

CITY OF GLENDALE

TITLE:	Materials Technician	CLASS CODE:	741
REPORTS TO:	Senior Materials Technician	GRADE:	21
DEPARTMENT:	Engineering	FLSA:	N

JOB SPECIFICATION DATE: February 22, 2007 kad

JOB SUMMARY

Tests, evaluates and documents the quality, performance and acceptability of construction materials in the field and laboratory.

ESSENTIAL FUNCTIONS

1. Prioritizes, schedules, performs and documents field and laboratory testing to evaluate the acceptability of all materials used on City construction projects.
2. Interprets and performs engineering test methodologies in accordance with American Society of Testing Materials (ASTM), American Association of State and Highway Transportation Officials (AASHTO), Maricopa Association of Governments (MAG) and Arizona Department of Transportation (ADOT) as applicable.
3. Reviews and evaluates materials and prepares laboratory and field computations to obtain results; maintains records of all testing performed in the field and laboratory.
4. Performs all AASHTO, ASTM, MAG, and ADOT field and laboratory test methods as required by project specifications.
5. Performs in-place field density tests on soils, aggregates and asphaltic concrete using both sand cone and nuclear densometers; establishes and monitors asphaltic concrete rolling patterns to attain required minimum in-place density.
6. Classifies soil and soil/aggregate combinations using ASTM and AASHTO guidelines.
7. Evaluates methods used in asphaltic concrete production and placement.
8. Determines if materials meet specifications; delays construction until testing shows specifications are met.
9. Uses nuclear testing devices under Arizona Radiological Regulatory Agency guidelines.
10. Operates all lab and field testing equipment used for materials testing.
11. Performs calibrations, maintenance, and minor repairs on lab and field testing equipment.
12. Assists in the maintenance of facility and equipment.
13. Attends on-site materials and staff meetings etc.
14. Reviews and evaluates outside agency generated reports.

SECONDARY FUNCTIONS

15. Performs other related duties as assigned.

KNOWLEDGE, SKILLS, ABILITIES

Knowledge of:

- Civil engineering principles terminology and practices
- Acceptable materials used on construction projects
- Materials inspection practices and procedures; modern laboratory and field testing methods and equipment
- City of Glendale, ASTM, AASHTO, ADOT and MAG specifications and test procedures
- Properties, characteristics, strengths and weaknesses of the materials, items or products used in public works construction
- Precautions for handling hazardous substances and wastes
- Acceptance control tests on asphalt, concrete and soils

Ability to:

- Perform inspections and testing of methods and materials used in public works construction projects
- Communicate effectively verbally and in writing and by use of a data network
- Employ practical applications of mathematics, trigonometry and geometry
- Enter test results into in-house automated data base system and recognize detrimental trends
- Establish and maintain effective working relationships with engineers, public officials, contractors, city staff, inspectors and the public

WORKING CONDITIONS

Works in field areas of heavy construction equipment, deep trenches, and traffic. Exposure to seasonal weather conditions, radioactivity, and hazardous substances. Requires lifting of heavy construction materials.

MINIMUM QUALIFICATIONS

One year of college course work in construction, engineering technology, materials testing or a related field and two years experience in engineering materials testing.

Any equivalent combination of experience and training that provides the required knowledge, skills, and abilities is qualifying.

SPECIAL REQUIREMENTS

- Valid Arizona driver's license
- Nuclear ARRA gauge certification required upon date of hire