

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

Position Code 1. TRAENGAC75R
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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
3. Employee Identification Number	9. Bureau (Institution, Board, or Commission) Highway Operations
4. Civil Service Position Code Description TRANSPORTATION ENGINEER-A	10. Division Grand Region
5. Working Title (What the agency calls the position) Region Signals Engineer	11. Section Operations
6. Name and Position Code Description of Direct Supervisor PEPLINSKI, SUZETTE R; ENGINEER MANAGER LICENSED-3	12. Unit Traffic Safety and Operations
7. Name and Position Code Description of Second Level Supervisor TELLIER, THOMAS; STATE ADMINISTRATIVE MANAGER-1	13. Work Location (City and Address)/Hours of Work 1420 Front Ave. NW, Grand Rapids, MI 49504 / M-F, 7:30am-4:30pm (hours may vary)

14. General Summary of Function/Purpose of Position

This position functions as the recognized resource Grand Region Signals Engineer and is responsible for coordinating and enhancing region traffic signal operations and maintenance to ensure optimal operation of the region-wide transportation system; providing technical expertise or coordinating the expertise from others (e.g., central office staff or outside vendors) on traffic signals for Grand Region and Transportation Service Center (TSC) staff, including signal systems such as Centracs, Signal Asset Management, and other advanced signal systems, which includes supporting technical efforts in the Connected and Automated Vehicles (CAV) and Electrification areas; overseeing traffic signal maintenance, including contracts with vendors and local agencies to keep the traffic signal system in peak operation; and providing traffic signal infrastructure/asset management through coordinated application of programs, technologies, and processes. This position works closely with the other region Traffic Safety & Operations staff to continually innovate and advance arterial management and traffic operations throughout the 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: 35

As the recognized resource Region Signals Engineer, coordinate region traffic signal operations. Work with others in the TSCs and region Operations to operate, maintain, and enhance the region traffic signal system. Serve as region technical support for the installation, timing, and operation of electrical control devices.

Individual tasks related to the duty:

- Coordinate with Lansing Signals Unit, TSCs, contract agencies, and local stakeholders to develop and implement the ongoing signal optimization and corridor planning programs, by providing guidance based on local knowledge and to maintain consistency across the region.
- Perform traffic signal studies and analysis, including data collection and modeling which involves the use of various data collection equipment and software.
- Provide engineering support for signal related projects as needed, including providing signal inventory and local knowledge of intersections, attending site visits to determine design layout, and identifying potential field conflicts.
- Review project plans that impact traffic signal infrastructure to provide guidance on specifications and design details and ensure coordination with other planned and ongoing activities.
- Participate with TSCs on signal modernization projects by reviewing and submitting projects for modernization and providing technical expertise during construction.
- Serve as a liaison to region staff regarding the use of Centracs (or MDOT's current central signal control system), the utilization of Signal Performance Measures, and other advanced traffic signal technology.
- Work with the West Michigan Traffic Operations Center (WMTOC) Engineer and central office Signals Unit to implement and optimize active traffic signal monitoring on priority corridors in the region.
- Attend seminars and training as necessary to identify best practices and opportunities for improving system performance and safety and to stay educated and informed on new developments to traffic signal technology. Work to promote the best applications for improvement to the efficiency and performance of the MDOT signal system.
- Participate on statewide teams and efforts related to traffic signals and other electronic traffic devices.

Duty 2

General Summary:

Percentage: 35

As the recognized resource Region Signals Engineer, oversee traffic signal maintenance.

Individual tasks related to the duty:

- Manage regionwide traffic signal maintenance efforts. Serve as primary contact for field maintenance issues and support.
- Coordinate with TSCs regarding contract maintenance with local agencies for traffic signal operations.
- Work closely with Region Electricians regarding signal maintenance operations for signals under direct MDOT maintenance, including procurement support.
- Provide resources and support for Region Electricians' activities, including maintaining signal inventory.
- Oversee Traffic Signal maintenance vendor contracts, which includes scoping, providing cost estimates, establishing and managing vendor services contracts, addressing contract issues, acceptance of work performed, processing payments, and completing evaluations.
- Work with department/region staff to develop operation guidelines in the areas of maintenance and work zone management for contract agencies.
- Research, analyze, interpret, and apply latest technologies to maximize the efficiency of each signal. Recommend signal program improvements to the region, TSC, and central office staff and participate in activities to advance the excellence of the region traffic safety programs.
- Coordinate and manage infrastructure staking requests for traffic signal and other electronic device infrastructure. Review all incoming staking requests in a timely manner and respond or assign others to respond.

Duty 3

General Summary:

Percentage: 15

Coordinate traffic signal infrastructure/asset management for the Region System.

Individual tasks related to the duty:

- Work with region electricians and TSCs to provide and maintain updates to MDOT's signal asset management system.
- Manage database information for traffic signal electrical services.

