

## 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.	
<b>2. Employee's Name (Last, First, M.I.)</b>	<b>8. Department/Agency</b> TRANSPORTATION CENTRAL OFFICE
<b>3. Employee Identification Number</b>	<b>9. Bureau (Institution, Board, or Commission)</b> Highway Operations
<b>4. Civil Service Position Code Description</b> Transportation Engineer-A	<b>10. Division</b> Metro Region
<b>5. Working Title (What the agency calls the position)</b> QTL Bridge Inspector	<b>11. Section</b> Development
<b>6. Name and Position Code Description of Direct Supervisor</b> LEMIEUX, TYLER C; ENGINEER MANAGER LICENSED-3	<b>12. Unit</b> Region Bridge
<b>7. Name and Position Code Description of Second Level Supervisor</b> ZABEL, MARJORIE E; ENGINEER MANAGER LICENSED-4	<b>13. Work Location (City and Address)/Hours of Work</b> 18101 W. Nine Mile Rd., Southfield MI 48075 / 7:30-4:30 Mon-Fri (hours may vary)
<b>14. General Summary of Function/Purpose of Position</b>	
<p>This is an advanced level position that functions as a Qualified Team Leader (QTL) Bridge Inspector that performs inspection of bridges and culverts in the Region in compliance with State and Federal Highway Administration (FHWA) regulations. Responsibilities include conducting field inspections with a focus on extensive detail (i.e., in-depth inspections, bridge scoping) and/or complex structures (i.e., curved steel beams, trusses), making independent engineering judgments and decisions, preparing inspection reports, participating in bridge scoping, Call for Projects, Quality Control (QC) and Quality Assurance (QA), and Bridge Network Asset Management. This position is required to respond to emergencies.</p> <p>The duties of this position require the incumbent to operate a vehicle and/or vehicle trailer combination (i.e., aerial lift truck and ¾ ton pickup with boat trailer) with a Gross Vehicle Weight Rating (GVWR) of between 10,001 and 26,000 pounds when performing hands-on inspection of beam ends, deck bottom, etc. and when performing inspections on bridges over water.</p>	

**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: 60**

Function as a QTL performing bridge and culvert inspections with a focus on extensive detail and/or complex structures in accordance with applicable State and Federal regulations and making independent engineering judgements and decisions.

This duty requires operating a vehicle or vehicle/trailer combination with a GVWR of between 10,001 and 26,0000 pounds.

**Individual tasks related to the duty:**

- Perform bridge and culvert inspections by reviewing and completing the Bridge Safety Inspection Report or relying on the information provided to them from the Transportation Maintenance Worker (TMW) 9 or Transportation Engineer 9-P11's completed Bridge Safety Inspection Report.
- Develop the monthly/annual inspection schedule and organize the necessary equipment for inspections.
- Based on visual observations, evaluate the existing condition of bridges and culverts in accordance with the National Bridge Inspection Standards and MDOT bridge inspection policies.
- Document complex field observations reflecting the existing bridge condition on electronic and paper forms such as detailed inspection reports, BSIR, CSIR, Element Inspection Data, and the Structure Inventory & Appraisal form.
- Provide maintenance work crew recommendations for region special crews and designate the appropriate priority.
- After construction or maintenance is performed on a structure, conduct an inventory inspection by collaborating with construction inspector or maintenance work crew.
- Monitor, evaluate, and report on the performance of maintenance and rehabilitation activities to ensure quality and the desired objectives.
- Utilize department computer programs such as MiBridge, JobNet, SMART, and others to input inspections and manage the region bridge inventory.
- Assist statewide crew with fracture critical, fatigue sensitive or detailed inspections.

**Duty 2**

**General Summary:**

**Percentage: 10**

Responsible for working with the Region Bridge Engineer to identify needs, prioritize needs, and recommend potential maintenance, rehabilitation, or replacement activities for the Call for Projects (CFP) submittal by evaluating inspection data obtained to determine appropriate scopes of work for bridges and culverts. Participate in Statewide/Region strategy for bridge network improvement.

