

IOWA DEPARTMENT OF ADMINISTRATIVE SERVICES ▼
HUMAN RESOURCES ENTERPRISE

TRANSPORTATION ENGINEER SPECIALIST

DEFINITION

Performs professional engineering work in recognized engineering discipline(s) in the coordination and direction of transportation programs; provides consultation to field engineers, contractors or consultants; performs related work as required.

The Work Examples and Competencies listed are for illustrative purposes only and not intended to be the primary basis for position classification decisions.

WORK EXAMPLES

Provides technical engineering assistance in construction and maintenance techniques, procedures and processes in areas of roadways, structures and related transportation areas to department field engineers, city and county engineers and consultants.

Coordinates planning and compliance with state guidelines for programs administered by the department for highway prelocation, and transportation, environmental and safety improvements.

Presents technical information, program plans and proposals to higher level management, other agencies/jurisdictions and groups to obtain cooperation or acceptance; oversees and administers federal and state funded programs for local governments; prepares agreements with cities, counties and other states on grant programs, joint projects or transfers of jurisdictions.

Oversee all materials inspection, sampling, and testing activities within a transportation district.

Reviews engineering policies and publications and develops or modifies guidelines and procedures to adapt county and city projects to state and federal requirements.

Develops, reviews, interprets and initiates changes in project plans, concepts, design, contracts or specifications; investigates materials, work methods and construction problems; investigates and resolves immediate engineering and related engineering problems; develops single or alternative plans, policies, programs and recommendations; assesses risk of liability and makes recommendations for improvements; identifies, investigates and analyzes information for tort litigation.

Designs and evaluates research of materials; coordinates assignments to staff; evaluates and develops new/unique materials, equipment and test methods; develops performance criteria, test and inspection methods, and related data for the application of standards to specific products and services; reviews and monitors production from approved sources of highway materials.

Develops and monitors automated programs and systems to enable and enhance administrative functions connected with highway construction, design, contracting and various estimations/projections; works with department staff, other jurisdictions and consultants to coordinate updates and ensure integrity of systems.

Coordinates the preparation and processing of contract lettings; determines and develops innovative contracting techniques for critical projects with high visibility and substantial public impact.

COMPETENCIES REQUIRED

Knowledge of the principles, practices, and techniques associated with the assigned area of specialization within the field of transportation engineering.

Knowledge of basic transportation engineering principles, practices, techniques, and equipment related to the planning, design, maintenance, and construction of highway facilities or transportation programs.

Knowledge of mathematics including algebra, geometry, and trigonometry.

Knowledge of the current literature, trends, and developments in the field of transportation engineering specialization.

Knowledge of the policies and procedures of the agency as they relate to the work of the unit to which assigned.

Ability to read, write, and speak the English language to obtain and present facts, data, and opinions clearly and concisely, both orally and in writing.

Ability to develop and revise methods, policies, procedures, and specifications.

Ability to interact with staff, general public, public interest groups, contractors, and legislators, to negotiate acceptance/implementation of project recommendations and solutions.

Ability to establish program objectives and performance goals for the assigned area of responsibility and assess progress toward their achievement.

Ability to review applications, grants, contracts, specifications, test methods, and similar information or work submitted by employees, and decide if information is complete, presented appropriately, feasible, in the best interest of the agency, and whether to approve or disapprove.

Ability to investigate and analyze engineering or related problems and develop timely alternatives toward their resolution.

Ability to lead others and work cooperatively in a team environment.

Ability to train employees so they understand work procedures and methods, and expectations of standards, and are able to carry out the work in question.

Ability to meet customer needs in a consistently helpful and courteous manner.

Ability to apply personal ethical standards such as honesty, responsibility and trustworthiness required to be a productive employee.

Displays high standards of ethical conduct. Refrains from dishonest behavior.

Works and communicates with all clients and customers providing quality professional service.

Displays a high level of initiative, effort, attention to detail and commitment by completing assignments efficiently with minimal supervision.

Follows policy and cooperates with supervisors.

Fosters and facilitates cooperation, pride, trust, and group identity and team spirit throughout the organization.

Exchanges information with individuals or groups effectively by listening and responding appropriately.

EDUCATION, EXPERIENCE, AND SPECIAL REQUIREMENTS

Licensed as a professional engineer, and the equivalent of two years of full-time licensed professional transportation or related civil engineering experience. Must have, or prior to appointment, must obtain an active Iowa professional engineering license through the Iowa Professional Licensing Bureau – Engineering and Land Surveying Examination Board;

OR

a Masters degree in chemical, civil, construction, environmental, materials, structural, or transportation engineering; engineering management; or an area closely related to transportation engineering may be substituted for one year of the required experience;

OR

employees with current continuous experience in the state executive branch that includes experience equal to twelve months of full-time experience as a Transportation Engineer.