

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: Materials Fabrication Inspector

Position Number: 59018

Location: Billings

Department: Transportation

Division and Bureau: District Construction

Section and Unit: Materials

Job Overview:

The Materials Fabrication Inspector is responsible for coordinating, monitoring, and conducting materials inspection, sampling, and analysis activities associated with statewide construction projects. The incumbent must analyze plant quality control procedures, confirm test results, and act as the Department expert to identify any corrective actions required then act as the Department's lead in analysis of proposed corrective actions, and recommend plant certification, product acceptance, or rejection upon findings. The position provides direction to other inspectors and monitors plant operations during production of pre-stressed concrete beams, corrugated steel culverts; concrete pipe and box culverts; signing and signposts; timber; and seeding products that are incorporated into MDT projects statewide.

Essential Functions (Major Duties or Responsibilities):

Fabricated Item Inspection Management - 55%

Participate in establishing and implementing plant inspection procedures to ensure compliance with applicable state and federal standards for material quality and placement. Conducts inspection processes to ensure quality assurance requirements are incorporated into inspection and testing procedures; directs or performs inspection of plant operations; develops or reviews reports to ensure activities meet quality assurance requirements, and takes the lead in review of submitted corrective actions or repair procedures proposed by supplier to correct quality control or material deficiencies.

- Overseeing inspections and the preparation of detailed reports on procedures and fabricated products documenting any discrepancies and notifying the appropriate Department personnel

and Contractor of items that require correction. Acts as the Department's point of contact when working with suppliers to identify and evaluate appropriate corrective actions and is responsible for coordinating communications with appropriate Department personnel to ensure all areas of concern are addressed. Prepares detailed reports during inspection of Department certified plants or at the time of shipping for products produced at non-certified plants.

- Act as the regional wood product expert by providing oversight and direction in the fabrication and inspection of all wood products used in highway projects to ensure quality assurance requirements and materials specifications are met. Based on workload, the incumbent may designate Department representatives to perform inspection of wood products under his/her guidance.
- Developing and providing training on inspection and testing standards for Prestressed Beams, Concrete Pipe & Box Culverts, Corrugated Steel Pipe, Reflective Signs & Signposts, Miscellaneous Steel Items, timber, and seeding; documentation requirements; policy interpretations; and related information for training new inspectors, backup personnel and other area inspectors.
- Serve as one of the Regional Buy America experts ensuring proper documentation is obtained for steel material incorporated into products and projects.
- Participate as a team member to develop inspection requirements. Develop informational materials, certification documentation requirements, and other guidelines; and provide technical assistance and direction to Contractors, fabrication facilities and others on the appropriate requirements to attain and maintain status as a certified plant with MDT.

Item Inspection - 40%

The incumbent works with the Materials Information Office to identify the level of inspection required and ensure inspection is performed for prestressed concrete beams; concrete pipe and box culverts; corrugated steel pipe; reflective signs and sign posts; miscellaneous steel Items; concrete; timber; and seeding products or Department certified plants producing products that are incorporated into MDT projects to ensure compliance with applicable state and federal standards for material quality and placement.

- Provides inspection of the prestressed concrete beams and their components, including miscellaneous steel items for statewide bridge projects to ensure quality assurance requirements and material specifications are met. Performs or witnesses concrete field test to ensure placed concrete meets Department requirements.
- Ensures prestressed concrete beam fabrication work is within tolerances and specifications by interpreting and applying or directing other Department representatives to apply material's codes in conjunction with beam fabrication drawings. The position may personally perform or assign a representative to perform onsite inspections for MDT projects when fabrication agencies are unavailable to do so or when specialized expertise is required. The position also performs or assigns responsibility to perform spot inspections to ensure fabrication facility staff is properly certified and using the appropriate materials.

