

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: MSU Drafter Position Number: 54193201 Location: Bozeman/MSU Design Unit

Department: Transportation Division and Bureau: Engineering/Highways Bureau

Section and Unit: Road Design Section/MSU Design Unit

Job Overview: This is a student position located in the MSU Design office within the Road Design Section. Duties consist primarily of using CADD software to prepare contract documents (plan sheets, details, and cross sections) used for the construction of highway projects. This entry level position will receive extensive training and experience in road design.

Essential Functions (Major Duties or Responsibilities):

Develops Documentation, Plan Sheets, and Details - 40%

- Prepares plan sheets in accordance with industry practice, departmental and bureau standards for technical drawings.
- Develops detail sheets from interpreting engineering design calculations and hand-drafted sketches in sufficient detail so that contractors and inspectors alike are aware of the design intent.
- Develops engineering calculations and required documentation to produce bid quantities for incorporation into roadway plan sheets. Prepares calculations for typical sections and computed surfacing quantities, project alignments and grades, earthwork quantities, drainage features, guardrail, curb and gutter, sidewalk, ADA features, fencing, and other miscellaneous features necessary for project construction. Assists in compiling and preparing cost estimates. Writes and/or checks special provisions.

Reviews and Revises Calculations, Plan Sheets, Details - 30%

- Reviews and revises as a consequence of checking, plan sheets and details prepared by self or others.
- Reviews details and engineering design calculations for accuracy.
- Checks calculations and design documentation developed by others.

Develops Cross Sections and Plan Details from Survey Notes and Other Data - 30%

- Analyzes survey data, horizontal and vertical alignments, typical sections, and miscellaneous design input from other bureaus or sections and prepares cross sections showing major design elements.
- Coordinates miscellaneous design input from other sources to develop plan details.
- Develops bid quantities from cross sections and other design data prepared by self or others.

Supervision: The number of employees supervised is: 0

Physical and Environmental Demands:

- Work is performed in a controlled, comfortable office setting; Operate a computer, calculator, and other office equipment.
- Lifting objects (such as files or as-built plans) up to 20 pounds.
- Remaining seated for extended periods of time, with occasional walking, standing, and bending.
- Short travel for training, meetings, and conferences.

Knowledge, Skills and Abilities (Behaviors):

Knowledge of the principles and methods of CADD drafting and surveying usually obtained in the first year of college or other technical training. Familiar with highway plans, specifications, and design standards for Interstate, Primary, Secondary and County Roads. Knowledge of engineering mathematics, especially trigonometry and geometry.

Skill in the use of engineering office instruments, computers, and CADD software.

- Demands for accuracy in all aspects of work
- Ability to meet deadlines.
- Comparing data.
- Copying or transcribing data.
- Computing arithmetic, geometric, and trigonometric operations.
- Compiling information and organizing it into a logical format.
- Analyzing survey data and other design input data.
- Communicating effectively in both oral and written communications

Minimum Qualifications (Education and Experience):

This position requires the employee be currently enrolled, and in good standing, in the MSU-Bozeman Civil Engineering, Construction Engineering Technology, or Environmental Engineering programs with at least 30 credits completed by the end of the recruitment semester. Less than 30 credits may be considered if key engineering courses have been completed.

Prior engineering experience and/or prior MDT experience is preferred.

Special Requirements:

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| ☐ 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.

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.

Employee	Title	Date
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Human Resources Review

Job Code Title: Design Technician 1 Job Code Number: D31021

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	8/29/2023
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Signature	Title	Date
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