

HIGHWAY BRIDGE DETAILER I

DESCRIPTION: Under immediate supervision of a structural designer, performs specific structural detailing* tasks for portions of bridge projects of moderate scope and complexity. Applies drafting skills using a good understanding of geometry, but work does not require an understanding of structural design concepts; performs related work as required.

*Detailing is drawing to scale and dimensioning intricate details and ensuring that the details, in the appropriate views, show all the needed information for construction, also ensuring that detailed elements fit each other in the three dimensional space.

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

From complete sketches provided by the designer, details and dimensions plan view, elevation view, and cross section of any bridge element.

Details and lays out a bill of bars from completed listing.

Performs clerical work related to shop plans, such as stamping plans and transferring information to copies.

Creates and manipulates Microstation CAD files.

Creates and manipulates PC files (spread sheets and word perfect).

Prepares project folders by assembling data to define project location and preliminary dispositions; researches and documents historical information; defines permit requirements and related permit data.

Performs and documents hydrologic and hydraulic analysis for box culvert sites; field inspects sites and prepares design data sheets.

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

Knowledge of: NDOR bridge standard details; the development process of bridge plans.

Ability to: produce plan views, elevation views, and cross sections from complete sketches; perform mathematical calculations including geometry, algebra and trigonometry; read and understand the terminology used in bridge plans; accurately transfer information from sketches to the design plans; create and manipulate CAD and microstation files.

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

Knowledge of: mathematics including algebra, geometry and trigonometry.

HIGHWAY BRIDGE DETAILER I (continued)

Ability to: read blue prints; communicate with others to resolve differences and convey ideas.

Skills in: operating CAD; operating P.C.

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, abilities and skills. A general qualification guideline for positions in this class is high school education or equivalent AND education or experience in drafting using computer aided design.