Project Description

WOO- CSX RR Bridge over the Maumee River
PID: 100460

The Wood County Port Authority (WCPA) is proposing the removal of the Upper Maumee River Swing Bridge (Swing Bridge) over the Maumee River, which was previously owned by CSX Railroad and is now deteriorating. The bridge is located approximately 150 feet downriver (northeast) from Ohio Turnpike (Interstates 80/90) bridge in Wood and Lucas Counties and is eligible for listing on the National Register of Historic Places. Construction is expected to begin in 2017 and last approximately 6 months. All work is weather permitting.

This project is funded with federal, state, and local funds. At this time, the environmental document required by the National Environmental Policy Act is scheduled to be completed on 11/02/2016. Construction is expected to begin in winter of 2017 and last approximately 6 months. All work is weather permitting.

The project is located over the Maumee River, which is a navigable and recreational waterway. An opening for marine traffic will be maintained throughout the removal of the bridge. Coordination with the United States Coast Guard (USCG) and United States Army Corps of Engineers (USACE) is ongoing to ensure that the proper waterway permits have been received prior to construction. No new right-of-way will be needed for this project.

Due to the bridge being eligible for listing on the National Register of Historic Places, coordination with the Ohio Historic Preservation Office was conducted and starts on page 5 of this document. The proposed demolition of the Swing Bridge is considered an ‘adverse effect’ to a historic bridge. Continued coordination with the Ohio State Historic Preservation Office is currently underway for this project. Within the project area, there are no other National Historic Landmarks, sites listed or known eligible for the National Register of Historic Places, or sites for which Ohio Historic/ Archaeological Inventory records have been completed.

Potential environmental impacts include:

- The Maumee River and one wetland that was found within the project area will be impacted by the installation of a temporary causeway for the construction equipment to drive on in order to demolish the bridge.
- Waterway permitting from USCG and USACE is needed due to work occurring within the river and wetland.
- Several trees that are considered potential Indiana bat and Northern Long eared bat habitat trees will be cut along with other trees not considered potential bat habitat. The cutting would occur in the winter while bats hibernate in order to minimize impacts to the bat species.
- This project is located within the Maumee River special flood hazard area. Coordination with the local flood plain administrator is being completed and the project will be in compliance with all FEMA floodplain regulation.
- An “adverse effect” to a structure eligible for listing on the National Register of Historic Places.
WOOD COUNTY

WOO- CSX RR Bridge over the Maumee

PID: 100460
THE OHIO DEPARTMENT OF TRANSPORTATION
OFFICE OF ENVIRONMENTAL SERVICES
1980 W. BROAD ST.
COLUMBUS, OH 43223
PRODUCED WITH ARC GIS SOFTWARE
CREATED BY: J. BAIRD
DATE CREATED: 7/19/12.

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December 16, 2015

Ms. Amanda Schraner Terrell, Division Director
Deputy State Historic Preservation Officer
State Historic Preservation Office
Ohio History Connection
800 E. 17th Ave.
Columbus, Ohio 43211-2474

Attn: ODOT Transportation Review Managers

Subject: WOO-CSX RR Bridge over the Maumee River, PID: 100460

Dear Ms. Schraner Terrell:

The Wood County Port Authority is proposing the removal of the Upper Maumee River Swing Bridge (Swing Bridge), which is located approximately 150 feet downriver (northeast) from the westbound Ohio Turnpike (Interstate 90) bridge in Wood and Lucas Counties. The federal funding for this project was allocated as part of a federal earmark. The larger project entails land acquisition, design and construction of The Backside Trail (Trail), which is located along the route of the Toledo Beltline Railway. The subject undertaking includes the demolition of the Swing Bridge. The Area of Potential Effects is considered to be the footprint of the bridge, and a small amount of land on either end of the bridge to provide access during construction.

The Swing Bridge, which was built in 1903 to carry a single rail line over the Maumee River, is an eleven span bridge of approximately 1490 feet in length, which includes two 40 foot long built up girder approach spans, eight riveted Pratt deck truss spans, which range in length from 143.5 to 145 feet, and a center pivot swing span Pratt thru truss, which is 253 feet long, and is supported on a center pier. The subject bridge is eligible for inclusion on the National Register of Historic Places (NRHP). Attached are mapping showing the location of the bridge as well as photographs (Figure 1).

