. The start date for the DOPAA review will be adjusted availability of the document for review.
- AEW will send the updated schedule for ECT to revise accordingly.
- It was agreed that the completion timeline will allow for 2013 construction of the North River Road segment.

Report Phasing

- Several alternatives will be discussed in the report, including:
 - North River Road and Shoreline Trail
 - North River Road only, east from Bridgeview
 - North River Road, west of Bridgeview through the Clear Zone
 - South side of North River Road, east from Bridgeview
 - South River Road, west of Bridgeview
 - Do Nothing
- The alternates for utilizing the south side of north river road, as well as the South River Road, may be eliminated from further evaluation. The County Road Department, AEW and ECT will identify the parameters and specifics of why these alternates should be eliminated from consideration, with the details provided in the EA.
- Ken Baker advised that the EA report must provide an adequate amount of detail in order to justify the elimination of any alternate from further evaluation.
- AEW noted that in order to proceed forward independently with phase 1, separate appraisals and agreements with the Air Force would be needed and would likely result in additional efforts that were not included in the original proposal.

ECT Updates

- ECT distributed the draft Agency Coordination letters. Requested that they be reviewed by everyone and to provide feedback within the week.
 - John Crumm noted that their office is now the Macomb County Department of Roads and not a road commission.
 - Ken Baker requested that ECT provide a list of agencies and stakeholders that will be notified. ECT agreed to provide.



- ECT provided and expanded scoping document for everyone's review. The various alternatives must be expanded or added to the document.
- It was reconfirmed that an informal process should be followed to contact and meet with stakeholders to discuss the project and gather input.
- It was noted that there may be objections from base personnel and veterans due to the reduction in access to the lake frontage when construction the trail and security fence. ECT should meet with base personnel. Coordinate this effort with Public Affairs.
- ECT plans to start field work May 7th. Chris Platz will be the primary base contact.

North River Road Easements

- AEW reviewed easement needs along North River Road, base on the preliminary plans prepared by HRC. The plans show several temporary construction easements along the route and a permanent easement starting west of the base entrance, extending east to the Mac-N-Ray entrance.
- Ken Verkest to review further with HRC.

Bridge Sketches

- Lyle Winn distributed several sketches and an aerial map of the Shoreline route.
- MDNR boat launch
 - Bridge options include a north-south crossing of the main channel to the lake or an east-west crossing of the channel to the base boat ramp.
 - It was brought to everyone's attention that this area of the base is mission critical and will require a bridge with 35 feet clear to the water surface.
 - An alternate to the high bridge may be a grade separation, with the trail passing under an access drive to the boat ramp and building located on the peninsula. AEW to evaluate further and will check clearance dimensions with the front security area.
- Drainage outlet
 - Standard prefabricated bridge with no special clearances
- Marina Crossing
 - A high bridge, with 35 feet clearance to the water surface, will require access ramps that are in excess of 600 feet in length.
 - Ramps will be difficult to accomplish in the vicinity of the walleye ponds.
 - A suggestion was made to consider a spiral access ramp.
 - A tunnel under the marina entrance will require ramping of approximately 500 feet.
 - An alternate was suggested to route the path around the marina with a grade separation to allow base access to the marina over a shallower tunnel for the path.



- Causeway
 - Lyle Winn introduced the concept that the causeway should be treated as a linear park.
 - The linear park could incorporate a refurbishing and widening of the existing breakwall, benches, pavilions, bump out areas for fishing and a wider than normal path.
 - Concept sketches provided for discussion.
 - It appears that the base has no reason to keep the breakwall and that the steel seawalls may be in serious need of repair.
 - It was suggested that the causeway could move further out into the lake with the north end landing north of the walleye ponds. The extended length would allow for a ramping to achieve a 35 foot clearance for the marina access. AEW to look at costs and evaluate as a viable option.

Additional Items

- MDNR field office contact individual is Adam Lett. Ken Verkest invited him to the progress meeting, but unable to attend. Ken to provide contact information.
- ECT will develop a list of stakeholders and distribute to the team for review and comment.
- Ken Baker to forward additional electronic drawings to ECT.
- Lyle provided a copy of a recent Macomb Daily article describing the history and use of the walleye ponds.

