

NO RTEC JOB SPECIFIC SKILLS COMPETENCY

CIVIL ENGINEER TECHNICIAN

DOT CODE: 005.261-014 SVP 7

Job Description: Assists Civil Engineer in application of principles, methods, and techniques of civil engineering technology.

Physical Demands - Mildly Active w/light lifting, carrying, or moving (up to 20 lbs); **General Educational Development** - R4 M4 L4; **Aptitudes** - Above average General Learning Ability, Verbal, Numerical, Spatial, Form Perception, Clerical Perception, Motor Coordination, Finger Dexterity - Average Manual Dexterity

CORE SKILL COMPETENCIES/INDICATORS:

1. Can demonstrate knowledge of industrial trends, population growth, zoning laws, and state/local building code and ordinances. (R, IN, S, T)
2. Can demonstrate proper procedures involved in the research and interpretation of building codes and specifications. (IN, S)
3. Can demonstrate construction knowledge. (R, IN, S, T)
4. Can demonstrate knowledge of radiation safety and use of nuclear gauges. (R, IN, S, T)
5. Can demonstrate ability to use computer-aided drafting (CAD) and design equipment and software. (R, IN, S, T)
6. Can demonstrate ability to operate computer to record and analyze engineering data. (R, IN, S, T)
7. Can demonstrate ability to review and understand design specifications, engineering reports, maps, drawings, blueprints, tests, and aerial photographs on soil composition, terrain, hydrological characteristics, and other topographical and geologic data. (IN, S)
8. Can demonstrate ability to assist in the preparation and/or modification of reports, blueprints, specifications, plans, construction schedules, environmental impact studies, and designs for projects. (R, IN, S, T)
9. Can demonstrate ability to draft detailed dimensional drawings, such as construction drawings, topographical profiles, and related maps and specifications utilized in the planning and construction of civil engineering projects. (R, IN, S, T)
10. Can demonstrate proper techniques involved in conducting materials testing and analysis. (IN, S)
11. Can demonstrate proper techniques involved in conducting plant inspections. (IN, I, S)
12. Can demonstrate proper techniques involved in conducting traffic studies. (IN, S)
13. Can demonstrate ability to prepare technical or research reports detailing tests/inspections/studies conducted and results. (IN, S)
14. Can demonstrate understanding of pollution control requirements, and their application to construction and repair of water and wastewater treatment systems. (IN, S)
15. Can demonstrate proper use of maps and surveying equipment to obtain and analyze topographical details of project sites. (R, IN, S, T)
16. Can demonstrate proper technique involved in calculating dimensions, profiling specifications, and determining type and amount of materials/equipment needed for projects. (R, IN, S, T)
17. Can demonstrate ability to estimate material and labor costs based upon analysis of collected data. (R, IN, S, T)
18. Can demonstrate knowledge of methods utilized to inspect construction sites for satisfactory quality, and to determine conformance of sites to design specifications. (IN, I, S)
19. Can demonstrate ability to maintain records of equipment and materials at construction sites. (R, IN, S)
20. Can demonstrate ability to prepare accurate project status reports. (IN, S)
21. Can demonstrate proper techniques used to test and troubleshoot electrical, computer and electronic systems. (R, IN, S, T)

22. **Can demonstrate ability to perform advanced arithmetic operations, such as college algebra and trigonometry, quickly and accurately. (IN, S)**
23. **Can demonstrate ability to use a calculator quickly and accurately. (IN, S, T)**
24. **Can demonstrate ability to work with precision as regards the attainment of set limits, tolerances or standards. (R, IN, S, T)**
25. **Can demonstrate understanding of the principles and theories of science, engineering and mathematics. (IN, S)**
26. **Can demonstrate ability to define problems and adapt scientific knowledge to solve them. (IN, S)**
27. **Can demonstrate good communication skills. (IN, I, S)**
28. **Can demonstrate supervisory skills. (R, IN, I, S)**
29. **Can demonstrate ability to work under stress to meet schedule deadlines. (R, I)**