An earlier phase of the development of the Trail, LUC/WOO Abandoned CSX Maumee River Swing Bridge and Proposed Backline Trail, PID: 80544 was reviewed by the ODOT-OES Cultural Resources team in 2009. This phase included property acquisition only. On March 16, 2009, an Inter-Office Communication (IOC) regarding the property acquisition was sent from ODOT-OES to ODOT District 2 (Figure 2). The State Historic Preservation Office (SHPO) was forwarded a copy of the IOC, according to the Section 106 Programmatic Agreement. ODOT-OES determined the following, in accordance with 36 CFR Section 800.4(c)(2)[Determine whether a property is eligible]
and the Stipulation 2(b)(3) of above referenced Programmatic Agreement:

- "The 1903 American Bridge Company-built Upper Maumee RR Bridge's center swing span, meets National Register eligibility under Criterion C as a rare example of its type, with the

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Pratt through truss swing span, center pier and movable components as the contributing elements of the bridge. The approach spans, approach piers, abutments and all decking material are considered non-contributing elements. It is also eligible under Criterion A for being constructed by the American Bridge Company, a prolific out-of-state bridge builder. For Section 106 purposes for the proposed bikeway, we propose the National Register boundary as the existing 253-foot center swing span Pratt truss of the Upper Maumee Bridge with its associated components as contributing.”

Through subsequent informal consultation with the SHPO, it was agreed that the entire bridge, including the piers and all of the approach spans, would also be considered contributing elements to the NRHP eligible structure. Any existing bridge decking is not considered contributing. The National Register Boundary for the property is the footprint of the bridge.

All work will be constructed within existing publicly owned right-of-way. No additional properties listed on or eligible for listing on the NRHP were identified in the Area of Potential Effects, as shown on the Section 106 Records Check map in Figure 3. Based on the magnitude of the undertaking, results of literature review, and previous disturbance due to rail construction, no further cultural resource investigations are warranted.

In accordance with 36 CFR § 800.5(a), FHWA with ODOT as their agent have determined the proposed undertaking constitutes an “adverse effect” due to the removal of the historic bridge. Enclosed are copies of formal Section 106 Consulting Party Invitation and acceptance letters (in Figure 4). Upon concurrence with the “adverse effect” finding, documentation as specified by 36 CFR § 800.11(e) will be forwarded to the Advisory Council on Historic Preservation (ACHP) to determine their participation in resolving the “adverse effect”. Questions may be addressed to Monica Bruns, ODOT Office of Environmental Services, at Monica.Bruns@dot.ohio.gov.

Respectfully,

Timothy M. Hill, Administrator
Office of Environmental Services

Ohio State Historic Preservation Office Concurrence:

(Date)

TMH:mlb
Enclosure

cc: Consulting Parties; On-Line CE
Figure 2
Previous Consultation
OHIO DEPARTMENT OF TRANSPORTATION
INTER-OFFICE COMMUNICATION
Office of Environmental Services

TO: David Dysard, District 2 DDD

DATE: March 16, 2009

FROM: Timothy M. Hill, Administrator, Office of Environmental Services

SUBJECT: Cultural Resources Preliminary Evaluation

PROJECT: LUC/WOO Abandoned CSX Maumee River Swing Bridge and Proposed Backline Trail

RE: National Register evaluation of bridge and cultural resources literature review

PID: 80544

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Project Description
The City of Toledo proposes to build a bikeway on an 11.384-mile section of an abandoned railroad. The abandoned railroad was once part of a beltline that surrounds the city. This segment of the line spans the Maumee River and is located in both Lucas and Wood counties. No new right-of-way is expected for the work.

In December 2008 your office contacted the Office of Environmental Services, Cultural Resource Division to provide a National Register eligibility evaluation for the Upper Maumee River crossing and perform a literature review to identify cultural resource sites within the abandoned eleven-mile-long segment of the Chessie Seaboard Express (CSX)-owned railroad.