- Inspects precast plant fabrication processes and quality control procedures to ensure quality and compliance with project specifications and approved shop drawings. Based upon inspection results, provides recommendation regarding product acceptance or Department certification of plant.
- Verifies that all fabrication work is within tolerances and specifications by interpreting and applying material requirements in conjunction with shop drawings. The position ensures the quality by performing inspection of fabricated items such as rebar within concrete products or assigning a Department representative to perform inspection. The position may perform fabrication inspections when fabrication agencies are unavailable to do so or when specialized expertise is required. The position performs spot inspections to ensure fabrication facility staff are properly certified and using the appropriate materials.
- Provides oversight and direction in the inspection of miscellaneous items used in statewide construction projects to ensure quality assurance requirements and material's specifications are met. If noncompliant aspects are identified, the incumbent coordinates with Department experts and producers regarding corrective actions proposed by the producer to attain compliance. If corrective actions are agreed upon, the Fabrication Specialist inspects applicable procedures and recommends final product acceptance or rejection.

Other Duties - 5%

The Fabrication Inspector assists the Billings District in performing its construction and preconstruction functions when there are no ongoing fabrication projects. The functions performed are assigned as necessary and dependent upon ever changing bureau demands.

Supervision

The number of employees supervised is: 0

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

Physical and Environmental Demands:

Physical:

- Moderate lifting
- Exposure to outside weather conditions which may be adverse at times
- Exposure to chemical compounds including mercury and hydrochloric acid
- Working in an environment which is often very dusty with possible fumes, including welding fumes
- Moderate travel to cover all areas within the region
- Remaining seated for extended periods of time, with frequent walking; standing; bending
- Operating a personal computer

- Communicate in writing, in person, and over the phone

Mental:

- Precision and decision making while working independently
- Ability to multi-task
- Demands for accuracy in all aspects of work
- Initiative and accountability
- Research and problem solving
- Computing arithmetic operations
- Ability to meet inflexible deadlines
- Comparing data
- Compiling information, analyzing, coordinating, synthesizing, negotiating, instructing

This position requires infrequent overnight travel, approximately 5%. There are also frequent day trips.

Knowledge, Skills and Abilities (Behaviors):

This work requires knowledge of the principles and practices of construction, materials testing, and program administration. Requires extensive knowledge of the principles and practices of materials standards; inspection, sampling, testing, and analysis techniques; physical sciences; properties and characteristics of a variety of materials; project development, management, and budgeting methods; new and established sampling and laboratory testing protocols and procedures; state, federal, AASHTO, FHWA, and ASTM testing standards, procedures, and project specifications; methods and techniques of highway construction; extensive knowledge of various site-specific characteristics and their potential effects on construction projects (e.g., soils, temperature, weather conditions, gradations, segregation, stability, flows, additives, absorption rates, etc.); safety practices and procedures; the Montana Bridge and Materials Manuals, structural construction methods and techniques; a variety of site specific circumstances and their impacts (soils, temperature, weather conditions, etc.); on the job training methods and techniques; contract law and claims management; and Buy America requirements and specifications. The incumbent must be capable of interpreting and communicating specifics associated with properties and characteristics of a variety of materials; laboratory and field testing protocols and procedures; state, federal, AASHTO, FHWA, ASNT, AWPA and ASTM standards; project specifications; the Montana Bridge and Materials Manuals, structural construction methods and techniques.

This position requires skill in coordinating multiple projects; complex sampling and testing procedures; and a variety of equipment; and adapting sampling and testing methods and techniques to meet various site-specific circumstances. Effective written and verbal communications skills are also required in communicating technical information and project plans with, contractors, fabricators and department staff; and directing and coordinating a variety of technical and professional training programs. This position further requires skill in the use of

standard office software applications (i.e., word processing, spreadsheet, scheduling, etc.) in the performance of inspection duties.

Minimum Qualifications (Education and Experience):

The required knowledge and skills are typically acquired through a combination of education and experience equivalent to two years of technical engineering or science related training or course work at a college or institution.

This position requires a minimum of four years of progressively responsible experience in road construction or materials testing.

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:

List any other special required information for this position

- | | |
|--|--|
| <input type="checkbox"/> Fingerprint check | <input checked="" type="checkbox"/> Valid driver's license |
| <input type="checkbox"/> Background check | <input type="checkbox"/> 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.



DM&

08/15/2022

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

Human Resources Review

Job Code Title: Materials Specialist Job Code Number: D2D011

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

Human Resources:

Signature	Title	Date
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