

Historic Bridge Manual



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Manual Notice 2018-1

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Manual: *Historic Bridge Manual*

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Purpose

This manual contains procedures to facilitate moving historic bridge projects through the project development process.

Contents

This revision contains edits in Chapter 3, including corrections to the “Minimum Criteria to Support Continued Use by Vehicular Traffic Off-System” table and the addition of a statement indicating how detour lengths are calculated.

Supersedes

This revision supersedes previous versions of this manual.

Contact

For more information about any portion of this manual, please contact the TxDOT Bridge Division.

Archives

Past manual notices are available in a [pdf archive](#).

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Chapter 1 — Overview

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Section 1 — About This Manual

Purpose

This manual contains procedures to facilitate the development of projects involving historic bridges. These procedures minimize project delays by:

- ◆ Outlining procedures to be followed when potential projects impact historic bridges.
- ◆ Serving as a reference regarding the applicable laws, regulations, policies, and guidelines that have been put in place to ensure development of the most feasible and prudent project involving a historic bridge.
- ◆ Providing brief discussions on the funding programs the state uses or has used in working with historic bridges.

Manual Revision History

Version	Publication Date	Summary of Changes
2001-1	October 2001	New manual.
2005-1	January 2005	Revision updating information about Unified Transportation Program funding categories and authorization levels, adding information about the Statewide Transportation Enhancement Program-funded Historic Bridge Preservation Program, and correcting minor editorial errors.
2006-1	March 2006	Revision updating the name of the federally funded Bridge Program and adding an index to the manual.
2013-1	November 2013	Manual rewrite.
2017-1	July 2017	Manual rewrite including reorganization, updates, and additional information. Updates include changes to NEPA review responsibilities and other updates to be consistent with current legislation. New information has been added regarding the Five Year Rule, hazardous materials agreements, and the Need and Purpose Statement.
2018-1	March 2018	Editorial corrections to "Minimum Criteria to Support Continued Use by Vehicular Traffic Off-System" table and added statement indicating how detour lengths are calculated.

Feedback

Direct any questions or comments on the contents of this manual to the Director of the Bridge Division, Texas Department of Transportation.

Section 2 — Manual Organization

This manual is organized into four chapters providing information about the project development process for projects involving a historic bridge. These chapters are as follows:

Chapter 1—Overview. This chapter contains information about manual revision history and organization, an introduction to working with historic bridges, and guidance on defining and identifying historic bridges.

Chapter 2—Regulations and Funding. This chapter provides guidance as to the regulations governing projects involving historic bridges, and the funding types and limitations for these bridges.

Chapter 3—Procedures and Sequence. This chapter provides detailed guidance about the project development process and sequence that must be followed when developing projects that affect a historic bridge.

Chapter 4—Agreements. This chapter contains an overview of the Adaptive Use proposal and guidance for understanding and developing agreements.

Section 3 — Definition and Identification

Historic Bridge Definition

Historic bridges are defined as bridges listed or eligible to be listed on the National Register of Historic Places (NRHP). A bridge that is rare in type, unusual from an engineering perspective, or historically significant because of its location or association with an important event or person may be deemed a historic bridge. This determination is made by the TxDOT Environmental Affairs Division (ENV) in consultation with the State Historic Preservation Officer (SHPO). Texas has numerous examples of historic bridges, including metal truss bridges, concrete arch or span bridges, and suspension bridges. Additional information about historic bridges can be found on the [TxDOT ENV website](#).

Historic Bridge Information

A historic bridge can be identified by coding in TxDOT's Bridge Inspection Database. The database contains bridge inventory, inspection, and appraisal data for each bridge class structure on public roadways in Texas. Item 37 in the database indicates a bridge's historical significance; this value is maintained and updated by ENV. Coding practices used to identify historic bridges within the database are presented in the table below.

Historical Significance - Item 37

Code	Description
1	Bridge is ON the National Register of Historic Places (NRHP).
2	Bridge is ELIGIBLE for the NRHP.
3	Bridge is NOT ELIGIBLE for the NRHP.
4	Bridge is at least 40 years old; historical significance has not been determined.
5	Bridge is less than 40 years old.

Once a bridge has been identified as historic, project development must proceed according to federal and state laws governing historic bridges. These laws are discussed in more detail in Chapter 2.

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Section 1 — Overview

Federal and state statutes heed the importance of preserving significant elements of our cultural and engineering heritage. All projects affecting a historic bridge must be developed in accordance with these regulations in order to demonstrate effort to minimize harm to historic structures. The statutes outline requirements for developing the project including coordination with the public, coordination with state and federal agencies, analysis of preservation alternatives, evaluation of preservation methods, and marketing for bridges prior to demolition.

Other statutes provide guidance on funding for historic bridges for vehicular or adaptive use. Due to limitations in available funding and engineering challenges inherent to these unique structures, TxDOT works collaboratively and creatively with local, state, and federal partners to make prudent choices and implement processes that will maintain and preserve these important parts of our transportation heritage. The following sections discuss the federal and state regulations pertaining to developing and funding historic bridge projects.

NOTE: Funding for the preservation of a historic bridge that is deemed unsuitable for vehicular traffic is limited to the cost of demolition. In addition, any historic bridge preserved using federal funds for non-vehicular use is not eligible for any other federal funds. (MAP-21 Section 1111; 144 USC 23(g)(4)(B))

Section 2 — Laws Applying to Historic Bridges

Federal Laws

Overview. When a proposed project will impact a historic bridge, project development must proceed in accordance with federal regulations set forth in Section 106 of the National Historic Preservation Act (NHPA). Section 106 references additional regulations, including the National Environmental Policy Act (NEPA) and Section 4(f) of the Department of Transportation Act. These laws are in place to ensure that agencies consider impacts to historic properties and make efforts to preserve these properties.

Section 106. Section 106 regulations can be found in Title 36, Part 800 of the Code of Federal Regulations (36 CFR 800). The purpose of Section 106 is to require agencies to identify historic properties which may be adversely affected by a proposed project, and to assess how the property might be affected. The Section 106 process requires public involvement with state and local entities, including the State Historic Preservation Officer (SHPO) and other consulting parties such as county historical commissions.

NEPA. NEPA regulations are similar to Section 106 regulations in that they require agencies to assess impacts to historic properties that may result from a proposed project, and to engage the public and other agencies with these findings. Public involvement activities required under NEPA should be integrated with those required under Section 106 whenever possible. Consult with the TxDOT Environmental Affairs Division (ENV) Historian for guidance in developing a public involvement campaign. Additional information can be found in TxDOT ENV's Environmental Handbook. Handouts for use in public meetings are available at the [Advisory Council on Historic Preservation website](#).

FHWA assigned TxDOT most of the FHWA NEPA responsibilities for environmental review, consultation, or other actions required under federal environmental law that pertain to the review or approval of specific highway, railroad, public transportation, and multimodal projects. The responsibilities were assigned under the Surface Transportation Project Delivery Program, referred to as the NEPA assignment program, and codified in the U.S. Code at 23 USC 327.

The assigned responsibilities are subject to the same procedural and substantive requirements as previously applied to FHWA. The assignment program does not preempt or interfere with any power, jurisdiction, responsibility, or authority of an agency, excluding FHWA, under applicable law and regulations. More information about the assignment program requirements can be found in the TxDOT Environmental Compliance Toolkits available on the [ENV website](#).

Section 4(f). The results of the Section 106 and NEPA coordination processes are integrated into the Section 4(f) process and documentation. All historic bridge projects undergoing the Section 4(f) process must be coordinated and approved through ENV. ENV takes into consideration the infor-

mation and results gathered through the Section 106 coordination process prior to rendering a final Section 4(f) decision.

Section 4(f) regulations (23 CFR 774) require that agencies conduct an analysis as part of the project planning process to determine if any feasible or prudent alternatives exist to avoid or minimize harm to a historic bridge. For more information on the Section 4(f) process, see the [Section 4\(f\) Policy Paper](#) implemented by FHWA. If a historic bridge will be left in its original location as a monument or a pedestrian facility, and its integrity and value will be maintained, FHWA has stated that Section 4(f) does not apply. In these cases, TxDOT requires the bridge's owner to develop and implement a maintenance plan to ensure the continuing historic integrity of the bridge.

Note that any historic bridge removed from vehicular service may not be placed back in vehicular service at any location.

The alternatives analysis is required for all historic bridges that will be demolished, relocated, or otherwise adversely affected if federal funds are used to fund all or a portion of the project.

