

Position Description

Read each heading carefully before proceeding. Make statements simple, brief, and complete. Be certain the form is signed. Send the original to the Office of Personnel Services.

CHECK ONE: ☐ NEW POSITION ☒ EXISTING POSITION

Agency
Number

276

Part I - Items 1 through 12 to be completed by department head or personnel office.

1. Agency Name KDOT Kansas Department of Transportation		9. Position No. K0230824 / 00-05-27-803		10. Budget Program Number 99170	
2. Employee Name (leave blank if position vacant)			11. Present Class Title (if existing position) Engineering Technician Specialist (UC/NE) Certified Weld Inspector		
3. Division Project Delivery			12. Proposed Class Title		
4. Section Construction and Materials		For Use By Personnel Office	13. Allocation		
5. Unit Kansas City Regional Lab			14. Effective Date		
6. Location (address where employee works) City: TBD County: TBD			15. By		Approved
7. (circle appropriate time) Full time X Perm. X Inter. Part time Temp. %			16. Audit Date: By: Date: By:		
8. Regular hours of work: (circle appropriate time) FROM: 7:00 AM To: 3:30 PM		17. Audit Date: By: Date: By:			

Position
Number

PART II - To be completed by department head, personnel office, or supervisor of the position.

18. If this is a request to reallocate a position, briefly describe the reorganization, reassignment of work, new function added by law or other factors which changed the duties and responsibilities of the position:
Samples, inspects, tests, reviews, and reports on a variety of materials for maintenance and construction projects, using a variety of specialized methods, which are of a technical nature, involving knowledge and experience. Materials and finished products that are used on KDOT projects must meet the specifications for those projects

19. Who is the supervisor of this position? (Person who assigns work, gives directions, answers questions and is directly in charge)?
Who evaluates the work of an incumbent in this position?

Name	Title	Position #
Eric Vail	Public Service Executive III	K0236948 / 00-05-28-804

20. a) How much latitude is allowed for the employee in completing the work? b) What kinds of instructions, methods, and guidelines are given to the employee in this position to help do the work? c) State how and in what detail assignments are made.

- Employee is given a wide latitude in scheduling and completing the assigned work. Work assignments are given both orally and written by the supervisor. Instructions are usually brief and general in nature. Assignments generally consist of design plans, shop plans, KDOT standards or specifications, and specifications for specific items.

21. Describe the work of this position using the page or one additional page only.

No. %	E or M	
1. 30%	E	Fabrication inspection and/or testing of structural steel: • Inspects to determine the acceptability of fabricated products. • Inspects and accepts structural steel products to increase the probability of the product's satisfactory performance during the service life of the structure. • Uses KDOT, ASTM, AWS, AASHTO, and SSPC specifications, as well as industry standards, to evaluate structural steel fabrication, cutting, welding, bolting, and painting. • Performs or monitors non-destructive testing, qualifies welders, checks welding procedures, checks certifications, interprets radiographs, documents progress and measurements, evaluates welding techniques and repair procedures, and evaluates dimensional tolerances of fabricated pieces and fit-up of assembled members. • Inspection work is performed independently at various fabrication facilities throughout the country. Therefore, the employee must deal with most shop quality control problems, interpret plans, and plan their own work schedule on their own. On occasion, concurrent work at multiple plants will be required. • Overnight travel is required.
2. 20%	E	Inspection, testing, and/or sampling of other project related materials, including plain and epoxy coated reinforcing steel, concrete and corrugated metal pipe, fencing materials, cement, painted products, precast concrete products, fasteners, non-structural fabricated items, and galvanized products: • Inspection is done to determine the acceptability of the various products. • Inspection and acceptance of supplied products increase the probability of the product's satisfactory performance during its service life. • KDOT, ASTM, AWS, and AASHTO specifications, as well as industry standards will be used to evaluate products and materials. • Inspection, testing, and/or sampling is performed independently at various locations throughout the country. • Overnight travel may be required.
3. 20%	E	Documentation of inspection and/or testing: • Documents the work of the producer/supplier from raw materials to finished product ready for delivery to a jobsite. • Uses field books, computers, and paper reports for documentation and future reference. • Follows KDOT, FHWA, and office requirements regarding methods of documentation. • Documents the facts of inspections and test results in the appropriate storage medium.
4. 10%	E	Inspection and/or testing of pre-stressed concrete: • Performs inspection to determine the acceptability of pre-stressed products. • Inspection and acceptance of pre-stressed products to increase the probability of the product's satisfactory performance during the service life of the structure. • KDOT, ASTM, AASHTO, and PCI specifications, as well as industry standards will be used to evaluate pre-stressed materials and fabrication. • Inspection work is performed independently. Therefore, the employee must deal with most shop quality control problems, interpret plans, and plan their own work schedule on their own. On occasion, work at other facilities throughout the country might be required. • Overnight travel is possible.
5. 10%	E	Performs other duties as assigned Other Structural Inspection (Inspection and testing of Post Tensioned Structures, Heat Shrinking & Straightening, etc.) • Inspects to determine the acceptability of construction process(s). • Inspection and acceptance of construction work to increase the probability of the product's satisfactory performance during the service life of the structure. • KDOT, ASTM, AASHTO, AWS, and ASBI specifications, as well as industry standards will be used to evaluate post tensioned process. • Overnight travel is possible.

