

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: Area Materials Lab Supervisor Position Number: 72201, 54201, 57013, 71201, 56201, 52201, 51028, 53016

Location: Statewide Division Offices

Department: Transportation Division and Bureau: Construction

Section and Unit: Materials

Job Overview:

The Area Laboratory Supervisor is responsible for managing materials operations and activities throughout the phases of highway construction projects. The position serves as the Area's authority in materials standards, sampling, testing, and application and is expected to coordinate with the District Materials Supervisor and Materials Bureau to ensure the consistency and compliance of independent judgments and decisions in the field. Duties include managing major materials projects, including project budgets, timelines, resource allocations, and procedures; administering the Area Materials Laboratory to ensure effective operations, compliance with standards and regulations, and the accuracy and integrity of sampling, testing, and results analysis; and performing a variety of other duties as assigned. The incumbent reports to the District Materials Supervisor and directly or indirectly supervises 2-4 FTE, based on division office.

Essential Functions (Major Duties or Responsibilities):

PROJECT MANAGEMENT – 60%

This position manages pre-construction, construction, and maintenance materials projects to ensure quality, consistency, efficiency, and safety of materials provided to major highway construction projects within the Area. Duties include directing and overseeing pre-construction, construction, and maintenance project planning and implementation, laboratory siting and configuration, and sample collection procedures; directing and coordinating sample tests and analyzing results; ensuring safety

and compliance of the hot plant, equipment, vehicles, and procedures; serving as the Area's authority in materials issues by assessing and resolving complex technical and administrative problems; evaluating new developments in materials to identify and incorporate enhancements; and overseeing WAQTC training.

1. Supervises, directs and oversees Area pre-construction materials activities to determine factors that may affect planned siting, sampling, collection, mixing, and testing activities. The incumbent evaluates site assessment reports to determine necessary modifications to proposed project plans and coordinates with other project staff to integrate changes and requirements.
2. Supervises, directs and oversees Area materials construction and maintenance project activities to ensure safety, compliance, and quality assurance throughout all phases of materials sampling, testing, and documentation, bituminous mix testing, seed and fertilizer blending, QPL and other precast facility inspections, soil compaction, core correlation, QA core densities, Buy America Provisions, road profilers, and other activities.
3. Supervises, directs and oversees laboratory siting and configuration to ensure safety, efficient testing, and observation of the hot plant by assessing site characteristics, conferring with Bureau Chiefs, contractors, suppliers, and project managers; assessing power requirements and supplies; and overseeing the set-up and calibration of all testing equipment, traffic cones, and core correlation activities.
4. Supervises, directs and oversees sample collection activities for gravel pit surveys to identify borrow and surfacing sources by determining and applying a variety of technical sampling methods, techniques, and equipment to specific materials according to unique site characteristics. Coordinates underground utility locates.
5. Supervises, directs and coordinates sample tests to determine compliance with established standards, coordinate quality assurance and independent assurance measures, and determine if further sampling or testing is required by determining specific technical methods and techniques to apply based upon the type of sample, calibrating testing equipment and running controls to ensure accuracy, and monitoring testing procedures to ensure the integrity of results.
6. Analyzes test results to determine the overall suitability of materials for various projects and develop necessary modifications to mix designs.
7. Assesses various features of the site and hot plant to identify visual signs of practices or materials that are out of compliance, and to gather baseline information used in the compilation of BMP test results.
8. Assesses and resolves complex project administration problems, identifies and addresses project resource needs, and coordinates the exchange of accurate, current information among contractors, District and Department staff, fabricators, local governments, suppliers, private businesses, and others associated with construction projects.

9. Evaluates new materials testing methods, techniques, experimental products, and new technologies to determine and implement operational efficiencies, cost-saving measures, and other enhancements. Researches information and Data related to new developments in materials design and testing, assesses developmental methods proposed by other staff and managers, and implements appropriate operational and resource enhancements to improve quality, efficiency, safety, and/or cost-effectiveness of District materials operations and activities. Implement schedule and policy changes.
10. Oversees materials staff, the training of field engineers, and maintenance personnel, and other government agency staff to ensure effective implementation of WAQTC/AASHTO/ASTM procedures and requirements. Monitor operations to ensure that staff members comply with administrative policies and procedures , safety rules, union contracts, and government regulations. Identifies training needs based on staff competencies and changing requirements, delivers or coordinates training by subordinate staff, and monitors procedures to ensure appropriate implementation Maintains NRC (nuclear regulatory) requirements for storage, inventory, documentation and training. Conducts field inspections audits for ensuring proper procedures are being followed for safe operation, storage, and inventory of Nuclear Density devices.

LABORATORY ADMINISTRATION AND TECHNICAL ASSISTANCE FOR MDT's CONCRETE, AGGREGATE, PLANT MIX, AND SOILS PROGRAM – 25%

This position administers the ongoing operations and activities of the Area materials laboratory to ensure the overall quality, efficiency, and effectiveness of laboratory operations and resources (e.g., Human, equipment, financial, etc.) by planning and directing Area laboratory ongoing laboratory operations and activities; recommending operational policies, procedures, and guidelines; directing vehicle, equipment, and supply assignment, maintenance, repair, and ordering activities; ensuring the safe and effective operation and maintenance of nuclear densimeter gauges, road profilers, and other equipment; monitoring and fulfilling laboratory inventory and equipment needs, completing requisitions, and/or procuring immediate needs; actively researching and reviewing current information related to materials equipment, testing and sampling procedures, regulations, and other issues; conducting monthly safety meetings and monitoring and enforcing safety protocols on-site and in the laboratory; and updating manuals and procedures as required. Laboratory administration also requires the ability to analyze and interpret test results, construction plans, and technical drawings; accurately perform mathematical computations; and modify test procedures as changes to these procedures are made.

