



ARMY POSITION DESCRIPTION

PD#: GW01414

Sequence#: VARIES

Replaces PD#:

MECHANICAL ENGINEER

GS-0830-12

Organization Title:

POSITION LOCATION:

Servicing CPAC: SOUTHEAST ATLANTIC

Installation: VARIES

Region: SOUTH CENTRAL

Agency: VARIES

Army Command: VARIES

Command Code: VARIES

POSITION CLASSIFICATION STANDARDS USED IN CLASSIFYING/GRADING POSITION:

Citation 1: OPM JFS PROF WORK ENG & ARCHITECTURE GROUP, NOV 2008

Supervisory Certification: *I certify that this is an accurate statement of the major duties and responsibilities of this position and its organizational relationships, and that the position is necessary to carry out Government functions for which I am responsible. This certification is made with the knowledge that this information is to be used for statutory purposes relating to appointment and payment of public funds, and that false or misleading statements may constitute violations of such statutes or their implementing regulations.*

Supervisor Name: GORDON L. SIMMONS **Reviewed Date:** 09/25/2017

Classification Review: *This position has been classified/graded as required by Title 5, U.S. Code in conformance with standard published by the U.S. Office of Personnel Management or if no published standards apply directly, consistently with the most applicable published standards.*

Reviewed By: HILLARY SCHWEITZER

Reviewed Date: 09/25/2017

POSITION INFORMATION:

Cyber Workforce:

- Primary Work Role: VARIES
- Additional Work Role 1: VARIES
- Additional Work Role 2: VARIES

FLSA: EXEMPT

FLSA Worksheet: EXEMPT

CONDITION OF EMPLOYMENT:

Drug Test Required: VARIES

Financial Management Certification:

Position Designation: VARIES

Position Sensitivity: VARIES

POSITION ASSIGNMENT:

Competitive Area: VARIES

Competitive Level: VARIES

Career Program: VARIES

Career Ladder PD: YES

Target Grade/FPL: 12

Career Pos 1: [GW475341](#)

GS-0830-11

FLSA Appeal: NO Bus Code: VARIES DCIPS PD: NO <ul style="list-style-type: none"> • Mission Category: VARIES • Work Category: VARIES • Work Level: VARIES Acquisition Position: NO <ul style="list-style-type: none"> • CAP: • Career Category: • Career Level: Functional Code: 21 Interdisciplinary: NO Supervisor Status: VARIES PD Status: VERIFIED	Security Access: VARIES Emergency Essential: Requires Access to Firearms: VARIES Personnel Reliability Position: VARIES Information Assurance: VARIES Influenza Vaccination: NO Financial Disclosure: VARIES Financial Disclosure: NO Enterprise Position: VARIES	Career Pos 2: Career Pos 3: Career Pos 4: Career Pos 5: Career Pos 6:
POSITION DUTIES: <p>Serves as a mechanical engineer on the staff of a design organization responsible for planning, and design of new and/or extension, conversion, or modernization of existing buildings or facilities. Assignments involve performance of office and field design duties associated with in house design and mechanical engineering review on project sites with diverse climatic, geographic, and environmental conditions that involve mechanical engineering features such as heating, ventilating, and air conditioning (HVAC) systems; plumbing, compressed gas systems; POL storage and dispersing systems; central heating/cooling plants; mechanical distribution; cyber security industrial control systems; and enhanced commissioning. Applies the latest design and construction techniques to all type structures and buildings.</p> <ol style="list-style-type: none"> 1. Performs technical design, contract document preparation, review, assessment, and provides guidance, including the resolution of complex design problems, development of Building Information Models (BIM), CADD drawings, specifications, and design analysis, as well as the preparation of appropriate documents for agency officials, client agencies, and contract Architect-Engineer (A-E)/Design-Build (D-B) firms. 50% 2. Conducts, or directs the conduct of, investigations of project site to determine (for new construction) feasibility of proposed project; topography; and essential site configuration; or (for additions or renovations) condition of structure and essential data prior to initiating design. Evaluates data obtained, incorporating relevant features into design consideration and solutions. 5% 3. Prepares statement of mechanical engineering scope of work and detailed man-hour 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. 5% 4. Reviews, evaluates, and determines adequacy of shop drawings, samples, certificates of compliance, laboratory analyses, and other submittals and data from contractors covered by Government contracts. Determines compliance or noncompliance for such submittals. 5% 5. Meets with contractors, manufacturers' representatives, and Government agency representatives to establish materials and test, and building commissioning requirements. 		