6. 05%	E	Review and approval of welding procedures, qualification of field welders, and inspection of field welding: • Acceptance of welding procedures and field welders, and inspecting field welding is to increase the probability of satisfactory performance of structural steel and structural aluminum products during the service life of the structure. • Uses KDOT and AWS specifications, and industry standards will be used • Tasks are reviewed by the immediate supervisor on a random basis for accuracy and completeness.
7. 05%	M	Training, maintenance of office and equipment, and other assigned duties.
	E	Must be capable of performing the essential physical functions detailed in Section 28.

* The description of how the work is to be performed does not preclude the consideration of reasonable accommodation for qualified people with disabilities.

22. a. If work involves leadership, supervisory, or management responsibilities, check the statement which best describes the position:
- () Lead worker assigns, trains, schedules, oversees, or reviews work of others.
- () Plans, staffs, evaluates, and directs work of employees of a work unit.
- () Delegates authority to carry out work of a unit to subordinate supervisors or managers.

- b. List the names, class titles, and position numbers of all persons who are supervised directly by employee on this position.

Name	Title	Position #
		K0000000 / 00-00-00-000

23. Which statement best describes the results of error in action or decision of this employee?
- () Minimal property damage, minor injury, minor disruption of the flow of work.
- () Moderate loss of time, injury, damage or adverse impact on the health and welfare of others.
- (X) Major program failure, major property loss, or serious injury or incapacitation.
- () Loss of life, disruption of operations of a major agency.

Please give examples.

The erroneous acceptance or interpretation of specifications, plans, or inspection techniques, involved in inspection of structural steel, aluminum, or timber fabrication, could result in early failure of a structure, with major property loss, serious injury, or loss of life. While the effects of the failure might be relatively minor, the fix, repair, or replacement could be very expensive..

24. For what purpose, with whom and how frequently are contacts made with the public, other employees, or officials?

Although the employee works independently at various locations throughout the country and, therefore, must be able to make certain decisions without the help of others, contact is made with producers, contractors, and other KDOT personnel on a daily basis. This is to provide information, within departmental policy guidelines, to producers, contractors, and other KDOT offices, for use on KDOT projects.

In particular, the accuracy of the information provided to others, especially KDOT offices, is important for it may be used to make decisions concerning acceptance of a product or its repair prior to acceptance.

25. What hazards, risks or discomforts exist on the job or in the work environment?

- (X) Frequent exposure to extreme cold/heat wet/humid conditions.
- (X) Exposure to mechanical parts such as but not limited to, muffler, exhaust pipes, and other radiant energy equipment.
- (X) Exposure to noise, vibrations, fumes, odors, gases, dust and/or poor ventilation.
- () Works in traffic.
- (X) Other: Work environment at production plants is frequently noisy, dirty, greasy, and uncomfortable as to temperature and humidity. There is an apparent risk due to overhead cranes and equipment. Most plants require safety glasses and shoes to occupy premises. Out-of-town travel is required.

26. List machines or equipment used regularly in the work of this position. Indicate the frequency with which they are used:

Daily: motor vehicle, measuring devices (ex. Welding tools, dimensional tools, paint checking tools, steel, and concrete evaluation tools), calculator, computer

As Required: Protective Gear

PART III - To be completed by the department head or personnel office

27. List the minimum amounts of education and experience which you believe to be necessary for an employee to begin employment in this position.

Education – General

Education or Training - special or professional

Licenses, certificates, and registrations

Valid Driver's License

Employee must attain a Certified Welder Inspection (CWI) certification within six months of hire, unless the time is extended by the Bureau Chief. The CWI must be maintained.