1. Plans and oversees Area laboratory operations and activities to ensure the overall quality, efficiency and cost effectiveness of materials sampling, testing, and reporting procedures. Develops short and long-term plans, objectives, and cost-effective strategies for meeting changing needs of various construction projects, materials standards, and available resources. This involves assessing Area construction and materials needs; evaluating new or alternative

methods and procedures; reviewing and interpreting changing contracts, program/project requirements, and technical specifications; and developing plans and procedures to meet District objectives. Provide related materials training to department personell through different means such as hands-on instruction, presentations, contracting industry, etc.

2. Recommends operational policies, procedures, and guidelines that agree with Department requirements while satisfying the complex materials needs of various projects.
3. Oversees vehicle, equipment, and supply assignment, maintenance, repair, and ordering activities to ensure employee safety, efficient and effective use of Department resources, and prolonged life of significant capital investments.
4. Ensures the safe and effective operation and maintenance of nuclear densimeter gauges, road profilers, and other technological equipment and vehicles to ensure safe and effective operations by project staff. Oversees equipment and vehicle calibration, testing, allocation to various project schedules, and reporting (e.g., nuclear exposure records, accuracy measurements, etc.). Accurate data collected by these and other systems provides baseline information for determining incentives and deductions for contractors.
5. Monitors laboratory inventory and equipment needs, completes requisitions, and/or procures immediate needs to ensure adequate supplies and equipment to support the functions of the materials laboratory.
6. Researches and reviews current information related to materials standards, equipment, testing and sampling procedures, and other issues to stay abreast of changing trends and technologies, identify new standards for equipment and employees, and determine how to incorporate new technologies, procedures, regulations, and other issues into the administration and operation of the materials laboratory. Reviews and transmits all concrete and plant mix designs to Materials Bureau for production under various highway projects.
7. Conducts monthly safety meetings to inform laboratory technicians of changing safety protocols, limitations and capabilities of sampling and testing equipment, site-specific characteristics, unusual or modified procedures, and other issues that affect the safety of project staff and the public. The incumbent also monitors and enforces safety protocols on site and in the laboratory.
8. Updates and recommends changes to manuals and procedures to reflect new policies, methods, regulations, equipment, and other information provided by the department. Updates MSDS manuals, monitors inventory, and label hazardous material used in the area laboratory.
9. Serve as the conduit of highly technical information between project engineering management and the Materials Bureau.

SUPERVISION – 10%

Direct and mentor auditors in their work group through performance plans, annual evaluations, verbal comments, coaching note comments and responses to staff questions by suggesting new and innovative techniques in audit procedures to improve the efficiency of the auditor. Share their

knowledge of advanced level audit skills and techniques with peers and lower level staff through meetings, work-paper reviews, responses to staff questions, training and mentoring. This position trains staff in more efficient way of doing things. Work paper reviews are where the supervisor looks at what needs to be done, understanding what and why the action was performed, and what they might have missed. Recommends solutions to the auditor regarding necessary modifications in work processes.

OTHER DUTIES – 5%

Performs a variety of other professional and technical duties in support of ongoing Area, District and Department operations.

Supervision

The number of employees supervised is: 2-4 FTE

The position number for each supervised employee is: varies by division – supervises the lab technicians in the division labs.

Physical and Environmental Demands:

- Work is performed in a controlled lab environment.
- May work with hot materials and equipment (steel molds, ovens at 350 degrees, hot plates, etc.), solvents, and chemical additives.
- Exposure to testing equipment, caustic chemicals (hot asphalt, lime, acids, mercury, and other chemicals), dust, and fumes.
- Heavy independent lifting (up to 80 lbs.) of equipment, material samples, etc.
- Use of protective personal equipment such as gloves, respirators, and eye protection.

Knowledge, Skills and Abilities (Behaviors):

This position 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.); operations of

various hot plants (e.g., drum dryers, batch plants, etc.); safety practices and procedures; and contract law and claims management. Supervisory responsibilities require knowledge of Department and State personnel procedures and policies, organization theory, employment law, rules and regulations, program requirements, and personnel management practices and techniques. A progressively responsible knowledge of specialized sampling and testing equipment, software, and other technologies is also required.

This position requires skill in directing, organizing, and coordinating multiple staff and projects, complex sampling and testing procedures, and a variety of equipment; adapting sampling and testing methods and techniques to meet various site-specific circumstances; operating a variety of sampling and testing equipment (e.g., coring machines, auger trucks, laser profiler, gyratory compaction device, nuclear gauges); and operations of hot plant equipment and monitoring devices (e.g., gauges, hydrated lime feed, bin splits, specific gravity, segregation, etc.). Effective written and verbal communications skills are also required in communicating technical information and project plans with landowners, contractors, 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, geo systems (proctors) etc.) in the performance of laboratory management, supervisory, and training 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 training or course work at at college or technical institution.

This position requires a minimum of four years of progressively responsible experience in construction lab testing or highway construction, including a minimum of one year of supervisory 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:

List any other special required information for this position

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|--|-------------------------------------|---|
| <input type="checkbox"/> Fingerprint check | <input type="checkbox"/> None | <input type="checkbox"/> Union Code |
| <input type="checkbox"/> Background check | <input checked="" type="checkbox"/> | <input type="checkbox"/> Valid driver's license |

Other; Describe

Yes 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: Materials Lab Supervisor Job Code Number: D2D01M

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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