Chapter 34 Local Bridge Program

34.1 General Discussion

This chapter describes the national requirements for bridge inspection programs and for selecting bridge projects to be funded using federal funds.

The primary objective of the Local Bridge Program (LBP) is to ensure public safety through inspection, rehabilitation, and replacement of bridges that meet the requirements for inclusion in the National Bridge Inventory (NBI) as defined by the National Bridge Inspection Standards (NBIS). The bridges that would be eligible for rehabilitation and or replacement using federal funds are described in Section 34.41.

34.2 Bridge Condition Inspection Program

A methodical Bridge Inspection Program is required for agencies that want to qualify for LBP funds.

The Federal Highway Administration (FHWA) has set the national standards for the proper safety inspection and evaluation of bridges in a document called the National Bridge Inspection Standards (NBIS). These standards are in the Code of Federal Regulations, Title 23 Highways Part 650, Subpart C. The latest electronic version of the NBIS can be found online at www.fhwa.dot.gov/bridge. Information and guidance on bridge condition inspection in Washington State is located in the *Washington State Bridge Inspection Manual* (WSBIM). Reference these documents for additional information on the following subjects. In the event of conflicting information or requirements between the WSBIM and Sections 34.2 and 34.3 of this manual, the WSBIM will govern.

.21 Delegation of Bridge Program Manager Status – Each State Transportation Department is required to perform, or cause to be performed, the proper inspection and evaluation of all highway bridges located on public roads that are fully or partially within the State's boundaries, except for bridges owned by Federal agencies or Tribal governments. The WSDOT Local Programs Bridge Engineer (LPBE) has been delegated as the Program Manager for county and city owned bridges. The NBIS contains provisions to allow further delegation of bridge program functions identified in §650.307(e) to qualified Local Agency bridge program personnel. This sub-delegation adds Quality Assurance responsibilities to a local agency. Section 34.3 and Appendix 34.54.

.22 Bridge Inspection Types and Intervals – Each structure in the National Bridge Inventory (NBI) shall receive a routine inspection at intervals not to exceed 24 months except as provided in the NBIS.

Inspection interval requirements are listed in Section §650.311 of the NBIS. These requirements are also outlined in the flowchart in Appendix 34.52 and are detailed in the WSBIM. Bridges shall be inspected in the calendar month that is the result of the current inspection month plus the assigned inspection interval in months. The inspection update should be entered into the inventory within 30 days of the inspection and submitted for release within 60 days of the inspection. Data is submitted for release by emailing a list of Structure IDs or a selection set exported from WSBIS to BridgeWorks@WSDOT.wa.gov. This allows Local Programs to monitor inspection progress, provides a record of inspection date compliance, and allows time for the data to be reviewed and released by Local Programs to the NBI within 90 days from the inspection date.

The Local Programs Bridge Engineer (LPBE) will perform regular reviews of the Local Agency Bridge Inventory to ensure that bridge inspections are being performed on time. Local Agencies will be provided a quarterly list of bridges and the projected inspection dates to cross check with the agency inspection list to ensure concurrence and identify any omissions.

Local Agencies will be notified monthly of bridge records that do not have current inspection dates because the field inspection has not been done, has not been entered in Washington State Bridge Inventory System (WSBIS), or because the information has not been released to the NBI. This notification will be first in the form of email or other correspondence with the Local Programs Bridge Office. If corrections are not made within 30 days of notification, the second notification will be a formal letter of noncompliance from the Local Programs Engineering Service Manager with a corrective action plan.

Finally, failure to carry out the corrective action plan will result in formal notification from the Director, Local Programs that federal funds may be restricted until compliance is met.

.23 Qualification of Bridge Inspection Personnel – Federal regulations specify the requirements for two positions within a Bridge Inspection organization:

- Bridge Program Manager – hereafter Program Manager
- Bridge Inspection Team Leader – hereafter Team Leader

The **Program Manager** is the individual charged with managing a specific bridge program and who has been delegated the duties of ensuring timely bridge inspection and reporting and that bridge records are current and valid. The Program Manager provides overall leadership and guidance to bridge program personnel.

Minimum Qualifications for Program Manager are:

- Registered Professional Engineer or 10 years of bridge inspection experience
- And successful completion of FHWA approved Comprehensive Bridge Inspection Training Course

The **Team Leader** is the individual in charge of an inspection team and is responsible for planning, preparing, and performing bridge inspections. The Team Leader is required to be onsite for all condition inspection activities on NBI bridges, and is responsible for inspection reporting and accurate inventory coding. Qualified Team Leaders are certified by WSDOT and are issued an inspector identification number. Noncertified bridge inspectors are not allowed to submit bridge inspection data for NBI bridges to the inventory.

Minimum Qualifications for Team Leader are:

- 6 months of bridge inspection experience, Registered Professional Engineer, and successful completion of FHWA approved Comprehensive Bridge Inspection Training Course
- Or, five years of bridge inspection experience and successful completion of FHWA approved Comprehensive Bridge Inspection Training Course

- Or, Bachelor's degree in engineering from an ABET accredited program, and successfully passed EIT, and two years of Bridge Inspection experience, and successful completion of FHWA approved Comprehensive Bridge Inspection Training Course
- Or, Associate's degree in engineering, and four years of bridge inspection experience, and successful completion of FHWA approved Comprehensive Bridge Inspection Training Course

Program Manager and Team Leader qualification requirements are listed in Section §650.309 of the NBIS and are outlined in the chart in Appendix 34.51. The time requirements listed for qualification are measured by the actual time spent performing the designated activity or related tasks not by calendar years.

