Public Meeting
for
Project to Replace Temporary Wainiha Bridges

September 15, 2015

Meeting Agenda

- **6:00 p.m. – Welcome and Refreshments**
- **6:15 p.m. – Presentation followed by Public Feedback**

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Purpose of Meeting

- Update the public on where we are in the process.
- Share information on the proposed project design.
- Present information on anticipated construction approach.
- Obtain feedback from the community.

Wainiha Bridges 1, 2, and 3

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Temporary ACROW Bridges 2 and 3

Temporary ACROW Bridge 3

Project Background

- 2004 – Bridge 2 suffered permanent damage and a temporary ACROW was installed.
- 2004 – Road was nominated by Hanalei Roads Committee, Route 560 and placed on State and National Register of Historic Places.
- 2005 – HRC and HDOT and consultant hold first meeting on Wainiha Bridges project.
- 2005 – Historic Roadway Corridor Plan completed.
- 2007 – Damaged Bridges 1 and 3 were replaced with temporary ACROW bridges.

Project Background

- 2012 – HDOT completed Engineering Design Report for Kuhio Highway Wainiha Bridges.
- 2014 – FHWA-CFLHD and HDOT initiated environmental compliance process for a Project to Replace Temporary Wainiha Bridges.
- December 2014 – Public meeting to understand what was important to the community and what issues are present with the current bridges.
- 2015 – Purpose and need developed for the project. Preliminary design options evaluated for feasibility.

Project Background

- March 2015 – Public meeting to obtain feedback on the project purpose and need and on preliminary design options.
- 2015 (cont.) – HDOT and CFL evaluate alternatives to identify which alternatives should be dismissed and those that should be retained for detailed analysis in environmental document.

Purpose and Need

Primary Purpose

The primary purpose of the project is to replace the three Wainiha temporary bridges (referred to as Wainiha Bridges 1, 2, and 3) to maintain continued access along Kuhio Highway.

Secondary Purposes

- Improve operations
- Manage maintenance requirements
- Balance project improvements with the character of the historic roadway corridor

Environmental Process

Project Timeline	Steps in the Process	Activities
2012 & prior	Project Initiation / Initial Data Collection	• Collect data on roadway conditions • Document initial need for improvements
2014	Scoping and Additional Data Collection	• FHWA-CFLHD becomes project partner • Collect additional roadway data and environmental data • Refine issues and concerns • Develop purpose and need • Additional outreach with public and agencies
WE ARE HERE IN THE PROCESS	Define and Evaluate Alternatives	• Develop screening criteria for alternatives • Define and screen initial alternatives • Refine remaining alternatives for detailed analysis
2015	Prepare Draft Environmental Assessment (EA)	• Document alternatives considered • Evaluate impacts of alternatives • Identify preferred alternative • Identify mitigation measures
Early 2016	Circulate Draft EA for Review	• Provide Draft EA to public and agencies (30-day review) • Conduct public meeting • Receive comments
	Final EA and Document the Decision	• Address public and agency comments • Select alternative for implementation (if FONSI is a result) • Commit to mitigation for impacts • Document decision

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Environmental Analysis

- Historic and cultural resources
- Flora and fauna, including protected species
- Water resources, including wetlands and other waters of the U.S.
- Coastal resources
- Floodplains
- Land use
- Visual resources
- Air quality and noise
- Real property
- Socioeconomic resources
- Utilities and emergency services

Alternative Development

- Factors considered in identification of alternatives:
  - Sight distance, including horizontal and vertical alignment, rail spacing and height, line of sight
  - Traffic calming considerations
  - Accommodation of vehicles loads and navigation of emergency/utility vehicles across and between bridges
  - Maintenance requirements
  - Aesthetics compared to historic roadway
  - Historic alignment of roadway
  - Other design criteria/guidelines

Alternatives Considered for Analysis

Elements of Proposed Action Considered (based on past public engagement and the Engineering Design Report):

Replace ACROW Bridge

- Bridge Alignment / Profile: On/Off alignment / Elevation
- Bridge Width: Single Lane / Two Lane
- Deck: Timber plank / concrete to replicate timber

No Build/No Action Alternative – Keep Existing ACROW Bridges

- This alternative is required pursuant to the National Environmental Policy Act. It serves as a baseline for comparison of the impacts of the Action Alternative.

