

**OHIO DEPARTMENT OF TRANSPORTATION
CONSULTANT BRIDGE INSPECTION AND INVENTORY
SCOPE OF SERVICES**

General Inspection/Administration Services as Requested

Project Name	D05/D06/D11 SNBI Inspection
PID	119285
Work Description	The consultant will provide bridge inventory and inspection services in Districts 05, 06, and 11. This contract is intended to cover fiscal years 2024, 2025 and 2026.

I. GENERAL REQUIREMENTS

Provide bridge inventory and inspection services in accordance with:

- ODOT Manual of Bridge Inspection, Latest Version
- Ohio Bridge Inventory Coding Guide, Latest Version
- Bridge Inspector’s Reference Manual, FHWA NHI Publication Number: 23-024
- Specifications for the National Bridge Inventory, Latest Version
- The Manual for Bridge Evaluation, Third Edition 2018, AASHTO Publication
- Hydraulic Engineering Circulars 18, 20, 23
- ODOT Bridge Design Manual, Latest Version

II. SCOPE OF WORK

The CONSULTANT may be required to perform the following services on a task order type basis for bridges designated by regulation, or by agreement, as State of Ohio inspection responsibility. Consultants must be prequalified for Level 1 bridge inspection services. Services may include, but are not limited to, the following:

TASK 1. – Review of existing data.

TASK 2. – SNBI TRANSITION

Task 2A – Inventory - The CONSULTANT shall complete the blank data fields in Subsections 2.1, 2.3, 3, etc..., as part of the “SNBI TRANSITION (TEMP)” form. Additionally, more permanent forms are in development and will be available before April 2024. The CONSULTANT shall complete the blank data inventory fields in the new SNBI forms after the forms and fields are made available. The CONSULTANT shall

refer to the Specification for the National Bridge Inventory (SNBI) and AssetWise for details.

Task 2B – Inspection - CONSULTANT shall perform a routine field inspection of the structure to determine the general condition. This task includes Condition Rating Inspection and Element Level Inspection. The consultant shall probe the channel around the footing in water to determine depth of scour and report the date in AssetWise. The CONSULTANT shall complete the blank data fields in Subsections 7.1 and, if the bridge is Posted weight restriction, complete Subsection 5.3 in the “SNBI TRANSITION (TEMP)” form. Additionally, more permanent forms are in development and will be available before April 2024. The CONSULTANT shall complete the blank data inventory fields in the new SNBI forms after the forms and fields are made available. The CONSULTANT shall refer to the Specification for the National Bridge Inventory (SNBI) and AssetWise for detail.

TASK 3 – SNBI SCOUR TASKS

Task 3A – Scour Assessment - The CONSULTANT shall refer to the most recent ODOT Manual of Bridge Inspection, Addendum 5. Deliverables include field notes, a completed Scour Critical Assessment documented in AssetWise, and any other reference material needed for the bridge owner to properly maintain their bridge files. A Level 2 or Level 3 Assessment, Channel photos, or cross sections may be tasked under this item if assigned.

Task 3B - Scour Plan-of-Action - The CONSULTANT shall refer to the most recent ODOT Manual of Bridge Inspection, Appendix H for the scope of this task. Deliverables include a completed Scour Plan-of-Action, field notes, calculations, and any other reference material needed by bridge owner to maintain bridge files.

TASK 4 – BRIDGE INSPECTION

Task 4A Routine Bridge Inspection – Perform a routine field inspection of the structure to determine the general condition. Note: This inspection does not include underwater inspection or soundings to determine scour. This task may include training ODOT staff on bridge inspection practices. The consultant shall refer to the most recent ODOT Manual of bridge Inspection for additional details on the scope of this task.

Task 4B – Fracture Critical Inspection – Perform a fracture critical field inspection of fracture critical items. The Consultant shall update the FCM inspection procedure with current photos and descriptions. The Consultant shall refer to the most recent ODOT Manual of Bridge Inspection for additional details on the scope of this task.

