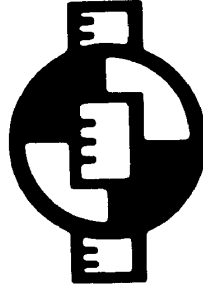


CHAPTER 28



ENGINEERING AIDE (EA)

NAVPERS 18068F-28G
Change 88

Updated: October 2021

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ENGINEERING AIDE (EA)

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NAVY ENLISTED OCCUPATIONAL STANDARD

FOR
ENGINEERING AIDE (EA)



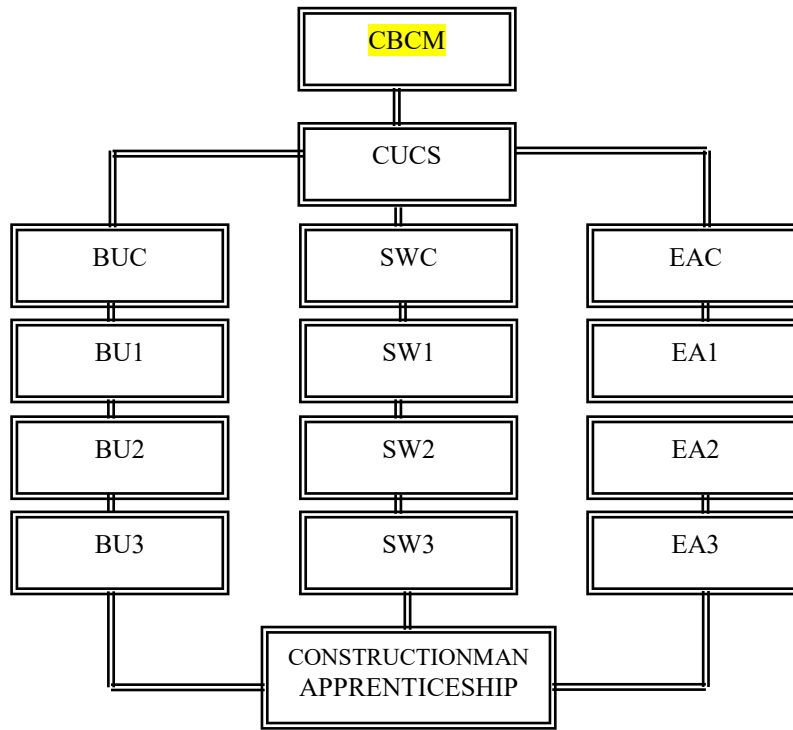
SCOPE OF RATING

Engineering Aides (EA) plan, supervise, and perform tasks required in construction design preparation, surveying, drafting, materials testing, and construction management; establish control survey points, run and close traverses, run level circuits, create topographic maps, stake out construction projects, employing conventional and Global Navigation Survey Systems (GNSS); prepare, edit, and reproduce construction drawings; establish and operate systems for testing soils, concrete and other construction materials, design aggregate mixes for soil-cement, concrete, and bituminous applications; prepare timekeeping records, construction schedules, planning and estimating, quality control, and progress reports; provide facilities support; maintain individual combat readiness; and perform tasks required in combat, Defense Support of Civil Authorities (DSCA), and Humanitarian Assistance/Disaster Recovery (HA/DR) operations.

This Occupational Standard is to be incorporated in Volume I, Part B, of the Manual of Navy Enlisted Manpower and Personnel Classifications and Occupational Standards (NAVPERS 18068F) as Chapter 28.

GENERAL INFORMATION

CAREER PATTERN



Normal path of advancement to Chief Warrant Officer and Limited Duty Officer categories can be found in OPNAVINST 1420.1.

For rating entry requirements, refer to MILPERSMAN 1306-618.

SAFETY

The observance of Operational Risk Management (ORM) and proper safety precautions in all areas is an integral part of each billet and the responsibility of every Sailor; therefore, it is a universal requirement for all ratings.

* Career path updated to reflect rating name change to Seabee Master Chief (CBCM) – NAVADMIN 054/21 refers

Job Title**Engineering Aide****Job Code****001160****Job Family**

Architecture and Engineering

NOC

TBD

Short Title (30 Characters)

ENGINEERING AIDE

Short Title (14 Characters)

ENGINEER AIDE

Pay Plan

Enlisted

Career Field

EA

Other Relationships and Rules

NEC BXXX series, 717B, 718B, 804G, 833A or other NECs as assigned.

Job Description

Engineering Aides plan, supervise, and perform tasks required in construction design preparation, surveying, drafting, materials testing, and construction management; establish control survey points, run and close traverses, run level circuits, create topographic maps, stake out construction projects, employing conventional and Global Navigation Survey Systems (GNSS); prepare, edit, and reproduce construction drawings; establish and operate systems for testing soils, concrete and other construction materials, design aggregate mixes for soil-cement, concrete, and bituminous applications; and prepare timekeeping records, construction schedules and planning and estimating, and quality control and progress reports. As project managers, they plan, staff, direct, and control multiple construction projects to include problem solving, planning, estimating, scheduling, cost control, and personnel management ensuring compliance with specifications, code requirements, plans, and contracts; and act as project supervisors and trainers for junior personnel.

