

## 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-E	<b>10. Division</b> Grand Region
<b>5. Working Title (What the agency calls the position)</b> Design Engineer	<b>11. Section</b>
<b>6. Name and Position Code Description of Direct Supervisor</b> JASINSKI, NICHOLAS; ENGINEER MANAGER LICENSED-3	<b>12. Unit</b>
<b>7. Name and Position Code Description of Second Level Supervisor</b> ROZEMA, SUSAN; STATE ADMINISTRATIVE MANAGER-1	<b>13. Work Location (City and Address)/Hours of Work</b> 1420 Front Ave. NW, Grand Rapids MI 49504 / 7:30 am - 4:30 pm M-F hours may vary
<b>14. General Summary of Function/Purpose of Position</b>  This position is intended to expose the employee to many disciplines within MDOT with a focus on design and to develop basic skills necessary for successful career and professional development in the transportation industry. In addition to design plan preparation, other training assignments will vary throughout the Grand Region and may include: construction administration, traffic safety engineering, material testing, bridge inspection, geotechnical analysis, surveying, and utility/permit review. This is a multi-disciplinary position that will require meeting tight deadlines and resolving issues to ensure the successful implementation and operation of MDOT services and products. Successful and continuing customer focus is a requirement for this position.	

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**

Under direct supervision of the Grand Region Design Engineer, prepare and complete the required typical/plan/profile/cross-section and miscellaneous details for road reconstruction and/or rehabilitation projects for highways and/or miscellaneous highway facilities such that a final design package can be submitted for the contract letting process.

**Individual tasks related to the duty:**

- Prepare detail plans, design calculations, layout drawings, specifications, cost estimates, and recommendations conforming to the established engineering practices and standards.
- Draft special provisions to modify existing specifications or to provide instruction to contractors.
- Utilize various MDOT standards, guidelines, and applicable manuals and various computer-aided drafting and design (CADD) software's.
- Prepare preliminary and final right of way (ROW) plans for the use in acquiring project ROW.
- Prepare detailed cost estimates at various stages of a project. Assure that the programmed scope, schedule, and budget are being followed and work with appropriate staff to resolve issues.
- Develop information and/or exhibits for public review, hearings, or informational meetings.
- Attend various project review meetings, record notes/comments, and incorporate into final plans.
- Review plans, details, and contract items for quality and adherence to established methods and procedures.

**Duty 2**

**General Summary:**

**Percentage: 20**

Regionwide training assignments as assigned by supervisor.

**Individual tasks related to the duty:**

- Assignments may vary based on region needs and opportunities and will be made in conjunction with the employee's development needs, technical interest, and departmental workload.
- Assignments may include:
  - Support Construction Section in the administration and oversight of construction projects and consultant contracts.
  - Support Operations Section functions including traffic safety activities, pavement marking program, traffic signal analysis, system mobility analysis, and maintenance activities.
  - Support Region construction activities including materials and testing, consultant contract oversight, and local agency oversight.
  - Support the Region Development Section in the areas of asset management and planning, surveying, bridge inspection and program management, and program development and management.

**Duty 3**

**General Summary:**

**Percentage: 10**

Assist in the quality assurance/quality control process of the Grand Region Design Unit.

**Individual tasks related to the duty:**

- Under the guidance of a senior level engineer or manager, perform quality control reviews on design projects within the Design Unit.
- Under the guidance of a senior level engineer or manager, provide quality assurance reviews on design projects developed by other Units within the Grand Region.
- Review plan packages to ensure adherence to MDOT standards and guidelines.
- Review plan quantities and cost estimates.
- Review design elements (geometric, drainage, guardrail, etc.).

**Duty 4**

**General Summary:**

**Percentage: 10**

Provide design engineering assistance to Transportation Service Center (TSC) construction engineers during project construction. Utilize engineering standards, guides, principals, techniques, and judgement to recommend solutions to concerns and questions.

**Individual tasks related to the duty:**

- Assist Region/TSC staff on special traffic or construction problems which arise during construction of active projects.
- Develop plans and/or estimates for construction related issues.
- Utilize various MDOT CADD software's to assist in the development of construction related plans and/or details.
- Partner/coordinate the development of construction related items with key Lansing/Region/TSC staff.
- Prepare information for response to customer concerns, as related to state trunklines.

**Duty 5**

**General Summary:**

**Percentage: 5**

Assist in the coordination of the Region Call for Projects Process.

**Individual tasks related to the duty:**

- Research old plans and gather project specific data according to the call for projects scoping checklist.
- Estimate construction costs and prepare Project Concept Statements.
- Enter cost and sufficiency data in the MAP Project Information System (MPINS).
- Complete Scoping Checklist in MPINS.
- Enter project network in Program/Project Management System (P/PMS) and utilize other Departmental Project Management software.
- Assist other TSC/Region staff in the preparation of preliminary quantity and cost estimates for the annual call for projects process, using the "Engineer's Estimate System".
- Assist in the determination of needed work on future highway projects and prepare detailed cost estimates for the annual Call for Projects including the research of old plans and field conditions.

**Duty 6**

**General Summary:**

**Percentage: 5**

Other duties as assigned

**Individual tasks related to the duty:**

- Attend various meetings.
- Cross train in other work areas as time allows.

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

- Personal judgement based on prior experiences and technical knowledge.
- Partner with other Lansing/Region/TSC staff to identify, recommend, and implement improvements in the work methods and materials utilized in this position.
- Use of automated or manual techniques in developing plans.
- Decisions will affect contractors, utility companies, engineers, technicians, and the motoring public.

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

- Definition of policy.
- Decisions that could affect a projects programmed plan completion date or project cost.
- Interpretation of complex design issues, such as safety and geometric concerns.
- Any area not covered by specific instruction or within established policy.

**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.**

Frequent travel to various projects requires a valid Michigan driver's license; work involves normal physical effort to sit, walk, or stand at will; exposure to dirt, fumes, high speed traffic, or adverse weather conditions; bending, stooping, and reaching for plans; carrying and/or lifting heavy (up to 25 pounds) or bulky loads; working within specific deadlines; sitting for long periods of time working on computer programs; occasional field review of projects requiring walking over irregular terrain; occasional overnight travel.

**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?**

This position is intended to expose the employee to many disciplines within MDOT with a focus on design and to develop basic skills necessary for successful career and professional development in the transportation industry. In addition to design plan preparation, other training assignments will vary throughout the Grand Region and may include: construction administration, traffic safety engineering, material testing, bridge inspection, geotechnical analysis, surveying, and utility/permit review. This is a multi-disciplinary position that will require meeting tight deadlines and resolving issues to ensure the successful implementation and operation of MDOT services and products. Successful and continuing customer focus is a requirement for this position.

**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 unit is to develop projects which includes surveying and designing projects, QA review of region projects, and preparing construction documents. This position assists in monitoring of the Grand Region Design Projects.

**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 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 the design process, use of personal computers, the project development process, the planning process, MicroStation applications, and Department computerized management systems is desirable. Ability to communicate effectively both verbally and in writing. Ability to work independently and as a team member.

**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.

None

*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