Each Section 4(f) alternative must be examined, evaluated, and thoroughly documented before any decision is made to demolish a historic bridge or to market it for non-vehicular use. The alternatives analysis must be conducted in accordance with [FHWA regulations for programmatic evaluations for historic bridges](#).

Section 4(f) alternatives include:

- ◆ No build.
- ◆ Build a new bridge at a different location without affecting the historic integrity of the structure.
- ◆ Rehabilitate the bridge without affecting the historic integrity of the structure.

TxDOT considers the following alternatives for each historic bridge project to minimize harm to the structure while meeting the need and purpose of the project:

- ◆ No build.
- ◆ Build a new bridge at a different location without affecting the historic integrity of the structure by bypassing the historic bridge with an alternate alignment.
 - Rehabilitate the bridge in situ for pedestrian use.
 - Stabilize the bridge in situ as a monument
- ◆ Rehabilitate the historic bridge for continued vehicular use:
 - Rehabilitate the historic bridge for continued two-way use.
 - Rehabilitate the historic bridge for use as part of a one-way pair.
- ◆ Replace the historic bridge.

- Rehabilitate the historic bridge for pedestrian use at a new location.
- Demolish the bridge.

Additional guidance on Section 4(f) procedures and documentation can be found in TxDOT's [Historic Bridge Programmatic Section 4\(f\) Guidelines and Standards of Uniformity](#). Detailed information about developing the alternatives is provided in Chapter 3 of this manual.

23 USC 144(g). Federal surface transportation funding legislation (23 USC 144(g)) requires TxDOT to inventory all on- and off-system bridges and to determine the historic significance of the bridges in the inventory. These regulations encourage TxDOT to retain, rehabilitate, adaptively reuse, and study historic bridges. This legislation also requires TxDOT to make available any bridges which are no longer suitable for vehicular use and will not be preserved as a monument. This process, known as marketing, is initiated once ENV determines that Section 4(f) standards have been met; bridges are then made available for donation to other governmental or responsible private entities. See Chapter 4 for additional information about marketing historic bridges.

Other Regulations. Additional regulations apply to historic bridges that have been deemed suitable for rehabilitation. Historic bridge rehabilitation projects are required to meet the standards outlined in Secretary of the Interior's Standards for the Treatment of Historic Properties (36 CFR Chapter 1 Part 68).

State Laws

Texas Natural Resource Code. Chapter 191 of the Texas Natural Resource Code provides definitions for historic properties, including bridges, which are listed in the National Register of Historic Places or are listed as state antiquities landmarks (SALs). This legislation prohibits demolition or alteration of historic properties without consultation and approval from the Texas Historical Commission (THC). TxDOT works cooperatively with the THC on projects utilizing state funds that impact a bridge listed on the National Register of Historic Places (NRHP) or as an SAL. The full text of [Chapter 191](#) is available in the Texas Natural Resource Code.

Section 3 — Funding Historic Bridge Projects

Funding Programs

Highway Bridge Program. Limited federal funding programs exist for the rehabilitation and adaptive use of historic bridges. TxDOT uses the Highway Bridge Program (HBP) to manage these limited federal funds. The funds are managed by BRG to ensure that federal and state requirements and performance measures are met. HBP funds may be used to maintain and rehabilitate historically significant bridges located either off-system or on-system; however, the projects are subject to funding limitations as described later in this section. For more information on the HBP and its eligibility requirements, see Chapter 2, Section 3 of the Bridge Project Development Manual.

Transportation Alternatives Set-Aside (TA Set-Aside). The Transportation Alternative Program has been replaced by funding set aside within the Surface Transportation Block Grant Program (STBG) known as the TA Set-Aside. Guidance regarding applicant eligibility, project eligibility, and the competitive selection process for proposed projects is set forth in 23 USC 133(h). TxDOT uses funds from the TA Set-Aside to facilitate eligible federally funded projects. TxDOT's Public Transportation (PTN) and Transportation Planning and Programming (TPP) Divisions oversee the use of TA Set-Aside funds to ensure the Texas Transportation Commission rules and all federal requirements are met.

Projects for the preservation and rehabilitation of historic bridges for non-vehicular use may be eligible for TA Set-Aside funds. Additional information about TA Set-Aside funds can be found on the [FHWA website](#).

Other programs. Other federal and state funding categories may be used to perform maintenance or rehabilitation on historic bridges. To ensure the work does not adversely affect the historical significance of the bridge, coordination with BRG and ENV is required.

Funding Limitations

General Discussion. On-system and off-system historic bridge projects are funded using either federal or state funds or a combination. Only when the legislature designates a specific project or bond funds are approved by the voters, can state funds alone be utilized for off-system historic bridge projects. Off-system projects funded through the HBP will have local participation or equivalent match work as the local contribution.

Rehabilitation for Continued Vehicular Use. Federal funds are available to rehabilitate historic bridges for continued vehicular service provided that the historic bridge is considered significant under Section 144 of the United States Code (23 USC 144). Bridges which have been closed for five or more consecutive years with no corrective action taken are not considered significant per 23 USC 144, and are not eligible for federal funding. In addition, the FHWA Memorandum dated

November 16, 2001, Subject: ACTION: HBRRP Closed Bridge Report, states that any insignificant bridges, such as the bridges closed for five or more consecutive years, should be removed from the National Bridge Inventory.

Historic bridges that are deemed significant under 23 USC 144 are eligible for federal funding if the rehabilitation will restore the load capacity and safety features required for the intended service life of the bridge. Federal funds are limited to the reasonable costs associated with rehabilitation as determined by an evaluation of the structural and safety needs for the bridge at the existing location.

Historic bridges rehabilitated for continued vehicular use with only state funds, including maintenance projects, typically do not have limits on funding.

Coordinate all on-system bridge projects, including maintenance projects, affecting a historic bridge with BRG and ENV.

This coordination effort:

- ◆ Ensures federal and state regulatory compliance.
- ◆ Ensures the work proposed does not adversely affect the historic integrity of the bridge or cause programmatic issues.
- ◆ Provides ENV the opportunity to collaborate with other jurisdictional agencies, such as the U.S. Army Corps of Engineers or the Coast Guard, when federal permits are needed.

Preservation for Non-vehicular Use. Federal funds for preservation of historic bridges for non-vehicular use are limited to the cost of demolition. Once demolition funds have been used, the historic bridge will no longer be eligible for any additional federal funds authorized under Title 23 for preservation activities regardless of the entity developing the project. (23USC 144(g)).

Historic bridges preserved for non-vehicular use with only state funds typically do not have limits on funding.

Chapter 3 — Procedures and Sequence

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Section 1 — Historic Bridge Team Process

Overview

The Historic Bridge Team (HBT) is formed at the beginning of the project development process for all projects that may impact a historic bridge. The purpose of the HBT is to facilitate project development and to ensure that the most feasible and prudent project alternative is selected. This multidisciplinary group ensures that the required state and federal processes are completed.

The following section provides a general description of the Historic Bridge Team, its members, and their responsibilities, along with a sequential outline with expected time frames for managing historic bridge projects. A flowchart illustrating the procedures for projects involving historically significant highway bridges can be found on the [TxDOT website](#).

Historic Bridge Team Members

The HBT is led by the Bridge Division Project Manager (BRG PM) and is composed of District and Division personnel, in addition to other governmental entities and consulting parties with reviewing or consulting authority.

Core HBT members include:

- ◆ *Bridge Division Project Manager (BRG PM)*. The BRG PM is responsible for leading the HBT, and is the main point of contact with the districts, divisions, and other bridge personnel concerning the funding, programming, and coordination of plan development. The BRG PM is responsible for developing the Historic Bridge Team report, which presents the structural alternatives analysis and cost estimates for the alternatives to the State Historic Preservation Officer (SHPO), local entities, and other consulting parties. Additional information about the HBT Report is presented in Section 3 of this chapter.
- ◆ *Bridge Division Design Engineer (BRG DesE)*. The BRG DesE is responsible for conducting an in-depth structural analysis and developing design detail plan sheets. As the structural subject matter expert, the BRG DesE will conduct a site visit prior to plan development to identify any additional repairs not already described in the condition assessment or HBT report.
- ◆ *Bridge Division Construction and Maintenance Engineer (BRG C/M)*. The BRG C/M is responsible for conducting historic bridge condition assessments, generally for on-system structures, and providing guidance on constructability and maintenance issues including painting systems, repair material selection, and structural repairs. Upon request by the District, the BRG C/M provides specialized construction inspections and other construction support during rehabilitation. Off-system condition assessments are generally handled by a BRG in-house consultant.

