



National Trust for  
Historic Preservation  
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INDIANA HISTORIC  
SPANS TASK FORCE

December 7, 2012

Ms. Pamela S. Stephenson  
Division Administrator  
Federal Highway Administration  
55 Broadway, 10<sup>th</sup> Floor  
Cambridge, MA 02142

Attn: Damaris Santiago, Environmental Engineer

Re: Comments on Environmental Assessment for the Mitchell River Bridge Replacement Project

Dear Ms. Stephenson:

On behalf of the National Trust for Historic Preservation, the Historic Bridge Foundation, and the Indiana SPANS Task Force, we appreciate the opportunity to comment on the Mitchell River Bridge Project following the release of the Environmental Assessment (EA). All three of our organizations have been closely involved in the planning process throughout this project, especially the Section 106 review. Our goal throughout has been to seek alternatives and modifications to the project that will avoid, minimize, and mitigate harm, and to ensure that the project includes “all possible planning to minimize harm” under Section 4(f) of the Department of Transportation Act, 49 U.S.C. § 303(c), 23 U.S.C. § 138.

**1. The Use of the Programmatic Section 4(f) Evaluation for Historic Bridges is Inappropriate Given the Exceptional Significance of this Historic Bridge.**

On October 1, 2010, the Keeper of the National Register issued her determination that the Mitchell River Bridge is eligible for listing on the National Register of Historic Places. In making this determination, the Keeper concluded that the Bridge has “exceptional” significance, and is “the last remaining single-leaf wooden drawbridge in Massachusetts,” and is perhaps the only surviving example in the entire United States. Because of the bridge’s exceptional significance, the FHWA should not be using the Programmatic Section 4(f) Evaluation.

The *Programmatic Section 4(f) Evaluation and Approval for FHWA Projects that Necessitate the Use of Historic Bridges*, adopted in 1983, provides a streamlined checklist for routine bridge replacement projects, which essentially allows a Section 106 agreement, together with “document and destroy” mitigation, to substitute for true compliance with the statutory Section 4(f) standard of “all possible planning to minimize harm.” The result is to circumvent or evade the strict application of the requirement to “minimize harm,”—and to evade comments by the Department of the Interior as well—by adopting the fiction that the Section 106 agreement essentially represents “all possible planning to minimize harm.” The reality, of course, is that Section 106 agreements rarely if ever represent “all possible planning to minimize harm,” and this case is no exception. Instead, these Section 106 agreements represent negotiated compromises.

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It is important to note that, by its own terms, the Programmatic Section 4(f) Evaluation is not allowed to be used in the case of bridges that are National Historic Landmarks (NHLs). This explicit limitation recognizes as a matter of policy that the abbreviated review process under the Programmatic Evaluation is inappropriate for bridges of “exceptional” significance, which is what NHLs represent. 36 C.F.R. §§ 65.1(b)(1), 65.2(a). Although the Mitchell River Bridge has not been designated as an NHL, it too has been deemed to possess “exceptional” significance, by the Keeper of the National Register herself, and the fact that it represents one of the last, if not *the* last, single-leaf wooden drawbridge in the United States, is a strong reason why the Programmatic 4(f) Evaluation should not be applied here. The policy reasons behind the NHL exception to the Programmatic 4(f) Evaluation are equally applicable to the unique and specific circumstances of the Mitchell River Bridge replacement project.

Coordination and comment by the Department of the Interior is normally required under Section 4(f), 23 C.F.R. § 774.5(a), but is circumvented by application of the Programmatic 4(f) Evaluation. In this case, review and comment by the Department of the Interior is especially important as a matter of policy, because of the role played by the Interior Department in resolving the dispute over whether the Mitchell River Bridge is eligible for the National Register, and in finding that the bridge has “exceptional” significance.

For all of these reasons, we believe it is inappropriate and unlawful for the FHWA to rely on the Programmatic 4(f) Evaluation in this case as a substitute for the stringent requirements of Section 4(f).

## **2. The Preferred Alternative Violates Section 4(f)’s Requirement to Select the Least Harmful Alternative.**

Where none of the alternatives would completely avoid the “use” of a historic property, as in this case, Section 4(f) *requires* the agency to select the alternative that is least harmful. *See, e.g., Druid Hills Civic Ass’n v. Federal Highway Admin.*, 772 F.2d 700, 714 (11<sup>th</sup> Cir. 1985); *Merritt Parkway Conservancy v. Mineta*, 424 F. Supp. 2d 396, 420-24 (D. Conn. 2006). A reasonable alternative that would minimize harm to historic properties cannot be rejected under Section 4(f)(2) unless the Secretary finds that it is either imprudent or infeasible under the stringent *Overton Park* standard.<sup>1</sup> *Druid Hills Civic Ass’n v. FHWA*, 772 F.2d at 715.

