

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

Position Code 1. TRALSPL2B68R

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) Bureau of Highways
4. Civil Service Position Code Description TRANSPORTATION ENG LIC SPL 2	10. Division Metro Region
5. Working Title (What the agency calls the position) Region Senior Geotechnical Engineer	11. Section Metro Region Construction Field Services (CFS)
6. Name and Position Code Description of Direct Supervisor PUNJABI, ASHOK K; ENGINEER MANAGER LICENSED-3	12. Unit Field Engineering
7. Name and Position Code Description of Second Level Supervisor MUELLER, ERIC; ENGINEER MANAGER LICENSED-4	13. Work Location (City and Address)/Hours of Work 18101 W 9 Mile Road, Southfield MI 48075 / M-F 7:30 to 4:30 (hours may vary)
14. General Summary of Function/Purpose of Position This position functions as the region authority regarding soils engineering providing expertise on the most complex geotechnical problems in the Metro Region. This position is responsible for the design and review of pavement structures, foundations, Mechanically Stabilized Earth (MSE) Walls and reinforced soil slopes, cofferdams, sheet piling with and without bracing, global stability, and settlement. The position provides project level review and recommendations for complex stage and overall constructability, with specific emphasis on geotechnical components such as temporary earth retention for part-width construction, bridge cofferdams, foundation interactions, etc. Additionally, this position will act as the M-10 retaining wall monitoring/evaluation/retrofit program manager and also coordinates with Lansing Bridge Field Services for the inspection of earth retaining structures in the Metro Region.	

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: 40

Serve as the region soils resource during scoping and design phases of project development.

Individual tasks related to the duty:

- Review and provide support during design plan preparation for geotechnical recommendations relative to site specific soil conditions, spread footings, drilled shafts, sheet piling, MSE walls, slope stability, settlement, and materials.
- Plan and conduct the classifications of soils and delineation of organic swamps through field soundings.
- Plan, conduct and/or analyze data from pavement management surveys, soil borings, pavement cores, Dynamic Cone Penetration (DCP), Falling Weight Deflectometer (FWD), Ground Penetrating Radar (GPR), or laboratory soils testing as project needs require.
- Review the adequacy of pavement section designs on rehabilitation, reconstruction, and widening projects and provide recommendations as to their suitability for carrying traffic loading.
- Develop design plan quantities to provide treatment of unsuitable subsurface site conditions for highways, bridges, drainage structures, utilities, roadway lighting, sign foundations and miscellaneous highway facilities. Typical examples involve subgrade undercutting, pavement underdrain, swamp treatment, granular blankets, stable embankment/cut slopes, unclassified foundation excavation, dewatering, sheeting, cofferdams, etc. for specific projects.
- Evaluate proposed construction activity impact on Soils Erosion and Sedimentation, and recommend preventative measures, quantities and locations as required.
- Participate in design project meetings to perform in-depth review of proposed plans and project site conditions with the design engineer and other stakeholders as needed.

Duty 2

General Summary:

Percentage: 30

Investigate construction sites to evaluate adequacy of pavement and other designs, and provide corrective recommendations where needed for area of coverage. Function as Region level resource for complex geotechnical issues encountered during construction and mobilize appropriate resources if needed to resolve problems.

Individual tasks related to the duty:

- Project level and Region-wide review of proposed geotechnical components such as temporary earth retention for part-width construction, bridge cofferdams, foundation interactions, MSE walls, etc.
- Conduct pavement subgrade inspections to identify frost susceptible materials, unstable subgrade conditions and high ground water and seepage areas and recommend corrective treatment.
- Conduct soil foundation inspections and determine allowable bearing capacity of spread footings or drilled shafts for bridges, culverts, signs, light and strain pole foundations.
- Investigate and prepare recommendations on global stability, erosion and density problems during the construction of highway embankments or excavations.
- Field review construction sites to evaluate safe angle of repose for slopes or necessary sheeting and shoring on excavations for safety in accordance with Michigan Occupational Safety and Health Administration (MIOSHA) regulations.
- Review contractor submitted temporary sheeting designs for adequacy.
- Conduct site inspections to review and recommend adequate soil and erosion measures on construction projects.
- Attend project meetings on an as needed basis to evaluate and recommend geotechnical solutions for soils related construction problems.

Duty 3

General Summary:**Percentage: 20**

Provide Region Maintenance and Region Permits with geotechnical recommendations as requested for area of coverage. Function as Region level resource for complex geotechnical issues related to Maintenance or Permits projects. Function as the M-10 retaining wall monitoring program manager. Coordinate with Lansing Bridge Field Services to inspect earth retaining structures in the Metro Region.