All agency applications for Program Manager delegation and Team Leader certification will be reviewed and approved by Local Programs. Program Manager delegation is issued to an individual within a specific agency that meets the qualifications, not to the agency (Appendix 34.54 to review the Bridge Program Manager Agreement). If a Bridge Program Manager leaves agency employment, and the agency desires delegation of another Program Manager, delegation to another qualified person within the agency is required (Section 34.21). Certification of Bridge Program Manager status will be sent with a signed agreement, digital or paper copy. Bridge Inspector Team Leader certification will be acknowledged through an email response and by activation of Certified Bridge Inspector privileges in the inspection software provided by WSDOT. Any bridge certification will become part of the "Staff Qualification" file required for all bridge program personnel and which will be checked on an annual basis and during Quality Assurance (QA) reviews.

WSDOT maintains a list of qualified inspection service consultants which is available through Local Programs. Private consultants wanting to provide in-service bridge inspection services must have bridge inspectors that have been certified by WSDOT staff.

.24 Continued Certification of Bridge Inspection Personnel – Each Program Manager and Team Leader must participate in a 40-hour continuing education program to maintain certification. This program requires the following during a five-year period:

- 40 hours of bridge related training including WSDOT sponsored bridge training, bridge conferences, and other NHI Bridge Training courses.
- An approved Bridge Inspector Refresher Training course.
- Field evaluation performed by WSDOT Local Programs during QA reviews or by an agency's Bridge Program Manager with the approval of the WSDOT Local Programs Bridge Engineer (Section 34.3).

The expiration date of Program Managers and Team Leaders privileges are listed under Account settings in the inspection software that are updated by Local Programs after verification that the continuing education requirements have been met. Qualification reviews are performed annually as part of the QA process outlined under Section 34.3.

Visit the Local Programs Bridge Services website at www.wsdot.wa.gov/LocalPrograms/Bridge/Training.htm.

.25 Bridge Inspection Records and File Requirements – Bridge owners are required to maintain a complete and current official bridge file for each structure owned and reported to the NBI. This file is to be maintained throughout the life of the bridge. Chapter 2 of the WSBIM and Appendix 34.55 list the requirements for each official bridge file and detailed guidance on what to include. In addition, the latest version of the *American Association of State Highway and Transportation Officials (AASHTO) Manual for Bridge Evaluation* (MBE), has been incorporated by reference in the NBIS. See NBIS Section §650.317.

Agencies must identify bridges requiring special attention and must keep these Master Lists with the official bridge files. Lists of bridges that require special inspections such as, Nonredundant Steel Tension Member Inspections, Underwater Inspections, and Complex Bridge Inspections or are singled out for deficiencies such as Load Posting or having been determined Scour Critical should be included on Master Lists.

Additionally, each bridge owner is required to maintain a current file for each member of the agency's inspection staff detailing their bridge related experience and training.

.26 Bridge Load Ratings – All NBI bridges, including new structures, require load ratings which must be stamped and signed by the Professional Engineer charged with overall responsibility for the analysis. These ratings shall be performed in accordance with the guidelines within Chapter 6 of the AASHTO MBE and must be placed in the official bridge file as discussed in Section 34.25. If the current load rating is no longer applicable because of condition changes or added dead load, an updated load rating shall be completed. Bridges must be posted or restricted when the maximum load carrying capacity drops below the maximum unrestricted legal load. Additional load rating requirements are available in Chapter 5 of the WSBIM and Chapter 13 of the WSDOT *Bridge Design Manual* (BDM). Once it has been determined that an in-service bridge can no longer carry legal loads, the agency shall notify the LPBE within 7 days. Load restriction signs shall be installed within 30 days, including an update to the Local Agency Bridge Inventory with correct coding that reflects the diminished bridge capacity. The inventory update shall include a photo of the posting from each direction of travel for confirmation purposes. Load ratings for new bridges are eligible for LBP funds and should be included in the contract for bridges funded under this program. Load Ratings shall be completed and updated in the bridge inventory record no later than 90 days from the time the bridge is put in service.

.27 Bridge Scour Appraisal – A scour appraisal is required for each bridge over water. Chapter 5 of the WSBIM provides guidance on performing scour appraisals. The scour appraisal must also yield and document the federal scour code(s) as detailed in Chapter 2 of the WSBIM. This appraisal becomes part of the official bridge file discussed in Section 34.25.

A Scour Plan of Action (POA) for monitoring as well as scour repair plans are required for all bridges determined to be "scour critical" or to have unknown foundations. A plan of action (POA) has these primary components:

1. Development and implementation of a monitoring program.
2. Instructions regarding the type and frequency of inspections to be made at the bridge.
3. A schedule for the timely design, and construction of scour countermeasures (e.g., riprap).

The documented plan of action should address each of these components and explain why the preferred actions were chosen. (Chapter 5 of the WSBIM for more detailed information on what should be included in each POA).

.28 **Critical Findings –** A Critical Finding must be reported whenever a bridge is identified as having significant deterioration or structural damage causing emergency load restrictions, lane closure, bridge closure, or if a bridge has failed. See additional guidance for documenting and reporting Critical Findings in Chapter 6 of the WSBIM.

The WSDOT Local Programs Bridge Engineer must be notified by telephone or email within one working day of identification of a problem. The LPBE will coordinate notification and communication with FHWA until the Critical Finding is resolved. This allows the local agency, Local Programs, and FHWA to track the status of critically damaged bridges until the damage is resolved by repair or replacement of the bridge. Chapter 6 of the WSBIM for contact information, timelines, and procedures.

34.3 Quality Assurance and Quality Control Reviews

Local Programs conducts Quality Assurance and Quality Control (QA/QC) reviews of local agency bridge programs statewide to:

- Verify that local agency bridge inspection programs maintain a high degree of accuracy and consistency.
- Identify future training needs.
- Ensure compliance with the NBIS.

.31 **Quality Assurance (QA)** is defined in Section §650.305 as "the use of sampling and other measures to assure the adequacy of quality control procedures in order to verify or measure the quality level of the entire bridge inspection and load rating program." A QA review must be done by someone outside the work group.