Progress Meeting

- Next meeting is scheduled for Thursday, June 14, 2012, 9:30 am at SANGB building 127.

PROGRESS MEETING 3
Shoreline Trail
Environmental Assessment

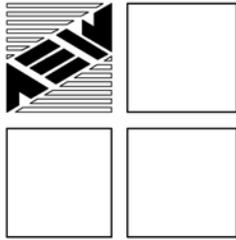
AEW Job No.: 0213-0110

June 14, 2012
9:30 A.M.

SANG Base
Building #127

Agenda

1. ECT site evaluations & Status
2. North River Road Easements
3. Marina Crossing Alternatives
4. Project Timeline
5. Additional Items
6. Next Meeting



ANDERSON, ECKSTEIN AND WESTRICK, INC.

51301 Schoenherr Road, Shelby Township, Michigan 48315
Civil Engineers • Surveyors • Architects 586-726-1234

Progress Meeting #3 Minutes
June 14, 2012

Shoreline Trail

Macomb County

AEW Project No. 0213-0110

<i>NAME</i>	<i>COMPANY</i>	<i>PHONE</i>	<i>E-MAIL</i>
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John Crumm	MCDOR	(586) 463-1982	jcrumm@rcmcweb.org
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Mark Earl	SANGB	(586) 239-4993	mark.earl@ang.af.mil
Matt Carmer	ECT, Inc.	(734) 769-3004	mcarmer@ectinc.com
Melissa Roy	Macomb County	(586) 469-0781	roy@macombgov.org
Ken Verkest	Harrison Township	(586) 466-1445	kverkest@harrison-township.org
Kim Bewersdorff	SANGB	(586) 239-4522	kimberly.bewersdorff@ang.af.mil
Steve Sierakowski	SANGB	(586) 239-5631	thomas.sierakowski@ang.af.mil
Janice Stockett	SANGB	(586) 239-5081	janice.stockett@ang.af.mil
Lawrence Crowder	SANGB	(586) 239-6633	lawrence.crowder@ang.af.mil
Adam Lepp	DNR	(586) 465-2138	leppa@michigan.gov

The following is a synopsis of the discussion that took place at Progress Meeting No 3. No attempt has been made to quote the discussion exactly as it was stated. The intent of this document is to reiterate all items of relevance that were stated during the meeting. With that in mind each of the participants has the opportunity to add, delete, and/or modify the statements herein. We ask that any additions, deletions, and/or corrections be submitted to:

Jennifer Chehab, PE, or Lyle E. Winn, PE
Anderson, Eckstein and Westrick, Inc.
51301 Schoenherr Road
Shelby Township, Michigan 48315

by June 27, 2012 otherwise these minutes will stand.



ECT Site Evaluations & Status

- Matt Carmer indicated that he has walked the entire project and has concluded that:
 - Very few wetland areas along trail route, trail is mostly in upland area
 - Wetlands are located near MDNR boat launch and near storm water discharge canal.
 - Some Coastal wetlands are present near the storm water discharge channel
 - Portions of the trail are likely not in the flood plain
 - Documentation, including photographs have been taken
 - Some Indiana Bat habitat is present and will be addressed in report
- Will coordinate separately the lake bottom sampling and documentation with SANG
- Ken Baker indicated that all of the North River Road area is within the flood plain as well a portion of the base.
- Lyle Winn clarified that the replacement security road may impact the floodplain and isolated wetland areas.
- The break-wall area looks to be in generally good condition from the shoreline. Will evaluate further during the lake evaluation.

North River Road Easements

- Ken Verkest verified with HRC that easements are needed and the widest easement is located east of the golf course entrance.

Marina Crossing Alternatives

- Option 1, longer causeway of 4,800 feet, appears to be the preferred option.
 - Eliminates conflicts with the more intense areas along the base shoreline.
 - Eliminates conflicts around the marina
 - The bridge height can be accomplished to accommodate vessel clearances with a gradual rise in the causeway height.
 - More visually appealing
 - Located further away from the shoreline, minimizing security issues
- John Crumm will try to obtain a consensus at the County level on the alignment before ECT performs field surveys in this area.



