



STATE OF NEVADA
Department of Administration
Division of Human Resource Management

CLASS SPECIFICATION

<u>TITLE</u>	<u>GRADE</u>	<u>EEO-4</u>	<u>CODE</u>
STAFF II, ASSOCIATE ENGINEER	37*	B	6.228
STAFF I, ASSOCIATE ENGINEER	35*	B	6.229

SERIES CONCEPT

Associate Engineers perform a broad range of engineering work not requiring licensure by the Nevada State Board of Professional Engineers and Land Surveyors. Associate Engineers are distinguished from Engineering Technicians by greater latitude in the interpretation and application of established engineering criteria, and their technical expertise in the particular program area and/or knowledge acquired in a baccalaureate course of study in engineering or a related discipline. In addition, Associate Engineer duties are typically distinguished from advanced Engineering Technician duties by a greater responsibility for reviewing, interpreting and using judgment to make recommendations and determinations based on data received, organized, compiled and summarized by lower level technical staff including Engineering Technicians.

Participate in the planning, design, analysis and inspection of construction and maintenance of transportation and highway systems, bridges and other structures.

Design and analyze traffic systems including traffic signal systems, highway lighting systems, traffic striping detail and overhead traffic sign support structures.

Design and evaluate pavement structural sections for new and existing roadways; develop new structural section or develop appropriate rehabilitation strategy.

Perform technical and statutory review of water right applications; assist in hearings, preparing draft State Engineer Rulings and assist in administering water rights including water allocation, inventories and distribution.

Provide water quality clearance for highway projects including technical reports for inclusion in required environmental impact statements, and ensure compliance with federal and State water quality regulations; perform assessments and determine compliance with federal and State requirements regarding air quality, noise control and hazardous waste and prepare required reports.

Review applications, oversee inspections and recommend appropriate enforcement action for facilities subject to State and federal regulations governing wastewater treatment, air pollution control, solid and hazardous waste management, and site remediation; review designs and implementation of pollution control systems and environmental remediation projects.

Identify new, replaced and/or rehabilitated bridges and map the location for future scheduling; obtain and review bridge plans and specifications; participate in on-site inspections of in-service bridges to gather field data and prepare final inspection report.

Conduct on-site highway construction inspections to ensure adherence to specifications and recommend corrective action when needed; prepare final reports including the Construction Engineering Manpower Management System (CEMMS) for construction contracts awarded by the department.

Perform related duties as assigned.

* **Reflects a 2-grade special salary adjustment authorized by the 2001 Legislature to improve recruitment and retention.**

CLASS CONCEPTS

Staff II, Associate Engineer: Incumbents either: 1) continue to work toward licensure as a professional engineer under the direct supervision of a Registered Professional Engineer; or 2) work under limited supervision and perform advanced level engineering work not requiring licensure. Staff II positions are distinguished from Staff I positions by higher level knowledge, skills and abilities; greater independence and decision-making responsibility; and greater latitude in making exceptions and substitutions based on additional engineering experience. Incumbents have a broader scope and complexity of projects and may be responsible for all or most of a project, whereas Staff I's typically oversee small projects or less complex aspects of a large project. Staff II's are typically responsible for assigning and reviewing the work of lower-level employees and, in a university setting, supervising students.

Positions at this level perform a broad variety of complex engineering work not requiring licensure as a professional engineer, but requiring some professional training, academic coursework, experience and knowledge of accepted engineering practices and principles. Incumbents perform engineering assignments that are varied, broadly stated, involve different or unrelated processes and methods, and require the use of judgment in the analysis of diverse and complex data. Determinations regarding what needs to be done require the evaluation of one or more issues that typically involve choosing from among several alternative courses of action. Pertinent elements and conditions must be identified and evaluated to determine interrelationships and assess the applicability of standards and procedures. Actions and decisions impact the immediate work unit and some routine, day-to-day operations of the organization. Personal contacts are made to elicit, provide or exchange information requiring detailed explanation and the understanding of engineering terminology, including the explanation of technical issues to co-workers, professional engineers and the general public, which may include hostile individuals and/or situations.

Staff I, Associate Engineer: Incumbents either: 1) work under the direct supervision of a Registered Professional Engineer and gain knowledge and experience required for licensure as a professional engineer; or 2) work under general supervision and perform engineering work not requiring licensure. Staff I positions are distinguished from higher level Engineering Technicians by their participation in project design and management; responsibility for testing and inspections and the interpretation of results; determining the impact on project activities; and making design recommendations to professional engineers.

Positions at this level perform a broad variety of engineering work requiring technical training, academic coursework, experience and/or basic professional engineering knowledge and abilities. Assignments are varied, interrelated and generally follow established policies and guidelines. Duties involve several sequential steps, processes or operations with work typically being reviewed by the immediate supervisor or higher level engineers in the agency. Choices regarding what needs to be done require the incumbent to analyze situations as well as unique circumstances and select the most appropriate actions based on departmental standards and guidelines. Decision-making largely consists of choosing the most effective work methods, determining the priority of tasks, and using the appropriate equipment or techniques. Personal contacts with co-workers, supervisors, the general public and others are made to elicit, provide or exchange information that requires explanation of highly technical, engineering-related information.

