

PROJECT IMPACT PROFILE

County: Trimble, KY and Jefferson, IN

Route: US 421, Milton-Madison Bridge over Ohio River

Item No.: 5-135.80

Type Project: Bridge Replacement

Date: December 21, 2009

Document: Environmental Assessment

Date Approved: _____

Identify Preferred/Selected Alignment (indicate any changes to alignment or design): Existing Alignment¹

Provide an overview of the project impacts which will result (must be completed prior to each federal action). Check the Resolved Column on the right to indicate "yes" if all issues have been resolved; "no" if there are remaining issues. Identify all unresolved issues.

IMPACTS	COMMENTS / EXPLANATION	Resolved	
		yes	no
<p>1. Air Quality</p> <ul style="list-style-type: none"> - Attainment Status of project area - List TIP/STIP page and date 	<p>The project study area is located in the KYTC North Central Kentucky Intrastate Air Quality Control Region and the INDOT Seymour District. The project area is in attainment for all criteria pollutants in Trimble County, Kentucky and five out of six criteria pollutants in Jefferson County in Indiana. Madison Township in Jefferson County is in non-attainment for PM2.5.</p> <p>This project is part of the 2005-2007 KYTC Statewide Transportation Implementation Program as STIP amendment Number 2004-165 (page 68 of Appendix A-6 Scheduled Project Phases for KY counties not in Metropolitan Planning Organization (MPO) Areas) and the 2008-2011 INDOT Statewide Transportation Implementation Program as STIP Designation Number 0501151-4761 (page 89 of the INDOT Projects Not Inside MPO Metropolitan Planning Areas FY 2008-2011 INSTIP).</p> <p>All appropriate air quality analyses have been conducted for the proposed project, and impacts are expected to be minor. Compliance with standard state construction specifications and best management practices will minimize impacts during construction. No mitigation is required.</p>	X	
<p>2. Noise</p> <ul style="list-style-type: none"> - Is noise exceedance predicted? - Is noise mitigation required? 	<p>Noise analysis modeling was performed in accordance with the procedures outlined within the Title 23 Code of Federal Regulations (CFR), Part 772, U.S. Department of Transportation, Federal Highway Administration, Procedures for Noise Abatement of Highway Traffic Noise and Construction Noise, the Kentucky Department of Transportation (KYTC) Abatement Policy and the Indiana Department of Transportation Traffic Noise Policy (IDOT).</p> <p>One property experiences a noise level of 67.8 dBA in the 2032 scenario, slightly above the noise abatement criteria (67 dBA) for residential properties. This property is located approximately 15 feet east of the centerline of the northbound travel lane. It is currently uninhabited and has fallen into a state of disrepair. No other properties would experience a sound level impact above the threshold established in the FHWA noise abatement criteria. No noise mitigation is required.</p>	X	

