MULTI-TITLE DEFINITION
ARCHITECT SR.

FOR ARCHITECTS/ENGINEERS

I. DEFINITIONS

Section A, Levels, describes the appropriate placement of an employe based upon the specific level of skills, knowledge, and abilities required of the position and the amount of supervision received for the majority of time within the specific professional engineer program area.

Section B, Functional Work Activities, describes the full range of duties performed at the objective (i.e., “senior”) level. [Senior Level is the level an employe can reasonably expect to obtain if he/she performs the full range of functional work activities.]

Employes may also perform the following types of duties, but they are usually performed at the Senior or Advanced levels:

1. **Lead Worker:** An employe who trains, assigns the work and reviews the work of other professional employes and which may also include technical employes. Lead Worker functions will cease for Entry level architects/engineers when they have successfully attained the Senior level. Lead Worker functions are a permanent assignment but are dependent upon having developmental levels (below the Senior level) of engineer staff.

2. **Program Leader:** An employe who is the technical expert for a specific area(s) and who may have some oversight to assure uniformity within a specific architectural/engineering program area(s).

3. **Project Leader:** An employe who has the responsibility for coordinating the work of another professional architect(s)/engineer(s) when a project requires two or more architects/engineers for completion and which may also include other technical and professional employes. This function would last only as long as the project takes. An employe can be a project leader and a team member for another project simultaneously. **OR** A project leader can be an employe who has the responsibility of oversight of nonpermanent, nonstate, or contract engineers and related staff.

A. **Levels**

ARCHITECT/ENGINEER

Positions work under close progressing to limited supervision. Engineering principles and practices have been learned prior to entrance to this series. The primary emphasis is in developing skills in working with and/or understanding the program, state systems, user group(s), and the mechanics of the program. Positions receive specific guidelines and instructions on work assignments and the supervisor determines the priorities and provides clearly defined objectives. Work assignments are established by the supervisor on a short or long term basis as the employe progresses. Positions initially exercise little discretion in decision-making. Over time positions at this level make higher level contacts without the supervisor’s direction and make decisions on items of a narrower scope and impact.
SENIOR

Positions work under general supervision. The work assignments the employee is expected to complete include the full range and scope of their specific program duties. The majority of the assignments are complex. Positions at this level have extensive authority in carrying out their assigned responsibilities involving independently implementing the assigned responsibilities. The work at this level requires a high degree of interpretation and creativity in evaluating architectural/engineering aspects of new technologies. Positions at this level make decisions independent of supervisory oversight, with the work being reviewed after the decisions have been made.

ADVANCED

This is the level for positions under general policy review which provide advanced professional architectural/engineering expertise in their assigned program. Positions at this level function as (1) the primary architect/engineer for a specific aspect of a department program or (2) a program architect/engineer within an assigned geographic area. Architect/engineer positions at this level perform the most complex, difficult, and advanced architectural/engineering work which includes multi- and cross-program issues and which often include policy-making responsibilities. Employees at this level have architectural/engineering responsibilities which require continually high level contacts with public and private officials and architect/engineer consultants on highly sensitive and complex architectural/engineering reviews. The architectural/engineering knowledge at this level includes a broader combination than found at the Senior level. Assignments are broad in scope and continually require the incumbent to use independent judgment in making professional architectural/engineering decisions. Positions at this level make independent decisions and perform work in response to program needs as interpreted by the employee with the work being reviewed after the decisions have been made.

B. Title Series and Functional Work Activities

1. ARCHITECT

Positions allocated to this title series provide professional architectural services relating to developing building designs and reviewing consultant's work. Positions provide a full range of architectural services for projects including: program confirmation, construction supervision, contract administration, and construction management; act as project managers for the design and construction of projects; direct the work of project architects/engineers, building construction representatives, and owner agency staff; and assure that construction of state buildings is completed in accordance with approved programs, schedules, and budgets. Or, positions provide architectural services to communities with design issues including building improvements, historic preservation, public improvements and visual merchandising.

Specific program responsibilities and examples of architectural work performed include:

Chief Architect or Program Manager - Other Agencies: Serve as the key department professional resource person in the field of Architecture in matters relating to building design, construction, remodeling, and maintenance as delegated by, or in working with, the Department of Administration. Consult on departmental building and remodeling programs. Aid in the preparation of credible biennium capital building programs. Prepare cost estimates, concept and
budget reports, and plans and specifications. Evaluate bids. Oversee construction. Prepare change orders. Expedite implementation of the approved programs through conferences with the design consultants. Review consultant's plans and specifications. Investigate building failures, codes deficiencies, and other building deficiencies. Recommend solutions. Prepare environmental assessments. Serve as a public hearing examiner. Manage department's energy/space program. Depending upon the specific department, the building projects will be specialized as to their use.