Individual tasks related to the duty:

- Review and prepare recommendations on region permit applications for utilities, pavements, drainage structures and other facilities regarding geotechnical engineering and construction practices for area of coverage.
- Respond to requests by the maintenance engineer and make recommendations on the treatment of pavement distress areas, frost heaves, settlements, drainage problems, erosion and sedimentation, slope failures or the performance of special materials incorporated in maintenance improvement projects.
- Provide Region level resource duties for any of the above, as requested by unit leaders or other engineers within area.
- Monitor the M-10 retaining walls and report areas of concern to the Metro Geotechnical Supervisor.
- Work as the lead geotechnical engineer for coordinating any projects or corrective action needed to maintain the retaining walls.
- Work with Lansing Bridge Field Services as the Metro Region contact for the inspection of existing earth retaining structures.

Duty 4**General Summary:****Percentage: 10**

Perform miscellaneous duties.

Individual tasks related to the duty:

- Assist local governmental units in evaluating and solving soil engineering related problems when requested.
- Outline and review conformance with Michigan Department of Transportation (MDOT) procedures and policy with private consultants under contract to perform geotechnical investigations.
- Assist Lansing Construction and Technology personnel in compiling Region-wide geotechnical or material performance data.
- Complete special assignments as directed by the Region's Soils and Materials Engineer.
- 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.

Provide geotechnical design recommendations, and review design recommendations for consultants. Recommend various work items and quantities for preliminary plan reviews, directly affecting project costs and construction activities. Provide Quality Assurance (QA)/Quality Control (QC) review of draft recommendations by other engineers in the unit, making revisions as necessary to maintain Unit and Statewide consistency. Make on-site geotechnical recommendations to Delivery Engineers which may affect construction costs and contractor activities. Approve or recommend modifications to permit requests, which may affect an applicant's project costs or work procedures. All the above are critical components of successful construction of a wide variety of permanent highway infrastructure. 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.

Any decision that may have a serious impact on project cost, department liability or public safety.

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.

Working conditions include field and office work. Office work includes extensive use of a computer. Field work includes traversing uneven terrain in and around construction sites, working near high-speed traffic, exposure to dirt, dust, and noise in all weather conditions. The ability to work with and around mechanized equipment such as soil boring and pavement coring equipment. This position requires region-wide travel and occasional state-wide travel including extended periods of time in a vehicle. Ability to transport up to 100 lbs. 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):

- | | | | |
|---|------------------------------------|---|-----------------------------------|
| N | Complete and sign service ratings. | N | Assign work. |
| N | Provide formal written counseling. | N | Approve work. |
| N | Approve leave requests. | N | Review work. |
| N | Approve time and attendance. | N | Provide guidance on work methods. |
| N | Orally reprimand. | 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 position functions as the region authority regarding soils engineering providing expertise on the most complex geotechnical problems in the Metro Region. This position is responsible for the design and review of pavement structures, foundations, Mechanically Stabilized Earth (MSE) Walls and reinforced soil slopes, cofferdams, sheet piling with and without bracing, global stability, and settlement. The position provides project level review and recommendations for complex stage and overall constructability, with specific emphasis on geotechnical components such as temporary earth retention for part-width construction, bridge cofferdams, foundation interactions, etc. Additionally, this position will act as the M-10 retaining wall monitoring/evaluation/retrofit program manager and also coordinates with Lansing Bridge Field Services for the inspection of earth retaining structures in the Metro Region.

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 Metro Region Construction Field Services is a service-oriented unit providing information and direction to Design, Construction, Maintenance and Permits Divisions. The Region Senior Soils Engineer is directly responsible for acquiring and analyzing geotechnical data using engineering principles and specialized software. In addition, they function as responsible in charge for region-wide QA/QC review of complex soils engineering recommendations, peer reviewer and trainer for the Area Soils Engineer, and for implementation of the specialty software required for geotechnical engineering design.

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 Engineering Licensed Specialist 13

Four years of professional experience equivalent to a Transportation Engineer, including two years equivalent to a Transportation Engineer P11 or one year equivalent to a Transportation Engineer 12 or Transportation Engineer Licensed 12.

KNOWLEDGE, SKILLS, AND ABILITIES:

Knowledge of:

- Construction methods
- Standards and specifications for transportation infrastructure projects.
- Properties of soils.
- Borings and sampling methods
- Soils engineering principles.

Ability to:

- Use applicable geotechnical software .
- Work effectively with others.
- Communicate Effectively.
- Schedule field work operations and meet established deadlines.

**CERTIFICATES, LICENSES,
REGISTRATIONS:**

Possession of a valid drivers license is required.

Possession of a registered professional engineering license as required by the State of Michigan.

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.

ASHLEY PARSONS

5/28/2025

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