Quality Assurance reviews are a formal review conducted annually by the LPBE, or under the direction of the LPBE, of each local agency bridge owner. This formal review consists of both an office bridge file review and a field review as detailed below. Local Agencies may select any members of their team to participate in this review. Criteria for annual reviews will be as follows, with a goal of visiting each county within an eight-year period:

- Review a minimum of 50 bridge files from various bridge owners (approximately 1% of local agency bridge inventory).
- Field review a minimum of 25 bridges from various bridge owners (approximately 0.5% of local agency bridge inventory).

The office bridge file review begins with a discussion about the agency's bridge inspection program, including but not limited to an overview of the agency's Master Bridge List, available inspection resources, maintenance procedures, and a review of Program Manager and Team Leader qualifications. This discussion is followed by a review of the bridge files for select bridges, including paper and electronic components.

The field review consists of site visits to selected bridges with a copy of the most current bridge inspection report, plans, load rating summary, and scour appraisal (if applicable). The field review team will compare the bridge inspection report to field conditions observed. This discussion will include, but not be limited to overall condition codes, bridge elements and quantities, quality of inspection notes, and inspection procedures.

See Appendix 34.57 for a copy of the checklist used by Local Programs for this review.

Each agency will receive a summary of findings and recommendations for best practices a result of participating in a QA review. An overall summary of findings and recommendations will be included in the annual bridge updates training for the benefit of all local agency inspectors in the State.

Quality Assurance reviews of other data, field inspections, or bridge files may be conducted at any time to maintain the quality of the bridge program, as part of an Improvement Plan, part of a Plan of Corrective Action, or to otherwise ensure compliance with the National Bridge Inspection Standards.

Local Agency Quality Assurance – Each agency that has been sub-delegated Program Manager Responsibilities by WSDOT shall have written QA procedures in place. These procedures should include:

- Annual review of select bridge files to ensure accurate and complete bridge records. Recommend review of 10% of bridges in agency's inventory annually.
- Annual field review of select bridge inspections. This includes a site-visit and completed inspection report review. Recommend review of 10% of inspections performed annually.
- Oversight of inspection team Quality Control procedures to ensure they are effectively followed.

A detailed outline for the QA process used for in-house WSDOT bridge inspection is in WSBIM Chapter 7-8.

.32 **Quality Control (QC**) is defined in Section §650.305 as "procedures that are intended to maintain the quality of a bridge inspection and load rating at or above a specified level." QC review may be done by Supervisors, Team Leaders, inspection team members, and the Local Programs Bridge Inventory Engineer.

The Local Programs Bridge Inventory Engineer (LPBIE) continually performs routine QC reviews on the data contained in the Bridge Inventory. Each update to the data is reviewed prior to release into the database with the following QC actions:

- Checks changes made to all codes for reasonableness and consistency.
- Runs automated error checks within the BridgeWorks application.
- Checks to ensure that inspection report types are used correctly.

Additional queries are run throughout the year by the LPBIE and LPBE on all bridge inventory data for verification of data consistency and correct data field correlation.

Local Agency Quality Control – Each agency shall have written quality control procedures.

For agencies with in-house inspection teams, QC procedures should include, but not be limited to:

- Review of each inspection report by a team member on-site during the inspection. For example, a report written by the Team Leader could be reviewed by a co-inspector.
- Review of some or all inspection reports by a supervisor
- Documentation of QC. This may be retention of reports with reviewer comments and initials, or a tracking spreadsheet.

34.4 Local Bridge Program Call for Projects

Counties and cities are invited to submit bridge projects to Local Programs in response to the Local Bridge Program Call for Projects. These bridge projects must meet the eligibility requirements in Section 34.41 and federal eligibility requirements.

The specific application requirements may vary from biennium to biennium and will be outlined in the actual Call for Projects.

.41 Local Bridge Program Eligibility – A bridge project must fulfill the following criteria to be eligible for funding:

1. Bridge must be reportable to the National Bridge Inventory (NBI).
   a. The bridge must be more than 20 feet in length measured along the centerline of the roadway.
   b. The bridge is open to public, vehicular traffic or was closed due to deterioration or damage with an intent to reopen to public vehicular traffic.
2. It must be recorded in the Washington State Bridge Inventory System (WSBIS).
3. For replacement and rehabilitation, bridges must be in poor or serious condition.
4. For preventative maintenance, overall bridge condition is not considered.
   a. Seismic – agency must demonstrate that bridge is seismically vulnerable.
   b. Paint – paint system must be included in the Bridge Management System elements and have 2% in condition state 4.
   c. Scour –bridges must be scour critical or have unknown foundations.
5. Routine maintenance is not eligible for funding.
6. No replacement or rehabilitation projects can have been performed using funds in the past 10 years. There is no moratorium following preventative maintenance projects, however, the intent of this funding is for the repair to last at least 10 years.
7. Bridges with decks in poor or serious condition are eligible for rehabilitation. The 10-year moratorium will not disqualify the candidate. However, once the deck has been replaced or rehabilitated, the 10-year rule will apply.

.42 Bridge Replacement Design Standards – Bridges shall be designed in accordance with this manual and the following criteria:

1. **Live Load** – Load and Resistance Factor Design (LRFD) HL 93.
2. **Vertical Clearances** – Clearance over roadways is a minimum 16.5 feet. Clearance over railroads is a minimum 23.5 feet.
3. **Design-Year ADT** – Will be determined per Section 43.21.
4. **Bridge Length** – The length of the replacement bridge can be affected by one or both of the following factors:
   a. The bottom of the superstructure will be 3 feet above the 100-year flood elevation or as determined by field review.
   b. The abutment and pier locations(s) of a new bridge generally reduce the existing backwater elevation. The acceptable rise in the backwater elevation should meet state or local jurisdictional regulations as applicable.