Area of Potential Effect (APE)
The project starts at railroad Mile Post 5 (MP-5) near the corner of Laskey Road and Jackman Road. The project follows the railroad right-of-way south, through Bowman Park, Ottawa Park, The University of Toledo, Medical University of Toledo, and Schneider Park. The railroad continues southeast across the Maumee River into Wood County, and the project terminates at the west side of Bates Road, near Mile-post 16 (MP-16). See Figure 1.

Literature Review
The railroad segment which passes through the Medical University of Ohio was previously surveyed in 1978 for the proposed Westwood Ave to Hill Avenue project and also in 2006 for the Medical University of Ohio, Advanced Technology Park expansion. Another previous survey was conducted where the railroad intersects Dorr Street. On the east side of the Maumee, a previous survey was conducted where the WW Knight Nature Preserve is located along the west side of the APE corridor.
No previously recorded history/architecture sites are located within or immediately adjacent to the existing railroad within the proposed Bikeway segment. One previously recorded archaeological site was recorded near the bridge in 1979. The Turnpike Bridge Site (WO-0072) is a prehistoric lithic scatter located on the eastern bank of the Maumee River, between the turnpike bridge and the CSX railroad.

**History/Architecture**

**Toledo Beltline Railway**

The Toledo Railway and Terminal Company completed a 28.59 mile beltline around the city in September 1, 1903 (1903 *Annual Report of the Commissioner of Railroads and Telegraphs*). Prior to the completed TTRR beltline, in the late 1800’s, the Toledo Beltline Railway (B&O) and Michigan Central (NYC) rail lines were constructed to bypass and go around the city. In 1903, the Toledo Railroad and Terminal Company’s “beltway” connected with every railroad entering Toledo. In 1906 the line was sold under receivership to its connecting railroads; reorganized; and became the Toledo Railway and Terminal Company (TTRR) on January 1, 1908. In 1914 the Hocking Valley Railroad acquired nearly 10 percent interest in the TTRR (2007 *The Hocking Valley Railway*).

Our research indicates that the APE portion of the beltway and bridge were mostly abandoned in the early 1980’s by CSX, around the time of federal deregulation of the railroads but has an easement agreement with Norfolk Southern for part of the line. Cartographic sources indicate that the APE includes the only single track segment of the beltline, spanning the upper Maumee and continuing north toward Copeland Boulevard. See Figures 2 and 3.

**Upper Maumee River Swing Bridge**

The abandoned swing bridge is located 11.5 miles from the mouth of the Maumee River where it empties into Lake Erie. It was designed by the American Bridge Company and constructed in 1903 by the Toledo Railroad and Terminal Construction Company. It spans 1450 feet across the Maumee with a 49 foot vertical clearance. The bridge features a center pivot swing span with 11 spans total. The two approach spans are 40 foot built up girders. The center span is a double cantilever continuous 253 foot long two-span riveted Pratt through truss supported on a center pier. The remaining 8 spans are riveted Pratt deck trusses of 143.5 to 145 foot spans (2002 TMACOG). See Figures 4 and 5.
Center bearing, swing-span bridges are among the least common bridge types found in the country and are considered significant. Late nineteenth and early twentieth century examples possess a high level of significance if they retain their integrity. Character-defining features that contribute to integrity include a swing span, central pier of masonry or concrete, pivot, and end rests. Other features such as operational machinery, and abutments, piers or wingwalls may also be character-defining features (2005 NCHRP).

The report for the Toledo Metropolitan Area Council of Governments (TMACOG) for the proposed Backside Trail completed in December of 2002 by the Office of the County Engineer, states that the bridge is in critical condition. The report states that the piers and abutments have section loss and deterioration and that there is a large amount of surface rust over the entire structure, some of the pin connections are showing signs of section loss and a few of the lower deck chords are bent which may be due to a derailment that happened in 1982 on the south spans (2002 TMACOG).

Copies of the subaqueous study of the piers conducted for Burgess and Niple in 1987, The Upriver Bridge/Backside Feasibility Study conducted by Burgess and Niple in 1989 and the American Bridge Co.'s General Plan for the Maumee River Bridge (circa 1902) were requested by our staff in January 2009. We would like to have the opportunity to review these documents whenever your staff can provide them or they become available.

