

POSITION DESCRIPTION

This position description serves as the official classification document of record for this position. Please complete the information as accurately as you can as the position description is used to determine the proper classification of the position.	
2. Employee's Name (Last, First, M.I.)	8. Department/Agency TRANSPORTATION CENTRAL OFFICE
3. Employee Identification Number	9. Bureau (Institution, Board, or Commission) Bridges and Structures
4. Civil Service Position Code Description Transportation Eng Lic Spl 2	10. Division Structure Project
5. Working Title (What the agency calls the position) Structures Analysis Project Manager	11. Section Structure Construction
6. Name and Position Code Description of Direct Supervisor VACANT; ENGINEER MANAGER LICENSED-3; LIPTAK, RICHARD E; ENGINEER MANAGER LICENSED-4 (INTERIM)	12. Unit Structural Investigation and Testing Unit
7. Name and Position Code Description of Second Level Supervisor LIPTAK, RICHARD E; ENGINEER MANAGER LICENSED-4	13. Work Location (City and Address)/Hours of Work 8885 Ricks Rd. Dimondale, MI. 48917 / 7:30-4:30 (Hours may vary)
14. General Summary of Function/Purpose of Position The Bureau of Bridges and Structures (BOBS) serves as the subject matter experts for the structural integrity of state-owned bridges. This position functions as the statewide specialist performing testing and evaluation on critical, unique, or structurally significant bridges, culverts, and ancillary assets (e.g., major or fracture critical bridges with high structural consequence, structures requiring emergency response, etc.). Serve as the Project Manager for testing and investigation consultant contracts. Perform Quality Control and Quality Assurance in order to ensure that testing and evaluation are completed in compliance with the National Bridge Inspection Standards (NBIS), Specifications for the National Bridge Inventory (SNBI), and the Michigan Ancillary Structure Inspection Manual (MiASIM). Conduct liaison activities with industry representatives or suppliers pertaining to analysis or testing using non-destructive evaluation. This position requires possession of a valid driver's license to perform structure field inspections.	

15. Please describe the assigned duties, percent of time spent performing each duty, and what is done to complete each duty.

List the duties from most important to least important. The total percentage of all duties performed must equal 100 percent.

Duty 1

General Summary:

Percentage: 40

Function as the statewide specialist performing testing and evaluation on critical, unique, or structurally significant bridges, culverts and ancillary structures.

This duty requires possession of a valid driver's license to perform structure field inspections.

Individual tasks related to the duty:

- Serve as a technical expert to internal staff and external partners providing testing plan development and guidance ensuring the structural integrity of the asset and statewide alignment.
- Travel statewide to structure field inspections to perform research, investigations and testing of structures to assess condition performance and structural integrity.
- Perform complex analysis of bridges, culverts and ancillary structures, using data collected using advanced methods, including but not limited to: weigh in motion testing, ultrasonic testing (UT), magnetic particle testing, dye penetrant testing, infrared thermography (IR), ground penetrating radar (GPR), lidar, out-of-plane distortion of culverts, stream depth and/or scour sensors, culvert videotaping, observation of monitoring wells, and earthborn vibration analysis.
- Develop finite element models to analyze bridges, culverts and ancillary structures for situations not covered by standard methods.
- Install and manage real time structural health monitoring systems.
- Perform emergency response testing after accidents, extreme weather, or observed distress.
- Perform short- and long-term monitoring of bridges, culverts and ancillary structures, including but not limited to: tilt monitoring, embedded sensors for complex bridges, strain measuring, and scour.
- Utilize advanced diagnostic technologies and methods (e.g., remote vehicles, photogrammetry, UT, IR, GPR, etc.) to identify structural deficiencies or anomalies.
- Review testing data collected by others (researchers, consultants, in-house technicians) and make recommendations based on the findings.
- Research and review applicable laws and manuals to create/modify guidance documents to ensure decisions made are consistent statewide.
- Review, prepare, analyze, interpret, and complete reports for accuracy and provide recommendations.
- Perform inspections according to the Michigan Structure Inspection Manual and Michigan Ancillary Structure Inspection Manual.
- Ensure all testing activities are performed in a manner that protects the safety of personnel, the public, and the structural integrity of the assets being evaluated.
- Maintain detailed records of testing procedures, data, and conclusions in accordance with MDOT standards and documentation requirements.
- Take material samples for testing.
- Support testing on low/moderate/high risk bridges and ancillary assets as needed.