5. **Bridge Type** – The bridge type selected will be the most economical type for the span length needed, based on sound engineering judgment and/or economics.
6. **Bridge Foundation Type** – The type and depth of the foundation elements will depend on the results of the geotechnical and hydraulic analyses and shall be considered scour safe (WB76-80 coded 8 or 9).
7. **Culvert/Fish Passage Openings –** The minimum recommended vertical opening for maintenance and in-service safety inspection activities is 6 ft. If there are large objects, such as boulders, inside the structure, the recommended vertical opening is 10 ft.
8. **Accessibility for In-service Safety Inspection –** Requirements for in-service safety inspection in accordance with the NBIS should be considered to allow for proper visual inspection of all bridge members and hands-on access when applicable. This may include consideration of clearance requirements for under bridge inspection trucks (UBITs) or other equipment.

Both a load rating and a scour appraisal shall be provided for the new bridge to be included in the official bridge file. The scour appraisal will consist of a summary of the hydraulic design as justification for the scour safe code.

.43 Bridge Rehabilitation Criteria – To qualify as a rehabilitation project, the total rehabilitation costs shall not exceed 70 percent of the replacement costs and subject to the following requirements:

1. Structural deficiencies will be removed.
2. Structure will be brought up to current standards.
3. Completed bridge must load rate at or above legal load capacity with no load posting required.

.44 Preventative Maintenance – Project eligibility and priority ranking is based on the Washington State Bridge Management System (BMS) element data. Chapter 4 of the WSBIM for BMS element information.

.45 Eligible Bridge Costs – The following are eligible bridge costs:

1. **Bridge Construction** – All items typically detailed by bridge designers (concrete, rebar, piling, barriers, expansion dams, etc.).
2. **Bridge Aesthetics** – Limited to the treatment required in the approved NEPA documents. Typically, paints or pigmented sealers and fractured fin finishes on concrete structures will not be approved.
3. **Demolition** of existing structure(s).
4. **Detour** – All work items required to accommodate the construction of the new bridge.
5. **Traffic Control for the Work Zone** – Prorated by costs of bridge vs. approach work.
6. **Structural Excavation and Backfill for Bridge** – Includes abutments, wing walls, footings, cofferdams, etc.
7. **Riprap Protecting Bridge Structure Within the Right of Way** – Riprap placed within the right of way to protect the structure can be considered a bridge item.

8. **Approach Slab** – The approach slab is a reinforced concrete element that protects the bridge and abutments from impacts and can be considered a bridge item.
9. **Approach Guardrail Transition Section** – Approach guardrail systems are installed in accordance with Standard Plans and are considered a bridge item provided site conditions do not require unusually long transitions.
10. **Retaining Walls** (up to 20 feet maximum distance from the abutment) – Retaining walls are structural elements that serve the same functions as the standard bridge wing walls and are designed by bridge designers. Retaining walls beyond these limits would not be considered bridge items.
11. **Bridge Drainage** – Including components necessary to carry water from the structure.
12. **Environmental Mitigation** – Prorated for the bridge, demolition of existing structure, and/or detours.
13. **Mobilization** – Prorated by costs of bridge and approach work.

Approach costs will be limited to 15 percent of the above items.

.46 On-Site Field Review of Candidates – The on-site field review team verifies the condition of the bridge, reviews site information, and possibly requests updated or additional information. The field review is also an opportunity for the bridge owner to provide additional information related to up-front project scoping and analysis done prior to the call for projects.

1. **Field Review Team** – The Field Review Team consists of the WSDOT Local Programs Bridge Engineer (Review Team leader) and a local agency bridge owner representative. It will include the Region Local Programs Engineer and FHWA Division Bridge Engineer whenever possible. On non-CA agency bridges, the Field Review Team will also have a representative from the agency providing CA services for the non-CA agency. The Local Programs Bridge Engineer may add other representatives as deemed appropriate for specialized conditions.
2. **Review Procedures**
    a. The Field Review Team conducts an on-site review of proposed bridge projects. The Field Review Team may use results of a previous review for a bridge submitted but not funded, provided the review was conducted within the past three years.
    b. The current Bridge Inspection Report is reviewed at the site. The Field Review Team looks for inconsistencies between condition codes, load ratings, postings, ADT, and other factors.
    c. The items submitted with the application are reviewed at the site. The Field Review Team reviews the site in detail to verify the requested funding program best fits the condition of the bridge.
    d. A consensus is reached on the appropriate funding program and estimated scope of work for the project.
    e. The project cost estimate submitted by the agency is discussed in detail and revised as appropriate.

.47 Bridge Selection – A local bridge advisory committee convenes after the on-site field reviews are completed with the local agencies. A suggested list of bridge projects is presented to the committee with a description of the existing bridge and proposed project. The committee reviews all the projects and adds comments based on a statewide approach.

The Director, Local Programs approves the final list of bridge projects based upon funding levels, delivery schedules, bridge sufficiency and committee comments. Counties and cities will receive a funding notification letter informing them that their bridge project has been approved for funding. The letter will identify the anticipated federal funding level and asks the agency to submit their request for funds through their Region Local Programs Engineer. This letter will also identify the percentage for bridge approach cost participation and any other requirements specific to the project.

