

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION & PUBLIC FACILITIES

DIVISION: Southcoast Region		PCN: 25-2440 (Position Description Attached)	
JOB CLASS/TITLE: Materials Laboratory Technician, Specialist/Lead		WHEN POSITION IS NEEDED: ASAP	
FLEXIBLY STAFFED: <input type="checkbox"/> YES / <input checked="" type="checkbox"/> NO			
WAGE GRADE: 52		DUTY STATION: Juneau	
<input checked="" type="checkbox"/>	Permanent Full-Time	<input type="checkbox"/>	Permanent Full-Time Seasonal
<input type="checkbox"/>	Permanent Part-Time	<input type="checkbox"/>	Permanent Part-Time Seasonal
<input type="checkbox"/>	Non-Perm Full-Time	<input type="checkbox"/>	Non-Perm Part-Time
<p>CANDIDATE MUST BRING TO INTERVIEW:</p> <p><input checked="" type="checkbox"/> Completed Workplace Alaska Application (if not already submitted to the hiring manager by Local 71)</p> <p><input checked="" type="checkbox"/> Completed Certification of Employment as a Commercial Motor Vehicle Operator 10-year history form</p> <p><input checked="" type="checkbox"/> Criminal Convictions: Must provide a copy of the judgement from the Court for <u>any</u> Felony Conviction (regardless of date) and any Misdemeanor Conviction within the last 5 years. For positions requiring APSIN* clearance, must provide judgement for <u>all</u> convictions regardless of date.</p> <p><input checked="" type="checkbox"/> Copy of certifications and licenses</p> <p><input type="checkbox"/> Other:</p> <p><i>Note: Candidates who do not bring the required information to the interview may be rejected.</i></p>			

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STATE OF ALASKA

Position Description

Position

Control 252440

Number (PCN):

Class Title:

