

## Interdisciplinary, GS-08XX-05/07/09

An interdisciplinary professional position is one involving duties and responsibilities closely related to more than one professional occupation. As a result, the position could be classifiable to two or more professional occupational series. For this position, the nature of work could be classified to any of the following series, depending on the qualifications of the incumbent selected: GS-801, GS-804, GS-808, GS-810, GS-830 or GS-850.

Employee operates as a trainee within the General Services Administration, Public Buildings Service. Incumbent's grade level is dependent on the degree of supervisory controls, level of project involvement and complexity.

GS-5 level: At this grade, the incumbent uses a basic foundation of architectural and/or engineering knowledges to perform limited professional work of the organization. Receives specific assignments, with clear, detailed instructions and is expected to consult with the supervisor or a senior professional employee on all matters not specifically covered in the original directions. Work is reviewed in progress and upon completion for compliance with instructions and adequacy and accuracy of the final product. Assignments usually consist of specific tasks that are designed to orient the trainee in the practical application of theory and basic principles and to relieve more senior staff of detailed and simple work.

GS-7 level: At this grade, the incumbent uses a basic foundation of architectural and/or engineering knowledges to perform routine professional work of the organization, consistent with the employee's education and expanding professional experience. The supervisor indicates what is to be done, limitations, quality and/or quantity expectations, deadlines and priority of assignments and provides additional details for more difficult work. Work is reviewed for technical adequacy, compliance with instructions and appropriateness of architectural and/or engineering methods/techniques used to accomplish assignments. Work includes a mixture of specific tasks designed to orient the trainee in the practical application of theory and basic principles, as well as more detailed assignments to expose the trainee to a wider variety of project features, scopes and complexities found in GSA.

GS-9 level: At this grade, the employee is an advanced trainee performing the full range of duties described below and as accounted for in the factors following these duty statements.

### MAJOR DUTIES

Assignments will consist of learning the scope and foundation of PBS engineering and/or architectural responsibilities and assisting fully trained architects or engineers with day-to-day operations. Representative assignments include:

- visiting building site to obtain information regarding the condition of the structure, equipment and/or system characteristics; and the location of equipment and/or operating systems;
- reviewing project specifications to learn the customer, operational and technical needs;
- preparing preliminary and final working drawings and writing specifications on simple repair

and improvement projects;

--writing specifications for design, construction, repair and/or alteration projects involving his/her professional area of study for equipment and systems for which design criteria are standardized and well-established by applying standard engineering and/or architectural practices and approaches;

--reviewing and evaluating submittals by construction contractors of shop drawings, specification data, diagrams on building equipment and checking for compliance with drawings and specifications, identifying problems or changes needed;

--preparing cost estimates for scope of architectural or engineering work to be performed; and  
--performing other professional work to enhance his/her developing skill and experience base.

#### KNOWLEDGE REQUIRED BY THE POSITION

Professional knowledge of architectural or engineering principles and concepts as would be acquired through a bachelor's degree program in architecture or one of the engineering disciplines. Knowledge includes the professional terminology, methodology, units of measure and their interrelationships in this field to perform developmental assignments in the field.

Outside of incumbent's professional area of study, familiarity with either a) architectural methods and techniques or b) familiarity with engineering disciplines such as civil, electrical, structural and mechanical methods, techniques and concepts.

Knowledge of and ability to use design software to prepare and/or modify building drawings.

Ability to communicate orally and in writing.

#### SUPERVISORY CONTROLS

The supervisor makes specific assignments together with objectives, priorities, time limitations, background information and anticipated problems. The employee carries out the work, handling routine problems without assistance, as experience and program knowledges increase. Unusual problems are referred to the supervisor with a recommendation for their solution. Completed work is reviewed for technical adequacy, with new or unusual assignments reviewed more closely while in progress and upon completion.

#### GUIDELINES

Guidelines include a variety of technical manuals; local, State and Federal codes and standards; agency policies and regulations and standard business/design practices and methods. The employee selects and applies guidelines, interpreting them to specific parameters of the assignment. Problems regularly arise during the course of the project which require the employee to make minor adaptations of the guidelines. Situations requiring significant deviations from existing guidelines are referred to the supervisor.