- ◆ *District Bridge/Design Engineer* (District BrgE/DesE). The District BrgE/DesE is responsible for the overall project development. The District BrgE/DesE provides information concerning roadway alignments, traffic usage, and other site specific information, and assists in developing the draft Need and Purpose Statement portion of the HBT report.
- ◆ *District Environmental Coordinator/Specialist* (District EC/ES). The District EC/ES is responsible for completion of the appropriate National Environmental Policy Act (NEPA) documentation, including the development of the draft Need and Purpose Statement portion of the HBT report. Additional information regarding NEPA documentation is available on the [TxDOT ENV website](#). The District EC/ES develops Section 4(f) documentation, coordinates the Section 106 public involvement process, coordinates appropriate bridge marketing; and develops documentation for permit compliance and coordination.
- ◆ *Environmental Affairs Division Historian* (ENV HIST). The ENV HIST is responsible for leading the HBT through the cultural resource clearance process. The ENV HIST assists in the Section 106 public involvement coordination with SHPO and other consulting parties and coordinates the Section 4(f) document approval within ENV.
- ◆ *Environmental Affairs Division Project Delivery Manager* (ENV PDM). The ENV PDM is responsible for leading the HBT through the environmental clearance process.

Auxiliary HBT members include:

- ◆ *Federal Highway Administration* (FHWA). The FHWA is responsible for providing guidance on preservation funding.
- ◆ *Historic Bridge Foundation* (HBF). The HBF is responsible for reviewing and commenting on historic bridge projects as a consulting party through THC.
- ◆ *Local officials and other consulting parties*. These individuals are responsible for assisting the core HBT and facilitating the appropriate project agreements, as needed.
- ◆ *Texas Historical Commission* (THC). The THC is responsible for reviewing and commenting on historic bridge projects as the State Historic Preservation Office (SHPO).

HBT members rarely meet as a formal group. Participation is based on an as-needed basis and depends on the nature, location, and complexity of the historic bridge being evaluated.

Historic Bridge Team Process

The following table provides an overview of the project development process for historic bridges. The table includes the required activity, responsible party, and approximate time requirements.

Process Overview and Timelines

Process Step	Responsible Party	Action	Duration
1.	District BrgE/DesE and/or District EC/ES	<p>Confirm bridge's historic status and eligibility with ENV HIST.</p> <p>Request historic bridge condition assessment from BRG PM.</p> <p>Provide BRG PM the last two inspection reports including structural member list, channel profiles, load rating calculations, photos, and existing plans, if available.</p> <p>Relay general project goals: roadway is being realigned or local entity prefers to have bridge rehabilitated, etc.</p>	15 hours over 1 month
	District EC/ES	<p>Develop a tentative project schedule using duration times presented in this table.</p> <p>Request statement of historic significance from ENV HIST.</p> <p>Develop draft Need and Purpose statement.</p>	
2.	BRG PM	<p>Request Historic Bridge Condition Assessment</p> <ul style="list-style-type: none"> ◆ <i>Off-System Bridges</i> <p>Request a historic bridge condition assessment consultant work authorization from BRG Inspection Branch.</p> <p>NOTE: Request a condition assessment prior to executing an Advanced Funding Agreement with a local government. See Chapter 4 for more information.</p>	4 months (+ 3 weeks to obtain work authorization)
		<ul style="list-style-type: none"> ◆ <i>On-System Bridges</i> <p>Request a historic bridge condition assessment from BRG Construction/Maintenance Branch.</p>	3 months
		<p>OR: Request a historic bridge condition assessment consultant work authorization from BRG Inspection Branch.</p>	4 months (+ 3 weeks to obtain work authorization)

Process Overview and Timelines

Process Step	Responsible Party	Action	Duration
3.	ENV HIST BRG PM	Develop Statement of Historic Significance and provide to BRG PM and District EC/ES. Develop draft HBT Report using findings and results of the condition assessment and routine inspections. The HBT report should include: <ul style="list-style-type: none"> ◆ estimated construction costs for feasible alternatives using TxDOT’s unit costs; ◆ estimated demolition cost, if federally funded. Submit draft HBT Report to ENV HIST, District EC/ES, and District BrgE/DesE. Request a scoping meeting and site visit.	2 hours over 2 weeks 40 hours over 1 month
4.	HBT (BRG PM; District BrgE/DesE/ EC/ES; and ENV HIST) Auxiliary HBT members (as needed)	Attend scoping meeting and site visit to: <ul style="list-style-type: none"> ◆ discuss findings of the condition assessment and structural alternatives available to the historic bridge; ◆ discuss roadway geometry, site constraints, traffic demand, type of traffic, and local needs; identify additional information for HBT and NEPA documents; ◆ develop a plan for moving the project forward through the project development process and establish a project time line and action items. Depending on the historic bridge being evaluated, the BRG DesE, BRG C/M and THC are strongly encouraged to attend scoping meeting and site visit.	1 day (held within 1 month of receipt of HBT report)
5.	District BrgE	Coordinate with local government to explain condition of the historic bridge and potential structural alternatives. Develop and obtain Off-System Advanced Funding Agreement.	6 hours over 2 months

Process Overview and Timelines

Process Step	Responsible Party	Action	Duration
6.	District EC/ES	Develop NEPA documentation: <ul style="list-style-type: none"> ◆ Revise Need and Purpose statement based on structural and functional project constraints ◆ Develop Section 4(f) documentation, if required, according to the guidance provided on ENV's website. 	2 months (+ 18 hours for review)
	Or, if requested by District, ENV HIST:	Acquire and manage consultant work authorization for the development of the Section 4(f) documentation	2 weeks to obtain work authorization + 3 months (+18 hours over the 3 months for ENV HIST to review and comment)
	District EC/ES and ENV HIST	Manage additional historical studies report production, as required. Develop a public involvement plan to meet Section 106 requirements, if needed. See TxDOT's Environmental Handbook for more information. Prepare public meeting handouts , if needed	15 hours over 3 months
	BRG PM	Finalize draft HBT Report based on results of scoping meeting, site conditions, and revised Need and Purpose statement. Transmit draft HBT Report to ENV HIST for review.	12 hours over 1 week
	ENV HIST	Review and provide comments for draft HBT Report.	One day
7.	District EC/ES and/or ENV PDM	Identify other environmental constraints (archeological, biological, wetlands) per NEPA process.	10 hours over 2 months
	District EC/ES	Manage the development of the NEPA documentation	18 hours over 2 months
	BRG PM	Provide final signed and sealed HBT report.	One day
	District EC/ES and ENV HIST	Establish mitigation commitments and schedule. Conduct preliminary marketing of the historic bridge if structure is unable to meet the minimum criteria for continued vehicular use. See Section 4 for more information. Develop plan for implementing formal marketing efforts. More information can be found in ENV's Historic Resources Toolkit .	36 hours over 2 months

Process Overview and Timelines

Process Step	Responsible Party	Action	Duration
8.	District BrgE/DesE and/ or District EC/ES	Coordinate with historic bridge owner/recipient to develop exhibits and mitigation proposals for the two- or three-party Advance Funding Agreement Amendment to the existing off-system bridge agreement, as required. Coordinate draft exhibits with BRG PM and ENV HIST prior to partial execution of Amendment.	18 hours over 1 month
	ENV HIST	Conduct informal Section 106/Section 4(f) regulatory coordination process with SHPO, Historic Bridge Foundation (HBF), and other consulting parties, as needed.	15 hours over 3 months
9.	ENV HIST	Perform technical review of Section 4(f) documentation. Coordinate partial execution of Amendment and forward to BRG PM	14 working days
	District EC/ES	Conduct formal “marketing,” if required.	30 to 90 calendar days, at a minimum
	District BrgE/DesE and/ or District EC/ES BRG PM	Coordinate the development of the structural plans based on the scope outlined in the Amendment, HBT report and/or Section 4(f) alternative analysis.	2 hours over 2 weeks
	BRG DesE	Develop structural details and specifications, as needed.	2 to 6 months based on complexity of historic bridge and extent of rehabilitation
10.	ENV HIST	Review preliminary draft 4(f).	4 hours over 1 week
11.	District BrgE/DesE/ EC/ ES	Provide mitigation proposal, as needed.	30 calendar days (legal sufficiency)
	ENV HIST	Conduct Section 106 regulatory coordination process with SHPO, Historic Bridge Foundation (HBF), and other consulting parties (as needed).	
	BRG PM	Provide technical support during coordination process, including presenting 60% structural plans, as required.	
12.	SHPO	Review Section 4(f).	20 calendar days (14 additional days if revisions to Section 4(f) documents are required)
13.	District EC/ES	Complete NEPA documentation, integrating outcome of Section 106 coordination process and Section 4(f) findings.	30 calendar days