Progress Meeting No 3
0213-0110 Shoreline Trail
Page 3

Project Timeline

- The timeline has slipped by approximately 2 weeks. However, ECT believes that we be back on track by the next progress meeting.
- A pre-application meeting will be scheduled with the MDEQ to review project. Meeting should occur within the next 2 o 4 weeks.

Additional Items

- Adam Lepp discussed the DNR boat launch area.
 - Certain times of the year are very busy with all parking, including overflow, occupied by vehicles and boat trailers.
 - Funds to construct the boat launch may prohibit the use of the parking as a “trailhead”. Adam will research further.
 - The next phase of construction will expand the parking within the boat launch site.
 - Adam will forward a construction plan to AEW.
- SANG will forward a copy of the typical security fence to be used along the trail to AEW. ECT to photograph the fence during next visit.
- Discussion centered on the location of the security road at the walleye ponds. Will it be located west of the ponds or must it be located along the trail. Along the trail will require the reconstruction of the walleye ponds. The longer causeway option, mentioned above, would eliminate this concern.

Progress Meeting

- Next meeting is scheduled for Thursday, August 2, 2012, 9:30 am at the Macomb County Department of Roads.

PROGRESS MEETING 4
Shoreline Trail
Environmental Assessment

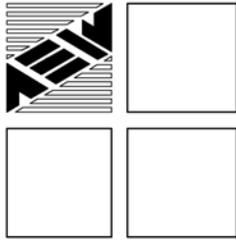
AEW Job No.: 0213-0110

September 28, 2012
10:00 A.M.

SANG Base
Building #127

Agenda

1. ECT overview of DOPPA
2. DOPPA comments
3. Security Fencing
4. Draft EA schedule
5. Additional Items
6. Next Meeting



ANDERSON, ECKSTEIN AND WESTRICK, INC.

51301 Schoenherr Road, Shelby Township, Michigan 48315
Civil Engineers • Surveyors • Architects 586-726-1234

Progress Meeting #4 Minutes
September 28, 2012

Shoreline Trail

Macomb County

AEW Project No. 0213-0110

<i>NAME</i>	<i>COMPANY</i>	<i>PHONE</i>	<i>E-MAIL</i>
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John Crumm	MCDOR	(586) 463-1982	jcrumm@rcmcweb.org
Kenneth Baker	SANGB	(586) 237-5741	kenneth.baker.2@ang.af.mil
Mark Earl	SANGB	(586) 239-4993	mark.earl@ang.af.mil
Matt Carmer	ECT, Inc.	(734) 769-3004	mcarmer@ectinc.com
Melissa Roy	Macomb County	(586) 469-0781	roy@macombgov.org
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Vince Viviano	DNR	(586) 465-2138	vviano@rcmcweb.org

The following is a synopsis of the discussion that took place at Progress Meeting No 4. No attempt has been made to quote the discussion exactly as it was stated. The intent of this document is to reiterate all items of relevance that were stated during the meeting. With that in mind each of the participants has the opportunity to add, delete, and/or modify the statements herein. We ask that any additions, deletions, and/or corrections be submitted to:

Lyle E. Winn, PE
Anderson, Eckstein and Westrick, Inc.
51301 Schoenherr Road
Shelby Township, Michigan 48315



ECT overview of DOPAA

- Matt Carmer indicated that he has included the various comments from the previous review and has a substantial portion of the EA drafted.
- ECT is in process of scheduling a site meeting with the MDEQ, Army Corp of Engineers, SANG to review project for environmental concerns.
- To date, no significant environmental habitats or species have identified during the site inspections.
- Lake bottom sampling is complete.

