

Materials Testing Engineering Associate
Task List 2015
(Based on 2013 Task List)

1. Performs and/or witnesses standard physical tests of asphalt, cement, concrete, pipe, rock, sand, soil, protective coatings and linings, metals, welds, textiles, and petroleum products, and a wide variety of other materials using conventional and/or computerized control equipment (e.g., universal testing frame, falling weight deflectometer) to assure conformance to specifications (e.g., American Society for Testing Materials, Los Angeles Building Codes, American Association for State Highway and Transportation Officials) in order to determine their properties for design and construction.
2. Performs environmental sampling and testing of water and air quality, soil contamination, and sound monitoring using Geoprobe, conductivity, temperature and depth (CTD) gauge, and other appropriate apparatuses.
3. Witnesses, inspects, and tests products and construction materials to provide quality assurance at fabricators' facilities.
4. Analyzes data and reports test results such as compressive and tensile strength, and relative compaction using current technology such as nuclear gauges, triaxial and direct shear apparatuses, computers and software (e.g., Darwin).
5. Interprets reports and data received from third-party laboratories such as ferrous and non-ferrous metals, textiles, and petroleum products, metallurgical and chemical analyses and construction and maintenance materials.
6. Gives oral presentations and attends meetings with other divisions and agencies regarding tests made.
7. Keeps physical and electronic reports and images of testing and inspection to document project files to protect City interests and maintain laboratory certifications.
8. Inspects, maintains, and verifies calibration of apparatuses and gauges using standard weights and measures in order to ensure accuracy.
9. Assists design engineers in investigating new materials and conducting research in construction materials (e.g., additives, admixtures, protective coatings).
10. Supervises test hole drilling operations including conventional drilling methods and current technologies such as Geoprobe in order to ensure efficiency and accuracy of operations.

11. Develops standard operating procedures which clarify and supplement tests prescribed by City specifications or testing organizations such as the American Society for Testing and Materials.
12. Maintains schedules and work flow and supervises employees.
13. Collaborates with other divisions and agencies to develop or review project plans and specifications, and material submittals.
14. Drives a City vehicle to perform job functions.