**Individual tasks related to the duty:**

- Evaluate the Bridge Safety Inspection Report findings to analyze the safety condition of the structures in accordance with applicable State and Federal regulations and develop the extensive Bridge Scoping Package using risk-based decision making and coordinating with other assets including utilities and environmental impacts.
- Identify the primary goals of the projects based on the Bridge Safety Inspection Report and determine appropriate repairs/replacement and cost estimates based on the condition of the Bridge.
- Work with Lansing, Region, and TSC staff to produce scoping documents consistent with the current MDOT format for bridge scoping.
- Work with the Region Bridge Engineer to identify needs, prioritize needs, and recommend potential maintenance, rehabilitation, or replacement activities for the CFP submittal by evaluating inspection data obtained to determine appropriate scopes of work for bridges and culverts.
- Participate in Statewide/Region strategy for bridge network improvement.
- Create and submit project concept statements to reflect accepted repair procedures.
- During the conceptual and scoping phases of a project; work with TSC, Region, and Lansing staff including the lead project manager, systems managers, systems specialists, and functional areas' specialists to help determine project scope, costs, and schedule.
- Assist with analyzing data to document how the Region is meeting or attempting to meet the strategic direction set by the department with respect to asset management.
- Based on strategies identified in CFP, develop potential list of structures for future scoping needs.

**Duty 3**

**General Summary:**

**Percentage: 10**

Responsible for leading, developing, and/or participating in the Region's bridge safety inspection QA/QC monitoring program and investigating, evaluating, and reporting on the actual condition of structures within the Region with requirements outlined in applicable State and Federal regulations and recommending changes to ensure MDOT maintains the highest quality structures.

**Individual tasks related to the duty:**

- Lead, develop, and/or participate in the Region's bridge safety inspection QC/QA monitoring program and investigate, evaluate, and report on the actual condition of structures within the Region with requirements outlined in applicable State and Federal regulations and recommending changes to ensure MDOT maintains the highest quality structures.
- Serve as part of the QA program by ensuring that the QC checks are completed and if applicable, investigate issues that need followed up on.
- Participate in the statewide bridge safety inspection QC/QA monitoring program.
- Conduct data quality checks on the Regions bridges.

**Duty 4**

**General Summary:**

**Percentage: 10**

Responsible for working with the Region Bridge Engineer to assist in the development of the Region's annual bridge program by identifying needs, prioritizing needs, and recommending potential maintenance, rehabilitation, or replacement activities to meet MDOT's strategies for bridges. Monitors, evaluates, and reports on the performance of maintenance and rehabilitation activities to ensure quality and the desired objectives.

**Individual tasks related to the duty:**

- Using technical knowledge relative to the maintenance and rehabilitation of bridge and culvert repairs, assist in the development of the region's annual bridge program by identifying needs, prioritizing needs, and recommending potential maintenance, rehabilitation, or replacement activities to meet MDOT's strategies for bridges.
- Establish and maintain a prioritized bridge maintenance list, communication with region bridge crews, and resolve issues encountered during maintenance work.
- Coordinate maintenance work activities with the TSCs, Region, and Statewide personnel.
- Lead the implementation of the region's Capital Scheduled Maintenance bridge program and the development and prioritization of the annual bridge crews' maintenance work plan.
- Adapt the Region bridge program based on changing funding, schedule, or corridor needs by providing final recommendations to the Region Bridge Engineer.
- Document and archive complex data collected during the field inspections.
- Review database for accuracy and revise data, if necessary.
- Upload field information to regional and statewide database systems.
- Generated standard reports and create specialized reports for the region engineer, region bridge engineer, and the statewide bridge systems manager.
- Participate in the annual inspection calibration meeting, as well as region inspection team meetings to incorporate the latest standards and techniques; and maintain a current working knowledge of the inspection program.