Reviews contractors' reports to determine adequacy of design. Consults with construction personnel to resolve difficult and complex problems developing during construction and prepares and reviews recommendations for corrective action. 5%

6. Evaluates technical data pertaining to design, materials, equipment, shop drawings, proposals for modifications and additions, and methods of installation submitted by contractors. Reviews for technical feasibility, adequacy, and compliance with specifications and established criteria. Determines if materials and equipment meet contract requirements, and recommends approval or rejection of all or parts of the submissions and proposals. Confers with contractors to resolve any problems or conditions. 5%

7. Evaluates design and construction objectives, identifies most economical and efficient procedures for building design, renovation and/or new construction, including in house design, coordinating with other architects and/or engineers in coverage of all technical areas, resolving overlapping responsibilities among technical disciplines concerning attention to design, and meeting total building objectives and schedules; and preparing all drawings, specifications, and supporting documents necessary for advertised or negotiated procurement. Provides input for cost and value engineering activities. 5%

8. Prepares Request for Proposal (RFP) documents for D-B solicitations. 5%

9. Participates in A-E and/or D-B evaluation and selection process. Evaluates and/or recommends the work of design and construction firms to ensure design excellence and compliance with all regulations and design criteria. 5%

10. Makes recommendations to contract officers concerning contract modification. Participates in cost engineering. 5%

11. Develops and maintains facility standard design documents in coordination with user and facility proponents. 5%

(100%)

Performs other duties as assigned.

Factor 1, Knowledge Required by the Position -- Level 1-7-1250 Points

Knowledge of professional mechanical engineering concepts, principles, and practices associated with HVAC, heat transfer, thermodynamics, compressed gas piping, and plumbing systems applicable to the full range of duties concerned with the planning, design, contract document preparation using state of the art software systems (e.g. BIM and CADD), renovation, and construction of such structures as dormitories, office buildings, training facilities, warehouses, maintenance facilities and other specialized buildings.

Knowledge and skills sufficient to design, inspect, or supervise the construction of such buildings.

Ability to conduct an extensive search for guidance to define project requirements in order to design and/or review plans and specifications for determination of acceptability and to recommend improvements.

Knowledge of related technical disciplines (i.e. architecture, electrical, mechanical, civil, and structural engineering) to ensure that areas of overlapping responsibilities among technical disciplines receive proper design consideration and that total project objectives are met.

Factor 2, Supervisory Controls - Level 2-4-450 Points

Incumbent receives assignments in terms of project objectives and priorities. The engineer has the total responsibility for planning and carrying out assigned projects, coordinating with others, determining approaches to take, and resolving problems. The supervisor or designated employee is informed of progress and critical problem matters. Completed work is reviewed for effectiveness in meeting requirements and dealing with problems.

Factor 3, Guidelines -- Level 3-4-450 Points

Guidelines include engineering and contractual regulations, manuals, technical publications, established procedures, and agency policy. The variety of the workload is such that the incumbent is frequently confronted with problems or unusual projects for which guidelines are inadequate or non-existent, requiring experienced judgment, initiative, and resourcefulness in adapting guidelines or developing the guidelines for first-of-its-kind type projects.

Factor 4, Complexity -- Level 4-5-325 Points

Assignments involve many different and unrelated engineering processes and methods, covering a broad range of work in engineering functions of assigned projects. The incumbent must be versatile and innovative in adapting and modifying guidelines for unique projects for which technical expertise is not available elsewhere in the district. The work also involves considerable planning and coordination with related fields.

Factor 5, Scope and Effect -- Level 5-3-150 Points

The purpose of the work is to originate new and/or improved applications and strategies for engineering or architectural concepts, theories, and principles; to assess project and/or program effectiveness; or to develop criteria, procedures, or instructions for a particular functional or specialized area. The work has an impact on the feasibility, accuracy, adequacy, safety, economy, and efficiency of a wide range of Corps activities.