	<p>During construction, mitigation methods could include less noisy equipment, quieter muffler systems, equipment shields, aprons, enclosures, mats (typically for blasting), use of dampeners, and maintenance programs. Methods for mitigation along a path (i.e., US 421) could include permanent, temporary, natural, or mobile shielding. The contractor can also limit times for which certain types of construction operations may be undertaken. This would assist in minimizing impacts to sensitive locations.</p> <p>The relatively short-term nature of construction noise should not hinder normal community functions. The contractor will be required to comply with local noise ordinances and Occupational Safety and Health Administration (OSHA) regulations concerning noise attenuation devices on construction equipment.</p>		
<p>3. Aquatic Ecosystems</p> <ul style="list-style-type: none"> - Channel change/culverts (total linear ft) - Is stream mitigation required? - Floodplain; FEMA no-rise certification - Wetlands (total acres impacted) - Is wetland mitigation required? - Permits required (404, 401, Coast Guard) - List date application/approval 	<p>Analysts conducted literature reviews, corresponded with state and federal resource agencies, and performed field surveys to determine if unique or sensitive ecological resources were present within the project area.</p> <p>There will be no channel changes or culverts with the project. Stream mitigation is not required.</p> <p>During construction, a number of mitigation measures will ensure impacts to the Ohio River habitat will be minimized.</p> <ul style="list-style-type: none"> - Use of a barge-mounted suction dredge for all dredging activities will minimize re-suspension of sediment as a result of dredging. - Only the minimal area required to complete construction activities – pier scour mitigation, staging areas, ferry landing sites – will be dredged. Dredged materials will be stored such that they will not re-enter the Ohio River during de-watering. - The minimum necessary number of bents shall be used during bridge construction. - Piece-by-piece removal of the bridge will be used to the maximum extent possible during demolition. When explosives are necessary, bridge pieces dropped into the Ohio River will be retrieved as soon as safely allowed. - Demolition of pier 5 will be executed such that scatter or debris is minimized. Following demolition, bridge pieces dropped into the Ohio River will be retrieved as soon as safety allows. - Erosion control measures shall be in place prior to activities in the staging areas and at ferry locations. <p>Because the project replaces the existing bridge superstructure, there would be minimal, if any, changes in the floodplain (acres impacted). The Proposed Action would require construction activities within the floodplain to complete the expansion of the bridge abutments, demolition of pier 5, scour mitigations on the existing piers, and construction of new land piers for the approaches. Hydraulic modeling and coordination with resource agencies is underway to determine if the Proposed Action would result in a “no rise” certification compared to the existing condition (no-rise status).</p> <p>Because the footprint of the Proposed Action lies within the existing state maintained right-of-way, no wetland impacts are anticipated. A Section 404 permit will be coordinated with the US Army Corps of Engineers prior to any dredging or fill work.</p>	<p>X</p>	

	<p>Coordination will be undertaken with regulatory state and federal agencies prior to construction to secure the appropriate permits for all project activities.</p> <ul style="list-style-type: none"> - Section 401 Water Quality Certifications will be pursued through both the Kentucky Division of Water and the Indiana Department of Environmental Management prior to construction. - A permit for construction along or across a stream will required through the Kentucky Division of Water since construction activities will occur within the Kentucky portion of the 100-year floodplain. - The project will require formal approval from the Indiana Department of Natural Resources for construction in a floodway under the Indiana Flood Control Act. - A Section 404 permit from the US Army Corps of Engineers is required before dredged or fill material may be discharged into waterways or wetlands. - A Section 10 permit is required from the US Army Corps of Engineers to do work in, over, or under a navigable waterway. 		
<p>4. Threatened/Endangered Species</p> <ul style="list-style-type: none"> - USFWS Coordination date(s) - Is BA required? List species. - Seasonal restriction on BA work? 	<p>The project team coordinated with USFWS as part of the 6002 agency coordination process.</p> <p>A Biological Assessment (BA) was completed for the project and submitted to the US Fish and Wildlife Service (USFWS) for review in October, 2009. The agency concurred (October 29, 2009) with the findings in the biological assessment and agreed that the document satisfied requirements of Section 7 of the Endangered Species Act.</p> <p>As of 2008, the United States Fish and Wildlife Service lists two federally threatened or endangered terrestrial species that have the potential to occur in the project area: Indiana bat (<i>Myotis sodalis</i>) and running buffalo clover (<i>Trifolium stoloniferum</i>). Habitat for Indiana bat and running buffalo clover was delineated during a June 2009 field visit; no impacts are expected for these species. Scattered summer roosting habitat for Indiana bats was observed. Approach work is extremely minimal, falling within the existing state owned right-of-way, and no habitat was observed within or adjacent to these areas. The Milton-Madison Bridge Project will have no effect on these species. Therefore, no additional mitigation measures are required.</p> <p>A list of additional species of concern in state or national databases is attached, including several endangered mussel species. Field work undertaken as part of this project did not identify any of these species in the project area.</p> <p>A pair of nesting peregrine falcons (<i>Falco peregrinus</i>) were observed during the field survey. Peregrine falcons are a US Species of Management Concern. The pair has been reliably nested at an artificial nest box on Pier 8 since 2002. Construction activities that may result in nest destruction or disturbance will be conducted outside of the species' nesting season (typically late February through July). When the nest box is removed during construction of the US 421 bridge, the Kentucky Department of Fish and Wildlife Resources (KDFWR) recommends installing a nest box at a safe location as soon as possible. Coordination activities will continue with KDFWR to identify a relocation site for the nest box and the timing of the relocation to ensure that impacts to the falcon during construction are minimized.</p>	<p>X</p>	