- Participate in project scoping and development related to identifying improvement opportunities and ensuring signal system goals are included and addressed. Coordinate, prepare, and submit the region projects for the annual traffic signals Call For Projects.
- Learn/coordinate traffic signal communications data and details to maintain the region traffic signal communications network. This includes requesting and procuring cell modems or other equipment, tracking details regarding communications services, and managing contracts to provide network management services as needed.
- Prepare or coordinate for the updates needed to system mapping, as needed.
- Coordinate with the TSC engineers, designers, region electricians, and Lansing signals staff to upgrade signal detectors, other electronic devices, and traffic signals as assigned.
- Research, develop, and submit ideas for new innovative projects.

Duty 4

General Summary:

Percentage: 10

Responsible for data coordination for Transportation System Management & Operations (TSMO) activities and region system performance measurements.

Individual tasks related to the duty:

- Utilize Synchro (or other applicable software) for modeling traffic operations.
- Utilize the Regional Integrated Transportation Information System (RITIS) software platform for analysis and reporting of transportation data.
- Manage incoming and outgoing data and required performance measures within the region.
- Assist region and TSC staff in efforts to optimize system operations by focusing on transportation mobility, reliability, and accessibility.
- Review, analyze, and complete reports for various operations studies and activities.
- Assist region operations staff with database maintenance and updates as needed.
- Participate in Region work zone safety and mobility planning, review, and data needs.
- Support region technical efforts in the Connected and Automated Vehicles (CAV) and Electrification areas by researching technical information, assisting with grant proposals, and managing pilot projects for implementation.
- Participate in statewide teams to assist with updating the department's TSMO policies and assist with application of these policies in the Region.

Duty 5

General Summary:

Percentage: 5

Other operations duties as assigned.

Individual tasks related to the duty:

- Assist with other duties in support of the region Operations section.

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

This position will make decisions as to means and methods to collect facts and to analyze and present data to improve overall highway operations. Decisions will involve standard practices, procedures, and policies applying engineering principles and practices consistent with MDOT, Federal Highway Administration (FHWA), and American Association of State Highway and Transportation Officials (AASHTO) standards and guidelines. This position's decisions will affect and impact the TSC's, region, and statewide direction toward an operationally focused department. Decisions will impact the traveling public, transportation providers, and stakeholders within the region on present and future highway operations.

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

- When changes in policy are required or existing policy is unclear.
- Changes in previously approved project scope, cost, or schedules.
- Conflicts in engineering standards, practices, or legal requirements.
- Correspondence to or from elected officials.
- Issues that may have State-wide impacts or could be precedent-setting.
- When a decision may be required from an executive level.

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.

- Field work (site reviews), exposure to live traffic, and exposure to the natural elements (walking, climbing, and standing required).
- Transporting materials up to 25 pounds.
- May require extended periods of time working on a computer.

- May require travel to meetings outside the normal working hours.
- Reading documents and plans, both paper and electronic.
- Driving a vehicle to field locations, meetings, and training which requires a valid driver's license.

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"/> N | Complete and sign service ratings. | <input type="checkbox"/> N | Assign work. |
| <input type="checkbox"/> N | Provide formal written counseling. | <input type="checkbox"/> N | Approve work. |
| <input type="checkbox"/> N | Approve leave requests. | <input type="checkbox"/> N | Review work. |
| <input type="checkbox"/> N | Approve time and attendance. | <input type="checkbox"/> N | Provide guidance on work methods. |
| <input type="checkbox"/> N | Orally reprimand. | <input type="checkbox"/> 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 recognized resource Grand Region Signals Engineer and is responsible for coordinating and enhancing region traffic signal operations and maintenance to ensure optimal operation of the region-wide transportation system; providing technical expertise or coordinating the expertise from others (e.g., central office staff or outside vendors) on traffic signals for Grand Region and TSC staff, including signal systems such as Centracs, Signal Asset Management, and other advanced signal systems, which includes supporting technical efforts in the CAV and Electrification areas; overseeing traffic signal maintenance, including contracts with vendors and local agencies to keep the traffic signal system in peak operation; and providing traffic signal infrastructure/asset management through coordinated application of programs, technologies, and processes. This position works closely with the other region Traffic Safety & Operations staff to continually innovate and advance arterial management and traffic operations throughout the 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?

This position is within the Region Traffic Operations Unit which coordinates the traffic operations activities within the region, including Traffic Safety activities, system mobility, WMTOC, Intelligent Transportation System (ITS) technologies, and Traffic Signals. This position is a critical component of the region's operational initiatives consistent with the department's direction. The position works with TSC, Region, State, and transportation stakeholders to improve operations of the state roadway system to enhance mobility and modal connectivity and safety.

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 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:

- The requirements of the design, construction, and maintenance of transportation projects. Must possess strong, effective organization, team building, facilitation, leadership, and communication skills both verbal and written.
- Traffic engineering practices and procedures.
- Computers.

Ability to:

- Read, interpret, and prepare engineering plans, specifications, and technical reports.
- Use and instruct others in use of relevant computer programs.
- Organize, evaluate, and present information effectively and to negotiate favorable solutions to complex issues.
- Establish and maintain good partner relationships.
- Communicate effectively both orally and in writing.
- Establish and maintain favorable customer relations.
- Provide excellent customer service.

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