Materials Laboratory Technician,
Specialist/Lead

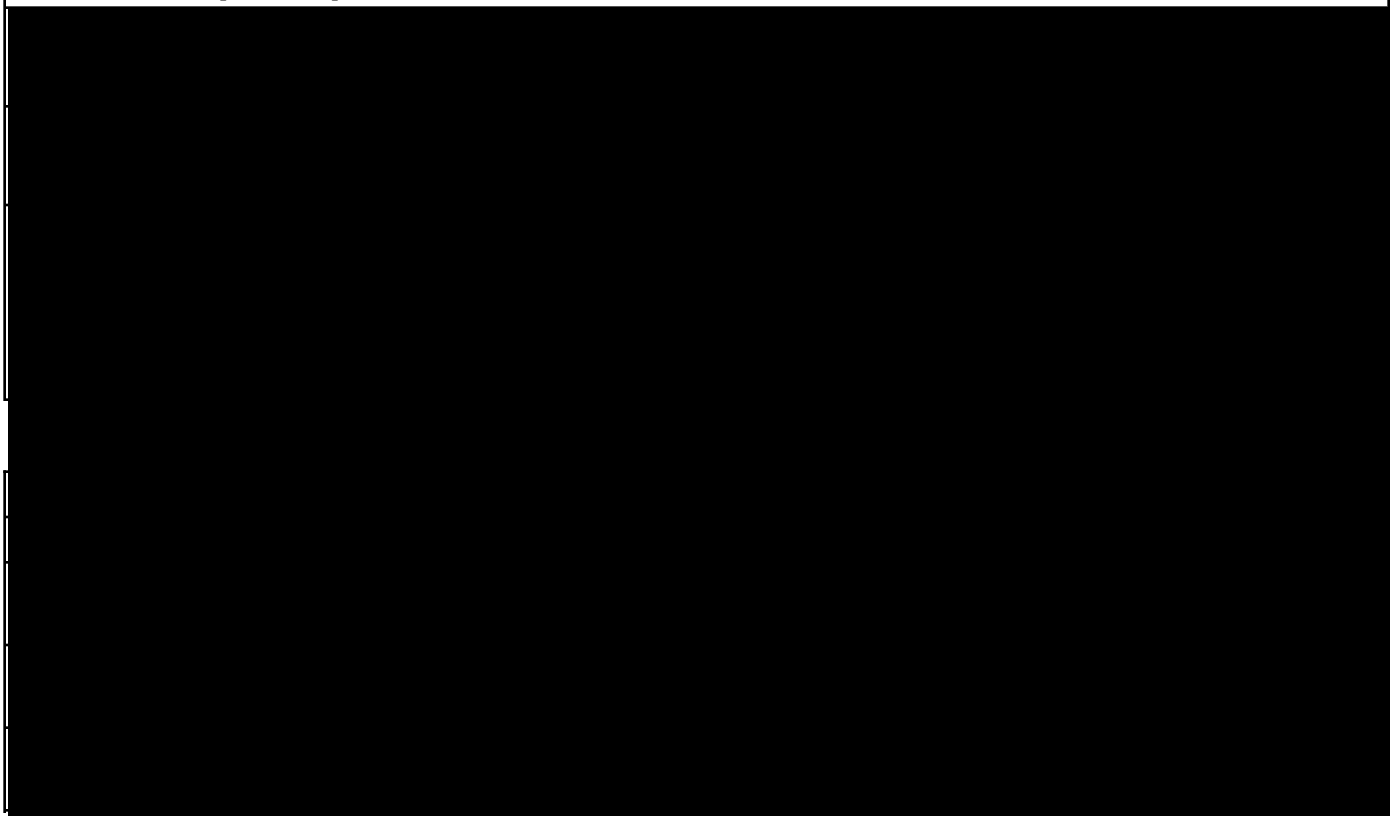
Recruitment Type:
Normal

1. Position Control Information

Class Title:	Materials Laboratory Technician, Specialist/Lead	Title Code:	PL0636	Grade:	52
		Salary Schedule:			N/A
Bargaining Unit:	Labor, Trade, and Crafts Unit	Bargaining Unit Code:			LL
Department:	Transportation & Public Facilities	Department Number:			25
Division:	Southcoast Region Design and Engineering Services				
Region/Section/Unit:	Southeast Region/Preconstruction/Materials				
Location:	Juneau	Location Code:			AWA
Time Class:	Full Time/OMB Authorized	Seasonal Code:	N/A	Time Class Code:	FACL
FLSA Exempt:	No	Strike Class:			3

Position requires possession of a Commercial Drivers License (CDL): No

Position requires possession of, or access to, firearms or ammunition: No



2. Duties

2.1. In one or two sentences, state the main purpose of the position.

Serves as senior technician in the regions AASHTO accredited materials testing laboratory. Under general supervision from the Lab Coordinator, routinely performs advanced materials testing for a variety of soils and aggregates, and performs mix designs for asphalt and concrete. Takes the lead technician role in maintaining Lab accreditation.

2.2. Starting from the most to the least important, list the functional areas assigned to the position. Within each functional area, describe the duty statement associated; estimate the percentage of time spent performing the duties; and define each area as essential (E) or marginal (M).

Functional Area Title: Maintains day to day function of the SE Regional Materials Lab		
E/M	% of Time	Duty Statement
E	25 %	Maintains the day to day function of the Southeast Region Materials Laboratory. Assigns priorities for the work to be performed in the lab, determines materials testing method based upon project specifications or other supervisor direction. Directs, reviews, evaluates and approves the materials testing work of up to three sub-journey technicians

Functional Area Title: Perform Materials Testing		
E/M	% of Time	Duty Statement
E	20 %	Performs all journey level materials testing functions on soils, aggregates, and asphalt / concrete mixes using ASTM, AASHTO, ACI, ATM, or WAQTC standards. In addition, performs materials related research requiring advanced skills.

Functional Area Title: Provide materials testing training		
E/M	% of Time	Duty Statement
E	10 %	Provides materials testing training for a variety of DOT personnel including, Engineers, Engineering Technicians, and Materials Laboratory Technicians. Must explain and demonstrate complex test procedures in presence of higher and lower level personnel.