Process Overview and Timelines

Process Step	Responsible Party	Action	Duration
14.	District EC/ES or ENV PM	Coordinate NEPA documentation (Section 4(f), etc.).	30 calendar days
	ENV HIST	Review and manage final ENV approval of Section 4(f) documentation.	
15.	District EC/ES	Finalize NEPA documentation and schedule public meeting/hearing.	Up to 2 months
16.	ENV	Issue project final approval.	30 to 60 calendar days

Other Considerations

Hazardous Materials. Many historic structures contain hazardous materials, particularly lead paint and asbestos, which may be removed or disturbed in the course of rehabilitation, relocation, or demolition. These materials can pose environmental and health risks if not appropriately mitigated. See Item 6, “Control of Materials,” of TxDOT’s Standard Specifications for the Construction and Maintenance of Highways, Streets, and Bridges for hazardous material mitigation measures.

Any local entity owning or receiving a bridge with hazardous material and choosing to not abate the hazard, must sign a special agreement releasing TxDOT’s responsibility of the hazardous material prior to letting the project.

Section 2 — Historic Bridge Team Report

Overview

The purpose of the Historic Bridge Team (HBT) Report is to provide a summary of information required to assist in completing the Section 4(f) process. The Bridge Project Manager produces the HBT Report with information from the condition assessment report and with input from the District Environmental Coordinator, TxDOT ENV, and the Bridge Division design engineer. The final HBT Report is an engineering document, and must be signed and sealed for regulatory approval by the Bridge Project Manager.

The HBT Report consists of a summary of bridge information, a need and purpose statement, a statement of historic significance, an alternatives analysis, and a recommendation for the preferred alternative. A flowchart illustrating the processes involved in a historic bridge preservation alternatives analysis can be found on the [TxDOT website](#). Each of the components of the HBT Report is discussed in more detail below.

Bridge Information

The Bridge Information section provides a summary of general information about the bridge and the site, including the condition assessment and inspection information.

The following items should be included in the Bridge Information section:

- ◆ bridge location information
- ◆ current and future average daily traffic counts
- ◆ Control-Section-Job (CSJ) and National Bridge Inventory (NBI) number
- ◆ detour length
- ◆ load posting
- ◆ as-built operating vehicular load rating
- ◆ current operating vehicular and pedestrian load ratings
- ◆ general description of the structure and its location
- ◆ demolition cost
- ◆ description of the current condition of the historic bridge and surrounding site conditions, including the roadway approaches, channel scour, superstructure elements, and substructure elements
- ◆ summary of items requiring rehabilitation/replacement/removal.

Need and Purpose Statement

The purpose of developing a bridge project is to ensure safety by remedying structural, geometric, or other functional deficiencies. Need and purpose statements outline the specific deficiencies and problems associated with the existing facility, and justify why a proposed project is necessary by establishing the objectives of the project.

Establishing a detailed need and purpose statement is vital to the development of the Programmatic Section 4(f) Evaluation since this statement lays the foundation for the alternatives analysis. Coordination is required between the District EC or ES developing the need and purpose statement, the BRG PM developing the alternatives analysis, and the ENV HIST developing the NEPA documentation, as these documents must be parallel.

The most important part of the need and purpose statement is establishing the need for the project by describing the deficiencies that exist and providing the justification for the expenditure of public funds to correct those deficiencies. The statement must be specific and detailed in describing the conditions that result in the deficiencies, including structural and functional deficiencies that will be addressed by the project. Include as much supporting information as possible.

The purpose defines the objective for the project and focuses on the desired outcome for the traveling public. The need for the project should be established first and the purpose determined second; for this reason, this statement is sometimes informally referred to as the need and purpose statement.

Issues discussed in the need and purpose statement should include as much of the following information as is relevant to the project:

- ◆ Narrow width. Describe the types and widths of vehicles using the bridge if the bridge deficiency is due to horizontal clearance. Indicate if impacts or crashes have resulted from narrow width.
- ◆ Insufficient height. Describe the types and heights of vehicles using the bridge if the deficiency is due to vertical clearance. Indicate if impacts or crashes have resulted from insufficient height.
- ◆ Increase in traffic. Provide ADT to show increase in traffic. If increase is situational and not supported by ADT, describe the situation that results in the increase in traffic. For example, if the bridge is the sole route available when other routes are blocked by train traffic, flooding, or some other temporary event, describe the event and provide an approximate increase in traffic.
- ◆ Types of traffic. Describe the types of vehicles accessing the bridge, and why these vehicles create a deficiency.
- ◆ Accident history. Describe accident history at the bridge, and why the accident history is the result of a bridge deficiency. For example, poor alignment or sight distance could result in accidents.

- ◆ Load capacity. Indicate the current and required load capacities for the bridge.
- ◆ Physical deterioration of bridge. Describe specific areas of deterioration and how they result in a deficiency. For example, deterioration often results in reduced load capacity. Issues such as scour, however, may not immediately affect load capacity but will need to be addressed to prevent future reduction in capacity. Be specific.
- ◆ Deficient railing. Describe the railing and its deficiency, and provide information about any accident history involving the deficient railing.

Functional obsolescence due to inadequate horizontal or vertical clearance is a common problem that should be addressed on historic structures, if possible. Vertical clearance restrictions caused by portal or other bracing on historic truss bridges should be carefully evaluated to ensure passage of essential service vehicles. Crash-tested rails should be added if possible; however, horizontal clearance, bridge geometry, and connection details present significant challenges for rail upgrades. At minimum, delineation of obstructions and bridge members located at the roadway level is required. In either case, coordination with BRG is required to determine the best course of action.

Guidance for developing a well-defined need and purpose statement is available on [TxDOT ENV's website](#). Contact your ENV Historian for additional guidance, if required.

Statement of Historical Significance

The statement of historical significance details how the bridge meets the criteria for listing in the National Register of Historic Places. The statement also identifies the historic character-defining features of the bridge that must remain in any proposed project, in order for the bridge to continue to convey its significance. ENV writes the statement based on documents on file.

Alternatives Analysis

The alternatives analysis serves as the foundation for initiating the necessary environmental and engineering studies for the environmental documents, Section 106 coordination, Section 4(f) coordination, and project development. The alternatives analysis outlines the functional and structural limitations of the historic bridge being evaluated and describes the rehabilitation requirements needed to comply with the Section 4(f) alternatives. Detailed information on conducting an alternatives analysis is provided in the Section 4.

Recommendations

The recommendations section presents the most feasible and prudent alternative that minimizes harm to the historic structure while meeting the transportation needs of the local community. The recommendation is selected based on the outcome of the Alternatives Analysis.

Section 3 — Alternatives Analysis

Overview

Alternatives are evaluated as to whether they are feasible and prudent using the *Standards, Policies, and Guidelines Relating to Highway Bridge Design* of the American Association of State Highway and Transportation Officials (AASHTO). Each alternative must be carefully evaluated based on the required structural capacity, the current structural capacity, and the information established in the need and purpose statement before an appropriate alternative can be recommended.

An alternative is deemed not *feasible* if:

- ◆ It can not be built as a matter of sound engineering judgment.

An alternative is deemed not *prudent* if:

- ◆ It results in safety or operational problems.
- ◆ It does not effectively address impacts through reasonable mitigation.
- ◆ It results in significant additional construction, maintenance, or operational costs.
- ◆ It involves multiple factors listed above that, while individually minor, cumulatively cause significant problems.

Structural Evaluation

Vehicular Service. In order to determine feasibility for vehicular service, each historic bridge must undergo a structural evaluation. For the purposes of the Historic Bridge Team Report, the Bridge Project Manager will perform a preliminary structural evaluation based on the minimum target load rating and information presented in the condition assessment report. This structural evaluation will determine if using the bridge to carry vehicular traffic is a feasible alternative. If the alternative is feasible, an evaluation of construction and maintenance costs will be provided to determine if it is a prudent course of action.

