Engineering Aids assist construction engineers in developing final construction plans. They conduct land surveys; prepare maps, sketches, drawings and blueprints; estimate costs; perform quality assurance tests on common construction materials such as soils, concrete and asphalt; and perform other engineering technician functions.

This is a 5 year enlistment program.

**What they do**
The duties performed by EAs include:

- conducting location surveys for roads, airfields, pipelines, ditches, buildings, drainage structures and waterfront construction;
- preparing hydrographic, topographic and triangulation drawings and maps;
- computing the volume of bulk materials (concrete, bituminous mixtures and earthwork) from drawings and specifications;
- laying out all types of construction work;
- operating and maintaining various types of precision surveying and laboratory test instruments and equipment;
- preparing architectural, mechanical, electrical, and civil drawings and sketches;
- designing grading and drainage systems;
- conducting concrete, soil and asphalt tests;
- conducting quality control inspections for all types of construction projects;
- prepare network analyses, charts and graphs.
- Reading and interpreting blueprints and preparing sketches for projects;
- making estimates of material, labor, and equipment requirements.

**Credit Recommendations**
The American Council on Education recommends the following semester hour credits in the associate and vocational degree programs, 3 semester hours for both computer aided drafting and surveying, 2 semester hours in soils testing, and 1 semester hour in concrete testing. An AA in Construction Technology can be earned from Coastline Community College.

**Qualifications and Interests**
Important qualifications include, high level math and record keeping skills; the ability to do detailed work and perform repetitive tasks; an orientation toward tools, equipment and machines; manual dexterity; curiosity and resourcefulness; a talent for expressing ideas in writing; and a good memory. **The prospective EA must have satisfactorily completed a high school or college course in trigonometry with a minimum grade of "C."** Some college level training in engineering subjects is beneficial but not required. Helpful characteristics include speaking and writing skills and good physical condition. Normal hearing is required.

**Working Environment.**
EAs may work in a variety of conditions, independently or as members of a large team. Their many different duties may be performed in climates ranging from tropical to arctic.

**Opportunities**
Opportunities to enter the EA rating are excellent for highly qualified applicants. About 300 men and women work as Engineering Aids in the Navy.

**Related Civilian Jobs**
O-Net SOC Code

- 11-3042.00 Training and Development Managers
- 11-9021.00 Construction Managers
- 11-9041.00 Engineering Managers
- 17-1021.00 Cartographers and Photogrammetrists
- 17-1022.00 Surveyors
- 17-3011.00 Architectural and Civil Drafters
- 17-3022.00 Civil Engineering Technicians
- 17-3031.00 Surveying and Mapping Technicians
- 17-3031.01 Surveying Technicians
- 17-3031.02 Mapping Technician
- 19-3022.00 Survey Researchers
- 47-1011.00 First-Line Supervisors/Managers of Construction Trades and Extraction Workers

Since Navy programs and courses are revised at times, the information contained on this rating card is subject to change.

(Revised 01/08)