DOPAA review comments

- Ken Baker introduced the Comment Response Matrix. Several corrections are required for clarification and to address concerns raised by other reviews as noted in the matrix. Additionally, it was noted that some of the comments in the Matrix have already been addressed and may no longer apply.
- Based upon a quick review of the comments, ECT and AEW were of the opinion that the corrections needed to incorporate the comments into the DOPAA will only require a modest effort and significant changes to the DOPAA are not anticipated.
- ECT will update the DOPAA, include responses on the Comment Matrix, and forward both documents to the group.
- Discussion centered on the stand-off distance needed from the security entrance at the north side of the base. Preliminary sketches show 250 feet. SANG personnel agreed that this should be 150 feet. AEW to modify sketches.
- The stand-off distance around the base marina should be 150 feet.
 - Path alignment to be adjusted by AEW
 - Parking lot will need relocation
 - Fencing required on both sides of path
 - Alignment to the north may need to go between the fishery ponds

Security Fencing

- The size and style of security fencing was discussed. It was agreed that the plan will be to install standard 8 ft. high, chain link fence with 3-strand barbed wire. A detail will be added to the EA.
- Fencing along the causeway will be needed.



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Draft EA Schedule

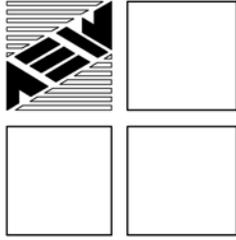
- The draft EA will be submitted approximately 2 weeks following the MDEQ site meeting.
- ECT will coordinate the MDEQ site review meeting and supply list of attendees to Kim for clearance to enter the Base for the meeting.

Additional Items

- A trail closure fence, at each end of the path, will be required that will allow SANG to completely close the trail during emergency situations.
- Provide a profile of the grade separations to give a better understanding of how the separation will occur.
- Modify the stand-off distance at the north base entrance and around the marina

Progress Meeting

- Next meeting will be an on-site review meeting with MDEQ, Army Corps of Engineers, Base personnel, Macomb County, ECT and AEW. Date of meeting to be established by ECT.



ANDERSON, ECKSTEIN AND WESTRICK, INC.

51301 Schoenherr Road, Shelby Township, Michigan 48315
Civil Engineers • Surveyors • Architects 586-726-1234

Pre-Application Meeting Minutes
October 26, 2012
(Revision 1 – December 5, 2012)

Shoreline Trail

Macomb County

AEW Project No. 0213-0110

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The following is a synopsis of the discussion that took place at the October 26th, 2012 Progress Meeting. No attempt has been made to quote the discussion exactly as it was stated. The intent of this document is to reiterate all items of relevance that were stated during the meeting. With that in mind each of the participants has the opportunity to add, delete, and/or modify the statements herein. We ask that any additions, deletions, and/or corrections be submitted to:

Jennifer Chehab, PE, or Lyle E. Winn, PE
Anderson, Eckstein and Westrick, Inc.
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Shelby Township, Michigan 48315



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by November 26, 2012 otherwise these minutes will stand.

Introductions

- Introductions including name and organization of all meeting participants present.

Project Overview

- Matt Carmer (ECT) discussed Phase 1 and Phase 2 of the project including where new trail would be installed and where existing trail will be reconstructed. Sheet 1 (Proposed Action Location Map) was discussed.
- In general, the necessary/proposed locations of security fence and interior base roads were discussed. Can the fencing and interior base roads be installed/constructed without the need for impacts to existing wetlands? Sheet 2 (Wetland Map) was discussed.
- In most cases where existing security road is present, this road will be converted into proposed trail surface. A new base security road (and security fence) will then be constructed adjacent to the shoreline trail.

Environmental Concerns

Wetlands

- Wetland R was discussed. This wetland is in an area of new trail construction. Can trail, interior base road and security fencing be installed/constructed without the need for impacts to Wetland R. Both Andy Hartz (MDEQ) and Henry Rosenfield (USACE) agreed that Wetland R could be taken off of the site figures, as this area is not wetland.
- During site walk following meeting, it was determined by ECT (Don Tilton), MDNR (Adam Lepp) and SANGB Staff that the existing property boundaries need to be staked and the existing wetlands be delineated in order to determine if wetland impacts will be necessary. The boundaries of the MDNR property (boat launch) need to be staked.
- Wetland U was discussed. This wetland is adjacent to the existing security road where the proposed trail will be reconstructed. The existing security road/trail is not within wetland. SANGB Staff discussed the need to be able to see the proposed trail/security fence from a newly-constructed security road. If Wetland U will be located between the newly proposed security road and the proposed trail/security fence, vegetation management within Wetland U will likely be required. MDEQ Staff confirmed that no permit is required to cut vegetation (including shrubs and trees) if the soil surface is not impacted.
- Wetland J was discussed (wetland is adjacent to/south of existing walleye ponds). This wetland is adjacent to the existing security road where the proposed trail will be reconstructed. The existing security road/trail is not within wetland. With limited distance between Wetland J and the top of slope adjacent to the Lake St. Clair shoreline, it is possible that impacts to Wetland J would be required in order to construct the