In order to be feasible, the structure must be capable of being rehabilitated to meet the minimum target load rating without losing its historic integrity. TxDOT has established guidelines for rehabilitation for both on- and off-system structures.

On-system structures are those on the designated state highway system, such as interstate highways, US highways, state highways, and farm-to-market roads. In order to be considered for rehabilitation for continued vehicular service, on-system historic bridges must either be rehabilitated or improved to meet applicable design standards, or must be granted a design exception for the deficiency. Design exceptions must be coordinated between TxDOT Design Division (DES), TxDOT Bridge Division (BRG), and TxDOT Environmental Affairs Division (ENV).

In 2005, the Advisory Council of Historic Preservation (ACHP) and FHWA established a program exemption from the Section 106 review for the entire interstate system, essentially stating a 4(f) is not needed for interstate bridges. More information is available on the [ACHP website](#).

Specific bridges in every state were excluded from this exemption, therefore still requiring a Section 106. FHWA maintains the [list](#) of Texas interstate bridges that must go through the Section 106 and 4(f) processes.

Off-system structures are those on other public highways, roads, and streets such as city streets and county roads. Off-System historic bridges may be rehabilitated for continued vehicular service provided one of the following conditions is met:

- ◆ The historic bridge is rehabilitated or improved to meet applicable design standards;
- ◆ The historic bridge is granted a design exception for its deficiency and is able to maintain its historic integrity;
- ◆ The historic bridge meets specific geometric, safety, and load capacity criteria that support the retention and preservation of the bridge as defined in the following table, “Minimum Criteria to Support Continued Use by Vehicular Traffic Off-System.”

Minimum Criteria to Support Continued Use by Vehicular Traffic Off-System

Current Average Daily Traffic (ADT)	Minimum Clear Roadway Width ¹		Minimum Load-Carrying Capacity (Operating Rating)	
	One-Lane, Two-Way Operations ²	Two-Lane, Two-Way Operations	Alternate Route Available ³	Alternate Route Not Available
ADT 100 or less	10 feet (3.0 m)	18 feet (5.4 m)	HS 5	HS 12 ⁴
ADT 101 to 250	10 feet (3.0 m)	18 feet (5.4 m)	HS 8	HS 12
ADT 251 to 400	Not applicable ⁵	18 feet (5.4 m)	HS 15	HS 15
ADT greater than 400	Not applicable ⁵	Not applicable ⁶	HS 15	HS 15

¹ For a minimum roadway length of 50 feet (15 meters) adjacent to the bridge end, roadway crown should match clear width across the structure plus additional width to accommodate guard fence if necessary.

² One-Lane, Two-Way operations are assumed to allow for sight distance across the entire length of the structure. In cases where sight distance across the length of the structure is not available, the allowable minimum clear roadway width shall be the allowable minimum for Two-Lane, Two-Way operations.

³ To allow these values, the identified alternate route must add no more than 5 miles (8 kilometers) to a trip for essential services such as school buses, and emergency fire and medical access. Detour route is calculated as the shortest distance from one end of the bridge to the other, if the bridge is out of service. All bridges on the identified alternate route must have a minimum load rating of HS 12. Historic bridges which do not meet the state legal load limit shall be posted.

⁴ HS 12 load rating was selected because it represents a typical minimum value for vehicles essential for educational, medical, and fire suppression services.

⁵ For ADT greater than 250, One-Lane, Two-Way operations on a structure are not permissible.

⁶ For ADT greater than 400, use design standards as appropriate for the class of highway as shown within appropriate sections of the TxDOT Roadway Design Manual.

Pedestrian Service. Historic bridges being analyzed for possible pedestrian use must meet the design live load as prescribed in the AASHTO Guide Specification for Design of Pedestrian Bridges, Section 3.1. Functional obsolescence is resolved by removing the structure from vehicular service; however, the bridge must be evaluated for ADA compliance and a pedestrian rail must be provided.

Alternatives

A detailed alternatives analysis must be included in the Historic Bridge Team Report in order to facilitate development of the Section 106 and Section 4(f) documentation. The following alternatives must be addressed in the Alternatives Analysis section of the Historic Bridge Team Report.

No Build. Under the No Build alternative, the historic bridge is left in place without rehabilitation. This option is rarely feasible as most historic structures exhibit some type of structural deficiency.

The No Build alternative analysis provides documentation showing whether the No Build alternative is feasible and prudent in terms of meeting the project's overall need and purpose.

For historic bridges that do not meet the project's need and purpose, the No Build alternative analysis should describe the structural elements causing the low load carrying capacity and any other issues affecting the bridge's function. The following information should be included in the alternative analysis:

- ◆ **Detour Length.** Discuss the detour length that would be required should the bridge not be in service. Detour length is especially important with regard to essential services vehicles, such as emergency vehicles and school buses, which may exceed the current load carrying capacity of the bridge. Detour length is one of the determining factors for the minimum target load rating, in order to ensure timely access for essential services vehicles.
- ◆ **Bridge Geometry.** Address the bridge geometry and functional obsolescence including deck width, bridge length, and horizontal and vertical clearances. The report should include a discussion of whether or not the geometry meets current federal and state standards, and whether or not it is adequate for traffic volume and vehicular needs at the location.
- ◆ **Bridge Rail.** Describe the bridge rail, if any, and whether or not it meets current standards.
- ◆ **Structural Adequacy.** Discuss the as-built and current load rating capacities, and whether or not these capacities meet federal and state legal requirements. Reference the table above, Minimum Criteria to Support Continued Use by Vehicular Traffic Off-System, for off-system structures. Discuss any damage to the superstructure or substructure.
- ◆ **Hydraulics.** Discuss any scour problems or other hydraulics issues.

The alternatives analysis discussion may be abbreviated for bridges that do not meet the minimum target load rating. For these bridges, only structural adequacy need be discussed in detail.

Rehabilitation for Continued Two-Way Traffic. This alternative references the functional and structural deficiencies discussed in the No Build alternative, and discusses how these deficiencies impact, influence, or relate to the historic bridge being able to remain in vehicular service for two-way traffic. The following items should be included if not previously discussed under the No Build alternative, or if updated or more detailed information is required:

- ◆ **Detour Length.** Discuss the detour length that would be required should the bridge not be in service. Detour length is especially important with regard to essential services vehicles, such as emergency vehicles and school buses, which may exceed the current load carrying capacity of the bridge. Detour length is one of the determining factors for the minimum target load rating, in order to ensure timely access for essential services vehicles.
- ◆ **Bridge Geometry.** Address the bridge geometry and functional obsolescence including deck width, bridge length, and horizontal and vertical clearances.
- ◆ **Bridge Rail.** Describe the bridge rail, if any, and whether or not it meets current standards.

- ◆ **Structural Adequacy.** Discuss the as-built and current load rating capacities, and whether or not these capacities meet federal and state legal requirements for the bridge to carry two-way traffic. Reference Minimum Criteria to Support Continued Use by Vehicular Traffic Off-System, for off-system structures. Discuss any damage to the superstructure or substructure.
- ◆ **Hydraulics.** Discuss any scour problems or other hydraulics issues.

In addition to the items listed above, the discussion for Rehabilitation for Two-Way Traffic must include the following:

- ◆ **Required Rehabilitation Work.** Discuss the efforts required to rehabilitate the historic bridge to carry two-way vehicular traffic and to upgrade the bridge to meet federal and state standards. Required work could include:
 - **Geometry.** Outline any changes to geometry, such as widening, lengthening, or improving vertical clearance.
 - **Bridge Rail.** Describe work that will be required to rehabilitate the existing rail, or to upgrade to a new rail.
 - **Structural Improvements.** Detail any work required to improve the structural capacity of the bridge superstructure or substructure. Required work may include rehabilitating, strengthening or replacing members, or rehabilitating or replacing the entire superstructure or substructure.
 - **Corrosion Protection Measures.** Outline any required work for corrosion protection, including paint or other corrosion protection measures.
 - **Presence of Hazardous Materials.** Discuss the test results of any hazardous materials present on the structure.
- ◆ **Cost Estimate.** Prepare a detailed cost estimate for each of the items of work required to rehabilitate the structure to carry two-way traffic if the alternative is feasible. Use the cost estimate to determine whether rehabilitation is a prudent alternative to new construction.

Rehabilitation for Use as Part of a One-Way Pair. The analysis of this alternative is similar to that for the previous alternative, Rehabilitation for Use as Part of a Two-Way Pair. This alternative provides more flexibility in achieving the required minimum target load rating by reducing the traffic to one lane, but poses significant economic and geometric concerns as an additional bridge would be required to accommodate the other lane of traffic.

