

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-A	10. Division Bay Region
5. Working Title (What the agency calls the position) Senior Level Road Design Engineer	11. Section Development
6. Name and Position Code Description of Direct Supervisor HILL, KIMBERLY S; ENGINEER MANAGER LICENSED-3	12. Unit Design
7. Name and Position Code Description of Second Level Supervisor SHELTON, ANNETTE K; ENGINEER MANAGER LICENSED-4	13. Work Location (City and Address)/Hours of Work 5859 Sherman Road, Saginaw, MI 48604 / M-F, 7:30am-4:30pm (hours may vary)
14. General Summary of Function/Purpose of Position As a senior level road design engineer in the Bay Region Design Unit, this position is responsible for the preparation of complex design projects, such as highway and interchange reconstructions and new roundabout construction, including road contract plans and specifications. This position assists in training and support of unit personnel and provides feedback and guidance to the others in the unit; solves complicated and unusual design problems; prepares plans, reports, estimates, and special provisions; and attends meetings.	

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: 65

Prepare plans, details, special provisions, calculations, proposals, and estimates for road reconstruction, rehabilitation, and resurfacing projects. This includes elements such as vertical and horizontal alignments, grading, drainage, profiles, storm sewer, permanent signing, and pavement markings.

Individual tasks related to the duty:

- Serve as a technical expert for design issues including engineering and computer-aided drafting and design (CADD) issues.
- Set horizontal and vertical alignments of various roadways including multilevel interchanges.
- Utilize and interpret technical resources such as American Association of State Highway and Transportation Officials (AASHTO) A Policy on Geometric Design of Highways and Streets, MDOT Geometric Design Guide, Standard Plans, Special Details, Drainage Manual, and Road Design Manual to design and coordinate changes.
- Prepare maintaining traffic and stage construction plans.
- Request preliminary and background information to begin the preparation of plans.
- Utilize engineering design software such as Bentley OpenRoads Designer, Federal Highway Administration (FHWA) Hydraulic Toolbox, and SignCAD.
- Write special provisions for non-standard pay items, and occasionally for maintaining traffic.
- Determine the supplemental specifications, applicable standards, and special details to be included with the contract documents for each project.
- Perform quantity calculations for the engineer's estimate.
- Prepare cost comparisons of alternative road design studies and prepare preliminary engineer estimates.
- Complete necessary forms for plan submittals.
- Coordinate project duties and internal reviews with Transportation Service Center (TSC), Region, and Lansing staff to complete projects on schedule.
- Problem-solve requests from the Unit Leader when the plans do not fit the existing environment.
- Coordinate changes to the project design with the Unit Leader and design team and implement necessary changes to the plans.

Duty 2

General Summary:

Percentage: 10

Oversee and approve work and tasks on unit produced projects which may include approval of items such as design plans, letters to external customers, construction progress clause, or other engineering products.

Individual tasks related to the duty:

- Review design plans, documents, calculations, and CADD files produced by the design unit to ensure compliance to specifications, agency standards, and policies.
- Coordinate staff and resources by assisting supervisor in monitoring, coordinating, and/or assigning work tasks to lower-level engineers and technicians based on operational needs. Provide guidance on engineering standards and policies for completion of design plans.
- Track project tasks and communicate project status to MDOT management through written and oral project data.

Duty 3

General Summary:

Percentage: 10

Coordinate staff and resources by providing guidance in the direction of the region design unit so that workflow is uninterrupted and production schedules are met. Assist supervisor in monitoring, coordinating, and/or assigning appropriate resources based on operational needs in the areas of operations. Mentor and train staff.

Individual tasks related to the duty:

- Make necessary and immediate recommendations on the region's assigned workload.
- Organize and coordinate work of region design unit personnel.
- Provide guidance in the training of personnel in the region in the various phases of road design and plan preparation and review their work.
- Review bridge plans, adjacent road projects, special designs, and utility permits for coordination with the region's projects.
- Provide guidance in keeping region records, estimating person hour requirements, setting dates for completing phases of work, and preparing the status of plans.

- Advise the appropriate region management on the progress being made to ensure compliance with production schedules.
- Participate in MDOT programs such as mentoring interns or serving on Statewide or Regional Committees.

Duty 4

General Summary:

Percentage: 5

Coordinate and conduct liaison activities at the direction of the unit supervisor with consulting firms, government agencies, private individuals, bureaus, divisions, and sections with MDOT to obtain input for the design and preparation of the final plans.

Individual tasks related to the duty:

- Write memos, make phone calls, and attend meetings as required. Maintain records of these contacts and reviews.
- Attend and/or conduct meetings if delegated by the unit supervisor. For example:
 - Participate in on-site reviews, Base Plan, Plan Review, and Final Project Coordination (FPC) meetings and receive input. Implement recommendations into project plans.
 - Participate in utility meetings involving representatives of affected utilities, both public and private.
 - Attend Right of Way (ROW) meetings to present ROW requirements to attending interested and affected parties.
 - Attend meetings with other divisions and agencies for solving unique problems associated with a specific project.
 - Attend public information meetings on the various projects within the unit.

Duty 5

General Summary:

Percentage: 5

Consultant Coordination.

Individual tasks related to the duty:

- Oversee and manage vendor contracts that are needed to support the completion of the region's goals.
- Communicate both in writing and verbally with the consultant to keep the project on schedule.
- Prepare Requests for Proposals, schedules, and scopes for projects.
- Prepare evaluations of the consultant's performance on the project. This includes assembling of any intermediate performance documents that were developed during the project progress.
- Provide technical assistance to consultants and serve as liaison between MDOT consultant and MDOT. Address project deficiencies in writing to the consultant.
- Review and approve progress payment invoices to ensure requests for payment correlate to work performed.

Duty 6

General Summary:

Percentage: 5

Other duties as assigned by the unit supervisor.

Individual tasks related to the duty:

- Assist the supervisor with various tasks within the Region Design Unit.

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

Complex technical decisions based on personal judgment and past experiences. 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 a deviation from an established procedure or when new situations arise which have not been dealt with before. 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 or budget.

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.

Endurance to work long hours both in the office and in the field, when necessary, which exposes individuals to hazards of moving traffic, construction equipment, and weather. Ability to work under pressure in order to meet deadlines. Field reviews of proposed or active road/bridge construction projects requires traversing irregular terrain. Occasional overnight travel to

training classes, conferences, and meetings. May use commercial modes of transportation for travel. 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 a senior level road design engineer in the Bay Region Design Unit, this position is responsible for the preparation of complex design projects, such as highway and interchange reconstructions and new roundabout construction, including road contract plans and specifications. This position assists in training and support of unit personnel and provides feedback and guidance to the others in the unit; solves complicated and unusual design problems; prepares plans, reports, estimates, and special provisions; and attends meetings.

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?

Reviews with the unit supervisor pertinent information in the preparation of road contract plans and specifications. Participates in the training of unit personnel and their work as delegated and attends meetings.

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 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:

Ability to:

- Work harmoniously with others.

- Communicate ideas and instructions to others, both orally and in writing.
- Use and instruct in the use of computer programs and systems used in road design by the MDOT, specifically MicroStation and OpenRoads Designer.
- Organize and delegate the work on several projects.

**CERTIFICATES, LICENSES,
REGISTRATIONS:**

Michigan licensure as a registered professional engineer is highly desirable.

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.

KELSEA COLE

3/19/2024

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