Duty 2

General Summary:

Percentage: 30

Serve as the Project Manager for testing and investigation consultant contracts.

Individual tasks related to the duty:

- Administer the testing and investigation consultant contracts within the unit as the technical expert.
- Determine and prioritize specific tasks needed to achieve established unit objectives and goals, ensuring the delivery of actionable, data-driven outcomes that support bridge owners in decision-making and asset management.
- Develop scope of services for consultant contracts.
- Lead and participate in consultant selection processes, including the review and evaluation of scopes of services through final selection.
- Review price proposals with selected consultant and coordinate negotiations.
- Review and approve payment, invoices, and progress reports and make recommendations for payment of services completed.
- Compile and maintain all vendor contract records.
- Coordinate and track Data Sharing Agreements for vendor contracts.

- Review and evaluate work prepared by contract consultants to ensure compliance with specifications, policies, and standards of MDOT.
- Prepare an evaluation of the Consultant's performance on the project. This includes assembling intermediate performance documents that were developed during the project process. This includes any subconsultants.
- Represent MDOT in building positive working relationships with consultant partners.
- Perform technical reviews and issue final approval of project plans and specifications to ensure full compliance with MDOT standards and requirements.
- Program jobs in JobNet, make change requests as necessary and submit in Phase Initiator (PI) as required.

Duty 3

General Summary:

Percentage: 15

Perform Quality Control and Quality Assurance in order to ensure testing and evaluation are completed in compliance with the NBIS, Specifications for the SNBI, and the MiASIM.

Individual tasks related to the duty:

- Provide technical expertise and guidance to Region and Bureau personnel relative to non-destructive testing (NDT) and evaluation using NDT data, and the associated costs of these techniques and alternatives.
- Review NDT results for reasonableness and compliance with all Federal and State laws and guidelines.
- Perform Quality Assurance review on NDT data and analysis performed by consultants or universities.
- Perform Quality Control review on NDT data and analysis performed by MDOT staff.
- Review request for action (RFA) analysis completed by other engineers.
- Research current and developing NDE testing and analysis devices, analysis techniques and methodologies.
- Research and analyze any new regulations, standards, equipment, and guidelines that pertain to nondestructive evaluation (NDE) testing and analysis.
- Develop and distribute advisories and other technical guidance pertaining to NDE testing and analysis.

Duty 4

General Summary:

Percentage: 10

Conduct liaison activities with industry representatives or suppliers pertaining to analysis or testing using non-destructive evaluation.

Individual tasks related to the duty:

- Participate on research advisory panels.
- Participate in special studies and prepare technical reports as assigned.
- Investigate emerging technologies for testing and evaluation of structures.
- Perform pilot investigations using innovative technologies.
- Evaluate and recommend use of innovative technologies.
- Develop plans to incorporate innovative technologies into standard practice.
- Participate in the Structures Community of Learning.

Duty 5

General Summary:

Percentage: 5

Other duties as assigned.

Individual tasks related to the duty:

- Attend meetings related to bridge and ancillary program development including, but not limited to, meetings with internal stakeholders, statewide groups, meetings with industry partners, and bi-weekly staff meetings.
- Participate in unit led training activities and deployment of innovative tools and concepts.
- Perform other duties as needed.

16. Describe the types of decisions made independently in this position and tell who or what is affected by those decisions.

The position provides direction to crews statewide that impact the work performed on bridges, culverts and ancillary structures. The position discerns and uses independent judgement to keep the Program Manager apprised issues with bridges, culverts and ancillary structures within dynamic situations. Decisions to close a roadway to traffic due to risk to public safety.

17. Describe the types of decisions that require the supervisor's review.

Unique situations with no past policy or when policy is unclear. Assistance in mitigating controversy. When issues are found in the QA/QC process.

18. What kind of physical effort is used to perform this job? What environmental conditions in this position physically exposed to on the job? Indicate the amount of time and intensity of each activity and condition. Refer to instructions.

This position requires occasional statewide travel and periodic out of state travel for periods of time up to several days as well as travel to attend meetings, project locations, or other work-related activities. The position requires performing inspections in the field which may include exposure to outdoor weather elements, traversing various types of terrain, working from ladders, an aerial bucket, or traversing under culverts, over water, wading in water to probe footings, and continually working near heavy traffic. Must be able to wear personal protective equipment. Ability to operate a computer. Position may require availability outside normal working hours based on operational needs. This position requires possession of a valid driver's license.

