

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: Hydraulic Civil Engineering Specialist **Position Number: 32029, 34013, 35005
32039, 34016**

Location: Helena

Department: Transportation

Division and Bureau: Highways and Engineering/Highways Bureau

Section and Unit: Hydraulics

Job Overview: The Hydraulic Civil Engineering Specialists are responsible for the development of alternatives and innovative approaches to complex hydraulic problems for multiple projects in various stages of development and ensuring that hydraulic activities are completed on schedule. This involves advanced engineering design and analysis, documentation of results, and communication and coordination with various department work units. The position reports to the Hydraulics Design Engineer (#35011) and does not directly supervise other agency personnel.

Essential Functions (Major Duties or Responsibilities):

Engineering Analysis and Design – 70%

The Hydraulics CE Specialist is responsible for the engineering analysis and design in the areas of bridge waterway openings, scour analysis, culverts, fish passage, storm drains, channel changes, stream restoration, and irrigation.

The CE Specialist utilizes state of the art hydraulic software to analyze and design project hydraulic features and is responsible for organizing and writing comprehensive hydraulic reports to present the results of the field investigations, modeling, analysis, and recommended hydraulic features.

Technical Expertise and Assistance – 20%

Provides advanced training, guidance, and engineering expertise to other engineers, District and field project personnel, and consultants on specialized applications of hydraulic engineering.

This includes serving as a technical resource on hydraulic designs within the District, resolving engineering problems as requested by Construction and Maintenance projects, and providing quality assurances of phased and final work.

Provides training and engineering expertise to other engineers and consultants on new theories, technologies, and standards in hydraulic engineering; conducts specialized research; and serves as

an engineering expert in assessing and justifying engineering aspects of damage claims and litigation involving hydraulic issues.

Other Duties - 10%

This position performs a variety of other duties as assigned by the Hydraulics Design Engineer in support of the Hydraulic Section that may include:

- Participating in ongoing training and educational programs,
- Assisting in updating: detail drawings, standard drawings, special provisions, supplemental specifications, hydraulic manuals and other policy and procedure documents,
- Assisting and providing expertise in updating of department manuals and guidelines, and
- Performing a variety of other duties as directed.

Supervision

The number of employees supervised is: 0

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

Physical and Environmental Demands:

Predominantly the work is performed in an office environment or occasionally in the field and may require:

- Ability to walk over uneven terrain or in water.
- Remaining seated for extended periods of time, with occasional walking; standing; bending
- Minor travel (200 miles/month)
- Operating a personal computer
- Communicate in writing, in person, and over the phone.
- Exposure to extreme weather
- Exposure to loud noises
- Exposure to confined spaces
- Exposure to high-speed traffic

Knowledge, Skills and Abilities (Behaviors):

The position requires skill in organizing and planning for the solution of complex engineering problems, especially those involving natural phenomena (i.e., hydrology and fluvial geomorphology); analyzing and evaluating engineering designs; and specialized analytical methods and techniques.

The position also requires skill in the use of standard and specialized software applications, computer modeling techniques, analyzing and interpreting statistical information, and written and verbal communications.

Minimum Qualifications (Education and Experience):

Either a bachelor’s degree in civil engineering, or related field such as construction engineering, mechanical engineering, geotechnical engineering, mining engineering, or environmental engineering or will obtain a bachelor’s degree in civil engineering or related field by May 2026.

Applicants with current work-related job experience and/or recent engineering graduates are preferred.

Certifications, licensure, or other credentials include: Successful completion of the Fundamentals of Engineering Exam (FE) or will pass the FE exam within 6 months of employment.

Alternative qualifications include: None.

Special Requirements:

- 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: Engineering Analyst Job Code Number: D25011

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:

Signature	Title	Date
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