All of the alternatives considered by MassDOT in this case were acknowledged to be “feasible and prudent,” except for Alternative 1. This determination triggers the requirement under Section 4(f) to incorporate “all possible planning to minimize harm.” As FHWA’s *Section 4(f) Policy Paper* specifically confirms, “FHWA may approve, from among [the feasible and prudent alternatives] that use Section 4(f) property, *only the alternative that causes the least overall harm* in light of the statute’s preservation purpose.” FHWA, *Section 4(f) Policy Paper*, Section 3.3.3.2 (July 2012) (emphasis added).

Alternative 3, the preferred alternative identified in the EA, does not satisfy this requirement, because it is not the least harmful alternative. Instead, Alternative 1B is clearly the least harmful prudent and feasible alternative, because it incorporates more wood, and less steel and concrete. In the Determination of Eligibility for the Mitchell River Bridge, the Keeper of

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<sup>1</sup> Under Section 4(f), a feasible alternative that minimizes harm cannot be rejected as imprudent unless it would result in “truly unusual factors”, “unique problems”, or “cost or community disruption” of “extraordinary magnitude.” *Citizens to Preserve Overton Park v. Volpe*, 401 U.S. 401, 413 (1971).

the National Register emphasized that “[t]he records show that over the years, residents have insisted that when authorities proposed alterations to the Mitchell River Bridge that priority was to be given to *in kind replacement of its materials*, and retention of its simple design, form and function as a wooden drawbridge.”<sup>2</sup> Whether viewed from either the shoreline or the water, “the simple, yet distinctive, configuration of the bridge and its presence on the landscape form an exceptionally important part of the community's historic identity.”<sup>3</sup> Thus, any design modification that includes more wood and less steel and concrete would “minimize harm” to the historic character of the Bridge. The Advisory Council on Historic Preservation summarized this conclusion:

Based on the information provided, and comments submitted by other consulting parties, it appears that two alternatives have fallen out as the preferred alternatives. These are Alternative 1B (timber structure with a 25' navigation Channel and concrete bascule pier) and Alternative 3 (timber superstructure on a concrete and steel substructure). While we appreciate the compromise offered in FHWA's support for Alternative 3, ***we must agree with the consulting parties supporting Alternative 1B as the best alternative from a preservation perspective.*** With the life cycle costs being nearly the same, and the strong preference among preservation organizations for retaining an all timber bridge at this location, ***we encourage FHWA to adopt Alternative 1B as the preferred alternative.*** In addition, we recommend that FHWA develop a Memorandum of Agreement (MOA) that focuses on your commitment to context sensitive design.

ACHP letter to FHWA, at p.1 (June 9, 2011) (emphasis added).

Under Section 4(f), a feasible alternative that minimizes harm cannot be rejected unless it can be demonstrated that “truly unusual factors”, “unique problems”, or “cost or community disruption” of “extraordinary magnitude” exist. *Citizens to Preserve Overton Park v. Volpe*, 401 U.S. 401, 413 (1971). No such demonstration that Alternative 1B is not a prudent alternative has been made, or even attempted, in this case. This is because any prudential difference between Alternative 1B and Alternative 3 clearly does not rise to the level of “extraordinary magnitude.” Thus, Alternative 1B, the alternative that is most in keeping with the historic nature, design, and character of the original Bridge, must be chosen in order to comply with the requirements of Section 4(f).

MassDOT’s claims regarding increased costs for a timber bridge are not supported by evidence. MassDOT has repeatedly claimed that there are increased costs associated with constructing a timber bridge because of the difference in the length of the useful life of timber versus concrete and steel bridges. In support of this contention, MassDOT has calculated the costs for a concrete and steel bridge based upon a 75-year life for the bridge, but MassDOT has failed to provide any factual or scientific support for this assumption. MassDOT has cited its experience in constructing wooden bridges in salt water to support its claim that a wooden bridge will have only a 20-to-30-year life, but did not provide any formal documentation. Moreover, the one example that MassDOT did reference—the Powder Point Bridge in Duxbury—used a different type of wood than has been suggested for this project. MassDOT has refused to consider the use of Greenheart wood, which has been known to last for over 50

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<sup>2</sup> Determination of Eligibility, Keeper of the National Register, Mitchell River Bridge (Oct. 1, 2010) (emphasis added).

