City of Phoenix

Structural Plans Engineer

Job Code:	23540	Job Function:	Engineering & Applied Science
Salary Plan:	001	Grade:	069
FLSA:	Exempt	Labor Assign:	ASPTEA
Benefit Cat:	007	EEO-4:	Professionals
SOC:	17-2051.00	Last Revision:	April 2025

This description shall not be held to exclude other duties not specifically mentioned that are of similar kind or level of difficulty as the examples of typical functions of the classification. They are intended to describe the general nature and level of work being performed by individuals assigned to positions in this classification.

DEFINITION:

The fundamental reason this classification exists is to examine complex plans for new construction, alteration, and repairs to ensure compliance with City building codes and national standards. Technical advice and assistance are given to architects, engineers, and contractors on code conformance problems and to field inspectors in the interpretation of construction plans and in the resolution of unusually difficult construction code interpretation problems.

SUPERVISION RECEIVED/GIVEN:

Supervision is received from a Deputy Planning and Development Director or Senior Structural Plans Engineer.

EXAMPLES OF TYPICAL JOB FUNCTIONS (Illustrative Only):

- Reviews and examines complex plans and specifications to determine if they comply with life safety and public access provisions of City and national construction codes
- Performs engineering computations to analyze structural members and assemblies for structural integrity and compliance with applicable construction codes
- Identifies inadequacies found on structural and architectural documents and specifications and requires corrections to be made to meet the requirements of City codes
- Investigates the suitability of materials and methods of construction for compliance with construction code
- Evaluates the testing of soil bearing values and load tests of buildings and structures
- Responds to questions related to construction codes, department policies and procedures which are submitted by the public
- Holds conferences with developers, owners, architects, and engineers relating to plan design data, code interpretations, and the resolution of design problems affecting life safety
- Recommends changes in codes to resolve design and interpretation problems and to accommodate and control new materials and new design concepts
- Approves alternate methods or materials for code compliance within the scope of authority delegated by the Assistant Planning and Development Director who serves as the Building Official

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REQUIRED KNOWLEDGE AND ABILITIES:

Knowledge of:

- Building construction, standard construction materials, and advanced analysis and design concepts including computerized design calculations
- Basic structural engineering in the design of reinforced concrete, steel, masonry, and timber as applied to construction of buildings and structures
- Nationally recognized codes and standards and related ordinances, such as the Uniform Building Code, NFPA Standards, AISC, AISI, AITC, CRSI, ACI and NDS

Ability to:

- Use professional judgment and common sense in the application and enforcement of the intent of code requirements
- Objectively interpret and consistently apply code requirements and related standards in accordance with department policies
- Read and accurately interpret building construction plans and specifications of any complexity
- Communicate in the English language by phone or in person in a one-to-one or group setting
- Produce written documents in the English language with clearly organized thoughts using proper sentence construction, punctuation, and grammar
- Work cooperatively with other City employees and the general public
- Use graphic instructions, such as blueprints, schematic drawings, building plans or other visual aids
- Ascend and descend ladders and unfinished stairs without handrails and/or fixed stair treads, such as working on a construction site
- Travel and maneuver over rough, uneven, rocky surfaces or terrain
- Perform engineering computations using mathematical methods such as multiplication, division, algebra, trigonometry, and calculus
- Comprehend and make inferences from written material
- Work safely without presenting a direct threat to self or others

Additional Requirements:

- By the end of the twelve (12) month probationary period, must be either a Registered Structural OR Civil Professional Engineer (PE) in the State of Arizona
- Obtaining a combination of discipline specific commercial certifications or licenses may be required for some positions depending on department or section assignment
- Some positions will require the performance of other essential and marginal functions

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ACCEPTABLE EXPERIENCE AND TRAINING:

Three years of experience in the building construction industry relating to structural engineering for buildings or similar structures and a bachelor's degree in civil or structural engineering or a related field. Other combinations of experience and education that meet the minimum requirements may be substituted.