2. CIVIL ENGINEER

Positions allocated to this title series provide professional civil engineering services relating to the design, construction, operation, and maintenance of facilities. Responsibilities include providing troubleshooting and evaluation services in the assigned civil engineering specialty; providing consulting services; developing and implementing design requirements and required levels of quality for new construction as well as remodeling/renovation (including design development, bidding, project management and construction supervision on construction projects designed in-house); and budgetary control and contract administration of construction projects including review and approval of payment requests and change orders. Responsibilities may also include conducting on-site surveys of hospitals, long-term care facilities, community based residential facilities and other health care facilities.

Specific program responsibilities and examples of engineering work performed include:

**Chief Civil Engineer or Project Manager - Other Agencies:** Administer building program for maintenance and construction for department structures, streets, bridges, walks and parking lots as delegated by, or in working with, the Department of Administration. Plan, develop and review short and long term goals. Develop information and formulate annual budget requirements for projects for the department. Prepare plans and specifications. Review the work of contractors. Review and approve design changes, contract change order, additions and/or deletions to contract quantities, and approve payments. Review plans for proper site considerations, sewer and water connections, etc. Conduct an annual inspection of all department structures. Analyze proposals and consult with customers concerning site conditions. Analyze and provide design recommendations. Develop scope, budget estimates and preliminary design. Establish schedules, determine resources required and provide coordination. Prepare construction documents and final project budgets. Act as the project manager for the bid and construction of projects. Investigate and recommend solutions for structural engineering problems in the department. Depending upon the specific department, the building projects will be specialized as to their use.

**Power Plant - University of Wisconsin (UW):** Oversee Shop supervisors and prepare maintenance and capital budgets. Coordinate construction and remodeling projects with engineers and craftsmen to perform work. Provide advice and consultation to UW departments, City of Madison, Bureau of Engineering, etc., and consult with UW regarding proposed building plans, buildings under construction, and problems in new buildings. OR Administer remodeling programs. Estimate costs, select materials and equipment, plan work schedules, coordinate and supervise construction, and prepare cost reports. Oversee trades crews (electrical, sheet metal, plumbing, painting, carpentry, masonry, plaster, steam fitter, and concrete). Review and assess structural framing of campus buildings. Recommend locations of loads and structural supports. Prepare specifications for materials and equipment review plans and specifications prepared by the State Bureau of Engineering, consult with the supervisor in charge of water and sewage distribution systems, develop status remodeling reports, and advise UW administrators and staff regarding remodeling
projects and issues. OR Plan, develop, and implement integrated maintenance and operations management systems for Facilities Planning and Management. Review and evaluate current programs and procedures within the Division. Identify methods for integrating existing programs into a new maintenance management system and develop specific recommendations for implementation. Design and develop appropriate specifications for the necessary software programs to accommodate the short and long-term needs of each project. Serve as a liaison with University System office to coordinate maintenance management programs and expectations. Develop preventive and predictive maintenance programs. Develop a work order management and job cost system. Develop a custodial management system.

3. **COMMUNICATIONS ENGINEER**

This series encompasses professional engineering positions which administer and manage the complex telecommunications contract providing statewide long-distance telephone, teleconferences, data communications, and image telecommunications services; evaluates state of the art telecommunication network T1 backbone facilities and interfaces for voice, advanced teleconferencing, microwave and video transmissions; administer a complex set of administrative provisions contained in the Sate Network Contract and the Consolidated Data Network Amendment, or any other kinds of communication engineering functions. Provide oversight to communications engineering and plan specification development, oversight of network implementation, coordination of joint planning efforts between contractors and state agencies, long-range planning, and policy development.

No representative positions.

4. **ELECTRICAL ENGINEER**

This series encompasses professional electrical engineering positions which provide services relating to design, construction, operation and maintenance of facilities. Responsibilities include provision of troubleshooting and evaluation services as the technical expert in the assigned engineering specialty; providing consulting services for the proper design and construction of electrical systems; development and implementation of electrical design requirements and required levels of quality for new construction as well as remodeling/renovation (including design development, bidding, project management and construction supervision on construction projects designed in-house; budgetary control and contract administration of construction projects, including review and approval of payment requests and change orders).

Specific program responsibilities and examples of engineering work performed include:

*Chief Electrical Engineer or Project Manager - Other Agencies:* Provide electrical and/or electronic engineering expertise to a department in the areas of building electrical and/or electronic systems design, construction, remodeling, and maintenance which have highly complex electrical power and/or electronic security systems. Design complex electrical systems and/or electronic security systems for institutions. Develop, implement and monitor the approved construction program. Eliminate building and security systems’ deficiencies, failures and code violations. Develop and implement the energy conservation program, including cost estimates, budgets, and timetables.

