

# 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: Design Technician I & II      Position Number: 36002, 36005, 36017, 36021, 36022, 36030**

**Location: Helena**

**Department: Transportation**

**Division and Bureau: Engineering/Traffic & Saftety**

**Section and Unit: Signing**

### **Job Overview:**

The Design Technician is entry level to the Designer series career ladder. The position is responsible for performing a variety of technical and pre-professional drafting and design duties. Assigned work begins at the basic level and includes detailed instruction on what attributes need to be designed, data analysis and developing plan details.

Design Technician I performs design work of average difficulty on rural, primary and interstate systems, and primary arterials passing through small urban and rural communities. These types of projects usually have minimal signing.

Design Technician II performs design work of advanced difficulty. The level of complexity of the projects assigned are advanced rural, primary and interstate, and advanced primary arterials passing through moderately sized urban communities.

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

#### **Project Development – 30%**

Performs a variety of technical and pre-professional field, office and administrative duties in support of ongoing design projects.

Determines the Signing Units involvement by reviewing the correspondence within each project file. Researches and analyzes all available project information for the plan development process. Obtains past as-built plans, determines if there are other projects planned in the area. Coordinates traffic plans design activities with other sections, bureaus, and districts. This information is used for the proper development of the signing, pavement marking, and delineation plan sheets.

Performs sign inventories and on-site inspection statewide to gather information of existing traffic control devices and topographic features impacting the design..

Prepares cost estimates to aid in the selection of alternatives. Writes special provisions for the traffic signing and pavement markings to clarify the general specifications of the bid documents. Prepares and compiles bid quantities.

Reviews traffic plans and specifications sheet by sheet to calculate specific pavement marking quantities necessary as requested by the project lead for incorporation into their plans.

Prepares a variety of memoranda, mostly form letters, and reports of meetings and for inquiries about signing and pavement markings within the Department. Helps other designers in the completion of projects and checks sign designs, quantities and estimates.

### **Preliminary Design Plans – 50%**

Performs traffic design work for the signing and pavement marking plans for roadway projects. Identifies problems that do not fit the standards, and proposes solutions. Establishes placement of traffic control devices in relation to design speed, roadway geometry, roadside features and driver information needs for inclusion in final design package.

Prepares a clear detail and description of installation requirements and quantities to the contractor and construction staff to facilitate construction. This involves determining and identifying specific and detailed data for every sign location, including calculating sign lay-outs using the Federal Highway Administration Alphabets, sign location, calculation of height of posts on the basis of roadway cross sections, specifies types of posts and breakaway devices and sign sheeting material. Drafting tasks extensively utilize MicroStation, computer aided drafting design (CADD) software, but also occasional pen and ink techniques.

### **Other Duties - 20%**

Performs a variety of other duties as assigned in support of Section, Bureau and MDT goals and objectives. Assists other MDT programs on special projects and attending training and educational sessions as required.

## **Supervision**

The number of employees supervised is: 0

The position number for each supervised employee is: N/A

## **Physical and Environmental Demands:**

- Lifting objects in excess of 30 lbs.
- Extensive travel throughout the state or district to project locations.
- Ability to walk over uneven terrain or in water.
- Continual walking or standing.
- Exposure to extreme weather and high-speed traffic.
- Operation of motor vehicles.
- Operation of power tools and/or equipment.

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

Understanding the concept of design drafting technology. Working knowledge of computer aided drafting and design (CADD) software packages

Effective written and verbal communication with a variety of audiences, maintain professional working relationships, and can operate various types of office equipment.

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

### **Design Technician I – level 1**

The required knowledge and skills are typically acquired through a combination of education and experience equivalent to an Associate's Degree or equivalent and some technical training or experience in drafting and technical work in highway design, survey, transportation planning, highway construction, traffic engineering or a related field.

### **Designer Technician II – level 2**

The required knowledge and skills are typically acquired through a combination of education and experience equivalent to an Associate's Degree or equivalent and at least one year of technical training or experience in design drafting technology that includes a working knowledge of computer aided drafting and design (CADD) software packages.

This position requires no experience.

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.

**Special Requirements:**

- Fingerprint check
- Background check
- 035 Union Code
- Valid driver's license
- Other; Describe
- 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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<b>Immediate Supervisor</b>	<b>Title</b>	<b>Date</b>
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<b>Administrative Review</b>	<b>Title</b>	<b>Date</b>
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My signature below indicates that I have read this job description.

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<b>Employee</b>	<b>Title</b>	<b>Date</b>
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**Human Resources Review**

**Job Code Title: Design Technician 1, 2 Job Code Number: D31021, D31022**

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

- |  |  |
|--|--|
| <input type="checkbox"/> FLSA Exempt                   | <input checked="" type="checkbox"/> FLSA Non-Exempt    |
| <input checked="" type="checkbox"/> Telework Available | <input type="checkbox"/> Telework Not Available        |
| <input type="checkbox"/> Classification Complete       | <input type="checkbox"/> Organizational Chart attached |

**Human Resources:**

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<b>Signature</b>	<b>Title</b>	<b>Date</b>
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