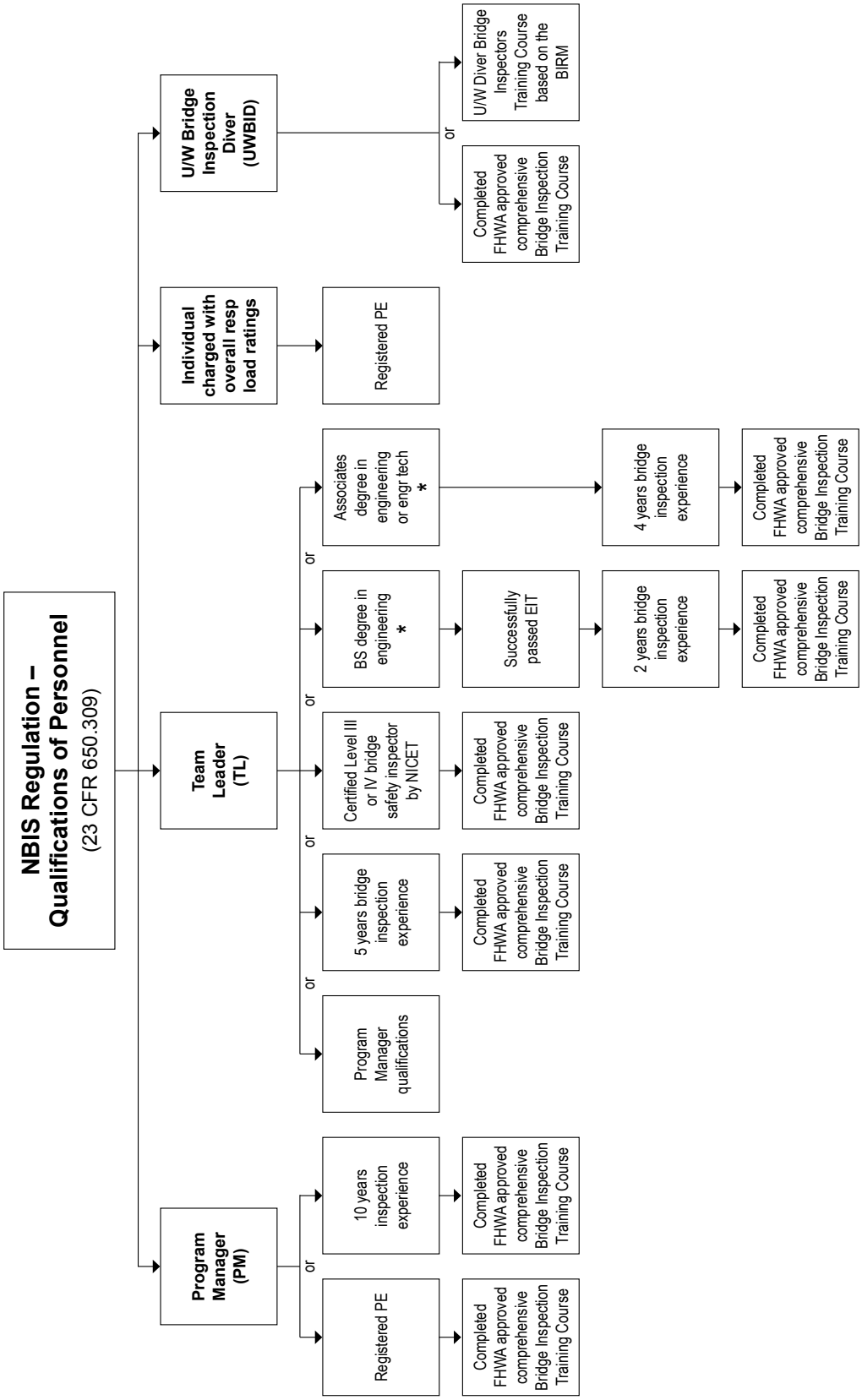
The committee is comprised of seven voting members and two alternates. The committee includes four county representatives, four city representatives, with the Local Programs Engineering Services Manager serving as Chair. Alternates initially serve one year as a non-voting member then for three more years as a voting member. Alternates for either city or county may participate in the event a voting member from their respective association is absent.

.48 Project Management and Funding – The level of funding available for the bridge program falls short of meeting all the needs on the local roadway system. With this limited funding, it is critical that the initial scope, schedule, and budget for each project be as accurate as possible. Identification of changes to the scope, schedule or budget during project delivery need to be communicated to Local Programs, the quarterly project report is the vehicle for this communication.

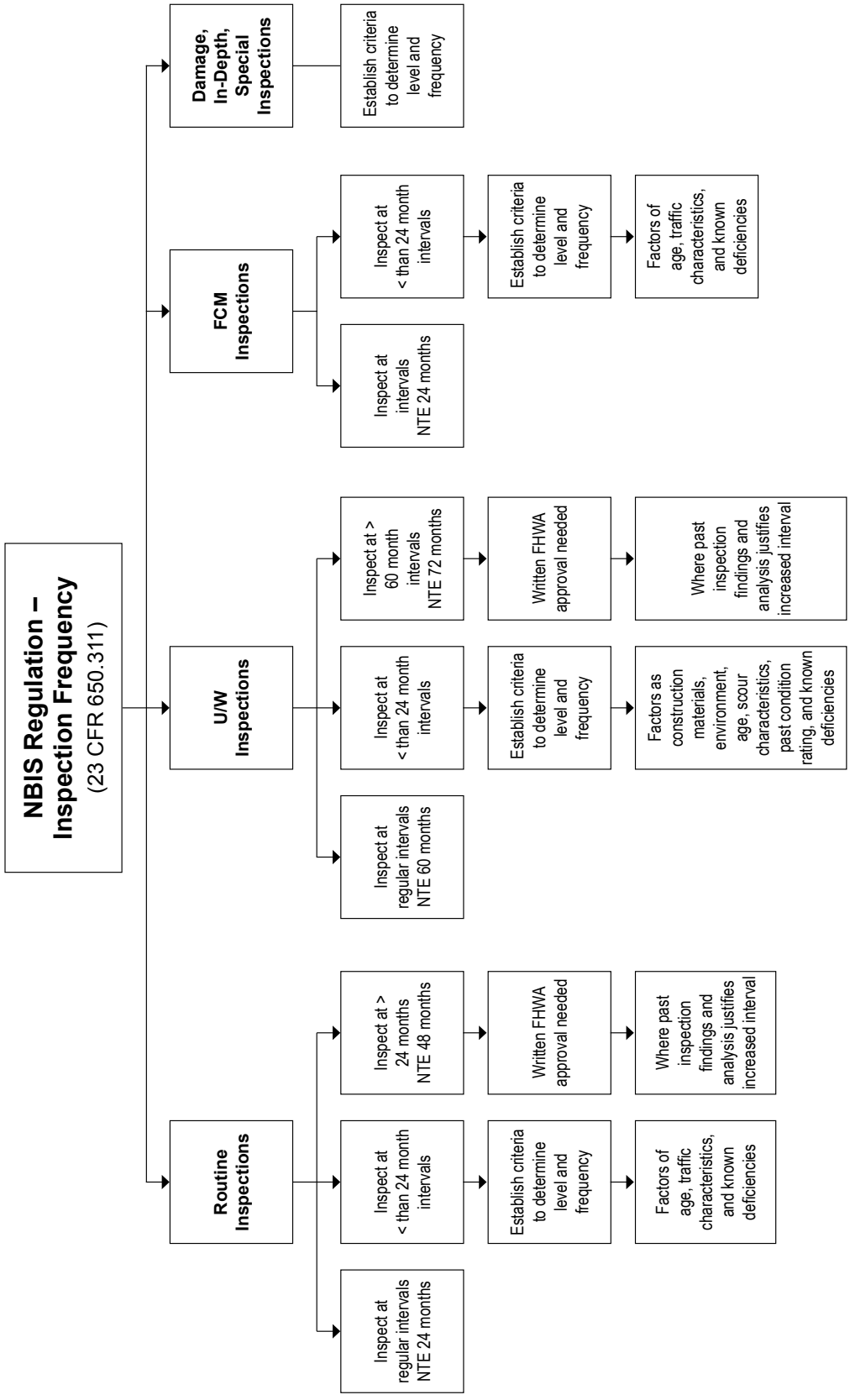
Updates to the project scope schedule and budget are required for all bridge replacement and rehabilitation projects and all other projects that exceed $2.0 million are required at 30 percent and 60 percent design.

