

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: Consultant Plan Checker Position Number: 39016 Location: Helena

Department: Transportation

Division and Bureau: Project Development and Delivery; Consultant Design Bureau

Section and Unit: Project Development

Job Overview:

This position is a Consultant Plan Checker in the Consultant Design Bureau of the Montana Department of Transportation Project Development and Delivery Program. This position provides technical supervision and review of road design plan packages developed by consultant engineering firms (Professional Engineers & Land Surveyors) to ensure compliance with applicable federal, state, and local standards; ensure designs are cost-effective, constructable, biddable, and accurate; and to ensure CADD files are compiled according to MDT standards. This position provides technical assistance, training, and direction to consultant engineering firms (and others e.g., MDT designers and engineers as needed); and assist Project Managers in the PS&E process for ECCS and the bid letting process. This position reports to the Consultant Plans Engineer (position 32094), and does not supervise others.

Essential Functions (Major Duties or Responsibilities):

Design Plan Review and Checking – 55%

Provide technical supervision and review of road design plan packages developed by consultant engineering firms to ensure compliance with applicable federal, state, and local standards; to ensure designs are cost-effective, constructable, biddable, and accurate; and to ensure CADD files are compiled according to MDT standards. Research and compile preliminary files, as-built plans and related documentation to prepare for the preliminary plan review. Attend Preliminary Field Reviews and Scoping meetings to make suggestions to the consultant engineer to ensure inclusion of site features and preliminary project requirements.

- Act as design liaison between the consultant and MDT specialty design sections to facilitate the compilation of photogrammetric, environmental, hydraulic, geotechnical and traffic data needed for the preparation of Alignment and Grade Review (AGR) plans.
- Review and check the accuracy and completeness of the individual elements of the AGR package (e.g., horizontal and vertical alignments, section widths, plan layout and format, work items, cost estimates, etc.) to ensure compliance with design and format standards, and to ensure inclusion of information needed to bid and construct projects. Evaluate horizontal alignment (e.g., radii, spirals, curve lengths, etc.) and vertical alignment (e.g., stopping and passing sight distances, vertical curve lengths, grade rates, etc.) elements to ensure accuracy and compliance with the specific project design speed and roadway type. Ensure plan packages agree with the design philosophy defined in the PFR and Scoping reports, to determine if the consultant is heading in the right direction and is utilizing the MDT format. Evaluate typical sections, roadway widths, summary frames, details, plan and profile sheets, cross-sections, CADD file formats and cost estimates to ensure compliance with MDT requirements. Provide comments to the consultant engineer through the Project Manager to aid in plan revisions at the AGR stage.
- Prepare for and attend the AGR meeting to facilitate plan review and revision by MDT specialty work units and approving authorities.
- Review the preliminary Scope-of-Work report prepared by the consultant engineer to ensure all pertinent items from the AGR and subsequent correspondence is covered in the report. Provide written comments to the consultant engineer on modifications or additions to reports, and direct the implementation of any necessary plan revisions or additions.
- Review and check the accuracy of design plans for Plan in Hand (PIH) reviews for errors or needed clarifications for the Plan in Hand review. Ensure any CADD problems have been resolved and that electronic file formats meet MDT requirements.
- Review and check completed estimates and special provisions to ensure clarity, accuracy and agreement with items shown in the plans and are in the proper format. Evaluate estimates to identify non-standard bid items and to ensure agreement with plan sheet summaries.
- Develop solutions to a broad range of design deficiencies identified through the plan review process. This involves coordination with other MDT specialty work units to identify alternatives, and the application and testing of design concepts to assess the feasibility and cost-effectiveness of various alternatives.
- Prepare for and attend the PIH meeting to facilitate plan review and revision by MDT specialty work units and approving authorities.
- Review and check the Final Plan Review package to ensure all items covered in the PIH report are properly incorporated into the plans. Provide written comments on the plan package, and direct the consultant engineer to make the final plan corrections and to submit the original plan package and supporting data in the appropriate MDT format for submission to the Engineering Construction Contracting Section (ECCS).