<p>5. Section 106</p> <ul style="list-style-type: none"> - Consultation / coordination required (Native American, local, interested parties) - Archaeology; SHPO concurrence date Identify sites that require additional work - Historic structures / districts: SHPO concurrence date. - Is there an adverse effect; MOA required? 	<p>Initial contact with the consulting parties was made in September 2008, with the kick-off meeting held in February 2009.</p> <p>For historic resources, the Proposed Action would have a direct adverse effect on the US 421 Bridge due to the removal of the superstructure. The Proposed Action would have no additional direct effects on any of the historic districts or individually eligible historic resources within the APE. Due to the estimated 12-month bridge closure period for construction, there would be an adverse effect on the economy of the communities and historic districts contained therein. Changes in access for local residents to goods and services will be caused by the temporary closure of the bridge for up to 12 months.</p> <p>For archaeology, a Phase I survey involving deep testing is currently underway. Core drilling monitoring, shovel probe testing and trenching have occurred on both sides of the Ohio River in relation to the Proposed Action. Once the Phase I is complete reports will be submitted for review.</p> <p>An MOA will be required for this project. SHPO concurrence dates are dates. A full list of mitigation items is attached.</p>	<p>X</p>	
<p>6. Section 4(f)</p> <ul style="list-style-type: none"> - List Section 4(f) resources impacted - Is mitigation required? - Is Land & Water Conservation Act funding involved - 6(f)? 	<p>The Proposed Action requires Programmatic Section 4(f) agreements for four resources: the US 421 bridge, Jaycee Park, Madison City Campground, and Milton Boat Ramp.</p> <ul style="list-style-type: none"> - Replacing the superstructure of the US 421 bridge would result in the loss of a historic resource eligible for the National Register. This action qualifies as a programmatic Section 4(f) use of the bridge. Mitigation includes a replacement truss superstructure having a similar profile of the existing bridge. Additional aesthetic elements such as color, pier shape, and railing options were coordinated with Section 106 consulting parties to ensure the replacement truss would be compatible with the historic character of the area. Stipulations in the Section 106 Memorandum of Agreement also specify that the builder plates on the existing bridge will be removed and publicly displayed (if available); the existing truss will be offered for relocation; the truss will be documented to HAER standards prior to demolition; and the video footage of the 1929 bridge opening will be reformatted to DVD/VHS. - Because of its close proximity to the US 421 Bridge, Jaycee Park would likely be needed as a staging area during the construction of the Proposed Action. This action qualifies as a de minimis use of the park as a Section 4(f) resource. Mitigation items include: relocation of park amenities during construction, replacement of park amenities after construction. extension of the riverwalk, and a paved parking area under the bridge. - To minimize community impacts during the bridge closure, a free ferry service will be provided during the closure period. Madison City Campground and Milton Boat Ramp would be used for ferry staging areas during the closure period. This action qualifies as a net benefit to both the campground and boat ramp. Following construction, the Madison Campground will be returned to the same or better conditions. Improvements to the Milton Boat Ramp will remain for use by the community. <p>No Section 6(f) lands are located in the project area and none will be impacted by the project.</p>	<p>X</p>	