This alternative should reference the functional and structural deficiencies discussed in the No Build and Rehabilitation for Continued Two-Way Traffic alternatives. The following items should be discussed and updated, if required, for new geometric and loading information based on usage as part of a one-way pair:

- ◆ **Bridge Geometry.** Update geometric information for new geometry resulting from conversion to use as part of a one-way pair.
- ◆ **Bridge Rail.** Describe the bridge rail, if any, and whether or not it meets current standards.

- ◆ **Structural Adequacy.** Discuss the as-built and current load rating capacities, and whether or not these capacities meet federal and state legal requirements for the bridge to carry traffic as part of a one-way pair. Discuss any damage to the superstructure or substructure.
- ◆ **Hydraulics.** Discuss any scour problems or other hydraulics issues.
- ◆ **Required Rehabilitation Work.** Discuss the efforts required to rehabilitate the historic bridge to carry traffic as part of a one-way pair and to upgrade the bridge to meet federal and state standards. Required work could include:
 - **Geometry.** Outline any changes to geometry, such as widening, lengthening, or improving vertical clearance.
 - **Bridge Rail.** Describe work that will be required to rehabilitate the existing rail, or to upgrade to a new rail.
 - **Structural Improvements.** Detail any work required to improve the structural capacity of the bridge superstructure or substructure. Required work may include rehabilitating, strengthening or replacing members, or rehabilitating or replacing the entire superstructure or substructure.
 - **Corrosion Protection Measures.** Outline any required work for corrosion protection, including paint or other corrosion protection measures.
 - **Presence of Hazardous Materials.** Discuss the test results of any hazardous materials present on the structure.
- ◆ **Cost Estimate.** Prepare a detailed cost estimate for each of the items of work required to rehabilitate the structure to carry traffic as part of a one-way pair, if the alternative is feasible. Use the cost estimate to determine whether rehabilitation is a prudent alternative to new construction.

Bypassing the Historic Bridge Using an Alternative Alignment. This alternative references the functional and structural deficiencies discussed in the No Build alternative, and discusses how the deficiencies may be corrected so that the bridge may be left in situ, either as a pedestrian bridge or as a monument.

Converting the historic bridge to pedestrian use provides significantly more flexibility in achieving the required load rating. Pedestrian loading is lighter than vehicular loading for most structures, and can be reduced by narrowing the pathway available to pedestrians through the placement of pedestrian railing. However, this option requires that the existing site be attractive to pedestrians, such as a location in or near a park. Many historic bridges will not meet this requirement, as they are too remote to be an attractive destination for pedestrians. This option also requires realignment of the existing roadway to bypass the historic structure. Realignment may not be geometrically feasible, and may not be prudent due to the expense of realignment and right of way acquisition.

Stabilizing the bridge in place as a monument eliminates the need to consider the load rating since the bridge will not carry either vehicular or pedestrian traffic. The bridge must be stabilized to

ensure that it does not pose a risk to the public or to the adjacent structure. The new vehicular bridge should be constructed upstream of the monument if at all possible to ensure no harm to the structure should the existing bridge collapse. As with the previous option, roadway realignment may not be feasible or prudent due to geometric and right of way considerations.

Perform a detailed alternatives analysis to determine if either in-situ preservation option is feasible. This alternatives analysis should reference the functional and structural deficiencies discussed in the previous alternatives. The following items should be discussed and updated, if required, for new geometric and loading information based on restoration in situ as a pedestrian structure or as a monument.

- ◆ Bridge Geometry. Discuss realignment constraints for the new bridge.
- ◆ Bridge Rail. Describe the pedestrian rail type. Pedestrian rails can be chosen from standards available on the Bridge Division website.
- ◆ Structural Adequacy. Discuss the as-built and current load rating capacities, and whether or not these capacities meet federal and state legal requirements for the bridge to carry pedestrian traffic. Discuss any damage to the superstructure or substructure. Discuss repairs that will be required to stabilize the structure as a monument.
- ◆ Hydraulics. Discuss any scour problems or other hydraulics issues.
- ◆ Required Rehabilitation Work. Discuss the efforts required to rehabilitate the historic bridge to carry pedestrian traffic and to stabilize the bridge as a monument. Required work could include:
 - Geometry. Outline changes to bridge geometry, such as lengthening.
 - Bridge Rail. Describe rehabilitating the existing rail, if desired.
 - Pedestrian Use Improvements. Discuss the pedestrian rail type and placement. Pedestrian rails can be chosen from standards available on the Bridge Division website. Discuss required ADA improvements to the bridge deck, if needed.
 - Structural Improvements. Detail any work required to improve the structural capacity of the bridge superstructure or substructure for pedestrian use or stabilization. Required work may include rehabilitating, strengthening, or replacing bridge members or the bridge deck, or rehabilitating or replacing the entire superstructure or substructure. Repairs will be minimal for bridges stabilized in situ as a monument, and limited to those that impact the structure's ability to sustain its own weight.
 - Corrosion Protection Measures. Outline any required work for corrosion protection, including paint or other corrosion protection measures.
 - Traffic Regulation Measures. Discuss the need for bollards to restrict the access of vehicular traffic on pedestrian bridges. Discuss removing approach spans or providing fencing to deter pedestrian access on bridges stabilized as a monument.
 - Presence of Hazardous Materials. Discuss the test results of any hazardous materials present on the structure. Any local entity owning or receiving a bridge with hazardous material

and choosing to not abate the hazard, must sign a special agreement releasing TxDOT's responsibility of the hazardous material prior to letting the project.

- ◆ **Cost Estimate.** Prepare separate, detailed cost estimates for the work required to rehabilitate the structure to carry pedestrian traffic or to stabilize the bridge as a monument, if feasible. State that the costs provided are based on TxDOT's average unit costs pricing, therefore, only relevant if TxDOT performs the work. Federal participation is only covered up to the cost of demolition for this alternative. The owner of the bridge will be 100% responsible for all costs over the demolition estimate.

Replacement of the Existing Bridge. This alternative considers two options: rehabilitating the historic bridge for pedestrian use at an alternate location, and demolition. Either option requires that TxDOT make a reasonable effort to identify a new owner for the bridge, as described in Section 4.

The demolition option requires no further analysis. The analysis required for rehabilitating the bridge for pedestrian use at an alternate location is similar to that required for rehabilitating the bridge for pedestrian use in situ. Both options use the same loading, so they will have the same required repairs for the span that will be reused. Repairs to approach spans and substructure that would be required under the in situ option are not required for the relocation option. However, additional costs are incurred for the relocation option in order to move the bridge to its new location. Costs for the new substructure are typically paid by the bridge owner unless the demolition estimate can cover these expenses along with the cost to relocate the structure. Typically, the estimated demolition cost only covers the cost to relocate the bridge. The following items should be discussed as part of the analysis for restoring the bridge as a pedestrian structure at a new location:

- ◆ **Moving.** Discuss the structural feasibility, site constraints, and travel constraints associated with moving the bridge. Bridge type and size may prevent relocation.
- ◆ **Bridge Rail.** Describe the pedestrian rail type. Pedestrian rails should be chosen from standards available on the Bridge Division website.
- ◆ **Structural Adequacy.** Discuss the as-built and current load rating capacities, and whether or not these capacities meet federal and state legal requirements for the bridge to carry pedestrian traffic. Discuss any damage to the superstructure.
- ◆ **Required Rehabilitation Work.** Discuss the work required to rehabilitate the historic bridge to carry pedestrian traffic and to stabilize the bridge as a monument. Required work could include:
 - **Moving.** Discuss the requirements for lifting and moving the bridge.
 - **Bridge Rail.** Describe bridge rail rehabilitation, if desired.
 - **Pedestrian Use Improvements.** Describe the pedestrian rail type and placement. Pedestrian rails can be chosen from standards available on the Bridge Division website. Discuss required ADA improvements to the bridge deck, if needed.