34.5 Appendices

Appendix 34.51 NBIS Regulation – Qualifications of Personnel



Appendix 34.52 NBIS Regulation – Inspection Frequency



Appendix 34.53 Bridge Inspector Experience and Training Record

Washington State Department of Transportation

WSDOT Bridge/Tunnel Inspector Experience and Training Record

Team Leader Name	Date
Agency Name	Phone
Address	Email

NBIS Qualification - select one. See detailed list on page 2. All require completion of comprehensive bridge inspection training from WSDOT or NHI or equivalent.

☐ 1a - PE + Experience ☐ 1b - Experience (10 years) ☐ 2 - Experience (5 years)
☐ 3 - Bachelor's + EIT + Experience ☐ 4 - Associate's + Experience

Inspection Type Qualifications	
For each type, include course details below and attach course certificate	
☐	Completed comprehensive bridge inspector training (NHI or equivalent)
☐	Completed NSTM training course (NHI or equivalent)
☐	Completed comprehensive tunnel inspector training (NHI or equivalent)
☐	Completed Underwater Bridge Inspection Diver training (NHI or equivalent)

Education

Institution (ABET accredited program)	*Major*	*Years*	*Degree*

Professional Registration (WA preferred, otherwise list any one active licensure location)

State	*Branch/Agency*	*Registration Number*

Bridge Inspection Training

Course	*Sponsor*	*Hours*	*Dates*

Special Technical Course

Course	*Sponsor*	*Hours*	*Dates*

Bridge Inspection Experience

Agency/Firm	*Bridge Duties*	*Years*

To the best of my knowledge, the above information is true and accurate.

Applicant's Signature _____ Date _____

DOT Form 234-100
Revised 12/2022

Appendix 34.54 Bridge Program Manager Agreement Example

Washington State Department of Transportation

Lynn Peterson
Secretary of Transportation

Transportation Building
310 Maple Park Avenue S.E.
P.O. Box 47300
Olympia, WA 98504-7300
360-705-7000
TTY: 1-800-833-6388
www.wsdot.wa.gov

Agency: Click here to enter text. Agency No.: Click here to enter text.

In accordance with Title 23, Code of Federal Regulations, Part 650 - Bridges, Structures, and Hydraulics, Subpart C – The National Bridge Inspection Standards (NBIS) the Washington State Department of Transportation (WSDOT) in its role as the Washington State Bridge Inspection Organization is responsible to inspect, or to cause to be inspected, all highway bridges located on public roads that are fully or partially within the State's boundaries, except for bridges owned by Federal agencies. The NBIS contains provisions to allow delegation of bridge program functions identified in §650.307(c)(2).

The individual in charge of the bridge program as defined in the NBIS is the Bridge Program Manager. The overall Program Manager for Local Agency owned bridges in Washington State is the WSDOT Local Agency Bridge Engineer. The individual delegated Program Manager status within an agency and deemed in charge of the Agency Bridge Program for that agency is the Agency Bridge Program Manager. While delegation of Program Manager is allowed, such delegation does not relieve WSDOT of any of its responsibilities under the NBIS.

Agency Bridge Program Manager status is assigned to a specific qualified individual within a specific agency. Any change of employment of the Agency Bridge Program Manager requires re-delegation by the WSDOT Local Agency Bridge Engineer of Bridge Program Manager status to another qualified person within that specific agency.

A qualified person within a Local Agency who accepts Bridge Program Manager status agrees to:

- Adhere to the Washington State Bridge Inspection Manual M 36-64 and all policies and procedures promulgated by the Washington State Department of Transportation (WSDOT) which accomplish the policies and objectives set forth in NBIS.
- Provide overall leadership and be available to the inspection team leaders to provide guidance.
- Supervise or provide Bridge Program quality control to ensure that the requirements of the NBIS are met. This includes review of inspection reports and approval of the Team Leaders work, overseeing bridge inspection schedules, ensuring that all analysis, reporting, and inventory requirements are met, and critical deficiencies are addressed in a timely manner. Support staff may be Private Consultant or State Services.

The qualified person within a Local Agency who accepts Bridge Program Manager Status:

Bridge Program Manager (Name)	Bridge Inspector Cert. No.
Mayor or Chairman	Date

Washington State Department of Transportation

Approved By:

Local Programs Engineering Services Manager	Date

Appendix 34.55 Bridge File Requirements

A 34.55.1 General

Each agency is responsible for maintaining a bridge file for each bridge within its jurisdiction. A detailed list of information that should be in the bridge file is listed and described in Chapter 2 of the *Washington State Bridge Inspection Manual* (WSBIM) M 36-64. Another reference for a detailed list of the information that should be included in the bridge file can be found in American Association of State Highway and Transportation Officials (AASHTO) Manual for Bridge Evaluation. When inclusion of this information in the bridge file is not possible or impractical, reference to the location where it can be found will suffice. Components of the bridge record may be paper, electronically stored in BridgeWorks, or electronically stored on an agency server with a backup procedure.