Factors 6&7 Personal Contacts/Purpose of Contacts - Level 3c 180 Points

Contacts are made with architects and engineers within the Corps, project managers, representatives of A-E firms, client agencies, code producing organizations, manufacturers and material suppliers, construction contractors, members of professional and technical societies, and ARSTAF agencies.

Contacts are made to conduct surveys and investigations; assess the effects of construction on the local community; resolve specific design or construction problems; develop factual data to base recommendations and decisions on issues where there may be conflicting interests and opinions; justify feasibility and desirability of modifying existing rather than constructing new buildings; and/or motivate field technical personnel toward safe and continued use of good professional practices.

Factor 8, Physical Demands -- Level 8-2-20 Points

The work is sedentary except for regular and recurring field surveys and construction site inspections. Such inspections involve a considerable amount of physical activity, including walking, climbing, bending, and stooping.

Factor 9, Work Environment - Level 9-2-20 Points

Most work is performed in an office setting although there are regular and recurring visits to building site locations during the construction supervision of design projects. Such visits expose the architect to a variety of hazards associated with construction activities, including high noise levels, dust, moving equipment, high temperatures, or adverse weather conditions at projects and construction sites, etc.

TOTAL POINTS: 2845

GRADE CONVERSION: 2755-3150 = GS-12

Fair Labor Standards Act (FLSA) Determination = (EXEMPT)

- ☐ **1. Availability Pay Exemption** - (e.g., Criminal Investigators, U.S. Customs and Border Protection pilots who are also Law Enforcement Officers).
- ☐ **2. Foreign Exemption** - (Note: Puerto Rico and certain other locations do not qualify for this exemption – [See 5 CFR 551.104](#) for a list of Nonexempt areas.)
- ☐ **3. Executive Exemption:**
 - ☐ a. Exercises appropriate management responsibility (primary duty) over a recognized organizational unit with a continuing function, AND
 - ☐ b. Customarily and regularly directs 2 or more employees, AND
 - ☐ c. Has the authority to make or recommend hiring, firing, or other status-change decisions, when such recommendations have particular weight.

Note: Shared supervision or “matrix management” responsibility for a project team does not meet the above criteria. Limited “assistant manager” functions or “acting in the absence” of the manager does not meet the above criteria.

- ☒ **4. Professional Exemption:**
 - ☒ a. Professional work (primary duty)
 - ☒ b. Learned Professional, ([See 5 CFR, 551.208](#)) (Registered Nurses, Dental Hygienists, Physician’s Assistants, Medical Technologists, Teachers, Attorneys, Physicians, Dentists, Podiatrists, Optometrists, Engineers, Architects, and Accountants at the independent level as just some of the typical examples of exempt professionals). Or
 - ☐ c. Creative Professional, ([See 5 CFR, 551.209](#)) (The primary duty requires invention and originality in a recognized artistic field (music, writing, etc.) and does not typically include newspapers or other media or work subject to control by the organization are just some examples of Creative Professionals). Or
 - ☐ d. Computer Employee, ([See 5 CFR, 551.210](#)) (must meet salary test and perform such duties as system analysis, program/system design, or program/system testing, documentation, and modification). Computer manufacture or repair is excluded (non-exempt work).
- ☐ **5. Administrative Exemption:**
 - ☐ a. Primary duty consistent with [5 CFR 551](#) (e.g.; non-manual work directly related to the management or general business operations of the employer or its customers), AND job duties require exercise of discretion & independent judgment.

☒ **FLSA Conclusion:**

☒ **Exempt**

☐ **Non Exempt**

FLSA Comments/Explanations:

Duties meet criteria for Professional Exemption as outlined in 5 CFR 551.208.

CONDITIONS OF EMPLOYMENT & NOTES:

Incumbent may be required to obtain and maintain a Secret security clearance.

Valid driver's license may be required.

Up to 20% TDY may be required.

POSITION EVALUATION:

Not Listed