<p>7. Socioeconomic</p> <ul style="list-style-type: none"> - Number of relocations (residential, business) - Is there a neighborhood/community impact? - Farmland (AD 1006 Form) 	<p>The Proposed Action does not require any new right-of-way, so there are not any associated relocations or impacts to farmland.</p> <p>In order to consider the economic impact of the construction period (including closure of the bridge for up to a year), an economic analysis was conducted. Findings include:</p> <ul style="list-style-type: none"> - During the bridge closure period, provision of a free ferry service between communities could lead to as much as a 45% reduction in increased transportation costs compared to the alternative without ferry service. Annually, increased transportation costs during the bridge closure are estimated to cost between \$61 million and \$77 million with a ferry service. - Economic impacts represent only a small portion (less than 5%) of the total economic activity in the tri-county region. - The adverse impacts associated with the bridge closure in 2011 (i.e., a loss of 517 total job-years and \$44 million in total economic output) are significantly less than the positive regional economic impact due to the construction component (i.e., \$153 million in total cumulative economic output over the three years). Three years of construction spending will offset negative impacts in 2011 resulting from the bridge closure. - According to interview responses from local business owners, losses from the closure would be temporary and the majority of jobs/outputs are anticipated to eventually return after the bridge reopens. <p>Mitigation items for the bridge closure period include:</p> <ul style="list-style-type: none"> - Contractor incentives/disincentives to minimize the bridge closure period - A free ferry service for the duration of the bridge closure period - A local/regional advertisement campaign for the cities of Madison and Milton to help tourism marketing and maintain business during the closure period 	<p>X</p>	
<p>8. Environmental Justice</p> <ul style="list-style-type: none"> - Is there a disproportionate impact to minority or low-income groups? 	<p>The Proposed Action would not have a disproportionate effect or any direct impacts (displacements or relocations) on environmental justice communities within the study area.</p> <p>During construction, the closure of the bridge would have an adverse economic effect on the entire populations of both communities, including environmental justice populations. The detour to the next nearest Ohio River highway crossing is in Markland, a 50-mile round trip detour. A number of residents would be forced to find transportation to businesses located 10 miles or more away, compared to finding transportation to locations roughly 2 miles away today.</p> <p>For the Proposed Action, a free ferry service would be provided between communities during the 12-month bridge closure period to help offset these impacts. INDOT and KYTC have committed to covering the cost of the ferry; no fee would be charged to users to cross the river. The ferry would be able to provide a cross-river link for both motorists and cyclists/pedestrians. This would help to mitigate the adverse economic and access impacts of the project while it is under construction.</p> <p>The Proposed Action would also provide a long term connection between communities for pedestrians and bicyclists. The sidewalk and bike path would provide a connection for residents that currently do not have access to a vehicle, a benefit for low income groups living near the bridge.</p>	<p>X</p>	

<p>9. UST / Hazardous Materials</p> <p>- Identify sites that required Phase II / Phase III (list parcel numbers and locations)</p>	<p>An assessment of hazardous materials and underground storage tanks was performed to identify recognized environmental conditions present on parcels located near the project corridor for the Proposed Action.</p> <p>The Milton Save property is a known location of contaminated soil. However, the Proposed Action is not expected to impact this property. Likewise, this property is not expected to create an environmental condition for the proposed bridge replacement due to the fact that minimal approach work is anticipated near this property. Lead contaminated soil was historically present beneath the Milton bridge approach as a result of previous bridge paintings. However, 1999 remediation efforts removed the contamination and clean closure was granted from the Kentucky Division of Waste Management Superfund Branch. The existing US 421 Bridge was surveyed for asbestos containing materials and no asbestos containing materials were found on the main spans or the approach spans.</p> <p>The project area contains environmental conditions in the vicinity of the Proposed Action; however, none are expected to impact the proposed superstructure replacement as no new right-of-way will be acquired. No cumulative or indirect impacts are anticipated.</p>	<p>X</p>	
<p>10. Other impacts not previously discussed</p> <p>- Is there any additional mitigation required? - Are there any special notes for this project? If yes, attach a copy.</p>	<p>A list of mitigation for the project is attached.</p>	<p>X</p>	

Have there been any changes in regulations or laws since the last federal action for this project? If yes, describe: n/a
Comments and coordination:

Date(s) of Public Information Meeting(s): Project Advisory Group (PAG) Meeting #1, October 9, 2008
PAG Meeting #2, November 13, 2008
PAG Meeting #3, December 9, 2008
PAG Meeting #4, January 13, 2009
Public Meeting #1, February 12, 2009
PAG Meeting #5, March 24, 2009
PAG Meeting #6, April 28, 2009
Public Meeting #2, May 19, 2009
Public Meeting #2 - Online Forum, June 2, 2009
PAG Meeting #7, August 13, 2009
Public Meeting #3, September 10, 2009
Public Meeting #3 - Online Forum, September 17, 2009
PAG Meeting #8, December 10, 2009

Date of Public Hearing: **January 14, 2009**

Prepared by: Wilbur Smith Associates for KYTC, INDOT and FHWA **Date:** December 21, 2009

¹ The Proposed Action for the project is Superstructure Replacement on Existing Piers with Minimal Approach Improvements.