**Duty 5**

**General Summary:**

**Percentage: 10**

Perform other duties as assigned.

**Individual tasks related to the duty:**

- Attend necessary training to maintain bridge inspection qualifications.
- Attend meetings as necessary.
- Perform other duties as assigned.

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

As a QTL, independently perform inspections within FHWA guidelines to ensure public safety, document repair recommendations and follow up on recommendations as necessary to promote public safety, determine the extent of bridge damage caused by vehicles, extent of scour during a storm event, and/or structural stability due to corrosion, and plan of action for each event.

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

When changes in policy are required. When issues are found in the QC process. When Immediate follow-up is necessary.

**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 region wide travel and occasional statewide travel. The job also requires working from aerial buckets, ladders, and boats; the ability to work at heights up to 200 feet requiring the use of a bucket truck and/or scaffolding (rarely) or safety harnesses under or alongside the structure while performing bridge maintenance activities; and the ability to climb under bridges, over water, wading in water to probe footings, and continually working near heavy traffic. Must be able to lift and carry up to 100 pounds, which occurs daily and requires good physical conditioning and agility. Ability to sustain long periods in confined spaces; wear adequate personal protective equipment; and sustain extensive and repetitive twisting, bending, climbing, lifting, and squatting. Ability to traverse rough terrain and be exposed to outdoor weather elements. Exposure to hazardous materials. Position may require availability outside normal working hours based on operational needs.

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

This is an advanced level position that functions as a QTL Bridge Inspector that performs inspection of bridges and culverts in the Region in compliance with State and FHWA regulations. Responsibilities include conducting field inspections with a focus on extensive detail (i.e., in-depth inspections, bridge scoping) and/or complex structures (i.e., curved steel beams, trusses), making independent engineering judgments and decisions, preparing inspection reports, participating in bridge scoping, Call for Projects, QC and QA, and Bridge Network Asset Management. This position is required to respond to emergencies.

**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 inspect bridges and culverts within a geographical area to manage and ensure structural integrity. This requires the inspection and recording of the information to be used for assessing existing condition and identifying future maintenance and construction work. This position is responsible for performing the physical field inspections on bridges and culverts, determining the proposed scope of work as part of the CFP, participating in the Region's bridge safety inspection QC/QA Monitoring Program and in Bridge Network Asset Management.

**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 Engineer 12**

Three years of professional engineering experience involved in transportation systems and programs equivalent to a Transportation Engineer, including one year equivalent to a Transportation Engineer P11.

**Alternate Education and Experience**

**Transportation Engineer 9 - 12**

Possession of a registered professional engineer license as required by the State of Michigan may be substituted for 6 months of experience at the Transportation Engineer 9-12 levels. This substitution may only be used once for any employee for qualification of appointment or early reclassification.

**KNOWLEDGE, SKILLS, AND ABILITIES:**

- Knowledge of:
  - Bridge and culvert elements.
  - Good written and oral communication skills.
  - Mathematical skills for measuring and computing information.
  - Organizational skills.
- Ability to:
  - Make decisions regarding structural integrity necessary to promote the safety of the motoring public and fellow employees.
  - Work effectively with others as a team
  - Use computers/various software applications.
  - Determine priorities and maintain favorable public relations.
  - Serve as an expert witness in court.

**CERTIFICATES, LICENSES, REGISTRATIONS:**

- Subclass Code: CMVOSSP – A safety-sensitive position in which the employee is required to operate a commercial motor vehicle with a GVWR of between 10,001 and 26,000 pounds.
- Possession of a valid driver’s license.
- Possess status as a Qualified Team Leader. QTL status includes:
  - Successful completion of NHI-130055 Safety Inspection of In-Service Bridges course.
  - Successful completion of 18 hours of approved bridge inspection recurrent training over the last 5 years.
  - Successful completion of the Field Proficiency Exam in the last 2 years.

*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.***

STACI ERICKSON 4/25/2024

\_\_\_\_\_

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