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- **Structural Improvements.** Discuss any work required to improve the structural capacity of the bridge superstructure for pedestrian use. Required work may include rehabilitating, strengthening, or replacing bridge members or the bridge deck.
 - **Corrosion Protection Measures.** Outline any required work for corrosion protection, including paint or other corrosion protection measures.
 - **Presence of Hazardous Materials.** Discuss the test results of any hazardous materials present on the structure. Any local entity owning or receiving a bridge with hazardous material and choosing to not abate the hazard, must sign a special agreement releasing TxDOT's responsibility of the hazardous material prior to letting the project.
 - **Traffic Regulation Measures.** Discuss the need for bollards to restrict the access of vehicular traffic on pedestrian bridges.
- ◆ **Cost Estimate.** Prepare a cost estimate for the work required to rehabilitate the structure to carry pedestrian traffic, if feasible. State that the costs provided are based on TxDOT's average unit costs pricing, therefore, only relevant if TxDOT performs the work. Federal participation is only covered up to the cost of demolition for this alternative. The owner of the bridge will be 100% responsible for all costs over the demolition estimate.

Section 4 — Environmental Steps

Public Involvement

Public participation is an integral part of the transportation process and helps to ensure that decisions are made in consideration of public needs and preferences. Early and continuous public involvement brings diverse viewpoints and values into the decision-making process. This process enables agencies to make better informed decisions through collaborative efforts and builds mutual understanding and trust between the agencies and the public they serve. Successful public participation is a continuous process, consisting of a series of activities and actions to both inform the public and stakeholders and to obtain input from them. Depending on the level of public interest in a bridge, ENV may produce a Public Involvement Plan for the project.

More information on public involvement can be found on [TxDOT ENV's website](#).

SHPO Coordination

The Environmental Affairs Division, along with the Bridge Division project manager as appropriate, consults with the State Historic Preservation Officer (SHPO) on proposed alternatives and whether a finding of an adverse effect is applicable under Section 106. Section 106 compliance is performed under the terms of TxDOT's programmatic agreement, which allows for both formal and informal consultation with the SHPO. Section 106 consultations should be completed before seeking concurrence for Section 4(f) findings.

Section 5 — Historic Bridge Marketing

General Discussion

Federally funded projects that propose to demolish a historic bridge are required to make the historic bridge available for donation to a state, locality, or responsible private entity as long as the state, locality, or responsible private entity enters into an agreement to maintain and assume responsibility for the historic bridge (see 23 USC 144 (g)).

TxDOT refers to this requirement as bridge marketing. Marketing can involve face-to-face discussions on proposed new uses for a historic bridge as well as formal notifications that TxDOT is searching for a responsible owner. Informal marketing includes discussion with the historic bridge owner, local entities, or other interested and responsible parties. The requirement for marketing is satisfied when a responsible owner for the historic bridge has been identified, or when TxDOT has made a reasonable effort to identify a new owner.

The statewide list of interested parties may be utilized to assist in finding a responsible owner for the historic bridge, if needed. Formal marketing, when required, should include notifications in media outlets such as newspapers and TxDOT's Internet site. Bridges should be marketed for as long as possible, while balancing the need to allow for SHPO and public comment on alternatives or a Section 106 outcome.

Experience indicates that short to medium span metal trusses typically make realistic candidates for relocation. If a historic bridge has neither the potential for preservation in place nor potential for relocation for an adaptive use, formal marketing can be limited to 30 days to be in compliance with Title 23 USC Section 144.

The marketing of historic bridges to a responsible party is applied to both non-truss and truss bridges and can only take place after ENV has reviewed a preliminary draft of the Section 4(f) document. Informal conversations with potential recipients are considered to be efforts to "minimize harm." These conversations can be conducted in an effort to perform "all possible planning" under both Section 106 and Section 4(f). It should be noted that no agreements, whether written or oral, can be made prior to ENV's approval to begin formal marketing.

Marketing plans are to be prepared by the DIST EC/ES and submitted to ENV HIST for review and approval.

Marketing Non-Moveable or Large Bridges

Not all historic bridges are suitable for adaptive uses; however, there are no mechanisms in the federal regulations allowing agencies, such as TxDOT, to forego marketing. Items that would make a historic bridge unsuitable for adaptive uses may include:

- ◆ diminished structural condition of the historic bridge;
- ◆ physical impossibility of dismantling or moving all or some of the historic bridge, such as concrete arches or other large concrete bridge types;
- ◆ excessive costs associated with dismantling or moving all or some of the historic bridges, such as long span steel plate girders.

TxDOT recognizes these limitations and has developed a streamlined approach to marketing these types of bridges. The following steps are required for marketing large or non-moveable bridge:

- ◆ ENV HIST is required to review and approve the preliminary draft of the Section 4(f) document;
- ◆ ENV HIST is required to review and accept the Bridge Marketing proposal submitted by the District;
- ◆ ENV HIST will post the appropriate marketing documentation on TxDOT's website for 30 days; and
- ◆ District EC/ES will notify the THC, Historic Bridge Foundation, and the County Historical Commission chair of the availability of the bridge.

Marketing Historic Truss Bridges and Post-1945 Bridges Designated as Group A

Historic truss bridges, when found to be suitable for adaptive use, are more likely to be relocated. Finding a location for the bridge that is in the same county or geographical region is recommended and preferred. Other bridges, such as those designated as Group A Bridges as part of the Post-1945 Concrete and Steel Bridges inventory, may warrant a similar level of marketing. Consultation with the SHPO and other consulting parties should identify these significant bridges. Conduct preliminary marketing efforts with the current owner and other local officials before contacting and coordinating with other potential recipients. District Area Office engineers and ENV HIST are able to assist in these efforts.

If a responsible recipient is not found through these efforts, additional marketing of the historic bridge must take place. ENV-HIST has developed a bridge marketing plan which includes public notices, proof of publication, and other documents that will need to be included in the environmental documentation for the project. More information is available on [TxDOT ENV's website](#).

Chapter 4 — Agreements

Contents:

[Section 1 — Advance Funding Agreements and Amendments](#)

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[Section 3 — Agreement Party Responsibilities](#)

Section 1 — Advance Funding Agreements and Amendments

General Discussion

Advanced Funding Agreements and/or Agreement Amendments (Agreement) are executed when all parties have reached concurrence on how to proceed with project development. Development and execution of the Agreements are an important part of the project development process and bind all parties contractually to dutifully perform the actions set forth in the Agreement and Agreement Exhibits.

Standardized Agreements were created to assist in the development of projects impacting historic bridges. These Agreements fall under the following categories:

- ◆ Advance Funding Agreements for Bridge Replacement or Rehabilitation Off the State System
- ◆ Amendments for the Preservation and Adaptive Use of a Historic Bridge Off the State System
- ◆ Preservation and Adaptive Use of a Historic On-State System Bridge

Advance Funding Agreements for Bridges under Local Government Jurisdiction

Performing a historic bridge condition assessment prior to obtaining and executing any Agreement is highly recommended for any federally funded off-system project that will impact a historic bridge. Many local governments are unaware that some of their bridges were determined eligible for historic status and assume the bridges can be rehabilitated or replaced without additional environmental hurdles. Local governments often become aware of the bridge's structural capacity, historic status, and any environment constraints associated with the historic status only after the project development process has begun and the Agreement has been executed.

- ◆ Conducting the condition assessment prior to execution of the initial Agreement allows the local government to have an accurate appraisal of the condition of the historic bridge before entering into an agreement. Project planning can then account for the additional project constraints.

See the Bridge Project Development Manual for more information on the Highway Bridge Program and the development of the *Advance Funding Agreements for Bridge Replacement and Rehabilitation Off the State System*.

Preservation and Adaptive Use Agreements and Amendments

Agreements for historic structures to be preserved for adaptive use purposes are needed when a historic bridge is deemed suitable for monument status or rehabilitation as a pedestrian structure. These Agreements fall into the following categories:

- ◆ On-system
 - two-party agreement between the state and a recipient
- ◆ Off-system
 - two-party Advance Funding Agreement Amendment to the existing off-system bridge agreement between the state and the local government (owner/recipient)
 - a three-party Advance Funding Agreement Amendment to the existing off-system bridge agreement between the state, the local government (owner) and another party (recipient)

Standard Agreement forms can be accessed from the Contract Services Division (CSD) [internal website](#) or transmitted via email from the Bridge Division Project Manager (BRG PM).

Any local entity owning or receiving a bridge with hazardous material and choosing to not abate the hazard, must sign a special agreement releasing TxDOT's responsibility of the hazardous material prior to letting the project.

For other non-standard Agreements, please contact a BRG PM.

NOTE: Access to the internal website is available only to TxDOT personnel.

These Agreements are under the purview of BRG. The BRG PM is responsible for ensuring that the actions to be performed within the Agreement Exhibits: are within funding limitations, comply with federal and state requirements, and contain, at a minimum, the required structural work to ensure the historic bridge can safely be used for its intended purpose.