Functional Area Title: Maintains AASHTO accreditation		
E/M	% of Time	Duty Statement
E	20 %	Performs equipment calibrations, maintains the Lab verification / calibration system, using in house and contract personnel, as required under AASHTO R-18 to maintain AASHTO accreditation. This work also includes specialized tasks and procedures as needed for maintaining AASHTO accreditation. Performs AASHTO proficiency tests as well as performs tests during AASHTO on site assessments.

Functional Area Title: Communications		
E/M	% of Time	Duty Statement
E	10 %	Communicates with a variety of DOT personnel on materials testing issues. Discusses ways to troubleshoot, interpret, and or resolve test problems.

Functional Area Title: Maintaining an up-to-date and efficient lab		
E/M	% of Time	Duty Statement
M	5 %	Procures lab supplies and services by stock request including shipping and receiving. Recommends new products and lab processes as needed to make lab function efficiently and or keep current with industry standards.

Functional Area Title: Evaluates new test methods and test procedures		
E/M	% of Time	Duty Statement
M	10 %	Evaluates new test methods, performs such tests, and reports findings to the supervisor.

Percentage Total: 100%

3. Other Work Details

3.1. List the computer software and hardware used to perform the duties described. Estimate how often each is used (e.g. daily, 2-3 times a week, 1-2 times a month, etc.).

Daily use of IBM compatible computer with various word processing (MSWORD) and spreadsheet software (MS Excel) to assist in the final recording, interpretation and analysis of the test data. Use of specialized software, such as the FHWA Superpave software or PinePave software is routinely accessed to assist in the development of asphalt mix designs.

3.2. List the equipment and materials used to perform the duties described, including machinery, tools, instruments, vehicles, etc. Estimate how often each is used (e.g. daily, 2-3 times a week, 1-2 times a month, etc.).

The use of various laboratory equipment are routinely used in the performance of the work. This equipment may be operated several times a day depending on the workload. The equipment includes the following; laboratory sized rock crushers, heavy hand and hydraulic compactors, electro-mechanical sieve shakers, various drying ovens with temperatures up to 1000 degrees F, radioactive test equipment and the use of very sensitive electronic test equipment.

3.3. List the guides and references regularly used to perform the duties described. Examples include federal and state laws and regulations, professional standards, building codes, trade practices, contracts, and policy and procedure manuals. Explain how and why these guides and references are used. Estimate how often each is used (e.g. daily, 2-3 times a week, 1-2 times a month, etc.).

The following references are routinely used in the work performance: Alaska DOT&PF Construction Manual, Standard Specifications for Highway Construction, Alaska Test Methods Manual, Project specific Contract Plans and Specifications, American Association of State Highway and Transportation Officials (AASHTO) and American Society for Testing and Materials (ASTM) Standards, Federal Highway and Aviation Standards, Asphalt Institute and American Concrete Institute Manuals, Materials Safety Data Sheets, Various Lab Equipment and Instruction Manuals and Western Alliance for Quality Transportation Construction (WAQTC) Training & Test Procedures.

3.4. Describe the level of authority and independence the incumbent of the position exercises. List the actions the incumbent takes or the decisions the incumbent makes on a regular basis without obtaining prior approval from a higher level employee. For example, explain how the position has the authority to commit the organization, or any parts thereof, to a course of action.

Directs, schedules and plans to perform the lab tests safely and to assure the results are reported to meet project time demands. Direct sub-journey technicians to assure the lab equipment is calibrated and maintained in accordance with the SE Regional Materials Lab Quality Manual, as required under AASHTO R-18, for an AASHTO accredited lab. Also, frequently called upon to answer questions from field personnel about testing issues, and remind project personnel of their responsibility to meet applicable testing standards.

3.5. Describe the nature of the contacts the incumbent has with other people in order to perform the duties described. Include who is contacted, the reason for the contact, and how often the contact is made.

