

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 Development
4. Civil Service Position Code Description Transportation Technician-A	10. Division Development Services Division
5. Working Title (What the agency calls the position) Senior Transportation Technician	11. Section Real Estate Services Section
6. Name and Position Code Description of Direct Supervisor CRYSLER, LORI J; PROPERTY MANAGER-3	12. Unit Property Management Unit
7. Name and Position Code Description of Second Level Supervisor VANIS, TERESA R; STATE ADMINISTRATIVE MANAGER-1	13. Work Location (City and Address)/Hours of Work 425 W. Ottawa Street, Lansing, MI 48933 / 7:30 a.m. - 4:30 p.m.

14. General Summary of Function/Purpose of Position

As a senior transportation technician, this position is responsible for the most complex assignments related to MDOT's statewide Real Estate technical program. MDOT's real estate technical program consists of MDOT right-of-way plans and right-of-way maps. The right-of-way plans are developed when MDOT needs to acquire right-of-way for statewide projects. MDOT right-of-way plans are developed using Computer Aided Design and Drafting (CADD) systems and show the right-of-way that must be acquired for a project. The right-of-way maps are MDOT's statewide inventory of MDOT owned property that are public in electronic format for viewing, printing and downloading by MDOT staff, government agencies, utility companies, design consultants, business owners and the general public.

The senior transportation technician is responsible for the most complex assignments related to preparing and updating the MDOT right-of-way maps. The most complex assignments include reviewing right-of-way plans and updating right-of-way maps where property acquisition or disposal abuts both railroad and highway property, involves dedicated and/or statutory right-of-way, involves either reconstruction or construction of new roadways and/or bridges with revised or new geometric alignments utilizing complex curve data.

The senior transportation technician is also responsible for the most complex assignments related to instrument work, that includes preparing right-of-way legal descriptions for road and bridge projects, condemnation proceedings and disposal of MDOT excess and railroad properties. Complex assignments include interpreting or writing property legal descriptions that involve encumbered properties, properties involving multiple jurisdictions (i.e. state, county, city, railroad) acquisitions of properties with restrictive covenants (i.e.. contamination restrictions, farmland preservation, condominium developments), and having the subjective expertise to interpret the legal intent of legal descriptions (i.e. bearing provided is from a section line based on the knowledge of surveying practices in that era, multiple centerline locations, irregularly shaped parcels).

The senior transportation technician will prepare sketches and overlays of residential and commercial lands merging information from previous highway projects, subdivisions and property surveys with new and current highway projects, rotating bearings and entire properties to decipher the boundaries of these properties for the disposal of MDOT-owned excess property.

This position serves as a resource to Regions, Transportation Service Centers, other Real Estate Staff, contractors' surveyors, lawyers, and the general public as to the methodology used in the preparation of legal descriptions.

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

Prepare and update MDOT right-of-way maps for the most complex assignments. The most complex assignments include reviewing right-of-way plans and updating right-of-way maps where property acquisition or disposal abuts both railroad and highway property, involves dedicated and/or statutory right-of-way, involves either reconstruction or construction of new roadways and/or bridges with revised or new geometric alignments utilizing complex curve data.

Individual tasks related to the duty:

- Interpret and design right-of-way plans, review and identify any ambiguities and/or errors on ROW maps and determine how best to resolve right-of-way issues.
- Produce appropriate products for ROW and GIS map updates utilizing multiple file types (ie. .tiff, .dgn, .kmz, .kml) and programs (ie. MicroStation, ArcGIS).
- Review final design plans for inclusion of required legal and technical nomenclature needed to prepare property deeds.
- Compute bearings, distances and traverses which involve irregular shaped properties and require using geometric and trigonometric calculations to determine unknown bearings, distances and partial segments of curves (which includes chords of curves which are needed within legal descriptions) not supplied on design plans.
- Interpret design and right-of-way plans and specifications for purpose of understanding route layout and design implementation for complex road and bridge projects.
- Assemble GIS information from field collected data or existing electronic data.
- Provide support to Region and Central Office personnel in deciphering legal descriptions and mapping.
- Provide on-site consulting, phone support and various trouble shooting tasks related to Real Estate Technical issues such as interpretation of plans, computation of bearings, distances and traverses, and right of way specifications.
- Test, evaluate and understand new methods that support right-of-way map updates and coordination with GIS technology.
- Perform complex research of Survey data including horizontal and vertical geodetic and project control data, land survey, boundary, historic Government Land Office sectionalized survey and highway design survey records.
- Apply route surveying, boundary surveying, construction plan reading and survey control to make inferences about applicability of records to fulfill research requests, based on information located from records and databases that vary in format and medium including 100-year-old survey notes, modern CADD files, etc.
- Prepare CADD drawings as required to update MDOT right-of-way maps in preparation for GIS technology.
- Work closely with Real Estate and Design Staff as well as Region Offices to make revisions and corrections to the right-of-way maps and/or legal descriptions and sketches as requested.
- Consult with personnel employed by contractors, public utilities, city and county engineering departments, or road/bridge design or survey consultants regarding coordination of project activities.
- Draw architectural and engineering details of roadways, buildings, structures, topographical features and more using computer generated techniques and programs.
- Prepare detailed designs, drawings or strip maps for roadway improvements and control devices.
- Prepare charts and graphs for the presentation of statistical data.
- Attend staff progress and design meetings as technical expert to provide status of MDOT right of map updates and coordination with GIS technology

