

# STATE OF MONTANA

## JOB DESCRIPTION

*Montana state government is an equal opportunity employer. The State shall, upon request, provide reasonable accommodations to otherwise qualified individuals with disabilities.*

**Job Title: Signing Plans Checker/Designer**

**Position Number: 36023**

**Location: Helena**

**Department: Transportation**

**Division and Bureau: Engineering/Traffic and Safety**

**Section and Unit: Traffic Design**

**Job Overview:** This position reviews and checks signing and pavement marking plan packages developed within the Traffic Design Section and by Design Consultants. The position also provides technical assistance, training, and direction to MDT engineers and designers, and Design Consultants.

### **Essential Functions (Major Duties or Responsibilities):**

#### **Design Plan Review and Checking – 70%**

Performs comprehensive technical review of signing and pavement marking plan packages developed by designers and design consultants to ensure completeness, accuracy, biddability, constructability, cost-effectiveness, and compliance with applicable standards and guidance. Reviews project history to assure final design is consistent with approved scope of work and approved design exceptions. Reviews, checks and directs the revision of the PS&E package before submission to the Engineering Construction Contracting Bureau (ECCB).

- Reviews and checks the accuracy and completeness of the individual elements of the signing and pavement marking plans package to ensure compliance with design and format standards, and to ensure inclusion of information needed to bid and construct projects. Evaluates horizontal alignment and vertical alignment with respect to signing and pavement marking elements to ensure accuracy and compliance with the specific project design speed, functional class of the roadway, and other signing design criteria. Verifies that plan packages agree with the design philosophy defined in the milestone reports,. Inspects CADD file formats and 3D models for adherence to controlling design parameters. Evaluates typical sections, roadway widths, summary frames, details, plan and profile sheets, cross-sections, and cost estimates to ensure compliance with MDT requirements.
- Ensures that input and review comments from MDT specialty work units are appropriately incorporated into final plans by reviewing project documentation, designs and other data to

determine appropriate involvement; ensuring this information is incorporated into the plan and that individual work unit recommendations do not conflict. Reviews project documentation for adequacy and compliance with requirements, and provides quality assurances of phased and final work.

- Reviews and checks completed estimates and special provisions to ensure proper format, clarity, accuracy and agreement with items shown in the plans. Evaluates estimates to identify non-standard bid items and to ensure agreement with plan sheet summaries.
- Directs design staff to make all approved modifications resulting from the Final Plan Review. Verifies the PS&E package includes all items needed for submittal to the ECCB via the Project Design Manager. Confirms that the PS&E package is compatible with Right-of-Way agreements, design standard revisions, and current design guidelines.

### **Technical Design, Assistance and Training - 25%**

Provides technical assistance, training, and direction to MDT design staff. Serves as a technical authority and resource on design standards, guidelines, and current practices.

- Completes signing design and quantity calculations on technically complex highway projects.
- Maintains a contemporary knowledge of construction and design practices, software, and other job related skills by attending training to sustain continuing professional development. Maintains constant contact with other MDT and federal personnel, and conducts continual research to maintain a current knowledge of state and federal policies and standards, current software applications, and other job-related issues.
- Provides design and design plan interpretation, consultation, and guidance to MDT design staff throughout the course of design projects. Interprets and explains advanced technical aspects of designs. Analyzes, evaluates, and recommends solutions for design problems.
- Trains MDT design staff on the application of new design practices, technologies, and standards to ensure that best practices are effectively incorporated into design processes.
- Provides project related guidance and technical expertise to other departmental work units regarding issues such as design standards, design alternatives, and solutions. Provides recommendations for design standards, standard drawings and design procedures. Provides support and assistance to project design managers and design staff to deliver projects on schedule.
- Researches and assesses innovations in highway design practices to determine their applicability to state and MDT operations. Participates in the development and writing of specifications for design methods and applications (e.g., the Contract Plans Book). Communicates new specifications and requirements to consultant engineers and others to ensure adequate support for, and understanding of, highway design needs and requirements.

## **Other Duties - 5%**

This position performs a variety of special studies, project analyses, and other duties as assigned by supervisors in support of the Department's mission and Division objectives.

## **Supervision**

The number of employees supervised is: 0

The position number for each supervised employee is: n/a

## **Physical and Environmental Demands:**

Most work is performed in a professional office environment that involves long durations sitting or standing at a computer workstation. Regular trips to conference rooms or co-worker work areas. Occasional travel to off-campus sites for training/conferences. Rare field trips to project sites could involve traversing uneven terrain. Lift lifting (less than 30 lbs. ) occasionally required.

## **Knowledge, Skills and Abilities (Behaviors):**

The position requires a thorough knowledge of the principles, methods and theories of traffic engineering pertaining to highway design, highway construction, and signing and pavement markings. The position requires specific knowledge of the Manual on Uniform Traffic Control Devices (MUTCD) and American Association of Highway and Transportation Officials (AASHTO) standards and guidelines; estimating; technical writing. This position must be highly knowledgeable of departmental guidelines and procedures regarding signing and pavement markings; and written and verbal communications including presentation methods and technical writing. The position requires knowledge of computer design (Microstation, GeoPak, OpenRoads, 3D models, etc.), operations; roadway plans and specifications; utility and right-of-way plans; and highway layout. Training and technical assistance duties require knowledge of classroom and on-the-job training methods and techniques; construction and maintenance processes; state and federal standards; technical writing principles, and computer-assisted design software.

Operation of computer assisted design, spreadsheet, and word processing software (Excel, Word, Microstation, etc.); communicating effectively both verbally and in writing; problem-solving; negotiation; and mediation. The work also requires a working knowledge of environmental requirements, Right-of-Way requirements, and requirements of other Department work units for consideration in plan reviews.

**Minimum Qualifications (Education and Experience):**

The required knowledge and skills are typically acquired through a combination of education and experience equivalent to a Bachelor’s Degree in Civil Engineering, Civil Engineering Technology, Construction Engineering Technology, or a Related Field.

This position requires a minimum of four (4) years of signing design experience of which at least one year is at the Designer III level or equivalent.

Certifications, licensure, or other credentials include: N/A

Alternative qualifications include: Any combination of additional related work experience and education equivalent to the minimum qualifications. Experience may substitute for education on a year for year basis.

**Special Requirements:**

List any other special required information for this position

- Fingerprint check
- Valid driver’s license
- Background check
- Other; Describe
- Union Code
- Safety Responsibilities

The specific statements shown in each section of this description are not intended to be all inclusive. They represent typical elements and criteria considered necessary to perform the job successfully.

**Signatures**

My signature below indicates the statements in the job description are accurate and complete.

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Immediate Supervisor	Title	Date
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Administrative Review	Title	Date
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My signature below indicates that I have read this job description.

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Employee	Title	Date
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**Human Resources Review**

**Job Code Title: Designer 2 Job Code Number: D31012**

My signature below indicates that Human Resources has reviewed this job description for completeness and has made the following determinations:

- FLSA Exempt
- FLSA Non-Exempt
- Telework Available
- Telework Not Available
- Classification Complete
- Organizational Chart attached

**Human Resources:**

Tiffany Thornton HR Generalist

5/17/2022

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**Signature**

**Title**

**Date**