Communicate with manufacturers of test equipment for purchasing, operating and maintenance of equipment. On occasion, this position requires communicating with aggressive people. There is also added stress with the demand of maintaining a high degree of accuracy, running an efficient program and maintaining a safe working environment. Knowledge of plans and specifications, complex sampling and testing procedures. Ability to demonstrate, explain, and interpret complex test procedures. Skill in the resolution of mix design problems.

3.6. Describe the consequence of an error made by a prudent employee in the performance of the essential functions assigned to the position. What is the consequence of that error to individuals, operations, and programs?

Errors made by the incumbent will result in serious financial consequences to the State and may reduce the service life of the designed and constructed highway, airport, or marine facility. It may also result in out-of-specification materials being incorporated into our projects, which may result in a significant financial loss to the state by increased operational costs and a shortened service life.

3.7. List critical requirements of the position not previously described (e.g., skills in keyboarding, writing, negotiating, communications, etc.).

Accurate testing of samples according to appropriate testing protocol and timely reporting of the results. Scheduling and directing the work of up to three lab technicians. Maintaining the national accreditation for the SE Materials Lab as described under AASHTO R-18, including adding new tests and staying abreast of changing program requirements. Provide materials testing training and perform as the materials test reference standard for the SE Region.

3.8. List licenses, certifications, registrations, physical or other standards required by state or federal law or regulation to perform the duties described. Cite the specific authority (e.g. law or regulation, such as the OSHA Bloodborne Pathogens Act).

Must possess current certifications in all WAQTC modules, NICET Level III is encouraged, Certificate for the use of radioactive test equipment issued by the NRC is required.

4. Work Demands

The following identifies some of the physical and mental demands and potential hazards typically encountered by this position. These are job demands which can be ***reasonably anticipated and are an expectation of the job.***

Keeping in mind the essential functional areas and duty statements described in section 2, select the rating that best matches the requirement of this position according to the following descriptions:

Rating **Description**

Not Required (N): Not required of this position.

Present (P): Requirement **is** present, but **is not** essential to the position. (For example, a receptionist may encounter aggressive or angry people, but this is not an essential assignment.)

Occasional (O): Required 33 percent of the time or less **and** essential to the position. (For example, a lifeguard swims only occasionally, but it is essential that a lifeguard be able to swim; a correctional officer must control aggressive/angry people who are life threatening.)

Frequent (F): Required over 33 percent of the time **and** essential to the position.

Items checked below must be consistent with the duty statements listed in section 2.

4.1 Physical Requirements

Title	Rating			
	N	P	O	F
Sitting			O	
Walking				F
Standing				F
Running	N			
Jumping	N			
Bending or twisting				F
Squatting or kneeling			O	
Crawling	N			
Reaching above shoulder level		P		
Reaching below shoulder level		P		
Ascending or descending using a ladder or other conveyance		P		
Climbing stairs		P		
Driving cars, light duty trucks		P		
Driving heavy duty vehicles		P		
Using floor mounted foot controls to operate equipment (e.g., not driving a car)		P		

Repetitive motion of hands/fingers (e.g., keyboarding, turning pages)				F
Fine manipulation with fingers			O	
Pinching with fingers			O	
Grasping with hand, gripping				F
Load, unload, aim, and fire handguns, shotguns or other firearms	N			
Lifting/carrying up to 25 pounds				F
Lifting/carrying 26-50 pounds				F
Lifting/carrying more than 50 pounds			O	
Pushing/pulling up to 25 pounds				F
Pushing/pulling 26-50 pounds				F
Pushing/pulling more than 50 pounds			O	
Balancing on moving surfaces		P		
Balancing on narrow surfaces		P		
Balancing on slippery surfaces		P		
Balancing on uneven surfaces			O	
Restraining/grappling with people in a public protection environment	N			
Seeing objects at a distance			O	
Seeing objects peripherally			O	
Using depth perception			O	
Seeing close work (e.g. typed print)				F
Distinguishing colors			O	
Hearing conversations or sounds				F
Hearing via radio or telephone				F
Communicating through speech				F
Communicating by writing/reading				F
Distinguishing odors by smell			O	
Distinguishing tastes	N			