Alternatives Considered but Dismissed from Further Evaluation

Replace the ACROW Bridges with Two-Lane Bridges

- Standard design recommendation for this roadway's classification and amount of daily traffic
- Considering the historic context and current roadway operating and safety conditions, project team is able to apply design exception

Replace the ACROW Bridges with One-Lane Bridges on a New Alignment

- This alternative may provide cost savings due to more efficient construction. However, cost advantages do not outweigh other disadvantages such as deviation from historic alignment, additional right-of-way and other impacts. No major design advantages identified.

Alternatives Carried Forward

Replace the ACROW Bridges with New One-Lane Bridges on a Similar Alignment

- Historic alignment will be matched closely, with only slight minor improvement at Bridges 2 and 3
- Design exception will be required as design criteria and guidelines recommend one-lane bridges only be considered on low-volume roads (ADT < 400 vpd)
- Profile will be lowered

No Build/No Action Alternative – Keep Existing ACROW Bridges

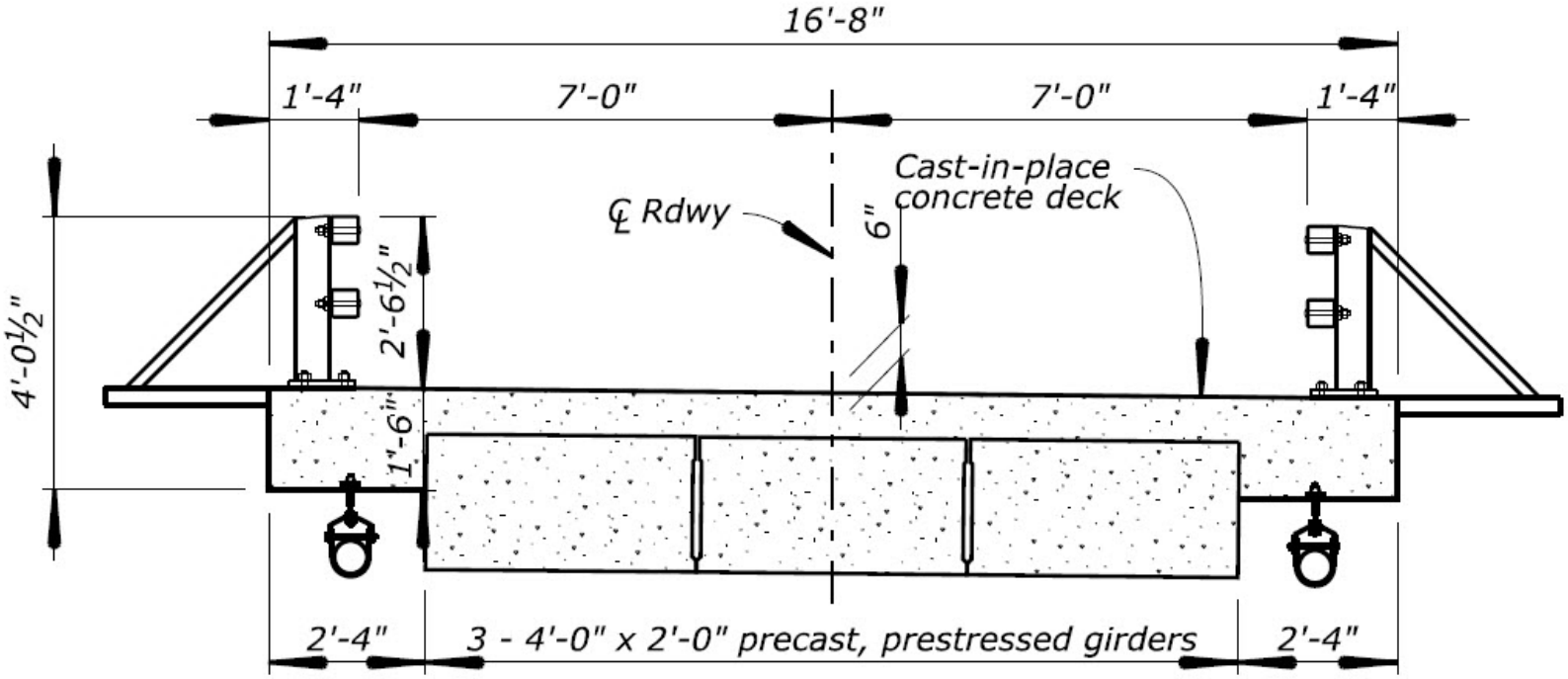
- This alternative is required pursuant to the National Environmental Policy Act. It serves as a baseline for comparison of the impacts of the Action Alternative.

