



Local Structures 6 – 20ft: Program Overview

The WisDOT 2023-25 budget includes the following language:

Provide \$12,500,000 to the Joint Committee on Finance SEG supplemental biennial appropriation in 2023-24 for assessment of local bridges and culverts that are less than 20 feet in length and create a biennial DOT SEG appropriation that could receive the funds. Direct DOT to develop a program for counties to assess local bridges and culverts that are 20 feet or under in length, but greater than six feet in length.

WisDOT has developed details to administer the program identified above and has discussed with the following local owner representatives:

- Wisconsin Towns Association (WTA)
- League of Wisconsin of Municipalities (LWM)
- Wisconsin County Highway Association (WCHA)
- Wisconsin Counties Association (WCA)

Below is a summary of the program to date.

Program Overview

- WisDOT estimates that there are approximately 25,000 structures that meet the definition in the budget language.
 - This estimate is based on GIS information of local roads, mapped waterways, and previous culvert inventory efforts. This estimate aligns with survey information from local owners.
- WisDOT is proposing a phased approach:
 - Phase 1: Inventory
 - Phase 2: Assessment

Phase 1: Inventory

- There are no personnel qualifications necessary to collect inventory information.
- Effort is focused on locating structures and gathering basic inventory information.
 - Goal is to gather as much relevant information that can be efficiently done by personnel with no technical background.
- WisDOT will provide guidance/direction on collecting the information noted below and will be available to answer questions as needed.
- WisDOT will provide information on identified *possible* structure locations to aid the inventory collection effort.
- Information will be uploaded into the Highway Structures Information System (HSIS), an on-line database used to store all Wisconsin bridge information.

Inventory Items to be Collected

- Name of person completing the inventory
- Date of inventory
- Owner
- County
- Municipality



- Road name
- Number of lanes on structure
- Feature under (waterway, dry terrain, pathway, other)
- Latitude/Longitude
- Location description (distance from an intersection)
- Total structure length
- Structure type (pipe culvert, box culvert, girder bridge, etc.)
- Structure material (concrete, steel, etc.)
- Weight limit (if posted)
- Concerns/photos (Intended to identify any critical issues noticed that should be brought to the immediate attention of the owner)

Phase 2: Assessment

Inspections

- Collect condition information on identified structures.
- Work is done by Wisconsin-certified bridge inspectors and submitted to WisDOT via the Highway Structures Information System (HSIS) application.
- WisDOT will provide guidance/direction on collecting the information noted below and will be available to answer questions as needed.
- Condition information will be based on the National Bridge Inspection (NBI) 0 – 9 scale, commonly used for bridges.
 - 7 – 9: Good condition
 - 5 – 6: Fair condition
 - 3 – 4: Poor condition
 - 0 – 2: Severe condition
- For a bridge-like structure, the inspector will rate the superstructure, substructure, and deck based on the NBI scale noted above.
- For a culvert-like structure, the inspector will record a single rating for the structure based on the NBI scale noted above.
- Inspector to supplement NBI rating with notes and photographs detailing significant findings.
- Other items to be collected during the inspection:
 - Structure geometric measurements – dependent on structure type
 - For culvert-type structures: height, barrel length, number of cells
 - For bridge-like structures: deck width, deck thickness, girder dimensions (if present)
 - Approach roadway width
 - Evidence of flooding, structure inundation
 - Supplement with notes and photographs (as appropriate) to support findings.

Load Rating

- As funding allows, structures will be load rated to verify their capacity to safely carry legal-weight traffic.
 - Only bridge-like structures will be considered for a load rating.
 - Load ratings may be prioritized based on condition.
- Load ratings will be performed by a professional engineer or under the supervision of a professional engineer.
- If capacity is found to be inadequate, the structure is load posted or closed.



Program Funding & Administration

The goal is to distribute funding as equitably and efficiently as possible, based on the number of structures in a given county, city, town, or village.