4.2 Work Environment

Title	Rating			
	N	P	O	F
Work in/exposure to inclement weather			O	
Work/in/exposure to cold water			O	
Work/live in remote field sites			O	
Work in confined areas (under desks, in heating vents, etc.)		P		
Exposure to dust, chemicals, or fumes				F
Exposure to hazardous equipment (e.g., guns, chainsaws, explosives)				F

Exposure to electrical current (not outlets)			O	
Swimming/scuba diving	N			
Work at heights up to 25 feet (e.g., towers, poles)	N			
Work at heights over 25 feet (e.g. towers, poles)	N			
Work in urban or highway traffic (other than driving)			O	
Work around moving machinery or mobile equipment				F
Work around moving mechanical parts				F
Work on and off moving equipment			O	
Work on slippery or uneven surfaces			O	
Work/travel in boat/small aircraft/helicopters		P		
Exposure to high noise levels				F
Exposure to infection, germs, or contagious diseases (e.g. hospital, lab, clinic, etc.)	N			
Exposure to blood, body fluid, or materials potentially contaminated by blood or body fluids (e.g., hospital, lab, clinic, public protection environment)	N			
Exposure to needles or sharp implements (e.g. hospital, kitchens)	N			
Use of hot equipment (e.g., kitchen ovens, lab equipment)				F
Exposure to wild/dangerous animals	N			
Exposure to insect bites or stings		P		
Exposure to aggressive/angry people in a public protection environment	N			

4.3 Other Work Demands

Title	Rating			
	N	P	O	F
There are no other work demands.				

4.4. Explain any special physical, mental, or behavioral requirements of the position that have not already been addressed.

Materials lab work takes place in an environment that includes high noise levels, routine exposure to dust, and some chemical odors. Some testing occurs using radioactive sources, and the requirement to monitor exposure to radioactive leakage from the test equipment as a precautionary measure. The mandatory work also involves exposure to hot bituminous materials (325 degrees F), ignition ovens (1000 degrees F), and other machinery that could catch loose clothing or body limbs at any given time during the course of testing. There may be some occasion that an assignment leads to the field, requiring travel out of town, exposure to asphalt production plants and construction equipment as well as the requirement to assist in traffic control.

5. Supervisory Authority

This page must be completed if PCN **252440** is assigned supervisory or lead level authority (this includes Labor, Trades and Crafts foreman positions). In the chart below, list each position PCN **252440** supervises or leads. Record **252440** 's level of authority for each area of responsibility according to the definitions below. Subordinate positions listed must be consistent with those reflected on the staffing chart, and levels of authority must be substantiated in all other applicable portions of the PD (i.e. duties, guides, actions, decisions).

Note: These ratings are not dependent upon whether the position has actually exercised the authority, but rather what level is assigned.

Level Definition of Level of Authority Assigned

- 1 = Has authority to take action; notification to supervisor may or may not be necessary afterward.
- 2 = Effectively recommends and discusses decision with supervisor; then takes action.
- 3 = Presents recommendations to supervisor; supervisor makes decision and directs position to take action.
- 4 = No authority to take or recommend action.

Is PCN **252440** assigned supervisory or lead level authority for one or more of the responsibilities listed in the chart below? **Yes** If no, skip this section.

PCN 252440 's Responsibilities and Assigned Level of Authority

Positions Directly Supervised or Led by PCN 252440	Employ (includes authority to hire, transfer, layoff, OR recall)	Discipline (includes authority to suspend, demote, OR issue written warnings)	Discharge	Adjudicate Grievances (includes authority to respond to a first level grievance under a collective bargaining agreement)	Assign Work	Set Task Priorities	Check Quality of Work	Evaluate Performance	Instruct & Train Staff
250921	4	4	4	4	1	1	1	3	1
25N07059	4	4	4	4	1	1	1	3	1
25N219	4	4	4	4	1	1	1	3	1