

CITY OF GLENDALE

TITLE:	Engineering Technician II	CLASS CODE:	737
REPORTS TO:	Engineering and Design Supervisor Or Senior Engineering Technician	GRADE:	21
DEPARTMENT:	Engineering	FLSA:	N
JOB SPECIFICATION DATE: September 25, 2006 kad			

JOB SUMMARY

Performs civil engineering drafting, design, mapping and records, or survey work.

ESSENTIAL FUNCTIONS

Design Section

1. Prepares preliminary and final design and construction drawings, plan profile sheets, construction detail sheets, and cover sheets using computer aided design and drafting systems.
2. Prepares as-built drawings from construction record drawings.
3. Calculates adjustments of water pressure lines using computer software.
4. Calculates horizontal and vertical geometrics required in the layout of construction drawings; prepares quantity take-offs requiring the calculation of areas and volumes.
5. Prepares cost estimates, bid schedules, and quantities lists.
6. Prepares legal descriptions and maps for right-of-way issues.
7. Maintains and updates street maps, utility maps, and quarter section maps.
8. Provides technical and general engineering information to utility agencies and the public.

Mapping and Records Section

9. Originates, updates, and maintains street maps, utility maps, and quarter section maps both manually and using computer aided drafting programs and digital engineering systems.
10. Participates in the production, review, storage, maintenance, and retrieval of as-built drawings and city maps.
11. Answers inquiries regarding utility locations, as-built drawings, flood zones, aerial photos, right of way and property lines, legal descriptions, quarter section maps, benchmarks, tax id numbers, parcel numbers, and general city map information.
12. Prepares legal descriptions and maps for right-of-way issues.
13. Designs and drafts special maps for special events and projects.
14. Researches and determines locations of flood zones and prepares related correspondence to public and private agencies; prepares elevation certificates.
15. Provides technical and general engineering information to utility agencies and the public.
16. Participates in preparing the operating budget for the section.

Survey Section

17. Performs a full range of instrument person, rod person, and chain person tasks and duties.
18. Assists the party chief with land or property surveys, design or topographic surveys, and construction surveys for public works projects.
19. Performs routine calibrations on survey equipment.
20. Assists in the preparation and verification of mathematical calculations, computing angles, distances, bearings, traverses, and bench loops.

SECONDARY FUNCTIONS

21. Performs other related duties as assigned.

KNOWLEDGE, SKILLS, ABILITIES

Design Section/ Mapping and Records Section

Knowledge of:

Civil engineering drafting principles and practices relative to the area of assignment
Computer aided drafting and desktop publishing systems

Ability to:

Prepare difficult or complex civil engineering drawings using the methods, techniques, and instruments of drafting
Perform algebraic, geometric, and trigonometric calculations associated with the reduction of field survey notes, calculate grades, areas, and volumes; lay out legal descriptions; prepare quantity take-offs
Develop projects, determine time and materials, and meet project deadlines independently under minimum supervision
Establish and maintain effective working relationships with developers, contractors, utility agencies, other city departments, and the public
Communicate effectively, verbally and in writing
Read and interpret county assessor maps, ownership lists, and other engineering maps and drawings

Survey Section

Knowledge of:

The principles and practices of surveying and the duties of instrument person, rod person, and chain person
Proficiency in algebra, geometry, and trigonometry as applied to survey computations

Ability to:

Perform survey duties related to the design of public works projects and the mapping of the city
Read survey figures quickly and accurately, and independently interpret written instructions and maps
Communicate effectively with developers, contractors, and the public

WORKING CONDITIONS

Design Section/Mapping and Records Section

Office setting with occasional field trips to validate data.

Survey Section

Works primarily in the field often in heavy traffic areas and construction zones.

MINIMUM QUALIFICATIONS

Associate degree in engineering, technical computer aided-drafting, land surveying, or a related field relative to area of assignment, and:

Design/Mapping and Records

Three years of experience performing engineering technician and drafting work including experience with computer assisted drafting, or

Survey

Three years of experience in survey, operating survey instruments.

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

SPECIAL REQUIREMENTS

Valid Arizona driver's license