TABLE 4 – ENDANGERED SPECIES

COMMON NAME	SCIENTIFIC NAME	STATUS	SOURCE
Indiana Bat	<i>Myotis sodalis</i>	US/KY Endangered	USFWS/KSNPC/KDFWR
American Badger	<i>Taxidea taxus</i>	IN State Special Concern	INDNR
Orangefoot Pimpleback	<i>Plethobasus cooperianus</i>	US/KY Endangered	USFWS/KSNPC
Pink Mucket	<i>Lampsilis abrupt</i>	US/KY Endangered	USFWS
Ring Pink	<i>Obovaria retusa</i>	US/KY Endangered	USFWS
Clubshell	<i>Pleurobema clava</i>	US/KY Endangered	USFWS
Fanshell	<i>Cyprogenia stegaria</i>	US/KY Endangered	USFWS
Rough Pigtoe	<i>Pleurobema plenum</i>	US/KY Endangered	USFWS
Sheepnose	<i>Plethobasus cyphus</i>	US Candidate/KY Endangered	USFWS/KSNPC
Pyramid Pigtoe	<i>Pleurobema rubrum</i>	KY Endangered	KDFWR
Rabbitsfoot	<i>Quadrula cylindrical cylindrical</i>	KY Endangered	KDFWR
Lea's Bog Lichen	<i>Phaeophyscia leana</i>	KY Endangered	KSNPC
Wolf Spikerush	<i>Eleocharis wolfii</i>	IN State Rare	INDNR
Stemless Evening Primrose	<i>Oenothera triloba</i>	IN Extirpated	INDNR
Large-leaved Phlox	<i>Phlox amlifolia</i>	IN State Rare	INDNR
Kentucky Wisteria	<i>Wisteria macrostachya</i>	IN State Rare	INDNR
Peregrine Falcon	<i>Falco peregrinus</i>	US Species of Management Concern/KY Endangered	KSNPC/KDFWR
Bald Eagle	<i>Haliaeetus leucocephalus</i>	Delisted June 28, 2007	KSNPC
Least Bittern	<i>Ixobrychus exilis</i>	KY Threatened	KSNPC
Bank Swallow	<i>Riparia riparia</i>	KY Special Concern	KSNPC
Black Vulture	<i>Coragypus atratus</i>	Not ranked, monitored	INDNR
Barn Owl	<i>Tyto alba</i>	IN Endangered	INDNR
Dark-eyed Junco	<i>Junco hyemalis</i>	KY Special Concern	KDFWR
Eastern Hellbender	<i>Cryptobranchus alleganiensis alleganiensis</i>	US Species of Management Concern/KY Special Concern	KSNPC
Midland Smooth Softshell Turtle	<i>Apalone mutica mutica</i>	KY Special Concern	KDFWR
Northern Leopard Frog	<i>Rana pipiens</i>	KY Special Concern	KDFWR
Black Buffalo	<i>Ictobus niger</i>	KY Special Concern	KDFWR
Spottail Shiner	<i>Notropis hudsonius</i>	KY Special Concern	KDFWR

Milton-Madison Bridge Project Proposed Mitigation Items

Community Connectivity

- Innovative construction contracting techniques will be used to minimize the closure of the US 421 Bridge and to reduce interruption of service to the businesses and residents of the historic districts (i.e., Design-Build Contracting, A+B Bidding, incentives and disincentives).
- A free ferry service will be provided for the duration of the bridge closure. The ferry will operate seven days a week, 24 hours a day except when weather or river conditions make operations unsafe. Pedestrians will be accommodated on the ferry.

Economic-based Impacts

- Funding up to \$225,000 (including \$25,000 for Milton) will be provided for a tourism and promotional marketing effort beginning six months before and running six months after the bridge closure period. This marketing campaign shall include a regionally based promotion designed for local businesses to continue attracting customers during and after the bridge closure period.
- An Historic Preservation Officer will be employed for a period of two years for the purpose of seeking new opportunities to apply for grants and other assistance for the use in improvements for the Madison Historic District and the Madison National Landmark District. This reimbursement shall not exceed \$40,000 annually.
- A business planning seminar will be funded for Milton and Madison business owners and employers to prepare for the temporary bridge closure. This will be implemented a minimum of six months prior to the closure of the US 421 Bridge.