- Ensure 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; and ensuring the consultant engineer's interpretation of specialty recommendations is correct.
- Prepare for and attend the FPR meeting to facilitate plan review and revision by MDT specialty work units and approving authorities.
- Assist the MDT Consultant Plans Project Manager in finalizing the Plans, Specifications and Estimate (PS&E) package for submittal to ECCB.
- Verify that the consultant has made plan changes or corrections requested by the Engineering Construction Contracting Bureau or resulting from PS&E review to ensure designs are constructable and biddable.
- Provide information and/or direction for various requests fielded by the Q&A forum.

Technical Assistance and Training – 35%

Provide technical assistance, training, and direction to consultant engineering firms (and other MDT designers as needed) by providing direction, supplying information, and responding to inquiries to ensure acceptable preparation of design plans, compliance with requirements, and efficiency. Provide training and technical assistance to consultants and others on the design team on new theories, MDT design software, and new technology and standards in highway design. Keep abreast of contemporary knowledge of design practices, software, and other job related skills by attending training and education.

- Maintain a contemporary knowledge of construction and design practices, software, and other job related skills by attending training and education to maintain continuing professional development. Maintain constant contact with other MDT and federal personnel, and maintain a current knowledge of state and federal policies and standards, current software applications, and other job-related issues.
- Provide technical assistance and training to consultant engineers and members of their design team on computer-related items such as data transfer. Provide guidance in the use of the department's design software packages, CADD standards, design standards, and MDT policies and guidelines related to the development of a complete plan package.
- Provide design and design plan interpretation, consultation, and guidance to consultants throughout the course of design projects.
- Train consultants on the application of new design practices, technologies, and standards to ensure that best practices are effectively incorporated into design processes.
- Provide project related guidance and technical expertise to other departmental work units regarding issues such as design standards, design alternatives, and solutions. Provide recommendations for design standards, standard drawings and design procedures.

- Research and assess innovations in highway design practices to determine their applicability to state and MDT operations. Communicate new specifications and requirements to consultant engineers and others to ensure adequate support for, and understanding of, highway design needs and requirements.

Other Duties – 10%

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. This includes exchanging information with contractors, agency staff, and the public; providing training, education, and professional and technical assistance; coordinating special projects; and attending ongoing education and training as directed.

Supervision

The number of employees supervised is: 0

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

Physical and Environmental Demands:

This position functions in a typical office environment and includes extensive travel throughout the state to project locations. This position requires the ability to traverse over uneven terrain

Knowledge, Skills and Abilities (Behaviors):

The position requires an advanced knowledge of the principles and practices of road design including knowledge of horizontal and vertical alignments, drainage, typical sections, cross-sections, approaches, intersections, etc. The position requires knowledge of drafting; engineering fundamentals (e.g., computing horizontal and vertical curves, designing grades, determining earthwork, basic hydraulic design, soils, mechanics, etc.), advanced mathematics including algebra, geometry; construction processes, architectural practices; AASHTO, MDT, and/or local design standards; estimating; technical writing; and specialized engineering and design software including CADD (Microstation, GeoPak, Autocad, etc.). 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.

Skill in the operation of computer assisted design, spreadsheet, and word processing, and other software (Excel, Word, Adobe Acrobat, BIM 360, Microsoft TEAMS, Zoom, etc.); communicating effectively both verbally and in writing; problem-solving; negotiation; mediation; and in operating drafting and survey equipment.

Minimum Qualifications (Education and Experience):

The required knowledge and skills are typically acquired through a combination of education and experience equivalent to an Associates's Degree or Bachelor's Degree in drafting/design, surveying, engineering, architecture or closely related field.

This position requires a minimum of 6 years of experience in progressively responsible highways design."

Certifications, licensure, or other credentials include:

A valid Montana Drivers License is required.

Alternative qualifications include: Any combination of additional related work experience and education equivalent to the minimum qualifications.

Special Requirements:

List any other special required information for this position

- | | |
|--|--|
| ☐ Fingerprint check | ☒ Valid driver's license |
| ☐ Background check | ☐ Other; Describe |
| 035 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
-----------------------------	--------------	-------------

Administrative Review	Title	Date
------------------------------	--------------	-------------

My signature below indicates that I have read this job description.

Employee	Title	Date
-----------------	--------------	-------------

Human Resources Review

Job Code Title: Designer 2 - Road Plan Checker

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:

Signature

Title

Date