Our staff has not confirmed if the swing span was ever opened or featured the machinery to operate. It was built at a time when commercial activity on the Maumee was shifting down river. Swing bridges are easier to erect in place without disturbing navigation than other movable bridges. Our research does not indicate that there was ever a fender system in place to protect the opened span. The fender systems were sometimes used as falsework during construction (2003 Koglin).

The Ohio Department of Transportation's Historic Bridge Database contains two vehicular swing bridges, one in Cleveland and the other in McConnelsville. The Harmar Village Bridge is a former B&O Railroad swing truss and part of the National Register-listed Harmar Historic District crossing the Muskingum River in Marietta. All three are rim-bearing swing spans dating from 1901 to 1914 respectively. The Lower Maumee River Bridge is located at the northern Maumee crossing of the beltway line and it is also a center bearing bridge. It has been altered and updated over the years but still operable as of 2003 (2009 Berry).

Ohio built a total of 71 iron railroad bridges between 1902 and 1903, according to the Commissioner of Railroads and Telegraphs Annual Report for that year.
The American Bridge Company was incorporated in 1900 by JP Morgan as part of a consolidation of 28 steel fabricators and constructors which included the Toledo Bridge Company. The American Bridge Company became a subsidiary of the U.S. Steel Corporation in 1901. A private company since 1987; American Bridge Co. is noted for constructing the San Francisco Bay Bridge, the Sears Tower, and recently, the world’s largest movable bridge (Woodrow Wilson Bascule Bridge over the Potomac River) in Washington D.C. (1901/2009 American Bridge Company).

There are three American Bridge Company-built vehicular bridges in ODOT’s Historic Bridge Database dating from 1923 to 1949. All three structures are eligible for the National Register. A center-bearing vehicular swing span truss was built by the American Bridge Company in 1914 and carried State Route 555 over the Muskingum River. It is no longer extant.

National Register Eligibility
It is our staff’s opinion that the Toledo Beltline may possess significance within the context Toledo’s industrial heritage, as rare example of a beltline, and also for its brief association with the Hocking Valley Railroad. However, it is beyond the scope of this undertaking to evaluate the National Register eligibility of the railroad line in its entirety based on the scope of this project. It is our opinion that elements that would make this rail line significant will not be altered by converting the abandoned segment of the APE to a bikeway. The proposed project will retain the footprint of the railroad along the 11.384-mile bike trail.

Our staff has determined that the Upper Maumee Bridge meets National Register eligibility under Criterion C as a surviving example of an uncommon type of bridge technology. We consider the center-bearing swing span Pratt truss, its pier, and rests, the only significant elements of the structure. It also carries significance under Criterion A for its association with a prolific out-of-state bridge builder (American Bridge Company, PA).

Archaeology
Based on the literature review, previous surveys and disturbed nature of the APE, an archaeological reconnaissance survey is not considered necessary at this point unless the scope of work deviates more than ten feet beyond the existing rail right-of-way.

Conclusions
It is our staff’s opinion that conversion of the abandoned railroad corridor into a bikeway will not affect the characteristics that make the Toledo Beltline historically significant. The removal of the bridge will not affect the Beltline’s original configuration or context.
Retaining or making necessary alterations to contributing elements of the bridge (i.e. Pratt through truss center swing-span, pier, and movable components) with in-kind materials or for safety reasons may have no adverse effect to the historic property under 36 CFR Part 800. Final determinations of eligibility and effect will be made in consultation with the OSHPO.

Also, removal or alteration of non-contributing elements (i.e. approach spans, approach piers, abutments and all decking material) would not alter the characteristics of the bridge that make the resource eligible for the National Register of Historic Places.

Recommendations

Based on our historic evaluation of the bridge, we recommend an updated structural analysis of the center-span Pratt through truss and its pier to determine what alternatives are feasible for reusing it. The Office of Structural Engineering suggested that a structural assessment should be based on AASHTO's Guidelines for Historic Bridge Rehabilitation and Replacement and the Guide Specifications for Design of Pedestrian Bridges which only requires 85 pounds per square foot live loads.

Staff members from ODOT's Office of Structural Engineering have offered to conduct a field inspection and structural analysis of the bridge for pedestrian loads. Please let us know if you would like us to request an in-house inspection of the bridge.