Inventory

- WisDOT and local owner representatives agree on the following payment structure:
 - Local owners reimbursed \$100 per structure inventory that meet the parameters of the budget item as defined by WisDOT.
- Individual local owners will have three options to collect and submit the inventory information:
 - Use their own staff to collect the required information.
 - Coordinate with their respective County Highway Commissioner to have their county collect the required information.
 - Contract with a private-sector agency to collect the required information.
- Regardless of the resourcing method, inventory information will be sent to the County Highway Commissioners for submittal to WisDOT.
- WisDOT will reimburse County Highway Commissioners based on the number of structure inventories received for their respective county. The County Highway Commissioners will be responsible for distributing those funds to local owners, as applicable.

Assessment: Inspections

- WisDOT and local owner representatives agree on the following payment structure:
 - Reimbursement will be \$350 per structure inspection.
- Options to collect and submit inspection information include:
 - Municipalities with staff certified as bridge inspectors and the capacity to resource the effort may inspect structures in their jurisdiction.
 - County Highway Commissioners with county staff certified as bridge inspectors and the capacity to resource the effort will inspect all local structures within their county.
 - If the County Highway Commissioner does not have certified bridge inspectors on staff or does not have capacity to resource the effort, private sector certified bridge inspectors will be used.
- In the case where municipality staff certified as bridge inspectors are used:
 - WisDOT will reimburse County Highway Commissioners based on the number of structure inspections performed, who will then distribute to the appropriate municipality.
- In the case where county staff certified as bridge inspectors are used:
 - WisDOT will reimburse County Highway Commissioners based on the number of structure inspections performed by their staff and uploaded to HSIS.
- In the cases where private sector certified bridge inspectors are used:
 - The Wisconsin Counties Association (WCA) will coordinate with the other local owner organizations (WCHA, WTA, and WLM) to develop scope and execute contracts with private sector inspectors.
 - WCA et al. will coordinate across county lines to take advantage of economy of scale and most efficiently complete the work.
 - WisDOT will reimburse WCA based on the number of structure inspections performed by consultant inspectors and uploaded to HSIS.



Assessment: Load Rating

- WisDOT will coordinate with local owner representatives to develop specific direction for the load rating effort.
 - Scope of the load rating effort will be dependent on available funding.
- Load rating will be performed by private sector structural engineers.
- Reimbursement for load ratings will be on a lump sum basis.
- It is expected that contracting and reimbursement will be similar to the process described above for private sector inspections.

Program Timeline

Expected timeline for this effort is as follows.

- Inventory phase:
 - Start: Pending Joint Finance Committee approval, the intent is to start as soon as possible.
 - Local owners must decide on resourcing and inform their County Highway Commissioner by April 15, 2024. To recap, options for resourcing are:
 - Use their own staff.
 - Have county staff collect information.
 - Have an executed contract with a private sector agency to perform the inventory work.
 - WCHA will develop and distribute a form for local municipalities to complete indicating their resourcing choice.
 - Complete: By December 31, 2024
 - Work performed and information submitted to the County Highway Commissioner and WisDOT.
- Assessment phase (inspection):
 - Start: No later than January 1, 2025, possibly concurrent with the inventory phase.
 - Municipalities with staff certified as bridge inspectors must decide on resourcing and communicate to their respective County Highway Commissioner by February 1st, 2024.
 - County Highway Commissioners must decide on resourcing and communicate to Wisconsin Counties Association by February 15th, 2024. To recap, options for resourcing are:
 - Use county bridge inspectors to complete all required inspections in their respective county.
 - Use private sector bridge inspectors, with Wisconsin Counties Association (WCA) executing the consultant contract.
 - Complete: Funds must be encumbered for the inspection effort by June 30, 2025.
 - Target December 31, 2025 to complete all inspections.
- Assessment phase (load rating):
 - Start: To be determined, based on available funding.
 - Complete: Funds must be encumbered for the load rating effort by June 30, 2025.