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proposed trail and security fence. A new security road would likely need to be located/routed around the west side of Wetland J. It was also noted that the proposed trail in this area could be elevated if required in order to avoid/minimize impacts to existing wetlands.

Floodplains

- Sheet 3 (Floodplain Map) was discussed. SANGB Staff noted some discrepancies between SANGB floodplain map and Sheet 3. Specifically noting that there is a 100-year floodplain crossing area on the south side of the base, near the existing golf course. SANGB Staff noted that the map that they had contains some relatively recent data from FEMA for Macomb County. SANGB Staff noted that they have this floodplain data in electronic form and should be able to distribute to ECT.

Threatened & Endangered Species

- The July 30, 2012 letter from MSU Extension Michigan Natural Features Inventory was discussed by Matt Carmer (ECT). Legally protected and species of special concern that were listed in the letter were discussed. SANGB Staff noted that they have seen some of the listed bird species using the base property. ECT noted that many of the listed bird species are likely migrating when seen by SANGB Staff. The EA will discuss why these listed species will or will not be impacted.

Proposed Causeway

- Sheet 4 (Proposed Action Map Causeway Area) was discussed. Constraints associated with SANGB were discussed, including:
 - Buildings in close proximity to shore;
 - Existing breakwall.
- Proposed path should maintain 150' distance from shore.
- ECT asked about need for "warning signage" near causeway section. Are there currently signs in the water, discouraging/warning boaters?? SANGB Staff noted that there are not many/any signs in the area. Signs have been accidentally removed from shore in some cases during shoreline maintenance activities.
- SANGB does not want public boaters to be able to gain access to the shoreline. Need for anti-terrorism controls were discussed by SANGB Staff. MDEQ, MDNR and USACE noted that any proposed designs that are presented will be reviewed and commented on by Agencies. MDNR (Jim Francis) noted that the proposed security fencing proposed from the bottom of the causeway extending to below the water surface would not be an issue from a regulatory standpoint. Sheet 6 (Lake St. Clair Shore Bathymetry Map) was discussed. SANGB Staff noted that some of the dark areas in the figure are potentially old dredge areas; may be close to 8' deep in some areas. In general water is 5' to 6' deep. ECT (Matt Carmer) noted that, on average, there should be at least 4' of clearance between bottom of causeway security fencing and lake bottom for fish passage. Again, Jim Francis (MDNR) does not see any negative impacts from this proposed fencing.



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- Proposed Causeway Section Detail (Sheet 7) was discussed. Currently, the trail is proposed to be 12' wide. SANGB Staff noted that a width of at least 18' may be needed to accommodate necessary clearances between path users, security and/or rescue vehicles, etc. on the causeway portion. AEW and MCDOR commented that a walkway of 18' with "cut-outs" of an additional 10' may be needed. SANGB will need to clarify their requirements.
- Potential impacts of the proposed causeway construction on future seawall/shoreline restoration was discussed. MDEQ (Andy Hartz) noted that a good deal of the existing shoreline is rock/riprap/broken concrete and that the SANGB has a significant amount of shoreline that could be improved. Is it possible that constructing the causeway could hinder future shoreline restoration efforts/possibilities? Grants might be available that would help fund shoreline improvements along the base property. From SANGB Mission Standpoint, additional wildlife usage of shoreline would be an issue. SANGB Staff are already involved in daily depredation of nuisance birds/wildlife that may negatively affect airfield/flight paths. MDEQ Staff noted that the existing shoreline north of the proposed causeway is an area that is better suited for potential shoreline improvements (up through the area of the existing walleye ponds). As one heads to the north along the shoreline there are more open areas that are coming apart and would benefit from shoreline stabilization projects. SANGB noted that in the event of emergency/natural disaster it may be beneficial for shoreline to be diked. This has been previously discussed by SANGB Staff. All relevant discussions will need to be included in the EA.
- MDEQ (Andy Hartz) was concerned about the isolation of the bottomlands and asked how many acres will potentially be impacted between the proposed causeway and the shoreline. SANGB Staff noted that most of the public users of Lake St. Clair give the base the necessary space. As the State controls the bottomlands, the public has a paramount right to hunt, fish, navigate, etc. within these areas. At the same time, the SANGB does not want the public accessing the shore. MDEQ will be looking to the EA to address these issues. The EA should specify reasoning for the construction of the proposed causeway.