Employee must attain an American Segmental Bridge Institute (ASBI) Grouting Training Certificate within six months of hire, unless the time is extended by the Bureau Chief. The Grouting Training Certificate must be maintained. ASBI Certified Grouting Technician by ASBI is desirable.

Special knowledge, skills, and abilities

Knowledge of engineering technology, mathematics, drafting, and/or surveying.

Experience - length in years and kind

Minimum Requirements: Five years of experience in engineering technical support. Education may be substituted for experience as determined relevant by the agency.

28. SPECIAL QUALIFICATIONS

State any additional qualifications for this position that are necessary either as a physical requirement of an incumbent on the job, a necessary special requirement, a bona fide occupational qualification (BFOQ) or other requirement that does not contradict the education and experience statement on the class specification. A special requirement must be listed here in order to obtain selective certification.

ESSENTIAL PHYSICAL FUNCTIONS/DUTIES - Duties that are fundamental to the position based on the function and the results to be achieved, rather than the manner in which they are being performed. Duties that are directly related to the reason the position exists and cannot be reassigned without changing the nature of the position. All job duty physical demands are essential physical functions of this position, and the employee must be able to perform them.

Definition of Frequency:

Occasional= 1-33% (1 - 100 reps) Frequent= 34-66% (101 -500 reps) Continuous= 67- 100% (500+ reps)

Job Duty	Job Duty Physical Demands/Comments	Weight/Force	Frequency
Test Cylinders	Stand – To test cylinders at testing areas (moisture room, compression machine, etc.)	N/A	Occasional
	Forward Bend Stand – To observe cylinder in compression machine	N/A	Occasional
	Walk – To access various testing areas	N/A	Occasional
	Sit – There are opportunities throughout the day to sit while waiting for tests to finish	N/A	Occasional
	12" – Knuckle Lift – From 19" to 42" high. To transfer cylinders (4"x8") to various carts and surfaces of testing areas.	10 lbs.	Occasional
	One-handed Lift – From 12"-39" High; to remove cylinder (4"x8") from water tank	10 lbs.	Occasional
	Push – At 48" – 56" high; to dump waste cart into dumpster (2 times per week)	130 lbs.	Occasional
	Push/Pull – At 27" high (waist height); to remove waste from compression machine to dumpster via the waste cart	25 lbs.	Occasional
	Push/Pull – At 40" handle height; to move cylinders using a cart	50 lbs.	Occasional

Job Duty	Job Duty Physical Demands/Comments	Weight/Force	Frequency
Concrete Testing	Stand – To test mixture at standing workstation	N/A	Occasional
	Forward Bend Stand – To use Rolla-meter and/or pressure meter on 37" table or on the ground for 1 min per mixture	N/A	Occasional
	Forward Bend/Crouch/or Kneel –Up to 2 ½ minutes to fill the slump	N/A	Occasional
	12"- Knuckle Lift – 12" handle height; to weigh the bucket of mixture on the scale; up to 3x/shift	80 lbs.	Occasional
	Floor-Shoulder Lift – From floor to shoulder height; to shake Rolla-meter (20"1x8" diam) w/mixture for 1 ½ minutes per mix	38 lbs.	Occasional
	One-handed Lift – 12"-39" height; to remove cylinder (4"x8") from water tank	10 lbs.	Occasional
	Vertical Pull – 12"-knuckle height; to move wheelbarrow full of concrete outdoors on uneven terrain	100 lbs.	Occasional

Job Duty	Job Duty Physical Demands/Comments	Weight/Force	Frequency
Test Aggregate and Soils	Stand – To test aggregate and soils at various testing areas	N/A	Frequent
	Walk – To work various testing areas	N/A	Occasional
	Sit- There are opportunities during the day to sit while waiting for tests to finish	N/A	Occasional
	Floor- Knuckle Lift –From floor to 16” height; to place bag of aggregate/soil from receiving onto the cart	100 lbs.	Occasional
	Knuckle-Shoulder Lift – From 16” – 48” height; to move bag of aggregate/soil from the cart to the shaker	100 lbs.	Occasional
	Other– Repetitive Upper Extremity use; shaking sieve for sifting, 2-5 mins; ‘stirring’ soil for breakdown at 45” and 55” heights (work surfaces)	5 lbs.	Occasional
	Carry – 15 feet; to transport pan of aggregate from fan area to the sieve/workstation	10 lbs.	Occasional