<sup>3</sup> *Id.*

years,<sup>4</sup> does not require the use of preservatives, and would substantially reduce the cost of a timber bridge. Thus the conclusion that a wooden bridge would last only 20 to 30 years is not substantiated by sufficient documentation.

MassDOT also claims that wood construction in salt water would increase adverse environmental impacts as compared to concrete and steel construction. This claim fails to adequately consider the well-known electrolysis problems that Chatham has suffered as a result of steel pilings installed at its fish pier. The EA also fails to take into account the costs for repairs and maintenance to concrete and steel pilings. MassDOT and FHWA avoid looking closely at the potential cost to include the elaborate safeguards necessary to prevent rust and chemicals from being released into the water during any repairs, by claiming that a concrete and steel bridge will have a 75-year life span. This claim of a 75-year life span has never been substantiated. In fact, a report from the Forest Products Laboratory, a division of the U.S. Department of Agriculture, criticized the MassDOT reports for overestimating the life of concrete and steel while underestimating the life of wood. (Letter of Forest Products Laboratory, USDA, May 10, 2011) (attached). MassDOT's failure to fully examine the actual costs of a concrete and steel bridge has persisted, despite requests from consulting parties asking MassDOT to provide evidentiary support for its contentions. (See letter from Friends of Mitchell River Bridge to MassDOT, Apr. 25, 2011). This failure of proof by MassDOT has resulted in underestimating the actual cost of the concrete and steel bridge.<sup>5</sup>

Appendix E of the EA includes a table that summarizes and compares the estimated life cycle costs for Alternative 1B (more wood) and Alternative 3 (more steel and concrete). (Table 1 – Life Cycle Cost Analysis Summary). This table shows the following:

- Initial project costs would be 19 percent higher for Alternative 3, as compared to Alternative 1B (\$11.047 million vs. \$9.296 million).
- When comparing estimated life cycle costs over the 75+ year lifetime of the structure, the costs for Alternative 3 would be 6 percent higher than for Alternative 1B under the Best Case scenario (\$26.24 million vs. \$24.8 million), and 13 percent lower than for Alternative 1B under the Worst Case scenario (\$26.84 million vs. \$30.74 million).
- Assuming that actual life cycle costs would likely align somewhere between the two extremes of the Best and Worst Case scenarios, the cost difference using the mid-point between the Best and Worst Case scenarios for Alternative 1B and Alternative 3 would be approximately \$1.22M. Thus Alternative 1B would involve total life-cycle costs of

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<sup>4</sup> A dock constructed of Greenheart wood and located in Chatham near the Mitchell River Bridge was built over 50 years ago and is still standing in good condition. Despite being made aware of this dock, MassDOT declined to respond to requests to view the dock or to review the use of Greenheart wood as a potential alternative.

<sup>5</sup> In addition to skewing the estimates of any cost savings attributable to using concrete and steel rather than wood, FHWA failed to adequately consider in the EA the potential negative environmental impacts of its preferred materials. FHWA has ignored recent scientific evidence provided by the Forest Products Laboratory showing that concrete and steel may be more toxic to aquatic organisms than wood under some circumstances. (Letter from Forest Products Laboratory, at p.2 (emphasis added) (citing Lalonde, B.A., Ernst, W., Julien, J., Jackman, P., Doe, K. & R. Schaefer, 2011. A comparative toxicity assessment of materials used in aquatic construction. Arch. Environ. Contam. Toxicol. Published online: 11 Jan. 2011. Springer Science+ Business Media, LLC).

approximately 10 percent more than Alternative 3, based on the mid-point.<sup>6</sup>

- In any event, the life cycle cost analysis for Alternative 1B appears to be extremely conservative, based on the assumption that the bridge will need to be completely reconstructed (less abutments) every 20 years (worst case) to 30 years (best case). This assumption does not align with the actual history of the bridge, in which the overwhelming majority of the wooden pilings have been in place for more than 80 years. Nor does it align with the report from the Forest Products Laboratory: “It appears that the reports “Bridge Alternatives Evaluation and Life Cycle Cost Comparison” and “Bridge Repair/Rehabilitation Feasibility Study for Bridge Street over Mitchell River“ have a tendency to underestimate the relative service life, and overestimate impact, of treated wood in comparison to other construction materials.”

