

**State of Michigan
Civil Service Commission**
Capitol Commons Center, P.O. Box 30002
Lansing, MI 48909

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| Position Code 1. TRAENGAF22R |
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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.

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|-----------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------|
| 2. Employee's Name (Last, First, M.I.) | 8. Department/Agency TRANSPORTATION CENTRAL OFFICE |
| 3. Employee Identification Number | 9. Bureau (Institution, Board, or Commission) Bureau of Bridges and Structures |
| 4. Civil Service Position Code Description Transportation Engineer-A | 10. Division Structure Preservation and Management |
| 5. Working Title (What the agency calls the position) Maintenance Structures Engineer | 11. Section Structure Preservation |
| 6. Name and Position Code Description of Direct Supervisor CREISHER, JACOB D; ENGINEER MANAGER LICENSED-3 | 12. Unit Statewide Region Support |
| 7. Name and Position Code Description of Second Level Supervisor ZAKRZEWSKI, BRIAN D; ENGINEER MANAGER LICENSED-4 | 13. Work Location (City and Address)/Hours of Work 6333 Lansing Road, Lansing, MI 48917 / M-T; 7a.m. - 5:30p.m. (hours may vary) |

14. General Summary of Function/Purpose of Position

The Bureau of Bridges and Structures (BOBS) serve as the statewide structural authority for MDOT owned bridges, culverts, and special structures. The Statewide Region Support Unit provides active preservation efficiently and innovatively for our State of Michigan structural assets throughout the state. This position functions as the recognized resource structures engineer for the Michigan Department of Transportation (MDOT's) Statewide Region Support Unit providing statewide bridge maintenance program support, guidance, and engineering services for the 7 MDOT regions, contract agencies, local agencies, statewide region support unit, and bridge authorities and participating inspection, evaluation, and documentation of culvert maintenance repairs. This position also reviews and provides recommendations for developing necessary documents required for statewide alignment in bridge maintenance and preservation. This position requires statewide travel with overnight stays to various statewide jobsites.

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: 50

Serves as the recognized resource structures engineer providing statewide bridge maintenance program support, guidance, and engineering services for the 7 MDOT regions, contract agencies, local agencies, and bridge authorities. Bridge maintenance includes but is not limited to pressure relief joints (PRJ) which prevent the development of excessive compressive stress, pourable bridge joints, expansion joint device replacement, torn expansion joint gland replacement, bridge deck penetrating crack sealers, silane applications, and other waterproofing treatments, thin epoxy overlay preparation and installation, and shallow to deep concrete deck patches with concrete or other polymer concrete material.

Individual tasks related to the duty:

- Travel statewide to provide field reviews of maintenance activities by providing engineering expertise regarding the type of repair being done to ensure compliance with standards and further guarantee the structural integrity and durability of the repair over time (e.g., ensures correct process applied based on the specific material type as different materials require distinct processes).
- Conduct in house bridge maintenance Request for Action (RFA) activities when needed by providing engineering expertise regarding the type of repair being done to ensure compliance with standards and further guarantee the structural integrity and durability of the repair over time.
- Research and develop documentation on bridge preventative maintenance strategies and nationally recognized best practices to inform and enhance internal policies or procedural updates.
- Interpret state, federal, and local statutes governing bridge maintenance, construction, and mobility to ensure regulatory compliance and guide strategic decision-making.
- Collaborate with region bridge units to troubleshoot maintenance challenges, applying engineering principles to resolve technical issues effectively.
- Support performance measurement initiatives by compiling and validating data through photographic evidence, detailed written reports, spreadsheets, and geospatial analysis using ArcGIS, ensuring accurate evaluation of bridge maintenance programs.
- Provide quality control review of Region Specialty Bridge crews, contract agencies, and local agencies engaged in bridge maintenance tasks.
- Address training needs with region bridge personnel and local agencies fostering statewide consistency and alignment in maintenance practices.
- Procurement of materials and transporting materials to region specialty bridge crews as needed.

Duty 2

General Summary:

Percentage: 25

Assist the Region Support Unit on specialized bridge and culvert maintenance repairs.

