

TRANSPORTATION ENGINEER

JOB DESCRIPTION

Classification Responsibilities: A Transportation Engineer is responsible for performing professional transportation engineering work in the Transportation Department and may be assigned to either Transportation Planning or Traffic Studies. Work is performed independently with minimal supervision. Specific duties will vary by assignment and may include: reviewing development and construction plans to ensure compliance with City standards, Transportation Plan, and accepted transportation engineering practices; serving as transportation liaison to other agencies regarding freeway projects, roadway projects, corridor studies, project assessments, etc., during the scoping, design, and construction phases of projects; assisting with transportation planning projects (examples: transportation network modeling, developing guidelines, standards and codes, and developing systems to organize and log public and private development plans and transportation division input); supervising technical, paraprofessional or professional staff, researching and analyzing accident statistics, developing and implementing traffic safety education curriculum at public events, bicycle and pedestrian planning/safety; awarding, administering, and monitoring traffic barricade and traffic counting contracts; responding to and providing traffic engineering advice to other City departments, consulting engineers, private contractors, and the general public; advising, planning, and implementing traffic control plans for special City events; and conducting research and analysis on a variety of traffic engineering subjects. This position is responsible for performing related duties as required.

Distinguishing Features: A Transportation Engineer performs professional-level transportation engineering functions. Daily duties and assignments require the application of independent judgment, initiative, and decision-making regarding the planning, design, and review of transportation features of engineering projects. Special projects are routinely assigned and reviewed by the Transportation Department Director, Deputy Department Director, City Traffic Engineer, or Senior Transportation Engineer. This position will be responsible for performing engineering plans examination work in support of the central plans review function of the Development Services Division and Transportation Department including screening and preliminary plan review. Work involves: researching historical background information pertinent to individual permit applications; performing technical analyses of plans, specifications, and reports; and reviewing construction documents for completeness, accuracy, and conformance to applicable codes, ordinances, and national standards. The responsibilities of this class involve technical expertise as well as independent judgment, which must result in precision and accuracy. Incumbents in this class are required to develop and maintain a current knowledge of the policies, procedures, and standards of the City departments they represent. This is accomplished through reports, plans, meetings, and end results achieved. The Transportation Engineer class is distinguished from the Civil Engineer class by the latter having emphasis on civil engineering features of a project as opposed to transportation engineering features of a project. Employees in this class may progress by noncompetitive promotion to Senior Transportation Engineer upon meeting the specific criteria-based promotion requirements of performance and professional registration. This class is FLSA exempt-professional.

QUALIFICATIONS

Employee Values: All employees of the City of Mesa are expected to uphold and exhibit the City's shared employee values of Knowledge, Respect, and Integrity.

Minimum Qualifications Required. Graduation from an accredited college or university with a Bachelor's Degree in Civil Engineering or related field.

Special Requirements. Must possess a valid Class D Arizona Driver's License by hire date.

Substance Abuse Testing. None.

Preferred/Desirable Qualifications. Supervisory experience is desirable. Some (6 months - 1 year) civil engineering experience, with emphasis in traffic or transportation is desirable. Any combination of training, education, and experience equivalent to considerable (3 - 5 years) plans review experience related to the program area (example: Civil, Design Review, Streetlights, Traffic) and interpreting and applying codes, ordinances, and national standards (civil, traffic engineering) is desirable. Experience dealing with the public concerning controversial or difficult matters and registration as an Engineer-in-Training is also desirable.

ESSENTIAL FUNCTIONS

One position may not include all of the essential functions, knowledge and abilities listed, nor do the listed examples include all the knowledge and abilities which may be found in positions of this classification.

Communication: Provides traffic and transportation engineering advice, practices, policies and standards to other City departments, consulting engineers, private contractors and to the general public to resolve issues and reach concurrence on projects. Responds to and resolves public inquiries regarding City developments and construction projects administered by City, county, and state agencies within and around City limits. Serves as City liaison to other agencies regarding freeway projects, roadway projects, corridor studies, project assessments, etc., in meetings, field reviews, and other associated communication media. Prepares verbal and written reports of a technical nature.

Manual/Physical: Reviews the work products of others to ensure compliance with standard operating procedures and state regulations. Operates a motor vehicle requiring a standard Arizona Driver's License to respond to traffic problems and conduct field inspections. Uses common hand tools such as a hammer, tape measure, rolling tape measure, and electronic in-vehicle distance measuring device to collect data for pavement striping designs, and to determine and mark appropriate locations of signs and pavement striping reference points. Operates a variety of standard office equipment, and enters data into a personal computer to log in work requests, customer contact, maintain data and prepare reports, letters, and memos. Prepares and/or updates maps, graphs or similar charts to be used in written reports or as part of field work requests. Sets up and removes traffic cones to maintain a safe working environment during studies, evaluations and/or emergencies. Recognizes deficiencies in barricade set ups and communicates deficiencies to appropriate personnel. Detects traffic sounds when working near moving traffic during field work. Works in a variety of weather conditions while performing traffic studies. Represents the Transportation Division at various day and evening public meetings. Meets scheduling and attendance requirements.