*Physical Plant:* Develop plans for the maintenance, operation, and future improvements to the electrical distribution system. Prepare layouts, drawings, and specifications for electrical work on
new construction, remodeling, and maintenance projects involving electrical distribution, signals, and communications systems, special lighting installations, grounds lighting, fire alarm systems, and emergency electrical systems.

5. ELECTRONIC ENGINEER

This series encompasses professional electronic engineering positions relating to design, construction, operation and maintenance of all state agencies' facilities. Responsibilities include provision of troubleshooting and evaluating services as the technical expert in the assigned engineering specialty; providing consulting services for the proper design and construction of electronics systems; development and implementation of electronic design requirements and required levels of quality for new construction as well as remodeling/renovation (including design development, bidding, project management and construction supervision on construction projects designed in-house; budgetary control and contract administration of construction projects, including review and approval of payment requests and change orders), or other kinds of electronic engineering functions such as designing electronic security systems.

Specific program responsibilities and examples of engineering work performed include:

Chief Electronic Engineer or Project Manager - Other Agencies: Plan, design, and review the designs of private consultants for very complex systems which involve entire building or institution-wide systems such as telecommunication and data systems, fire alarm and smoke detection systems, radio and personal security systems, overall security systems, paging and intercom systems, and other related systems. Prepare project cost estimates and various other activities relating to construction, performance and maintenance of electronic systems in state facilities. Perform project management duties which include reviewing and approving design documents, coordinating activities with institution staff and consultants, and managing related engineering services and construction contracts on delegated design project.

6. MECHANICAL ENGINEER

This series encompasses professional mechanical engineering positions which provide services relating to design, construction, operation, and maintenance of all state agency facilities. Responsibilities include troubleshooting and evaluation services as the technical expert in the assigned mechanical engineering specialty. Provide professional engineering consulting services for the proper design and construction of mechanical systems controls. Develop and implement mechanical design requirements and required levels of quality for new construction as well as remodeling/renovation (including design development, bidding, project management and construction supervision on construction projects designed in-house); and budgetary control and contract administration of construction projects, including review and approval of payment requests and change orders.

Specific program responsibilities and examples of engineering work performed include:

Chief Mechanical Engineer or Program Manager - Other Agencies: Provide mechanical and civil engineering expertise to a department in the areas of building mechanical systems design, construction, remodeling, and maintenance. Design complex mechanical systems and related site utilities for institutions. Implement and monitor the approved construction program to ensure the quality of work and compliance with state codes, Life Safety Code, and departmental and federal regulations. Manage environmental hazards at all institutions including asbestos and underground...
fuel tanks. Eliminate building and heating plant deficiencies, failures, and code violations. Develop construction programs, including cost estimates, budgets, and timetables. Eliminate functional and code deficiencies in institutional water supply and storm and sanitary sewers. **OR** Analyze and evaluate systems performance and needs assessment in the areas of mechanical and electrical systems, custodial and grounds operations, and equipment services. Review and evaluate current programs and procedures. Identify methods for integrating existing programs into a new maintenance management system and develop specific recommendations for implementation. Develop necessary training and safety coordination programs. Evaluate software packages currently used and coordinate with staff on the implementation of approved plans and programs.

**Specialty Area:** Review and develop engineering calculations for energy conservation measures on schools and hospitals. Provide technical assistance to engineering/architectural firms in the preparation of energy audits and energy conservation recommendations. Provide training regarding grant applications. Provide on-site monitoring to review the installation and perform troubleshooting where necessary. Act as a liaison between manufactures, schools, and hospitals and their consultant engineers. **OR** Review and approve designs and analysis work done by consultants and agency staff. Develop plans and specifications for projects not assigned to outside consultants. Provide specialized technical support for plumbing and fire protection system design requirements. Direct and provide mechanical engineering troubleshooting, inspection, and evaluation services to state agencies. Provide project management and contract administration services.

7. **SPECIFICATION WRITER**

This series encompasses professional engineer, specification writer positions which direct and review the preparation of building construction specifications by state agencies staff or consulting architects/engineers

Specific program responsibilities and examples of engineering work performed include:

**Electrical specification writer:** Develop plans for the maintenance, operation and future improvements to the electrical distribution system. Prepare layouts, drawings, and specifications for electrical work on new construction, remodeling, and maintenance projects involving electrical distribution systems, signal, communications systems, special lighting installations, grounds lighting, fire alarm systems, and emergency electric systems.

II. QUALIFICATIONS

The qualifications required for these positions will be determined at the time of recruitment.