Walleye Ponds Area

- Sheet 8 (Proposed Action Map Walleye Ponds Area) was discussed. AEW (Lyle Winn) noted that more clearance around the marina near the existing walleye ponds may be required (stay 150' from fence). Proposed trail, security fence and base security road will need to avoid ponds and existing Wetland J.
- For the purposes of the base security road, the road labeled as "George Ave." on the west side of the walleye ponds could be extended to the north (SANGB Staff noted that this road is not "George Ave." at this location and that the Google Map included on Sheet 8 is not accurate).
- Jim Francis (MDNR) noted that the walleye ponds continue to be used seasonally. He is not sure of future plans for the ponds however. He noted that MDNR works with the



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Lake St. Clair Walleye Association (LSCWA). These ponds are not critical to the LSCWA and all of the fish raised are used for stocking inland lakes.

- Tractors/equipment (including pumping lines, etc.) will need a crossing/conduit across/under the proposed pathway to feed the ponds with lake water.
- Does SANGB want new 8' tall security fence to be located between the proposed trail and the east side of the existing walleye ponds? Yes. SANGB would prefer to protect the public from the walleye ponds and to decrease an possible liabilities.
- Pumps are used to fill the ponds with Lake St. Clair water. The pump station located to the south is one of five stations that discharge rainwater from the installation, and receives this discharge water and pumps it out to Lake St. Clair.
- The required pipe/conduit to Lake St. Clair would require a MDEQ Permit. MDEQ Staff noted that this activity can be added to the overall permit application. Only one single 1-time construction for the proposed trail is needed.
- SANGB Staff note that the existing golf course on the south side of the base is interested in redoing an intake pipe used for irrigation. MDEQ Staff noted that this activity would also be needed to the permit application. This activity would require a soil erosion and a Part 303 Permit.

North Marina Area

- Sheet 10 (Proposed Action Map North Marina Area) was discussed. The goal is to construct the proposed trail, security fence and base security road while avoiding the existing Wetland R.
- The previously-discussed standoff distance of 250' from SANGB buildings was discussed. A distance of 150' may be acceptable. AEW is to confirm this. The 150' distance allows for the primary route for the trail to be constructed (i.e., will not have to construct through the marina at all). This information is shown in Sheet 11 (North Grade Crossing).
- Proposed footbridge in this area was discussed. MDNR (Adam Lepp) asked what the necessary cross section/impact for a foot bridge would be. Matt Carmer (ECT) discussed the proposed design of the footbridge and noted that a footbridge may still be needed to cross the marshy area adjacent to the marina.
- MDNR (Adam Lepp) asked what will be done with the DNR parking lot fence. AEW noted that because a survey in this area is not available, this is difficult to answer. Not sure where the base/state land boundary is. In addition, the current effort does not include a survey.
- The goal is to fit the trail into the road easement in this area in an effort to minimize cost, etc.
- Future changes to base entrance was discussed. A potential roundabout may be constructed. The visitor's parking lot will remain. SANGB may be able to provide a digital file that indicates what the future plan includes.