## COMPLEXITY

Assignments involve projects that are relatively routine or conventional, in that complex features, when they arise, typically have established precedents relevant to them. Problems encountered require the application of varied but standard and well established methods and techniques. Projects are assigned to provide diversified experience as a foundation for future project responsibility and typically involve conventional systems and component-related projects or assisting higher-grade architects or engineers on large, more complex projects.

## SCOPE AND EFFECT

The purpose is to prepare working drawings and to write specifications for architectural design and/or engineering systems for government building, including design problems for projects of moderate complexity or relatively routine portions of larger projects. Work efforts have an impact on the adequacy of designs in terms of safety, economy, efficiency, types and sizes of systems to be installed, as well as in relieving higher grade architects or engineers of the more routine work.

## PERSONAL CONTACTS

Personal contacts are with architects, engineers and field office personnel within the PBS division and/or region, contractors, architect-engineering firm personnel, manufacturing representatives, professionals and personnel from other agencies, as well as other GSA personnel within the region.

## PURPOSE OF CONTACTS

Contacts are to exchange information, discuss needs and requirements of the using agency, resolve contractor's problems or discuss interpretation of specifications and obtain information about equipment, as well as to assist in solving unusual design problems and to report on status or results of work.

## PHYSICAL DEMANDS AND WORK ENVIRONMENT

Work is sedentary except for occasional walking and bending during project or construction site visits. Work is usually performed in an office setting, although there are occasional visits to construction sites.

## Interdisciplinary, GS-08XX-11

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Employee operates as an architect or engineer within the General Services Administration, Public Buildings Service.

### MAJOR DUTIES

Performs professional and technical assessments related to a variety of building alteration and/or construction projects, including the following representative duties:

Confers with representatives of agencies regarding design and/or project requirements, needs, building limitations and functional use of space to determine the most economical solution to satisfy operational needs.

Evaluates design and construction objectives and identifies the most economical and efficient procedures for building renovation, design and construction. Coordinates with subject matter specialists (higher graded architects or engineers) prior to and during design development to assure that all technical areas receive proper design consideration and that the total project objective and schedules are met.

Investigates project sites to determine the condition of facility or property prior to initiating design and evaluates and translates this data into working drawings and specifications.

Prepares detailed fee estimates used for negotiating with architect-engineering firms for design services as well as correspondence, plans, reports and A/E contract criteria necessary for project completion.

Prepares technical statement of scope of work and detailed supplementary instructions for design guidance including instructions for consulting engineers and architects retained to develop working drawings and specifications.

Meets with contractors, manufacturers' representatives and Government agency representatives to establish materials and test requirements. Reviews contractors' reports to determine adequacy of their content; assists in administering repair and alteration type A/E contracts; and acts as a technical consultant to the A/E staff in the resolution of problems affecting the quality of workmanship, time schedules for work completion and construction or equipment problems.

Makes final inspections in conjunction with or without other GSA personnel, checking in detail all phases of contract compliance with specifications and drawings. Verifies quality and acceptability of work. Makes detailed report listing omissions and defects. Assures the correction of all omissions and defects listed.

## KNOWLEDGE REQUIRED BY THE POSITION

Knowledge of professional architectural or engineering principles, concepts and practices applicable to a full range of design, layout, construction, repair and/or alterations to public structures such as office buildings and/or courthouses as could be acquired through a bachelor's degree in architecture or engineering supplemented by several years experience in the field.

Knowledge and skill sufficient to design and/or evaluate technical blueprints or project objectives, prepare or evaluate cost projections for work, to monitor work in progress and to evaluate completed products for compliance with cost or project requirements.

Familiarity with architectural methods and techniques or engineering disciplines such as civil, electrical, structural and mechanical methods, techniques and concepts (outside of the incumbent's specialty area) to ensure that areas of overlapping responsibilities between technical disciplines receive proper consideration to meet project objectives.

Knowledge of project management practices to ensure that all aspects of the work are properly monitored in progress and upon completion.

Knowledge of and ability to use CAD design software to prepare and/or modify building drawings.

Ability to communicate orally and in writing.

## SUPERVISORY CONTROLS

The supervisor makes assignments in terms of project objectives and priorities. The employee determines the nature of questions and issues involved, carrying out the work according to established professional and agency practices. Unusual problems are referred to the supervisor with a recommendation for their solution. Completed work is reviewed for technical adequacy, soundness of technical judgment and compatibility with the work of other professional staff members. Techniques used to complete work are not usually reviewed in detail.

