

HIGHWAY DESIGNER III

DESCRIPTION: Under limited supervision of a Registered Professional Engineer, is assigned own projects; is responsible for technical engineering design work of broad scope, complexity and diversity in the calculation and preparation of plans for very complex construction projects for highways, and related civil or transportation engineering projects; performs related work as required.

EXAMPLES OF WORK: (A position may not be assigned all the duties listed, nor do the listed examples include all the duties that may be assigned.)

Designs horizontal and vertical alignment of roadways.

Prepares design plans for new and reconstruction projects requiring additional lanes on new or existing horizontal alignment.

Prepares design plans for new or rebuilt highway interchanges.

Prepares design plans of complete new urban projects including associated storm sewer design and the utility rehabilitation coordination.

Prepares design plans for major rural new and reconstruction under traffic.

Review design plans for off-system urban reconstruction projects for compliance with federal and state Standards and Specifications.

Recommend solutions for solving problems at high accident areas, research accident history, coordinate with other divisions, and provide estimates to help determine cost-benefit ratio.

Prepares design plans for safety projects and oversee safety project designs done by local government agencies and consultants.

Attend standard plans, safety and other policy recommending committee meetings.

FULL PERFORMANCE KNOWLEDGES, ABILITIES, AND SKILLS REQUIRED: (These may be acquired on the job and are needed to perform the work assigned.)

Knowledge of: extensive knowledge of Nebraska Department of Roads (NDOR) Roadway Design Standards, AASHTO Roadway Design Standards; Nebraska Standard Specifications for Highway Construction; hydraulics and hydrology, advanced engineering principles related to design and construction of projects including engineering, surveying, hydrology, hydraulics and geometrics.

Skill in: applying design principles to the most complex design with limited direction.

HIGHWAY DESIGNER III (continued)

ENTRY KNOWLEDGES, ABILITIES, AND SKILLS REQUIRED: (Applicants will be screened for possession of these through written, oral, performance, and/or other evaluations.)

Knowledge of: basic engineering principles related to design and construction of projects including engineering, surveying, hydrology, and geometrics; agency, state, and federal guidelines, policies, and regulations regarding the design and construction of highways, bridges, culverts, and other transportation-related projects.

Ability to: respond to inquiries at public hearings and meetings; plan and coordinate multiple sections/divisions activities relating to project completion; identify specific information from a substantial amount of related data or information in such sources as legal property descriptions, reports, survey notes, manuals, and standard specifications.

JOB PREPARATION GUIDELINES: (Entry knowledge, abilities, and/or skills may be acquired through, BUT ARE NOT LIMITED TO, the following coursework/training and/or experience.)

Any combination of training and/or experience that will enable the incumbent to possess the required knowledge, skills, and abilities. A general qualification guideline for positions in this class is a high school education or the equivalent AND education or experience in design, drafting, engineering, or highway construction.