Consultant Bridge Inspection Requirements

1. The intent of this contract is for a Professional Engineer (Consultant) to make an in-depth (unless routine, Element Level, and/or fracture critical is specified) condition inspection of the noted bridge(s). The Consultant will complete the inspection in accordance with the latest Ohio Department of Transportation (ODOT) Manual of Bridge Inspection including more recent Addendums and FHWA’s Bridge Inspector’s Reference Manual (FHWA). Note that when the previous inspection report contains Element Level data, an Element Level inspection shall be

- performed, and values updated.
2. The State of Ohio may delete, or postpone, the inspection of a bridge from the contract up until the time that the physical inspection begins.
 3. The Consultant shall be responsible to provide all necessary traffic control, including traffic control plans (unless otherwise specified), personnel, equipment, tools, and incidentals, including ladders and scaffolding to access to all portions of the site. (The Consultant is only required to provide traffic control plans as necessary to obtain a permit. These bridges are inspected every year, and existing traffic control plans from prior years' permits are available and are allowed to be resubmitted for the permit for this inspection.)
 4. All subconsultants used in the inspection shall be named in the proposal so that they can be approved as a sub-consultant at the time of the agreement.
 5. The Consultant will not be responsible for structural conditions which occur after the date of the last site visit, providing the condition was not visibly evident at the time of the last visit, and the Consultant used usual and customary procedures to inspect the bridge.
 6. Any steel structure with lower lateral bracing, pins and hangers, fatigue prone connections, steel pier caps (either of box section or I section), bridges with transverse floor beams and stringers, or any other unusual connection details, shall be carefully inspected for cracks, poorly designed details, or poorly fabricated details. A recommendation shall be made, if necessary, whether a retrofit program or corrective modification should be taken with a description of the proposed solution, and if any traffic limitations should be initiated. Adequate access shall be provided so that all such details can be visually inspected within arm's reach (even for routine inspections).
 7. Any observed section loss on members which are normally analyzed to determine safe load capacity of the bridge, shall be measured and documented quantitatively (ultrasonic thickness gauge, calipers etc.) to allow for subsequent re-analysis of the structure. Analysis of the structure will not be required of the Consultant unless specifically stated in the S.O.S. minutes.
 8. The Consultant will not be responsible for conditions which are not obvious through usual and customary visual inspection or through standard state-of-the-art testing. The Consultant will not be responsible for identifying and evaluating portions of the bridge which comprise of poor-quality materials and/or inadequate structural design, unless obviously visible to a trained and experienced bridge inspector/engineer performing the inspection services, in accordance with the customary standards of the profession.
 9. Underwater inspection, requiring the use of divers, shall not be required unless specifically stated in the S.O.S. minutes. The Consultant will be required to probe around all substructure units located in water, unless the stream velocity or depth is such that probing is not feasible. All such findings shall be reported. The consultant will be required to complete or revise the Underwater Dive Inspection Procedure Checklist on file such that all UW inspection elements are identified, the inspection frequency is identified, inspection procedures are identified, and all underwater elements are inspected according to those procedures.
 10. If a Fracture Critical Inspection is specified, the Consultant must perform a hands-on inspection of all FCM's on both sides of the steel member. This inspection cannot be replaced with a drone.
 11. If an in-depth inspection is specified, the Consultant will be required to visually inspect all main structural members of the bridge within an arm's reach distance. On welded girder type bridges, this will require access to both sides of each girder so that all fatigue prone connections can be inspected within arm's reach. Any cracks discovered, and/or suspected, as a result of this hands-on visual inspection, shall be documented and further defined with the use of dye penetrant, magnetic particle or ultrasonic devices.
 - a. If an in-depth inspection is being performed, all unsound concrete shall be delineated by sounding, unless stated otherwise. All unsound areas shall be measured and reported in square feet of surface area. Coring or other means of testing shall not be done, unless specifically stated in the S.O.S. meeting.
 12. Destructive Testing
 - a. Any additional destructive testing, other than that previously mentioned, shall not be