Mental: Plans, organizes, and directs the activities of subordinate personnel. Supervises and evaluates the work of subordinate personnel which may include: technical reports, customer contacts, field work requests, crash studies/statistics, traffic control plans, bicycle and pedestrian plans, and traffic safety

education programs. Prioritizes own work and prioritizes and assigns work to others. Reviews construction plans for transportation engineering features to ensure adherence to the Transportation Plan, as well as standard technical design references such as the City of Mesa Engineering Procedure Manual and the City of Mesa Standard Details. Reviews plans to consider compatibility with the surrounding community and other civil engineering and development features associated with a project. Determines adherence to traffic engineering specifications on a variety of transportation projects with contractors and developers. Develops policies and procedures for the traffic studies group. Performs mathematical calculations and statistical computations to determine sight distance calculations, warning sign locations, or striping tapers. Conducts transportation engineering research work and analyzes data, including traffic counts, traffic speed, traffic crashes, and striping and signing measurements to make recommendations to resolve traffic problems. Meets deadlines for projects. Reads and interprets construction drawings, blueprints, schematic drawings, or layouts. Reviews transportation development and traffic signal construction plans by checking for such factors as ability for roadways to be striped and signed for a particular design speed and to ensure adequate visibility for drivers at intersections and driveways. Reviews plans for appropriate consideration of such modes as bicyclists and pedestrians. Evaluates and provides feedback on how transportation elements of proposed plans impact an existing adjacent neighborhood, as well as the quality of the proposed community. Evaluates technical information and statistics and prepares reports with statistical results. Comprehends reference materials. Develops alternative preliminary plans in order to resolve conflicts. Researches, develops, prepares, and updates transportation policies, standards, guidelines and procedures for implementation by the Transportation Department and other City departments. Reviews detailed traffic impact studies for recommended improvements appropriate for development.

Knowledge and Abilities:

Knowledge of:

the principles and practices of civil engineering and the methods and techniques used in the design of public street right-of-way widths, and compatibility with existing improvements within the adjacent areas already developed and public street improvements;

the principles of transportation planning, such as, traffic modeling, the three-step process (trip generation/distribution/assignment), and basic urban design;

principles and practices of employee supervision and training;

the federal, state, and local regulations and codes, and the engineering standards pertaining to the design of the projects assigned;

the symbols and terminology used in engineering drawings;

the current modes of ground transportation, including street, transit and traffic operations, light rail, bicycle systems and pedestrian requirements;

the materials, methods, and techniques used in the planning, construction, operations, and maintenance of City streets and traffic control devices;

the Manual on Uniform Traffic Control Devices, a Policy on Geometric Design of Highways and Streets, City of Mesa Engineering Procedure Manual, City of Mesa Standard Details, Transportation Plan, City of Mesa signing and striping standards, City of Mesa Traffic Barricade Manual and City code;

safety procedures and practices for working in heavy traffic;

traffic laws and regulations pertaining to traffic control; and

terminology, methods, practices and techniques used in technical traffic engineering report preparation.

Ability to:

supervise subordinate staff or other personnel by assigning work, selecting work methods, answering questions, and reviewing and approving work performed for compliance to instructions given and for conformity to sound traffic engineering principles;

complete performance evaluations, approve leave of absence requests and set work schedules;

effectively investigate, analyze, evaluate and resolve operational, procedural, and personnel problems;

assess and assign priorities to problems and work assignments when confronted with several pressing demands at one time;

perform a variety of plans review duties in the areas of public works construction;

review industrial, commercial, subdivision, residential and multifamily plans for compliance with Development and Sustainability and Transportation Department requirements and regulations, including but not limited to: public utility availability, public rights-of-way acquisition, public street improvements, storm drainage facilities, public streetlights, and non-City utility conflicts;

apply the standards and requirements contained in the City's Engineering Procedure Manual to engineering and architectural plans submitted for review;

review subdivision plats;

analyze, propose, and obtain approval for updates to the City's Engineering Procedure Manual and Standard Details on periodic basis;

represent the City Plan Review Section at Development and Sustainability and Transportation Department coordination and/or training meetings;

coordinate review and processing of legal documents pertaining to land rights between the City and the Public;

review, process, and coordinate plan review submittals for various City programs involving development agreements (example: City Share, In-Lieu Payments, and Utility Service Agreements);

participate in the selection of staff and provide or coordinate staff training;

prepare traffic studies, including parking studies, crash analysis, signal studies, left-turn signal studies, high crash location studies, and studies concerning traffic conditions in neighborhoods and around schools;

provide general engineering advice to other City departments and to the general public;

write special project conditions and construction notes precisely so there is little possibility of misinterpretation by contractors;

participate in transportation planning activities including reviewing detailed traffic impact studies of major developments;

prepare detailed reports summarizing accident statistics related to pedestrian, bicycle, and/or fatal accidents;

provide advice and assistance to City departments, consulting engineers, private contractors, other agencies, and the public regarding transportation elements and traffic control;

evaluate technical information and statistics;

effectively communicate both verbally and in writing; and

establish and maintain effective working relationships with City officials, other professionals, contractors, coworkers, and the general public.

The duties listed above are intended only as general illustrations of the various types of work that may be performed. Specific statements of duties not included does not exclude them from the position if the work is similar, related, or a logical assignment to the position. Job descriptions are subject to change by the City as the needs of the City and requirements of the job change.

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RM/js

CS4620.DOCX

EEO-Prof

JOB FCTN-ENG

Non-DOT Safety and Security-Y/N

CDL-Y/N

RESP-Y/N

PAY GRADE: 56

IND-9410

SWORN-No

Non-DOT Random-Y/N

DOT-Y/N (***By Assignment***)

INCREMENTS 65-200