A resolution or ordinance must be included as part of the Agreement if a local government is either the owner or the recipient of the historic bridge. Adding the resolution or ordinance to the Agreement helps to ensure the long term preservation of the bridge by indicating the local government's intent to perform actions described in the agreement and to maintain the historic bridge.

If the local government is the owner of the historic bridge, the resolution or ordinance must indicate that the local government is agreeing to:

- ◆ all proposed actions as described in the Agreement exhibits; and
- ◆ relinquish possession and responsibility, if not retaining ownership.

If the local government is retaining ownership or is a third party recipient, the resolution or ordinance must indicate that the local government is agreeing to:

- ◆ maintain the bridge and the features that give the historic bridge its historic significance;
- ◆ assume all future legal and financial responsibility for the historic bridge, which may include holding the State harmless in any liability action; and
- ◆ all proposed actions as described in the Agreement exhibits.

Section 2 — Adaptive Use Proposal

General Discussion

Adaptive uses for historic bridges are determined during the project planning process and are developed in consultation with BRG and Environmental Affairs Division (ENV); therefore, obtaining a structural assessment prior to making any decisions on adaptive uses is vital to ensure that the most prudent and feasible preservation alternative is selected.

If both the structural assessment and the project's need and purpose allow for an adaptive use of a historic bridge, the district, in consultation with ENV HIST, develops a request for adaptive use proposals through marketing efforts. Selection of the adaptive use proposal is made by ENV HIST and BRG in consultation with the State Historic Preservation Officer (SHPO).

The entity, whether the current owner or prospective owner, proposing the best adaptive use of the historic bridge is referred to as the recipient. The recipient is responsible for expanding the proposal, as necessary to fit the proposed adaptive use, by including a conceptual plan for preservation of the historic bridge.

The conceptual plan includes:

- ◆ a description of the proposed location including a map or sketch, if being relocated;
- ◆ a description of the proposed intended use of the historic bridge;
- ◆ a description of the proposed rehabilitation work to be performed on the historic bridge by the recipient, if any;
- ◆ a description of the project timeline, funding sources for rehabilitation, and any storage plans for the bridge.

HIST has prepared a reuse proposal checklist to assist prospective recipients in developing a conceptual plan. The checklist can be found on [TxDOT ENV's website](#).

Conceptual plans must be reviewed and approved by BRG and ENV. Once approved, conceptual plans will be presented to the SHPO and the other consulting parties for their concurrence. An agreement will then be developed and executed. The agreement will include the conceptual plan proposal as the Exhibit A, thus making it part of the Agreement (see Chapter 4, Section 1).

Section 3 — Agreement Party Responsibilities

Funding Responsibilities of the Parties

A historic bridge Agreement outlines funding responsibilities and scope of work for each party to the Agreement, in addition to defining the applicable standard procurement and public purpose provisions to which the parties must adhere when using federal or state funds. Funding limitations for preservation efforts are described in Chapter 2, Section 2.

The funding responsibilities and specific scope of work for each party are described in the Agreement Exhibits as a means of clearly defining the responsibilities of each party.

Work Responsibilities of the Parties

Work to be performed by the State. Plans, specifications, and estimates (PS&E) conforming to federal and state standards are required for the State to seek bids and execute a construction contract to perform work on a historic bridge for continued vehicular or for adaptive use. The qualities of uniqueness and rarity that contribute to a structure's historic significance are challenges that must be handled with diligence during the development of the PS&E package. Significant variability exists between historic structures, including the structural details, extent and type of damage or deterioration, and intended location for the rehabilitated structure. This variability makes developing estimates for the items of work difficult because there are few, if any, average bid costs for unique and unusual repairs required to rehabilitate the structure appropriately.

Due to the inclusion of federal funds, the scope of work to be performed by the State as part of an adaptive use plan under the Highway Bridge Program (HBP), is limited to the estimated demolition costs of the historic bridge. Items in need of repair or replacement must be carefully identified in order to develop an estimate. This estimate will assist in determining if the adaptive use alternative is feasible and prudent. Since the estimated demolition funds are rarely adequate to include all items of work, the State will attempt to fund as much of the required structural work as possible until the estimated demolition funding is exhausted so the historic bridge can safely be used for its intended purpose. Therefore, the work to be performed by the State is prioritized by removal, repair, relocation, and, when applicable, cleaning to remove lead-based paint. Note that TxDOT must inform the local government or responsible party of the presence of lead based paint if it has not been removed prior to transferring ownership of the bridge. Any local entity owning or receiving a bridge with hazardous material and choosing to not abate the hazard, must sign a special agreement releasing TxDOT's responsibility of the hazardous material prior to letting the project.

Example "Exhibit B" items of work to be performed by the State include:

- ◆ preparing complete PS&E, which may or may not include or be limited to:
 - modifying/repairing/replacing/strengthening structural members;

- repairing/replacing bridge decks;
 - installing/repairing/replacing bridge rails and/or pedestrian rails;
 - installing scour protection;
 - installing vehicle and pedestrian deterrents such as bollards and fencing;
 - cleaning and painting, as needed, including removal of lead paint;
 - preparing the historic bridge for relocation, if required, which may include lifting details and temporary bracing;
 - preparing specifications requiring the State's contractor to lift and set the historic bridge on the recipient's transport vehicle or transport the historic bridge to the permanent or temporary relocation site.
- ◆ demolition of remaining existing structure;
 - ◆ advertising for construction bids, issuing bid proposals, awarding and administering the contract for the construction of the project;
 - ◆ providing construction engineering and inspection during construction;
 - ◆ providing final inspection and issuing a "Notification of Completion" upon completing the project.

If the bridge must be moved to a temporary site, the State has no obligation to further move the bridge to the recipient's designated site, unless specified in the Agreement. The historic bridge must be removed from the existing site within a time period specified in writing by the State. The recipient, with at least 10 calendar days' notice from the State, must have its vehicle or vehicles available at the existing bridge site for loading and transport of the bridge to the relocation site. The recipient must coordinate transportation of the bridge with the State contractor in order to choose a date that is consistent with the State contractor's work schedule.

NOTE: For adaptive use projects using federal funds, work performed by the State's contractor is to be based on the estimated demolition cost.

Work to be performed by local entity or recipient. In most cases, the local government and/or recipient will be responsible for necessary work items beyond those provided by the State. The owner/recipient is responsible for 100% of the work beyond the limits defined in the agreement of the existing or relocated bridge as required to develop the monument/pedestrian facilities.

Example "Exhibit C/D" items of work to be performed by the local government/recipient include:

- ◆ funding and/or performing any rehabilitation work beyond that performed and/or funded by the State
- ◆ funding items of work that have been performed but are not eligible for federal reimbursement;
- ◆ allowing the State and the State's contractor the necessary access for all construction activities;

- ◆ right-of-way and utility adjustments;
- ◆ site preparation, if structure is being relocated to an alternate location, which may or may not include or be limited to:
 - constructing new foundations (The State may elect to provide engineering drawings for foundations for use by the recipient, at the recipient's request, to promote the use of a safe, substantial, stable, and durable substructure. The Bridge Division is available to prepare detail sheets for the plans and to write the required special specifications and special provisions);
 - constructing new approach spans and substructure;
 - constructing new bridge deck;
 - constructing new pedestrian railing;
 - providing other appurtenances;
- ◆ Providing traffic control for the State's contractor, if the historic bridge is to be relocated;
- ◆ Adhering to the items outlined in the Agreement, including:
 - retaining/accepting ownership upon receipt of "Notification of Completion";
 - maintaining the historic bridge in accordance with the Secretary of the Interior's Standards for Rehabilitation;
 - funding the maintenance of the structure at its own costs (See Chapter 2, Section 1 for limitations on the use of federal funds).

Examples of the Agreement Exhibits for [on-system](#) and for [off-system](#) structures can be found on the TxDOT website.

Ownership of the Historic Bridge

The owner/recipient retains or assumes ownership of the historic bridge upon completion of the State's project, or as specified in writing by the State.

The owner, recipient, or party acting on behalf of the recipient of the historic bridge may review the State's bridge plans prior to being released for contractor bids and is allowed to monitor and observe any of the preservation work including removal and relocation of the historic bridge. Monitoring and observation are allowed only if such actions are deemed fitting and appropriate safety measures have been taken.

The owner/recipient's review and observation must be coordinated with the State's area engineer and must not cause undue delay to the progress of the project.