Width Design Considerations

In applying best engineering judgement, the following factors and their advantages and disadvantages were considered:

- Design Controlling Criteria, including lane width, shoulder width, and bridge width
- Functionality, including design vehicle maneuverability, shy distance, and level of service
- Potential maintenance considerations
- Pedestrian and bicycle safety
- Driver perception and expectation
- Historic alignment considerations

Prestressed Concrete Girder Bridge
(14 foot width, clear width)



TYPICAL BRIDGE SECTION

<u>Bridge 1</u>: Single span, approximately 50 feet

<u>Bridge 2</u>: Single span, approximately 87 feet

<u>Bridge 3</u>: Three span, approximately 178 feet

Bridge Rail – Crash-Tested Structural Steel Tube Rail

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Existing Temporary Bridges 2 and 3

Rendering of Potential Bridges 2 and 3

Existing Temporary Bridge 3

Rendering of Potential New Bridge 3

Bridge Deck

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Construction Strategies

- Anticipated Duration of Construction is 2 years.
- Construction timing dependent on available funding.
- Construction delays will occur, with closures needed at project milestones. A public notification program will be established.
- Provide temporary traffic diversion *makai* of existing ACROW bridges.
- Accommodate emergency access throughout construction.

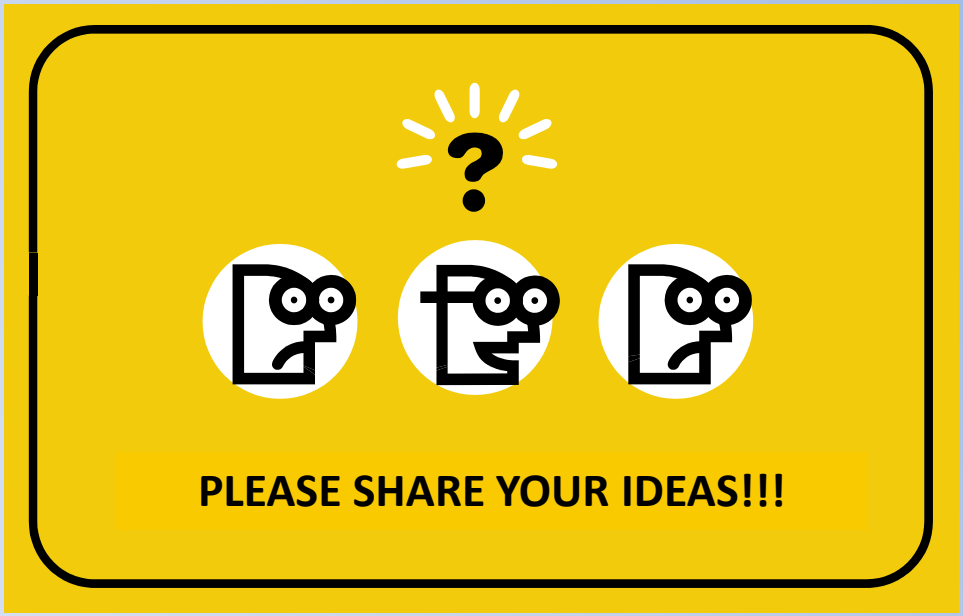
Construction Strategies

- Waioli, Waikoko, and Waipa Bridges are load restricted – Construct temporary bridges to accommodate construction loads while not affecting historic bridges
- Waioli – temporary bridge *mauka* of existing
- Waipa – temporary bridge *makai* of existing
- Waikoko – temporary bridge up and over existing

Next Steps

- Public feedback on alternatives and any other considerations.
- Draft Environmental Assessment (EA) preparation
- Review of Draft EA by public and agencies
- Final EA and documented decision
- Final design and permitting
- Construction advertisement

Please Share Your Thoughts



Please email comments by October 15, 2015 to Michael.Will@dot.gov

Visit www.cflhd.gov/wainiha for meeting materials

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