## GUIDELINES

Guidelines include a variety of technical manuals; local, State and Federal codes and standards; agency design and construction standards; and standard professional/design practices and methods. The employee selects and applies guidelines, interpreting them to specific parameters of the assignment. Problems regularly arise during the course of the project that requires the employee to make minor adaptations of the guidelines. Situations requiring significant deviations from existing guidelines are referred to the supervisor.

## COMPLEXITY

Assignments involve conventional aspects of architecture or engineering work concerning the design, layout, repair, alteration and/or construction of various Federal structures or serving as a

technical consultant to private firms performing the same work. Assignments include projects that generally vary in complexity but typically include a combination of several complex features, requiring the employee to use different approaches and a broad range of professional skill. Technical issues usually fall well within the state of the art.

### SCOPE AND EFFECT

Performs professional work impacting the design, construction, repair and/or alteration of complex buildings within a designated geographic area. The work has an impact of the safety, economy and efficiency of such facilities and those housed in these structures.

### PERSONAL CONTACTS

Contacts are with architects, engineers and field office personnel within the PBS division and/or region, contractors, architect-engineering firm personnel, manufacturing representatives, professionals and personnel from other agencies, as well as other GSA personnel within the region.

### PURPOSE OF CONTACTS

Contacts are to exchange information regarding client requirements or design objectives; to conduct site visits; to resolve specific design or construction problems; and to justify recommendations or decisions regarding technical findings, performance of private firms and/or cost calculations.

### PHYSICAL DEMANDS AND WORK ENVIRONMENT

Work is sedentary except for occasional walking and bending during project or construction site visits. Work is usually performed in an office setting, although there are occasional visits to construction sites.

## Interdisciplinary, GS-08XX-12

An interdisciplinary professional position could be classifiable to two or more professional occupational series. For this position, the nature of work could be classified to any of the following series depending on the qualifications of the incumbent selected: GS-801, GS-804, GS-808, GS-810, GS-830 or GS-850.

Employee operates as an architect or engineer within the General Services Administration, Public Buildings Service.

### MAJOR DUTIES

Performs review and assessment of design development documents, including the resolution of complex design problems, as well as the preparation of documents for agency officials, client agencies, and contract architect-engineering (A/E) firms.

Conducts site investigations to determine feasibility; topography; and site configuration; or condition of structure and essential data prior to initiating design. Evaluates data obtained, incorporating relevant features into design solutions. Meets with local organizations to ensure that designs complement the area and to assess the effects of new or additional construction on the local employment market.

Confers with GSA or client contacts regarding project requirements, building limitations and space usage to determine the most economical solution. Coordinates with others to assure that all technical areas are covered, proper design consideration is given and that the total project objectives and schedules are met.

Prepares detailed fee estimates used for negotiating with A/E firms for design services and all pertinent correspondence, plans, reports, and A/E contract criteria necessary for project completion involving complex architectural or engineering needs or issues.

Participates in A/E evaluation and selection process. Evaluates and/or recommends the work of A/E firms to ensure design excellence and compliance with all regulations and design criteria.

Prepares statement of professional scope of work and detailed supplementary instructions for design guidance and instructions of consulting engineers and architects retained to develop working drawings and specifications.

Meets with contractors, manufacturers' representatives, and Government agency representatives to establish requirements. Reviews contractors' reports to determine adequacy of design. Reviews and evaluates a wide range of contractor submittals including drawings, samples, certificates of compliance, laboratory analyses, paint certifications, material proposals and other data. Determines compliance or noncompliance for such submittals.

Administers repair and alteration type A/E contracts, as well as major alteration and new construction contracts and recommends approval or rejection of all or parts of the proposals. Confers with contractors to resolve any problems. Assists in administering of construction projects and makes recommendations to contracting officers concerning contract modifications.

Evaluates design and construction objectives and identifies the optimal procedures for renovation, design, and construction, including in-house design and/or use of an A/E firm.

Makes final inspections checking in detail all phases of contract compliance with specifications and drawings, identifies deficiencies and follows up to ensure correction of same.

### KNOWLEDGE REQUIRED BY THE POSITION

Knowledge of professional architectural or engineering principles, concepts and practices applicable to a full range of design, layout, construction, repair and/or alterations to a variety of complex structures such as office buildings, courthouses, or special use facilities as could be acquired through a bachelor's degree in architecture or engineering supplemented by several years of increasingly responsible experience in the field.