Impacts on Historic Resources

- A consultation process similar to that of Section 106 consultation process will be used should any future improvement to the US 421 Bridge approaches be advanced, regardless of the funding source. FHWA, in consultation with ACHP, shall approve the consultation process as being similar to that of Section 106 consultation process.
- The builder plates will be removed from the existing bridge and other plaques, if in existence. These plates shall be offered to the City of Madison for permanent display accessible to the public.
- The existing truss will be offered for relocation in accordance with Title 23 U.S.C. Section 144(o).
- Documentation of the bridge will be completed, including photos, measured drawings or “as-built” plans, and full written documentation (Level 1 HAER Documentation without plans; Level 2 if “as-built” plans exist). Documentation will be provided to the National Park Service (NPS) and other local entities.
- The original 35mm nitrate film of the opening of the 1929 bridge will be duplicated to modern film and DVD.

- The period of significance for the Madison National Register District has been reexamined. For the purposes of this Project, its ending date has been extended to coincide with that of the Madison Historic Landmark. Within three years, the nomination of the Madison National Register District shall be amended to include eligible properties not included in the 1973 nomination, but which should be included based on the extension of the period of significance. This shall be initiated within two years of construction letting.
- A study will be prepared for the possible expansion of the boundaries of the Third Street Historic District to include the other historic structures in the area. If determined appropriate after consultation with the Kentucky SHPO, a nomination to the NRHP shall be prepared. This shall be initiated within two years of construction letting.

Construction-based Impacts

- Three historic structures will be monitored for construction vibration damage. This shall include the two adjacent structures in Milton and one adjacent structure in Madison. If damage occurs as a result of project activities, INDOT and KYTC or their contractors shall be responsible for repair of any resulting vibration damage to historic properties. Any repairs shall be coordinated in advance with the respective SHPO.
- Construction activities will occur in accordance with local noise regulations, policies, and guidance to minimize adverse noise effects on residents living in historic properties.
- Requirements that the Contractor utilize a Traffic and Parking Management Plan for the ferry will be included in the bidding documents. The Plan should be sensitive to the historic districts and should make practical and reasonable efforts to minimize impacts to the historic districts.
- Necessary modifications will be made to Madison’s former Boat Launch near the City of Madison Campground (such as widening, resurfacing, adding sidewalks, restroom facilities, etc.) that are necessary for the ferry operation. At the request of the City of Madison, the modifications for the ferry dock and ramp will be removed after the ferry operation is no longer required so that this facility cannot be used for a boat launch area. The area will be returned to its original condition or better.
- Provisions shall be included in the contract documents that limit construction activities and construction noise during special events. KYTC and INDOT, with input from the Cities of Madison and Milton, shall identify the special events for which these provisions will apply.

Impacts on Archaeological Resources

- Phase I Archaeological Testing has been completed for the areas within the existing bridge rights-of-way and the proposed ferry operations area. Consultation is underway with the Kentucky SHPO by KYTC regarding whether further work is needed at one discovered site within the potential easement for the ferry operations. No sites were found in Madison.

Other Mitigation

- Emergency helicopter service will be provided through the duration of the bridge closure period.
- The Peregrine Falcon nesting box on the existing bridge will be relocated.
- Funding will be provided for a Planning Study for a new combined pedestrian/bicycle facility along KY 36 in Milton city limits including Cooper’s Bottom Road, Maple Street, School Hollow Road, High Street and Ferry Street.
- Funding will be provided for a Planning Study for walkways along the Ohio River and a scenic river overlook in Milton similar to Madison River Walk.
- The replacement bridge will be a 4-span truss design with a color reminiscent of the original bridge.
- The contractor may choose to use areas within Jaycee Park for construction staging. Once construction activities are complete, Jaycee Park will be restored, including the volleyball courts and the picnic shelter.