Individual tasks related to the duty:

- Travel statewide to lead in investigating, evaluating, and applying structure repairs by providing engineering expertise regarding the type of repair being done to ensure compliance with standards and further guarantee the structural integrity and durability of the repair over time (e.g., carbon fiber wrapping, concrete patching materials, carbon fiber jacketing, etc.).
- Provide oversight in evaluating and troubleshooting maintenance activity repairs on bridge approaches and culverts by using special equipment that uses polyurethane for soil stabilization and slab lifting in project success. This position ensures the structural integrity of the bridge while maintenance activities are being performed (e.g., ensuring the bridge is level while equipment is being used to ensure further damage is not inflicted).
- Lead the sounding of bridge decks, beams, substructure units (non-destructive tests) to determine locations of de-bonded concrete areas. Provide interactive quality assurance in the epoxy injection of de-bonded concrete process.
- Evaluate crack widths on concrete superstructure and substructure elements for suitability of epoxy injection. Provide interactive quality assurance in the epoxy injection of concrete elements process as assigned.

Duty 3

General Summary:

Percentage: 20

Review and assist with developing necessary documents required for statewide alignment in bridge maintenance and preservation.

Individual tasks related to the duty:

- Review and provide recommendations for updating specifications related to the bridge maintenance program.

- Review and provide recommendations for updating special provisions for construction related actions to bridge maintenance activities.
- Review and provide recommendations for updating white papers for resolving and identifying maintenance problems.
- Review and prepare budgetary tracking spreadsheets.
- Provide analysis of new and existing equipment technologies, prepare reports, and make recommendations to regions on the use of emerging technologies.
- Review and prepare detailed technical reports, white papers, and evaluations for training purposes, conference presentations, and technical committee approval that demonstrates bridge maintenance effectiveness.
- Conduct product trials of new bridge maintenance materials and methods. Monitor performance, record, and prepare evaluation reports and correspondence.
- Coordinate meetings and travel to regions to aid with selection of bridge maintenance projects.

Duty 4

General Summary:

Percentage: 5

Other duties as assigned.

Individual tasks related to the duty:

- 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.

This position requires independent decision-making ability. For assignments, the position is required to perform duties with little or no immediate supervision in the field and at bridge sites. The position provides directions to field crews statewide that impacts the work performed on bridges. This position makes independent judgement of materials and methods associated with bridge maintenance assignments.

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

Unique situations with no past policy or when existing policy is unclear. Assistance in mitigating controversies. Revision of program scope, budgets, and schedule.

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.

Work requires the ability to travel statewide to MDOT and Local Agency bridge locations with overnight stays to perform field reviews of proposed or active bridge maintenance activities which requires traversing various types of terrain; exposure to dirt, fumes, adverse weather conditions, and heavy and high-speed traffic including moving in and out of traffic; working in permit required confined spaces; working above open water; and working from heights up to 150 feet from a bucket truck or reach-all unit. Ability to transport heavy or bulky loads, read plans and remain in a stationary position for extended periods of time working from a computer. ; overtime, heavy workloads working with specific deadlines. Position requires 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):

☐ Complete and sign service ratings.

☐ Assign work.

N Provide formal written counseling.

N Approve leave requests.

N Approve time and attendance.

N Orally reprimand.

N Approve work.

N Review work.

N Provide guidance on work methods.

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?

The Bureau of Bridges and Structures (BOBS) serve as the statewide structural authority for MDOT owned bridges, culverts, and special structures. The Statewide Region Support Unit provides active preservation efficiently and innovatively for our State of Michigan structural assets throughout the state. This position functions as the recognized resource structures engineer for the Michigan Department of Transportation (MDOT's) Statewide Region Support Unit providing statewide bridge maintenance program support, guidance, and engineering services for the 7 MDOT regions, contract agencies, local agencies, statewide region support unit, and bridge authorities and participating inspection, evaluation, and documentation of culvert maintenance repairs. This position also reviews and provides recommendations for developing necessary documents required for statewide alignment in bridge maintenance and preservation. This position requires statewide travel with overnight stays to various statewide jobsites.

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 BOBS serves as the statewide structural authority for MDOT owned bridges, culverts, and special structures. The Statewide Region Support Unit provides active preservation efficiently and innovatively for our State of Michigan structural assets throughout the state. This position functions as a structures engineer for the MDOT's Statewide Region Support Unit in a multitude of field-related maintenance aspects, providing bridge maintenance program support, guidance, and engineering services and participating in inspection, evaluation, and documentation of specialized bridge and culvert maintenance repairs.

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.

Possession of a bachelor of science in civil engineering is preferred.

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:

- MDOT design policies, procedures, and practices.
- Engineering principles and practices used in the maintenance of all types of roads, bridges, and related structures.

Ability to:

- Make mathematical computations.
- Interpret engineering plans, specifications, and technical reports.
- Maintain records and prepare reports and correspondence related to the duties.
- Communicate effectively in a professional manner.
- Maintain favorable public relations.

**CERTIFICATES, LICENSES,
REGISTRATIONS:**

Possession of a valid driver's license is preferred.

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

1/21/2026

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