

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

Position Code 1. TRAENGEC23R
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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.

2. Employee's Name (Last, First, M.I.)	8. Department/Agency TRANSPORTATION CENTRAL OFFICE
3. Employee Identification Number	9. Bureau (Institution, Board, or Commission) Highways
4. Civil Service Position Code Description TRANSPORTATION ENGINEER-E	10. Division Development
5. Working Title (What the agency calls the position) Design Engineer	11. Section North Region
6. Name and Position Code Description of Direct Supervisor MONROE, KATHERINE L; ENGINEER MANAGER LICENSED-3	12. Unit North Region Office
7. Name and Position Code Description of Second Level Supervisor MCCAW, DAVID W; ENGINEER MANAGER LICENSED-4	13. Work Location (City and Address)/Hours of Work Traverse City or North Region Gaylord Office / 7:00a - 4:30p M-F (may vary at mgmt discretion)

14. General Summary of Function/Purpose of Position

As part of the North Region Design Squad, prepare the preliminary and final design plans for various transportation infrastructure design projects in the region. Prepare proposal material, cost estimates, and environmental permit applications, review project related documents, and perform quality assurance checks on project scoping documents and project plans as directed by the Region Design Engineer. Coordinate work within project teams. This position requires possession of a valid driver's license to perform field visits.

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: 70

Design and prepare preliminary and final plans for portions of various projects (e.g. maintenance, reconstruct project or a resurfacing project, etc.). This duty requires possession of a driver's license to perform field visits.

Individual tasks related to the duty:

- Prepare preliminary and final design plans utilizing computer aided design and drafting (CADD) software (e.g. Bentley OpenRoads Designer, Bentley Projectwise etc.).
- Research and develop possible solutions to problems addressed during project and seek input and guidance from senior level staff/management in resolving.
- Prepare scoping plans, base plans, preliminary plans, final plans and Right-of-Way (ROW) plans.
- Prepare detailed cost estimates using AASHTOWare Preconstruction and Microsoft Excel.
- Attend project meetings and incorporate findings into the plans.
- Assist construction personnel with questions related to design plans.
- Conduct design field visits and attend project meetings.

Duty 2

General Summary:

Percentage: 15

Provide alignment between Region, Transportation Service Center (TSC), and consultant designs by assisting Region Design Engineer with quality assurance reviews, methods, and procedures to be followed for all projects designed in the Region.

Individual tasks related to the duty:

- Assist with the development of library of typicals and details to be used for projects in the Region.
- Assist Region Design Engineer with development and implementation of quality control methods and procedures.
- Assist Region Design Engineer with quality assurance reviews at different milestone meetings for projects in the Region for compliance with Region and Statewide quality assurance procedures and drafting standards.
- Participate in post-construction reviews to evaluate the project designs and note suggestions for future projects.
- Assist staff engineers in the Region and TSC's with design standards and plan development as requested.

Duty 3

General Summary:

Percentage: 10

Assist Region Design Engineer with attending scoping meetings, reviewing scoping packages for completeness, and reviewing or preparing cost comparisons of alternate road designs. Attend scoping and Call for Projects meetings as directed. This duty requires possession of a valid driver's license to perform scoping field visits.

Individual tasks related to the duty:

- Review scoping packages and attend scope verification meetings for projects designed by the Region, TSCs, and consultants.
- Compare cost comparisons of alternate designs for discussion at scope verification. Verify scoping estimate for project programming.
- Prepare documents required for scoping or Call for Projects meetings and check completeness of submittals in ProjectWise.
- Assist TSC's with scoping future projects and assist in preparing a five-year plan for the Region.
- Complete scoping field visits.

Duty 4

General Summary:

Percentage: 5

Perform related work as assigned.

Individual tasks related to the duty:

- Attend trainings and seminars.
- Remain up to date on design standards, drafting standards, project tasks, and computer applications.
- Proactively meet the operational needs of the external customer.
- Continually strive to improve the Michigan Department of Transportation (MDOT) image.
- Assist with training and developing new employees and peers.

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

Personal judgment based on prior experience. Whenever possible, identify, recommend, and implement improvements in the work methods and materials utilized in the position.

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

When there is deviation from department standards or guidelines. When there is a need for interpretation of department guidelines, policies or procedures. When existing policy is unclear. When a decision may be required from the executive level, personnel matters, assistance in mitigating controversies, or revision of a program 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.

Ability to travel statewide. Traversing uneven terrain including moving up and down roadway slopes. Moving up to 25 pounds. Moving in and out of heavy traffic. Climbing under bridges, over water, wading in water, and continually working near heavy traffic. Moving in and around an office setting including remaining in a stationary position at a computer for long periods of time. Occasional overnight travel to training classes or conferences. Attendance at public meetings may be after hours. 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"/> 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?

As part of the North Region Design Squad, prepare the preliminary and final design plans for various transportation infrastructure design projects in the region. Prepare proposal material, cost estimates, and environmental permit applications, review project related documents, and perform quality assurance checks on project scoping documents and project plans as directed by the Region Design Engineer. Coordinate work within project teams. This position requires possession of a valid driver's license to conduct field visits and perform scoping.

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?

Development of road design plans, proposals, and specifications. This includes providing alignment and quality assurance within the region and to the TSCs as it relates to quality plan production. This position performs work in the areas of plan development, quality assurance, inspection, surveying, and office work on highway projects and associated transportation functions.

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 Degree in Civil Engineering, preferred.

EXPERIENCE:**Transportation Engineer 9**

No specific type or amount is required.

Transportation Engineer 10

One year of professional engineering experience involved in transportation systems and programs equivalent to a Transportation Engineer 9.

Transportation Engineer P11

Two years of professional engineering experience involved in transportation systems and programs equivalent to a Transportation Engineer, including one year equivalent to a Transportation Engineer 10.

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:

- Engineering practices and principles
- MDOT policies and procedures
- Computers and programs used in engineering functions

Ability to:

- Make mathematical computations
- Apply engineering principles to construction and design problems
- Communicate effectively
- Work as a team member
- Make presentations before groups
- Meet with and work effectively with others
- Be resourceful and use initiative to carry out assignments while working independently
- Maintain records
- Prepare reports and correspondence related to ongoing work

**CERTIFICATES, LICENSES,
REGISTRATIONS:**

Possession of a valid driver's license is required.

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.

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

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