Correspondence with the U.S. Coast Guard discovered that there are no records of requests to open the bridge within the past 15 years. The river is considered navigable at this crossing but the Coast Guard would have no objections to allow the bridge to remain in the closed-to-navigation position. Additionally, there would be no permit required if a fixed place structure were proposed (Striffler, 2009).

In accordance with Stipulation 2(B)(3) of the Programmatic Agreement Among The Federal Highway Administration, The Advisory Council On Historic Preservation, The Ohio Historical Society, State Historic Preservation Office, And The State Of Ohio, Department Of Transportation Regarding The Implementation Of The Federal-Aid Highway Program In Ohio (Agreement No 12642) executed July 17, 2006, and in compliance with 36 CFR Section 800.4(c)(2), ODOT-OES has determined the following:

1. The 1903 American Bridge Company-built Upper Maumee RR Bridge's center swing span, meets National Register eligibility under Criterion C as a rare example of its type, with the Pratt through truss swing span, center pier and movable components as the contributing elements of the bridge. The approach spans, approach piers, abutments and all decking material are considered non-contributing elements. It is also eligible under Criterion A for being constructed by the American Bridge Company, a prolific out-of-state bridge builder.
For Section 106 purposes for the proposed bikeway, we propose the National Register boundary as the existing 253-foot center swing span Pratt truss of the Upper Maumee Bridge with its associated components as contributing.

2. The proposed bikeway project will have no effect to elements that would render the Toledo Beltline railroad eligible for the National Register of Historic Places as a component within Toledo's industrial heritage, its distinguishing configuration which encircles the city, and minor association with the Hocking Valley Railroad.

3. As long as the work is limited to the existing railroad right-of-way and previously surveyed areas, the potential for impacting undisturbed archaeological remains is unlikely.

Once available, please provide us with a project package and mapping, including any areas of additional right-of-way. Please include a description of work associated with the other bridge structures located within the APE. We will make an official Section 106 finding for the subject project once we receive these items.

A copy of this IOC should be attached to the appropriate environmental document. If you have any questions or comments regarding this determination, they may be addressed to Thomas P. Barrett, Staff Historian at tom.barrett@dct.state.oh.us or 614-466-3932.

TMH/tpb

c: Mark Epstein, SHPO, w/attachments; Adam Johnson, FHWA; Project File;Reading file;
References


AASHTO, Guidelines for Historic Bridge Rehabilitation and Replacement, 2008

American Bridge Company, American Bridge Company Standards for Structural Details, 1901


Berry, Dale J., Michiganrailroads.com, 2009

Commissioner of Railroads and Telegraphs, Thirty-sixth Annual Report, 1903

Continental Appraisal Company and County Engineer’s Office, Preliminary Report Proposed Backside Trail on the Abandoned CSX Railroad Over the Maumee River, prepared for Toledo Metropolitan Area Council of Governments (TMACG), 2002

Koglin, Terry L., Movable Bridge Engineering, 2003

Miller, Edward H., The Hocking Valley Railway, 2007

Parsons Brinckerhoff and Engineering Industrial Heritage, A Context for Common Historic Bridge Types, 2005

Transystems/Lichtenstein, Draft Protocol for Defining Levels of Significance, 2007-08 Ohio Historic Bridge Inventory Phase 1A, 2008

Primary Sources

Striffler, Scot. M., Bridge Program Manager, Ninth Coast Guard District Bridge Program, email, March 10 and 12, 2009
Figure 1. Backline Trail APE in red.

Figure 2. 1903 Map of entire beltline. The APE is located in the bottom left corner.
Figure 3. 1933 map of beltline around Toledo with showing single tracks in APE (bottom left corner).

Figure 4. Train crossing bridge circa 1970's.

Figure 5. This a recent aerial view of the structure, showing its proximity to the Ohio Turnpike.
Figure 3
The results of a Section 106 Records Check
This map is a user generated static output from an Internet mapping site and is for general reference only. Data layers that appear on this map may or may not be accurate, current, or otherwise reliable. THIS MAP IS NOT TO BE USED FOR NAVIGATION.