DoD RelationshipGroup Title

Construction, General

DoD Code

171000

O*NET RelationshipOccupation Title

Civil Engineering Technicians

SOC Code

17-3022.00

Job Family

Architecture and Engineering

Skills*Complex Problem Solving**Operations Analysis**Management of Personnel Resources**Quality Control Analysis**Judgment and Decision Making**Management of Material Resources**Reading Comprehension**Mathematics**Monitoring**Systems Evaluation***Abilities***Information Ordering**Deductive Reasoning**Inductive Reasoning**Visualization**Mathematical Reasoning**Written Comprehension**Oral Expression**Problem Sensitivity**Originality**Written Expression***CONSTRUCTION DESIGN****Paygrade****Task Type****Task Statements**

E5

CORE

Calculate engineering and construction design requirements

E5

CORE

Develop architectural designs

E5

CORE

Develop civil engineering designs

E5

CORE

Develop electrical component designs

E5

CORE

Develop heavy construction designs

E5

CORE

Develop mechanical component designs

E6

CORE

Develop specialty designs based on unified facilities criteria (UFC) (i.e., airfield, wharf, pier, port, heliport, power station, moles, breakwater, etc.)

E5

CORE

Develop structural members designs

CONSTRUCTION MANAGEMENT**Paygrade****Task Type****Task Statements**

E6

NON-CORE

Conduct three-phase quality control inspections

E5

CORE

Develop construction activity summary sheets

E4

CORE

Develop construction environmental protection plans

E4

CORE

Develop construction estimates

E5

CORE

Develop construction project packages

CONSTRUCTION MANAGEMENT (CONT'D)

<u>Paygrade</u>	<u>Task Type</u>	<u>Task Statements</u>
E5	CORE	Develop construction project sketches and diagrams
E5	CORE	Develop construction safety plans
E5	CORE	Develop master activities
E5	CORE	Develop project three-phase quality control plans
E5	CORE	Establish construction site layouts
E5	CORE	Input project data into construction management software and tools
E5	CORE	Inspect construction materials
E5	CORE	Interpret construction project drawings and specifications
E4	CORE	Inventory project tools and materials
E5	CORE	Lead construction project crew
E6	CORE	Manage construction project resources
E7	CORE	Manage construction projects
E7	CORE	Manage construction safety plans
E6	CORE	Manage job site construction operations (e.g. quality control and safety plan implementation, job site information board, level III chart, etc.)
E7	NON-CORE	Manage project quality control plans
E7	NON-CORE	Manage three-phase quality control program
E6	NON-CORE	Monitor construction project contracts
E6	NON-CORE	Supervise batch plant operations
E6	CORE	Supervise construction project crews
E5	CORE	Supervise construction project safety operations
E6	CORE	Supervise environmental protection plans
E6	CORE	Supervise planning and estimating operations
E6	NON-CORE	Supervise project three-phase quality control process
E5	CORE	Turnover construction project
E6	CORE	Validate construction project packages
E5	CORE	Validate project surveys and elevation data

DRAFTING

<u>Paygrade</u>	<u>Task Type</u>	<u>Task Statements</u>
E4	CORE	Analyze construction drawings
E4	CORE	Develop construction plans using Computer-Aided Design (CAD) / Building Information Modeling (BIM) software
E4	CORE	Draft architectural drawings
E4	CORE	Draft civil drawings (i.e., drainage, road, site plans, etc.)
E4	CORE	Draft electrical drawings
E4	CORE	Draft mechanical drawings
E4	CORE	Draft structural drawings
E4	CORE	Produce construction drawings

DRAFTING (CONT'D)

<u>Paygrade</u>	<u>Task Type</u>	<u>Task Statements</u>
E5	CORE	Supervise drafting operations
E6	CORE	Validate construction drawings

ENGINEERING TECHNICAL SUPPORT

<u>Paygrade</u>	<u>Task Type</u>	<u>Task Statements</u>
E6	NON-CORE	Conduct building inspections
E6	NON-CORE	Consolidate construction project specifications
E4	CORE	Consolidate unit operational reports
E4	CORE	Maintain engineering technical libraries
E4	CORE	Maintain engineering tool kits
E4	CORE	Maintain technical plan files and records
E7	CORE	Manage engineering support operations
E6	CORE	Supervise engineering support operations

FACILITIES SUPPORT

<u>Paygrade</u>	<u>Task Type</u>	<u>Task Statements</u>
E6	NON-CORE	Administer facilities maintenance contracts
E5	NON-CORE	Administer facilities maintenance programs
E4	CORE	Coordinate facilities maintenance program requests
E7	NON-CORE	Manage facilities contract administration programs
E7	NON-CORE	Manage facilities maintenance programs

MATERIALS TESTING

<u>Paygrade</u>	<u>Task Type</u>	<u>Task Statements</u>
E5	CORE	Develop materials testing reports
E5	CORE	Perform bituminous mix design
E5	CORE	Perform concrete mix design
E5	CORE	Perform soil-cement mix design
E5	NON-CORE	Supervise batch plant quality control requirements
E5	CORE	Supervise materials testing operations
E4	CORE	Test bituminous materials
E4	CORE	Test concrete materials
E4	CORE	Test soil materials
E4	CORE	Test soil-cement materials
E6	CORE	Validate material testing reports

SURVEYING

<u>Paygrade</u>	<u>Task Type</u>	<u>Task Statements</u>
E4	CORE	Conduct construction surveys
E4	CORE	Conduct engineering surveys (i.e., reconnaissance)
E4	CORE	Conduct Global Navigation Survey System (GNSS) surveys

SURVEYING (CONT'D)

<u>Paygrade</u>	<u>Task Type</u>	<u>Task Statements</u>
E4	CORE	Convert file for upload to heavy equipment for Global Navigation Survey System (GNSS)
E4	CORE	Develop survey designs using post processing software
E4	CORE	Interpret survey data
E4	CORE	Process survey data
E5	CORE	Supervise surveying operations
E4	CORE	Upload file designs to heavy equipment Global Navigation Survey System (GNSS)
E6	CORE	Validate survey data