Trail Access



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- ECT (Matt Carmer) discussed potential points for trail access; including the north end, south end, and the “Johnson Street” gate (northwest end of the proposed causeway). The proposed plan is to have gates at these locations for SANGB use/access ONLY. This would also include vehicle access to the causeway.
- SANGB noted that the details of the access points/gates will need to be further discussed with SANGB Safety/Security Staff during the process of design.
- It was confirmed that the entire trail should be designed to provide for ambulance and emergency vehicle access.
- It was noted by meeting attendees that there are currently existing trails that have a longer distance between access points than the proposed trail design.
- The need for design for removal bollards at all necessary locations was discussed.
- SANGB Staff noted that for increased security, the north and south access points to the trail would likely need to be typical security gates.
- Pedestrian gates with “swipeable” access cards for trail access were discussed. SANGB Staff noted that “dummy” gates could be installed that have only 1 way in and 1 way out. SANGB Staff noted that the more vehicle access points to the pathway, the better.

Wildlife Control

- The removal of animals using firearms from the proposed trail would need to be worked into the Lease Agreement (per AEW), including hours of allowable trail use, etc.
- SANGB Staff noted that wildlife control is required every day.
- SANGB Staff believes that the proposed path will have an impact on animal control and the ability to remove wildlife (especially birds) promptly and efficiently.
- It was noted that SANGB Staff will continue to have access to the trail.
- It was noted that SANGB Staff currently conduct wildlife management activities adjacent to the golf course. Access to the golf course is not restricted to golfers during the wildlife management activities.

Vegetation Management

- It was noted that the County would be responsible for maintaining vegetation along the shoreline.
- Ideas related to how to manage vegetation growing within the areas of broken concrete were discussed.
- Phragmites removal at the walleye ponds was also discussed.

Proposed Footbridges

- Sheet 1 (Proposed Action Location Map) was discussed, including best methods to provide for fencing of footbridges. SANGB noted that climbable fencing is not desirable.
- AEW noted that they will incorporate a standard footbridge detail that has been modified to include an 8’ high security fence.

Trail Security



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- As this is proposed as a non-motorized trail, SANGB is to patrol for security purposes from inside the security fence.
- Additional discussion took place regarding where the base security road will be located along the proposed pathway.
- SANGB Staff noted that it is important to have a clear view of the security fence along the proposed trail. It is acceptable to route the base security road in order to avoid wetlands and other sensitive areas.
- Thick vegetation between the base security road and the proposed trail/security fence will need to be maintained to keep a clear view of the security fence from the security road.
- The MDEQ noted that the maintenance of herbaceous vegetation and trees/shrubs within wetlands for the purpose of maintaining a view from the base security road is acceptable. The vegetation maintenance should be noted on any subsequent permit applications to the Agencies.

Upcoming Meetings

- Next meeting has not yet been scheduled.

Appendix E

Site Photographs





SOURCE: ECT, INC., 2012

ECT
Environmental Consulting & Technology, Inc.
2200 COMMONWEALTH BLVD., STE. 300
ANN ARBOR, MI 48105
TEL: 734.769.3004
FAX: 734.769.3164

**LAKE ST. CLAIR
SHORELINE TRAIL PROJECT**
MACOMB COUNTY, MICHIGAN
ECT PROJECT NO: 120036

**ANDERSON,
ECKSTEIN AND
WESTRICK, INC.**
Engineering Strong Communities
51301 Schoenherr Road, Shelby Twp., MI 48315
586.726.1234
ENVIRONMENTAL ASSESSMENT MARCH 2013

SHEET NAME:
**PROPOSED ACTION
LOCATION MAP**

SCALE: 1" = 0.25 MILE

0 .25 .50 MILE

SHEET NUMBER
1 OF 1



Photo 1. Phase 1 Portion along North River Road (ECT, June 12, 2012)



Photo 2. Existing Trail to be reconstructed (ECT, June 12, 2012).



Photo 3. Existing trail ends near MacRay Marina channel (ECT, June 12, 2012).



Photo 4. Phase 2 trail segment requiring new construction (ECT, June 12, 2012).



Photo 5. Proposed causeway location within Lake St. Clair (ECT, June 12, 2012).



Photo 6. Area where causeway will meet existing trail (ECT, June 12, 2012).



Photo 7 Existing trail near Walleye ponds (ECT, June 12, 2012).



Photo 8. Scenic portion of trail to be reconstructed (ECT, June 12, 2012).



Photo 9. Turfgrass typically found adjacent to existing trail (ECT, June 12, 2012).



Photo 10. View of Lake St. Clair from existing trail location (ECT, June 12, 2012).