### **3. The EA fails to address Section 4(f) compliance for the public fishing path on the northeast quadrant of the bridge.**

The EA recognizes that the historic Bridge is a popular location for recreational fishing, and that two public paths providing access to the Mitchell River will be affected by the project—one public path cuts through a parcel owned by the town (15A-1) in the southeast quadrant of the Bridge, and the other public path crosses a privately owned parcel (15B-1B-1B) in the northeast quadrant of the Bridge. EA, p.24. With respect to the public path on the Town-owned parcel, the FHWA has obtained the consent of the Town for a finding that the impact on the access path would be *de minimis*, a determination that we do not dispute.

However, the Town’s concurrence in the *de minimis* determination did not address the public path on the northeast quadrant. The EA states that the “*parcel*” on the north side (15B-1B-1B) is a private property and therefore not protected under Section 4(f). EA, pp. 24, 29. However, this finding fails to address the fact that the recreational path cutting through the north parcel is a *public* path. *Id.* Both paths are used by recreational and commercial shell fishermen year-round; *both* paths provide the only access to the Mitchell River in this vicinity; and *both* paths will be displaced by the project. *Id.* The Section 4(f) Evaluation fails to acknowledge that the destruction or use of the public path on the north parcel must be avoided and minimized—just like the public path on the south parcel—unless there is no feasible and prudent alternative.

The EA notes that during construction, access via both of the paths will be restricted entirely. EA, pg 39-40. The EA indicates that at least some access will be maintained and/or restored once the project is completed, but fails to explain how this will occur. There are no details included in the EA or the Section 4(f) review documents that addresses how the public paths will be protected and public access to the river maintained. There is no way to determine whether FHWA intends to retain the existing natural pathway or whether the paths will be fenced, staired, graded, or otherwise altered. The only details included in the EA discuss the need for permanent alteration of the pathway via a 1173-square-foot easement (28% of the total parcel upon which the path is located) that will hold a slope covered by riprap. There is no specific information or drawing to show the FHWA’s plan to retain or replace public access. Given the importance of these paths to the public, it is imperative that the FHWA specifically develop and adopt a detailed plan to ensure that adequate access to the river will be

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<sup>6</sup> Note that a cost differential of more than 10 percent has been held by at least one court not to constitute a cost of “extraordinary magnitude,” and thus would not be sufficient to justify rejecting the less harmful alternative under *Overton Park*. *Stop H-3 Ass’n v. Dole*, 740 F.2d 1442, 1452 (9<sup>th</sup> Cir. 1984) (\$42 million cost increase not sufficiently “extraordinary” to justify rejecting the less harmful alternative as not prudent under Section 4(f)).

maintained both during and after construction. Failure to do so violates the provisions of Section 4(f).

#### **4. Failure to Engage in Consultation with Stakeholders Regarding 25% Progress Plans**

Recently it has come to our attention that MassDOT has been sending “25% Progress Plans” to the Town Staff for comment without providing copies to consulting parties or to the public more broadly. Many of the issues touched upon in these Progress Plans address design aspects of the Bridge that should be covered in consulting party meetings. For example, recent Progress Plans have indicated that the width of the Bridge would be increased to 44 to 45 feet, instead of the 40-foot width presented in the EA. (EA, p. 13). Other changes discussed in these Progress Plans include raising the dip that presently exists as drivers approach from the east side of Bridge Street. Such a change will result in an increase in traffic speeds which raises safety concerns in addition to potential preservation issues related to construction materials. And perhaps most troubling, it appears from these Project Plans that the choice of material for the fendering system is being delegated to Town staff who have recommended the use of a plastic material rather than wood. This type of ongoing discussion of substantive design changes that will potentially have significant impacts on the final project should be conducted within the formal historic review process.

Moving forward, it is imperative that the “25% Progress Plans” be transmitted immediately upon their creation to the public and to consulting parties for their review prior to consulting party meetings. A failure to do so would be in direct conflict with the assurances given by the FHWA throughout the environmental and historic review process that consulting parties will be kept informed and given timely opportunities to comment and participate in project decision-making.

Sincerely,



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Paul Brandenburg, Chair  
Historic SPANs Task Force



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