Job Duty	Job Duty Physical Demands/Comments	Weight/Force	Frequency
Collect and Test Asphalt	Stand– To test asphalt	N/A	Frequent
	Walk – To work various testing areas	N/A	Occasional
	Sit – There are opportunities throughout the day to sit while waiting for tests to finish	N/A	Occasional
	Forward Bend/Forward Reach – To set charger balls into the Los Angeles (LA) Wear machine at 12” high	N/A	Occasional
	One-handed Lift – From 12” – 39” height; to removed cylinder (4”x8”) from water tank	10 lbs.	Occasional
	Knuckle – Shoulder Lift – Up to 48” height; to use various testing equipment such as breaking head, mixing bowl & materials, molds w/samples, etc.	25 lbs.	Occasional
	12” Knuckle Lift – 8” to 31” height; to use the gyratory mold	35 lbs.	Occasional
	Horizontal Lift – At 37” height; to use various testing equipment & materials such as gyratory mold w/sample	50 lbs.	Occasional
	12” – Waist Lift – 12” – 33 height; to move cooler of asphalt from the ground onto the back of the truck	80 lbs.	Occasional

Job Duty	Job Duty Physical Demands/Comments	Weight/Force	Frequency
Test Pavement Density	Sit – In pickup truck; To drive to various locations	N/A	Frequent
	Stand – On uneven terrain, outdoors (including extreme weather); to test pavement density	N/A	Frequent
	Walk – Outdoors (including extreme weather conditions); to access various areas to be tested	N/A	Occasional
	Floor-Knuckle Lift –Floor – 33” height; to move the nuclear meter (&box) in/out of back of truck	80 lbs.	Occasional
	Carry – Up to 25 feet; to bring the nuclear meter (& box) to/ from the truck and test area	80 lbs.	Occasional
	12’ - Knuckle Lift – To 31” height; 2-person lift of 150 lbs. generator in/out the back of the truck; Note: Asphalt drill (125 lbs.) and concrete drill (150 lbs.) are lifted mechanically	75 lbs.	Occasional

Job Duty	Job Duty Physical Demands/Comments	Weight/Force	Frequency
Collect Aggregate Samples	Sit – In pickup truck; to drive to various locations	N/A	Frequent
	Stand – On uneven terrain, outdoors (including extreme weather); to collect samples	N/A	Frequent
	Forward Bend Stand – To collect samples from various levels	N/A	Occasional
	Walk – On uneven terrain, outdoors (including extreme weather conditions); to access the samples	N/A	Occasional
	Floor-Shoulder Lift – Floor – 54” height; to collect crushed sample from conveyor into sample pan	15 lbs.	Occasional
	Floor-Knuckle Lift – Floor-self-select height; to collect gradation and quality samples by running through the stream several times; (3-4 x/month); then place in back of pick-up truck @ 33” height.	50 lbs.	Occasional
	Carry – Up to 50 feet; to bring bag of samples from conveyors to the vehicle	50 lbs.	Occasional
	Floor-Knuckle Lift – Floor – 33” height; to load bag full of aggregate samples to/from the back of the pickup truck	80 lbs.	Occasional

Job Duty	Job Duty Physical Demands/Comments	Weight/Force	Frequency
Test Plastic Concrete	Stand – To test mixture at standing workstation	N/A	Occasional
	Forward Bend Stand – To roll Rolla-meter on 37” table for 1 min per mixture	N/A	Occasional
	Forward Bend/ Crouch/ or kneel	N/A	Occasional
	Lift, Waist-Shoulder	38 lbs.	Occasional

Job Duty	Job Duty Physical Demands/Comments	Weight/Force	Frequency
Perform Visual Inspections (Regional Labs)	Sit – To drive to various locations to inspect bridges, precast items, epoxy, fasteners, aluminum, structural steel, etc.	N/A	Frequent
	Walk - Indoors/outdoors on uneven terrain; To access areas to inspect in plants, onsite, and in the lab	N/A	Occasional
	Stand - Indoors/outdoors; To inspect in plants, onsite, and in the lab	N/A	Frequent
	Bilateral Hand Coordination - To use gauges and monitors for inspections	N/A	Occasional
	Bend, Forward, Crouch – To inspect low level areas.	N/A	Occasional
	Floor – Waist Lift - Floor- 33” ht; To load a bag of aggregate from the field into the truck.	80 lbs.	Occasional

Signature of Employee Date

Signature of Personnel Official Date

Signature of Supervisor Date

Signature of Agency Head or
Appointing Authority Date