A 34.55.2 Individual Bridge Records

A permanent record on each bridge must be maintained. This record provides a history of the bridge's condition, maintenance, and inventory data. This information must be kept current.

1. **Washington State Bridge Inventory System (WSBIS) Inventory Coding Form** – A copy of the current completed WSBIS Inventory Coding Form must be in the bridge file as a ready source of the current bridge information. The procedures for establishing, maintaining, and updating the inventory information is described in detail in WSBIM Chapter 2.
2. **Bridge Inspection Reports** – All on-site inspection reports must be kept in the individual bridge file and must be signed by the Team Leader responsible for the inspection. The history of bridge inspection reports should be maintained for the life of the bridge.
3. **Critical Findings –** A history of critical findings should be maintained for each bridge. This may be copies of Critical Damage Bridge Reports or Critical Findings recorded in BridgeWorks. Historic records may be limited to emergency repair or contract work.
4. **Photographs –** All photographs should be labeled with a description, orientation, and date. Photographs should be maintained as follows:
   - Labeled and dated copies of elevation and deck photographs of the bridge must be kept in the bridge file. Whenever the bridge's condition changes, new elevation and deck photographs should be taken and added to the file.
   - An agency may also keep on file photographs of problems or deficiencies discovered at the bridge (e.g., section loss in a deteriorating piling or significant spalling on a bridge deck). These photographs can provide documentation of existing or developing problems that could lead to repairs.

     Deterioration requiring a repair should be documented with a photo. The photo is then referenced in the note describing the deterioration and in the associated repair note.

     Once the repair is complete, a follow up photo is taken as part of the repair verification procedure.

- Photo documentation of load posting and vertical clearance signs from each direction of travel, including advanced warning signs.
- For bridges over water, photos of the channel upstream and downstream are recommended for comparison of channel conditions during each inspection.

5. **Plans –** Most bridges will have detailed design plans used for the construction of the bridge and final drawings reflecting the as-built condition of the bridge. These plans should be kept in the bridge file or a note should be included with location of any plans that are too bulky to fit in the file itself. If these plans are not available, a detailed sketch of the bridge needs to be made showing bridge length, width, span length, clearances, and a typical section with bridge materials and dimensions.

6. **Load Rating –** A copy of the stamped, signed, and dated load rating must be kept in the bridge file. Include a note in the bridge file with location of any load rating that is too bulky to fit in the file itself. Load test data should be included for any field load tests.

7. **Scour –** A scour appraisal is required for all structures over bodies of water. The scour appraisal shall include the calculations and/or narrative to justify the code(s) entered into the bridge inventory record.

   If a bridge is determined to be scour critical, a scour Plan of Action shall also be developed and implemented for that structure.

   All structures over water shall also be required to have channel cross-sections (soundings) taken at the upstream side of structure to monitor scour and channel migration at the site. Suggested frequencies for cross-sections can be found in Chapter 5 of the WSBIM.

8. **Correspondence –** All letters regarding the inspection, maintenance, or ownership of the bridge should be kept in the bridge file. This may include correspondence from FHWA, WSDOT, other agencies, and/or individuals.

9. **Inspection Procedures** – Each agency is required to develop and maintain procedures that address the special features of a bridge. Special features include nonredundant steel tension members, underwater elements, complex features, or any other feature requiring special inspection due to location, strategic importance, or special design features.

10. **Other Information** – All other information gathered about the bridge should be kept on file. This includes details about maintenance work performed, special reports or studies, heat straightening, damage, and paint reports.

A 34.55.3 Master List

The purpose of a master list is to assist in the management of non-routine inspections, bridges needing special inspection and/or inspection equipment. Each agency is required to maintain a master list of:

- Bridges with nonredundant steel tension members (NSTM).
- Bridges requiring underwater diving inspections.
- Bridges with special features (e.g., segmental bridges).

It is recommended that each agency maintain a master list of:

- Bridges that are scour critical.
- Load posted bridges.
- Bridges requiring an Under Bridge Inspection Truck (UBIT) to inspect limited access members.
- Short span bridges.
- Bridges needing repairs.
- Bridges needing traffic control for routine inspections.
- Fatigue cracked bridges.
- Environmentally sensitive bridges.
- Bridges needing deck replacement.
- Bridges that are seismic vulnerable.
- Bridges needing painting.

This information can be used to plan, schedule, and monitor the special inspections. At a minimum, the following information must be included for each bridge:

- Bridge type and location.
- Type and frequency of inspection required.
- Location of particular members to be inspected.
- Inspection procedures to be used.
- Type of special equipment required.
- Previous inspection dates.
- Most recent inspection findings.
- Any follow-up action taken as a result of the most recent inspection findings.

Bridges are added to the master list when they are identified as needing an underwater, NSTM, or special features inspections. As these inspections are performed, the master list is updated with the most current information. Bridges are kept on the master list throughout their service life, unless the bridge's category (e.g., NSTM, special features) changes.

A 34.55.4 Bridge Construction Files

Bridge construction files should include the following:

- Construction Plans
- As-built Drawings
- Specifications
- Shop and Working Drawings
- Material Certification
- Material Test Data

A 34.55.5 Short Span Bridges

Short span bridges (see WSBIM Chapter 3) are bridges or multiple culverts having an opening of 20 feet or less. The short span bridges are generally not reported to the Federal Highway Administration. Washington State encourages the reporting of short span bridge information because of concerns about their condition and possible maintenance repairs required.