Knowledge and skill to adapt standard, as well as unconventional design and construction practices and techniques, to establish design parameters and prepare project justifications and specifications for plans and designs for new construction and major renovation projects.

Familiarity with architectural methods and techniques or engineering disciplines (outside of the incumbent's specialty area) to ensure that areas of overlapping responsibilities between technical disciplines receive proper consideration to meet project objectives.

Knowledge of project management practices to manage construction activities and monitor projects such as would be acquired through several years' experience in the construction field.

Knowledge of and ability to use CAD software to prepare and/or modify building drawings.

Ability to communicate orally and in writing.

### SUPERVISORY CONTROLS

The supervisor assigns work in general terms indicating overall objectives and key priorities. The employee independently plans own work, coordinates with team members or other architects or engineers, resolves most problems that arise and carries assignments through to completion. For unusually difficult, complex, controversial or state of the art projects, the employee advises the supervisor of potential problems, accompanied by a proposed plan of action. Work is reviewed for adequacy of results and compliance with basic objectives.

## GUIDELINES

Guidelines include a variety of technical manuals; local, State and Federal codes; agency design and construction standards; agency policy statements and regulations; and industry procedures. Guides are often inadequate in dealing with the technical issues, requiring the employee to use insight and experienced judgment to adapt references where significant departures from established practices and precedents are needed due to changes in professional, environmental or related technical issues.

## COMPLEXITY

Assignments are diverse, covering a full range of professional considerations involving the design and construction of new buildings and/or restoration and renovation of existing buildings. Work typically requires the application of the latest technological advances with projects involving diverse and highly complex features, equipment and systems. The employee exercises seasoned judgment in adapting traditional techniques or evolving new ones to solve complex professional problems. The work requires recognition of the relationships of problems and practices of related fields either toward solving design and construction problems or determining the most appropriate source for expertise and assistance.

## SCOPE AND EFFECT

Provides professional advice and technical input in the renovation, design and construction of complex buildings. The employee's actions affect the work of others within and outside GSA and impact on the safety, materials, economy, progress and efficiency of such facilities, as well as the professional architectural or engineering integrity and adequacy of facilities.

## PERSONAL CONTACTS

Contacts are with architects and engineers within GSA, representatives of architect-engineer firms, client agencies, local community organizations, manufacturers, construction contractors, and members of professional societies.

## PURPOSE OF CONTACTS

To exchange information regarding client requirements or design objectives; to conduct site visits; to resolve diverse design or construction problems; and to justify decisions regarding technical findings, performance of private firms and/or cost calculations.

## PHYSICAL DEMANDS AND WORK ENVIRONMENT

Work is sedentary in nature and usually performed in an office setting. During project or site visits, the incumbent may be required to walk, bend and be exposed to the environment and hazards of a construction site.

## Interdisciplinary, GS-08XX-13

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Employee operates as a senior architect or engineer within the General Services Administration, Public Buildings Service.

### MAJOR DUTIES

Serves as a senior architect or engineer for the Public Buildings Service, with overall responsibility for the technical and business management of designated major design, construction, renovation or alteration projects. Projects assigned typically encompass the largest, most complex, highly visible activities of the region and/or those with the highest dollar value.

Participates with key GSA and client agency personnel responsible to define the goals of the project. Individually or as part of a team, prepares a master plan for accomplishing project goals. Prepares technical and supporting cost estimates to achieve goals of the master plan and prepares schedules for completing the project including implementing a system to review, control and report on project status.

Conducts site investigations and evaluates data obtained to determine feasibility, topography, and site configuration; or condition of structure and essential data prior to initiating design. Incorporates relevant features into design solutions; confers with GSA or client contacts regarding project requirements, building limitations and space usage to determine the most economical solution. Coordinates with other assigned personnel to assure that all technical areas are covered, that proper design consideration is given and that the total project objectives and schedules are met.

Determines which phases of projects will be performed in-house or by contract. Directs the preparation of detailed fee estimates and the pertinent correspondence, plans, reports, and A/E contract criteria necessary for project completion. Participates in A/E evaluation and selection process. Prepares statement of professional scope of work and negotiates contract specifications and design changes with organizational elements of the agency and contractors. Participates in review of bids, contractors' proposals, contract specifications and designs, as well as in contract negotiations and technical and business discussions with contractors. Monitors and assesses effectiveness of contractors in meeting contractual requirements, both technical and administrative.