19. List the names and position code descriptions of each classified employee whom this position immediately supervises or oversees on a full-time, on-going basis.

Additional Subordinates

20. This position's responsibilities for the above-listed employees includes the following (check as many as apply):

- | | |
|---|--|
| <input type="checkbox"/> Complete and sign service ratings. | <input type="checkbox"/> Assign work. |
| <input type="checkbox"/> Provide formal written counseling. | <input type="checkbox"/> Approve work. |
| <input type="checkbox"/> Approve leave requests. | <input type="checkbox"/> Review work. |
| <input type="checkbox"/> Approve time and attendance. | <input type="checkbox"/> Provide guidance on work methods. |
| <input type="checkbox"/> Orally reprimand. | <input type="checkbox"/> Train employees in the work. |

22. Do you agree with the responses for items 1 through 20? If not, which items do you disagree with and why?

Yes

23. What are the essential functions of this position?

The Bureau of Bridges and Structures (BOBS) serves as the subject matter experts for the structural integrity of state-owned bridges. This position functions as the statewide specialist performing testing and evaluation on critical, unique, or structurally significant bridges, culverts, and ancillary assets (e.g., major or fracture critical bridges with high structural consequence, structures requiring emergency response, etc.). Serve as the Project Manager for testing and investigation consultant contracts. Perform Quality Control and Quality Assurance in order to ensure that testing and evaluation are completed in compliance with the National Bridge Inspection Standards (NBIS), Specifications for the National Bridge Inventory (SNBI), and the Michigan Ancillary Structure Inspection Manual (MiASIM). Conduct liaison activities with industry representatives or suppliers pertaining to analysis or testing using non-destructive evaluation. This position requires possession of a valid driver's license to perform structure field inspections.

24. Indicate specifically how the position's duties and responsibilities have changed since the position was last reviewed.

25. What is the function of the work area and how does this position fit into that function?

The function of the work area is to provide research, testing, and evaluation support for the owners of bridges, culverts and ancillary structures. This position functions as the statewide specialist performing testing and evaluation on critical, unique, or structurally significant bridges, culverts, and ancillary assets (e.g., major or fracture critical bridges with high structural consequence, structures requiring emergency response, etc.).

26. What are the minimum education and experience qualifications needed to perform the essential functions of this position.

EDUCATION:

Possession of a bachelor of science degree in engineering.

EXPERIENCE:

Transportation Engineering Licensed Specialist 13

Four years of professional experience equivalent to a Transportation Engineer, including two years equivalent to a

Transportation Engineer P11 or one year equivalent to a Transportation Engineer 12 or Transportation Engineer Licensed 12.

KNOWLEDGE, SKILLS, AND ABILITIES:

Knowledge of:

- Engineering principles and practices used in the inspection, monitoring, testing, and analysis of bridges, culverts and ancillary structures.
- Finite Element Software.
- Bridge load rating and the Federal and State requirements for the load rating of bridges.
- Structural analysis and design.
- Non-Destructive Testing Techniques.

Ability to:

- Instruct others and communicate with others effectively.
- Promote and maintain favorable relations.
- Make mathematical computations.
- Interpret non-destructive testing data.
- Interpret engineering plans, specifications, and technical reports.
- Maintain records and prepare reports and correspondence related to the duties.

CERTIFICATES, LICENSES, REGISTRATIONS:

Possession of a valid driver's license is required and must maintain throughout employment in this position.

Possession of a registered professional engineering license as required by the State of Michigan and must maintain throughout employment in this position.

NOTE: Civil Service approval does not constitute agreement with or acceptance of the desired qualifications of this position.

I certify that the information presented in this position description provides a complete and accurate depiction of the duties and responsibilities assigned to this position.

Supervisor

Date

TO BE FILLED OUT BY APPOINTING AUTHORITY

Indicate any exceptions or additions to the statements of employee or supervisors.

N/A

I certify that the entries on these pages are accurate and complete.

LOGAN BRISTOL

6/4/2026

Appointing Authority

Date

I certify that the information presented in this position description provides a complete and accurate depiction of the duties and responsibilities assigned to this position.

Employee

Date