- done, unless specifically stated in the S.O.S. meeting.
 - b. Where, in the judgment of the Consultant, it is necessary to remove some portion of the structure to achieve complete and adequate inspection, no action shall be taken without prior approval of the District Bridge Engineer.
13. Report Deliverables:
- a. The Consultant shall be responsible for identifying and noting all visible defects in the bridge, whether because of deterioration, original construction, or original design. The Consultant shall also be responsible for identifying and noting areas of potential failure because of anticipated deterioration, past construction or maintenance practice, and/or inadequate original design. AssetWise is the Department's preferred method for consultants to directly update inspection and inventory data. This, however, is at the discretion of each ODOT project manager, and consultants may instead provide a written PDF report for ODOT to enter inspection dates and data. Specific report structure, drawings, and inspection findings must be discussed and agreed upon during the SOS meeting.
 - b. AssetWise
 - i. When ASSETWISE Access is required, the consultant must obtain usernames, passwords, bridge-access for all team leaders. All data, commentary, and files relevant to the bridge(s) inspected must be input in accordance with the Manual of Bridge Inspection including more recent Addendums. AssetWise Access requests are made through the AssetWise Landing Page: [AssetWise | Ohio Department of Transportation](#)
 - ii. The consultant shall incorporate the photographs within the report (not at the Asset Level) assigned within the bridge sub-units (ex. Deck Photos, Superstructure Photos). All photographs shall be dated and labeled to indicate the precise day, location, and view in which they were taken.
 - iii. The ODOT Bridge Inspection Report shall be filled out for each bridge inspected in ODOT's AssetWise unless specified otherwise. Photos, notes, and sketches shall be updated on elements within the scope of the inspection and added to ASSETWISE. The notes and numbers in all other sections of the inspection, filled out in the previous schedule inspection, not within the scope of the consultant's inspection, shall not be deleted, and shall remain unchanged, unless specifically permitted by the District Bridge Engineer, on a case-by-case basis. Final report approval shall be made by the Consultant P.E. The District Bridge Engineer must be permitted time to review any changes prior to final approval. The report shall be in accordance with the Manual of Bridge Inspection (ODOT). The consultant shall insert inspection data, photographs, maintenance recommendations, and condition narrative into ASSETWISE for the District Bridge Engineer to review prior to final approval.
 - iv. The consultant shall notify the District Bridge Engineer, as soon as practical, that the physical field inspection of the structure is complete. The Consultant shall approve the final report in ASSETWISE after the District Bridge Engineer has reviewed any changes. The approval shall occur upon whichever happens first:
 - 1. within 90 days of the field inspection, or
 - 2. February 14th the following year.
14. Notification:
- a. The Consultant shall notify the District Bridge Engineer, at least two weeks in advance of the start of the actual inspection, to allow scheduling of the required traffic control operations, at the periods mutually agreed upon by the Consultant and the District; to inform the local authorities involved of the dates of the inspection; and to obtain any

necessary right of entry for the Consultant. In some cases, as noted in the special provisions, the Consultant may be required to provide traffic control, notify involved local authorities, and obtain the necessary right of entry. In all cases, the consultant must notify the District Bridge Department when the Consultant intends to begin the inspection, **each day** the Consultant is on the job, and when the Consultant is finished.

- b. The Consultant shall notify the District Bridge Engineer of any, and all, serious deficiencies immediately upon disclosure, in order that they may be observed by the Department from available scaffolding, or access equipment. A phone call with follow-up email and photographs is preferred. A communication plan should be discussed during the SOS. After completion of the inspection, the Consultant's Professional Engineer must review areas of special concern with field personnel and District Bridge personnel at the site. Serious deficiencies include, but are not limited to, loose concrete over traffic, reduction in safe load capacity, advanced scour or undermining, and rapid changes in expected condition.
- c. The consultant will inform the District Bridge Engineer of the work location, number of personnel, any lane closures, the type of equipment, start and finish times, as well as the number of anticipated working hours the consultant will spend at the site that day.
- d. The consultant will update the Department as to any changes from the previous day's call, if the consultant left early, or stayed later than originally intended.
- e. At the completion of physical inspection, the consultant shall provide a spreadsheet with all the above information for each day out at the bridge. (The consultant will be given a number to call to leave a message with the information prior to the first day of inspection). This information will be used to keep local law enforcement apprised of who is out at the bridge, and to help estimate inspection costs for future inspection contract tasks. (It will not affect the cost of the agreed to, for this contract.)

15. All invoices for inspection services shall be submitted to the District Contract Manager for processing.

The State and Consultant agree that the Work to be performed for the bridge inspection, including the field work for each specific bridge included in the Agreement, shall commence, and be completed, within the same calendar year (March 1 to December 1). It is not the intent of the State to require the Consultant to perform field work for the bridge inspection during the months of December, January, and February. However, if unusual circumstances arise, the Consultant may agree to perform the required field work during this period, upon verbal authorization by the District Bridge Engineer, for a bridge inspection which has been previously authorized by the Director.

The State and the Consultant agree that inclement weather conditions will not be cause for an adjustment to the completion time established in the Agreement.