Duty 2

General Summary:

Percentage: 10

Prepare instrument work that includes preparing right-of-way legal descriptions for road and bridge projects, condemnation proceedings and disposal of MDOT excess and railroad properties for the most complex assignments. Complex assignments include interpreting or writing property legal descriptions that involve encumbered properties, properties involving multiple jurisdictions (i.e., state, county, city, railroad) acquisitions of properties with restrictive covenants (i.e., contamination restrictions, farmland preservation, condominium developments), and having the subjective expertise to interpret the legal intent of legal descriptions (i.e., bearing provided is from a section line based on the knowledge of surveying practices in that era, multiple centerline locations, irregularly shaped parcels).

Individual tasks related to the duty:

- Analyze property related information, including memos of negotiations, Engineering Reviews, appraisals and any other information in a property parcel file that may impact the legal descriptions.
- Review property information to create a description of properties in a legal and accurate manner so MDOT can acquire and/or sell property.
- Prepare legal descriptions intermingling bearing datum, distances, plats, private claims, government lots and any other land identifications in new descriptions to accurately describe lands to be acquired or sold.
- Review and provide expertise on required design documentation (old and/or new), surveys, past legal instruments and plats or other documentation used in preparing legal descriptions and drawing exhibits.
- Maintain records of all legal descriptions and sketches of highway and railroad excess properties.
- Create and compute unknown areas of properties to be taken for highway use and the disposition of highway and railroad excess properties.
- Review parcel packages and requests to verify accuracy of documentation in order to perform specific real estate tasks.
- Communicate technical information to requestors.

Duty 3

General Summary:

Percentage: 10

Prepare sketches and overlays of residential and commercial lands merging information from previous highway projects, subdivisions and property surveys with new and current highway projects, rotating bearings and entire properties to decipher the boundaries of these properties for the disposal of MDOT-owned excess property. Manage MicroStation files of these sketches and overlays for future use in the creation of new sketches and overlays of adjacent properties.

Individual tasks related to the duty:

- Analyze previous highway projects, subdivisions and property surveys to prepare accurate overlays of residential and commercial properties for the disposal of MDOT -owned excess property.
- Manage and maintain MicroStation files of the sketches and overlays to provide for future use of like sketches and overlays of adjacent properties.

Duty 4

General Summary:

Percentage: 10

Serve as a resource person to Regions, Transportation Service Centers (TSCs), other Real Estate Staff, contractors, surveyors, lawyers, and the general public as to the methodology used in the preparation of legal descriptions. Present training to technicians to use this methodology to interpret and write legal descriptions.

Individual tasks related to the duty:

- Consult with personnel employed by contractors, public utilities, city and county engineering departments, or consultants regarding coordination of project activities.
- Review legal descriptions provided by Regions, Transportation Service Centers and other Real Estate Staff to verify accuracy of legal descriptions and advise if improvements need to be made to improve the description.
- Develop and present training on the methodology used in the preparation of legal descriptions as well as how to write and interpret legal descriptions.

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

Must have considerable knowledge and understanding of route surveying, boundary surveying, and survey control and make decisions regarding these.

Independently determine conflicts or ambiguities in legal descriptions and how to resolve to best represent MDOT's interests.

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

When encountering unique ROW inquiries, especially in circumstances that might bring about a delay in the creation of legal descriptions, drawings and court exhibits or a decision that might involve significant changes in the already approved engineering review or negotiations.