Appendix 34.56 Individual Bridge Record Checklist Example

Bridge Program Files (Chapter 34)
Washington State Bridge Inspection Manual (WSBIM) Chapter 2

Individual Bridge Record

Bridge Name:
_____

Bridge Number: _____ Structure I.D.
_____

Initials	Date or N/A	
_____	_____	Current Washington State Bridge Inventory Coding Form (WSBIS)
_____	_____	Inspection date is current
_____	_____	Data is complete and correct (WSBIM Chapter 2)
_____	_____	Bridge Condition Inspection Report History
_____	_____	Reports signed and dated by qualified Team Leader
_____	_____	Team Leader qualification and training file up-to-date
_____	_____	History complete according to inspection frequency
_____	_____	Critical Finding (WSBIM Chapter 6)
_____	_____	Critical Damage Bridge Repair Report
_____	_____	Follow-up information (Inspection/Design/Repair)
_____	_____	Conclusion (Bridge reopened or permanently closed)
_____	_____	Photographs (deck and elevation at a minimum)
_____	_____	Date, description, orientation, inspector's initials
_____	_____	Location if not in individual bridge file
_____	_____	Bridge plans or detailed drawings
_____	_____	Plans do not exist
_____	_____	Location if not in individual bridge file
_____	_____	Scour Analysis (WSBIM Chapter 5)
_____	_____	Bridge is not over water
_____	_____	Analysis defines the WB76-80 Scour Code
_____	_____	If Scour Critical
_____	_____	Action plan
_____	_____	Bridge is included on Scour Critical Master List

Initials	Date or N/A	
_____	_____	Load Rating (WSBIM Chapter 5)
		_____ _____ Stamped, signed, and dated by Professional Engineer
		_____ _____ WB72-93 coded correctly per load rating
		_____ _____ Bridge is posted if necessary
		_____ _____ Bridge is included on master list of posted bridges
		_____ _____ WB76-60 coded correctly
		_____ _____ WB75-51 through WB77-55 correctly coded
		_____ _____ Location if not in individual bridge file
_____	_____	General Correspondence
_____	_____	Inspection Procedures (WSBIM Chapter 3)
		_____ _____ Bridge is Fracture Critical
		_____ _____ Bridge is on Fracture Critical Master List
		_____ _____ Fracture Critical procedures
		_____ _____ Bridge requires underwater inspection
		_____ _____ Bridge is on Under Water Inspection Master list
		_____ _____ Underwater Inspection procedures
		_____ _____ Bridge is Complex
		_____ _____ Bridge is Complex Bridge Master List
		_____ _____ Complex Bridge Inspection Procedures
_____	_____	Maintenance Records
		_____ _____ Maintenance recommendations on inspection report
		_____ _____ Maintenance initiation (signed, dated)
		_____ _____ Maintenance completed (signed, dated, description)
_____	_____	Other Information
		_____ _____ Special reports

Appendix 34.57 Local Agency Bridge Program Quality Assurance Checklist Example

Local Agency Bridge Program Quality Assurance Checklist

Agency: Click here to enter text.

Date: Click here to enter text.

Program Manager:

Name: Click here to enter text.

Experience: Click here to enter text.

Refresher Training: Click here to enter text.

Team Leader(s):

Name: Click here to enter text.

Experience: Click here to enter text.

Refresher Training: Click here to enter text.

Name: Click here to enter text.

Experience: Click here to enter text.

Refresher Training: Click here to enter text.

Team Member(s):

Name: Click here to enter text.

Experience: Click here to enter text.

Training: Click here to enter text.

Name: Click here to enter text.

Experience: Click here to enter text.

Training: Click here to enter text.

DOT 140-569
Revised 11/2024

Bridge Master List Information:

Number of Bridges in the Agencies Inventory: Click here to enter text.

Number of NBIS Bridges: Click here to enter text.

Number of NBI Bridges (on/under): Click here to enter text.

Number and Types of Specialty Inspections: Click here to enter text.

Number of Bridges Over Water: Click here to enter text.

Type of Inspection	No. Bridges	Notes
NSTM		
Underwater		
Complex Bridge (Not NSTM)		
Increased Frequency		
Special Access		
SD		
FO		
Valid Load Ratings		
Load Posted		
Scour Critical		
Unknown Foundation		
High Water POA's		

DOT 140-569
Revised 11/2024

Bridge Inspection Procedures: See attached Bridge File Checklist for each structure reviewed.

Is a Laptop Used in the Field? Click here to enter text.

Are Manuals Available in Field? Click here to enter text.

Bridge SID	**1)**	**2)**	**3)**	**4)**	**5)**	**6)**
Coding Accuracy						
WSBIS Accuracy						
Notes						
Sketches (in BW?)						
Procedures (in BW?)						
Photos (in BW?)						
Repairs/Maint.						
Load Posting/Codes/Photo						
LR Summary (In BW?)						
Scour Codes/Justification						
POA's (in BW?)						

Are Consultant inspectors used for any Bridge inspections? Click here to enter text.

Are 2-man inspection teams scheduled? Click here to enter text.

Is the Bridge Program Manager involved in the Quality Control of Bridge Inspections? Click here to enter text.

Inspection Equipment:

Equipment	**Agency Owned/Rented**	**Availability**
Ladder		
Manlift		
UBIT/Under Bridge Platform		
Boat		
Climbing Gear		
NDT		

DOT 140-569
Revised 11/2024

Inspection Finding Follow-up:

Does inspection team have ability to immediately close a bridge if necessary? Click here to enter text.

What is process for closing a bridge because of a Critical Finding? Click here to enter text.

Is the repair list tab up-to-date in Bridge Works? Click here to enter text.

Do notes referencing maintenance progress exist in inspection report? Click here to enter text.

How is maintenance funded? Click here to enter text.

How is maintenance scheduled/closed out? Click here to enter text.

How are required signs inventoried/ verified? Click here to enter text.

General Notes:

Click here to enter text.

DOT 140-569
Revised 11/2024

This page intentionally left blank.