MINIMUM QUALIFICATIONS

SPECIAL REQUIREMENT:

- * Pursuant to NRS 284.4066, some positions in this series have been identified as affecting public safety. Persons offered employment in these positions must submit to pre-employment screening for controlled substances.

MINIMUM QUALIFICATIONS (cont'd)

INFORMATIONAL NOTES:

- * Employees in this class who are not registered professional engineers may not represent themselves as such to other persons or entities.
- * Applicants for Staff I, Associate Engineer who have passed the Fundamentals of Engineering examination given by the National Council of Examiners for Engineering and Surveying are not required to take the State's written test.

STAFF II, ASSOCIATE ENGINEER

EDUCATION AND EXPERIENCE: Bachelor's degree from an accredited college or university in civil engineering or closely related engineering field and two years of professional engineering experience; **OR** Certification by the Nevada State Board of Professional Engineers and Land Surveyors as an Engineer Intern, and two years of professional engineering experience in civil engineering or closely related engineering field; **OR** two years of experience as a Staff I, Associate Engineer or Supervisor I, Associate Engineer in Nevada State service; **OR** an equivalent combination of education and experience.

(See Special Requirement and Informational Notes)

ENTRY LEVEL KNOWLEDGE, SKILLS AND ABILITIES (required at time of application):

Working knowledge of: engineering principles and practices; computer software programs necessary to complete job assignments. **Ability to:** make logical engineering judgments and decisions; read and understand engineering information from plans, drawings, specifications, manuals, correspondence, reports, graphs and memos; analyze technical information, problems, situations, practices or procedures to identify relevant concerns, formulate logical and objective conclusions and recognize alternatives and their implications; communicate orally using appropriate vocabulary and grammar to obtain and provide information and explain policies and procedures; write engineering reports and other technical documents; understand and perform statistical computations; establish rapport and gain the trust of others; operate personal computers and associated engineering software; *and all knowledge, skills and abilities required at the lower levels.*

FULL PERFORMANCE KNOWLEDGE, SKILLS AND ABILITIES (typically acquired on the job):

Working knowledge of: project management methods and techniques. **Ability to:** interpret construction drawings, contract documents, technical specifications and test results; analyze information, reach sound conclusions and make appropriate engineering decisions; complete heavy workload within established time frames; perform effectively with frequent interruptions and/or distractions; set priorities which accurately reflect the relative importance of the job responsibilities; exchange ideas, information and opinions with others to arrive at decisions, conclusions or solutions; establish and maintain effective working relationships with fellow employees and management.

STAFF I, ASSOCIATE ENGINEER

EDUCATION AND EXPERIENCE: Certification by the Nevada State Board of Professional Engineers and Land Surveyors as an Engineer Intern; **OR** Bachelor's degree from an accredited college or university in civil engineering or a closely related engineering field; **OR** two years of journey level technical experience equivalent to an Engineering Technician III in Nevada State service; **OR** an equivalent combination of education and experience. *(See Special Requirement and Informational Notes)*

ENTRY LEVEL KNOWLEDGE, SKILLS AND ABILITIES (required at time of application):

Working knowledge of: practical application of algebra, geometry and trigonometry to specific problems and situations. **General knowledge of:** engineering principles and practices; graph and table formatting. **Ability to:** make computations and calculations involving the application of engineering principles; read and understand technical reports, maps, specifications, plans and related documents; write technical reports and compose correspondence for transmittal to other governmental agencies; convert mathematical data,

MINIMUM QUALIFICATIONS (cont'd)

STAFF I, ASSOCIATE ENGINEER (cont'd)

ENTRY LEVEL KNOWLEDGE, SKILLS AND ABILITIES (cont'd)

quantities and measurements and calculate area, volume, length and proportion; plan, organize and schedule work to accomplish established objectives; work within a Cartesian coordinate system; work as part of a team; establish and maintain cooperative working relationships with contractors, co-workers, and representatives from other agencies; work independently and follow through on assignments; interact diplomatically with public in potentially hostile situations.

FULL PERFORMANCE KNOWLEDGE, SKILLS AND ABILITIES (typically acquired on the job):

Working knowledge of: where to go within the organization for needed information; agency policy manuals and guidelines; State laws and federal regulations pertinent to the assignment. **Ability to:** read, comprehend and apply federal, State and local laws, rules and regulations; make judgments pertaining to data validity and consistency; respond to questions in a group setting to provide information or explain procedures and policies.

This class specification is used for classification, recruitment and examination purposes. It is not to be considered a substitute for work performance standards for positions assigned to this class.

6.228

6.229

ESTABLISHED:

7/1/93P

7/1/93P

8/31/92PC

8/31/92PC

REVISED:

11/17/93UC

11/17/93UC

REVISED:

9/18/95UC

9/18/95UC

REVISED:

7/1/01LG

7/1/01LG

REVISED:

6/25/04PC

6/25/04PC

REVISED:

9/23/05PC

REVISED:

06/19/15