When any unusual conditions arise and no previous standards apply, consultation with the supervisor may be required.

Development of any proposed workflow changes.

Questions regarding policy and procedures.

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.

Occasional travel on a statewide basis. Travel may require sitting for long periods of time. Sitting for long periods of time using a computer. Overnight and long-distance travel is required for meetings. Ability to communicate effectively in a one on one situation or before a group as a regular part of the job.

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?

All duties are essential.

24. Indicate specifically how the position's duties and responsibilities have changed since the position was last reviewed.

New position.

25. What is the function of the work area and how does this position fit into that function?

The Real Estate Property Management Unit provides technical real estate support for the Central Office, Region Offices as well as outside contractors in the areas of mapping, right-of-way plans, and legal descriptions. This position independently prepares and updates the MDOT right-of-way maps for the most complex assignments. The most complex assignments include reviewing right-of-way plans and updating right-of-way maps where property acquisition or disposal abuts both railroad and highway property, involves dedicated and/or statutory right-of-way, involves either reconstruction or construction of new roadways and/or bridges with revised or new geometric alignments utilizing complex curve data.

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This position also serves as a resource person to Regions, Transportation Service Centers, other Real Estate Staff, contractors' surveyors, lawyers, and the general public as to the methodology used in the preparation of legal descriptions.

26. What are the minimum education and experience qualifications needed to perform the essential functions of this position.

EDUCATION:

Possession of an Associate's degree in concrete technology, civil technology, construction technology, surveying technology, construction management, mathematics, or computer science.

EXPERIENCE:

Transportation Technician 11

Three years of experience equivalent to a Transportation Technician, including one year equivalent to a Transportation Technician E10.

Alternate Education and Experience**Transportation Technician 8 - 12**

Possession of a Bachelor's degree or higher in an Applied Science or Science with 16 semester hours (24 term) credits in job specific or related course work qualifies for the Transportation Technician E10 level.

OR

Completion of 60 semester (90 term) credits including 24 semester (36 term) credits in any combination of course work in the following areas: structures, materials, soils, hydrology, surveying, design, bituminous, concrete, aggregate, chemistry, physics, geology, environmental science, computer science, highway or traffic technology, construction management, engineering, or mathematics may be substituted for the associate's degree.

OR

Four years of technician level experience consisting of quality control inspections, drafting, materials and testing, surveying, or traffic may be substituted for the Associate's degree.

OR

Current certification in bituminous (hot mix), concrete, density testing, or aggregate gradation and one year of related field experience may be substituted for the associate's degree.

OR

Current certification in bituminous (hot mix), concrete, density testing, or aggregate gradation and three years experience equivalent to a Transportation Maintenance Worker 9 may be substituted for the associate's degree.

OR

Current certification in bituminous (hot mix), concrete, density testing, or aggregate gradation and completion of 16 semester (24 term) credits in any combination of course work in the following areas: structures, materials, soils, hydrology, surveying, design, bituminous, concrete, aggregate, chemistry, physics, geology, environmental science, computer science, highway or traffic technology, construction management, engineering, or mathematics may be substituted for the Associate's degree.

KNOWLEDGE, SKILLS, AND ABILITIES:

Extensive knowledge of the U.S. Public Land Survey system; proper formatting of data; and of English and metric conversion factors as well as nomenclature and conventional symbols of mapping, architectural, and engineering drawings. Ability to apply required surveying knowledge to specific situations; interpret plats, plans, maps and drawings.

Communicate effectively with co-workers, consultants and general public inquiries. Knowledge of the function and operation of automated drafting equipment and computer graphics equipment such as CADD programs. Ability to operate automated drafting and computer graphics equipment. Knowledge of design and commercial planning concepts and techniques, including design manuals, standard plans and specification, construction manuals and engineering and drafting practices. Ability to express ideas clearly and concisely, both orally and in writing in normal and stressful conditions. Ability to read, interpret, or explain applicable standards, technical literature, regulations, plans, and specifications. Ability to prepare maps, drawings, and tracings neatly, accurately, and legibly.

Ability to maintain effective working relationships with private, public, local, state and federal personnel as well as other department personnel.

CERTIFICATES, LICENSES, REGISTRATIONS:

Possession of a valid driver's license.

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.

KELLEY SCHMITT

10/28/2020

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