Monitors project reviews, readjusting money, schedules and work required to complete assigned projects. Resolves problems or conflicts impeding progress, and assures that contractors and agency staffs work effectively toward timely completion of projects. Reviews highly controversial and/or complex change orders and claims to insure that they are adequately

documented and justified. Performs final acceptance inspections and completes all administrative actions required to close out assigned projects.

### **KNOWLEDGE REQUIRED BY THE POSITION**

Mastery of professional architectural or engineering principles, concepts and practices required to serve as a technical expert and/or project manager for designated major building projects. A bachelor's degree in architecture or engineering, supplemented by a number of years of progressively responsible experience on increasing complex projects is required.

Knowledge and skill to adapt unconventional design and construction practices and techniques, to establish design parameters and prepare project justifications and specifications for plans and designs for unique new construction and major renovation projects which integrate state of the art concepts into the design or construction considerations.

Knowledge of related engineering fields (outside the incumbent's specialty area) to ensure that areas of overlapping technical responsibilities receive proper consideration; skill is required to apply the latest developments in building design and construction to resolve complex or unprecedented problems.

Knowledge of, and skill in applying concepts and procedures associated with project management, financial management and/or procurement vehicles to achieve project goals and objectives.

Knowledge and ability required to use CAD software to prepare and/or modify building drawings.

Ability to communicate orally and in writing.

### **SUPERVISORY CONTROLS**

Assignments are made in the form of designated projects for which the scope, target completion date and available funds have been defined. The employee plans and accomplishes projects independently, with the authority to act on his/her own initiative on matters affecting the project outcomes. Master plans, deviation(s) from agency policies, schedule changes or other actions that hinder performance or alter operational characteristics of the project are submitted to the supervisor for prior review and approval, together with recommended actions and available alternatives. The employee keeps the supervisor informed of progress, potentially controversial matters, or issues with far-reaching implications. Completed work is reviewed from an overall standpoint in terms of effectiveness in meeting expressed objectives and requirements.

### **GUIDELINES**

Guidelines include broadly stated agency regulations and policy, and such standard material as technical manuals; local, State and Federal codes; agency design and construction standards; agency policy statements and regulations; and industry procedures. While helpful and pertinent

to assignments, the guidelines embrace a range of administrative and technical criteria involving concepts and principles for which the employee must either adapt, extend or develop supplementary material due to complicating conditions, or the individual characteristics of different locations or types of facilities being constructed or altered.

### COMPLEXITY

Assignments involve overall responsibility for the technical and business management of designated major, complex projects. Projects typically involve difficult or unusual negotiations or coordination among technical, socioeconomic, administrative or other technical issues or stakeholder concerns, e.g., compromises between a theoretically ideal method and a more economical but technically less desirable one, or conflicting interests and opinions between GSA and the client agency. The employee's actions constitute initial, and in many cases, the final agency recommendation or decision concerning the technical adequacy and cost effectiveness of the project's design, implementation and completion.

### SCOPE AND EFFECT

Position provides expert professional advice and technical guidance for major renovation, design, construction and alteration projects. The employee's actions affect the work of other subject matter specialists within and outside GSA, and impact on the safety, materials, economy, progress and efficiency of Federal buildings and facilities, as well as the professional architectural or engineering integrity and adequacy of these structures.

### PERSONAL CONTACTS

Contacts are with architects and engineers within GSA, representatives of architect-engineer firms, client agencies, local community leaders and formal and ad hoc interests groups and organizations, manufacturers, construction contractors, and members of professional societies.

### PURPOSE OF CONTACTS

Contacts are made to plan, direct and control the technical and administrative actions related to the project; to exchange information regarding client requirements or design objectives; to conduct site visits; to resolve diverse design or construction problems; and to justify decisions regarding technical findings, performance of private firms, cost calculations and/or to resolve competing interests of various community factions or technical groups.

### PHYSICAL DEMANDS AND WORK ENVIRONMENT

Work is primarily sedentary in nature and performed in an office setting. During project or site visits, the incumbent may be required to walk, bend and be exposed to the environment and the hazards of a construction site.