ENGINEERING ASSISTANT

I. DESCRIPTION OF WORK

Positions in this banded class perform routine or standardized work supporting higher level technicians and engineers by collecting, reviewing, analyzing, verifying, editing, computing, coding, updating, entering and processing field data. The work of this class is a combination of clerical and limited technical support. Positions support higher level technicians and engineers by performing manual or computer generated preliminary and intermediate mathematical computations using standardized formulas on data received from field and various other sources; or collect vehicle speed and classification data, indicating the level of highway use by type of vehicle.

II. ROLE DESCRIPTIONS BY COMPETENCY LEVEL

Contributing	Journey	Advanced
Positions at this level perform entry level work supporting higher level technicians and engineers by collecting, reviewing, analyzing, verifying, editing, computing, coding, updating, entering and processing field data. The work at this level is a combination of clerical and limited technical support. Positions support higher level technicians and engineers by performing manual or computer generated preliminary and intermediate mathematical computations using standardized formulas on data received from field and various other sources; or collect vehicle speed and classification data, indicating the level of highway use by type of vehicle.	Positions at this level perform routine or standardized work supporting higher level technicians and engineers by collecting, reviewing, analyzing, verifying, editing, computing, coding, updating, entering and processing field data. The work at this level is a combination of clerical and limited technical support. Employees support higher level technicians and engineers by performing manual or computer generated preliminary and intermediate mathematical computations using standardized formulas on data received from field and various other sources; or collect vehicle speed and classification data, indicating the level of highway use by type of vehicle. Work may include driving vehicles for the profilometer or falling weight deflectometer and operating equipment for short periods of time to relieve the primary operator in collecting pavement condition data; obtaining, compiling, processing, coding and entering data relating to culverts, popes and bridge superstructure, substructure, posted weight capacity and maintenance needs; translating data from bridge inspection reports into the master bridge computer file; and interpreting and transferring inspectors' rating of structures to computer input sheets. Work may also	Positions at this level peform para-technical work supporting higher level technicians and engineers by collecting, reviewing, analyzing, verifying, editing, computing, coding, updating, entering, and processing field and other data; or performing a full range of more standardized sampling, testing and inspection duties in a materials and tests laboratory; or performing beginning level survey work as part of a location and surveys field crew. The work at this level is a combination of technical and limited clerical support. Positions may support higher level technicians and engineers by performing manual or computer, generated preliminary and intermediate mathematical computations using standardized formulas on data received from field and various other sources. Positions may compile and enter data into the Bid Analysis Management System and maintain prequalification and subcontractor records; recommend division construction personnel complements using computer programs, project letting lists, project descriptions and type and estimated project cost data; serve as a resource for division personnel regarding the usage of various computer programs and the processing of monthly estimates; check and verify data

	include analyzing and processing accident notices, and prompt action notices; calculating bridge deck geometry and under clearance appraisals and computing water depth and height crown to bed using streamed soundings. Positions may also create hard copy computer files for new inventory structures; read and interpret plans describing superstructure and substructure, span lengths, beams, girders and other details of new structures; analyze new bride inspection reports, discerning changes and discrepancies between new inspection reports and existing data; calculate the amount of structural steel in bridges using weight of beams, number of lines of beams and span lengths; and intersected by structures. Work may include other duties and responsibilities as assigned.	entered on requests for subcontract; edit, correct and enter asphalt report data; and review low bid Disadvantaged Business Enterprise submittals. Duties may also include performing beginning level survey work as part of a location and surveys crew. Materials Testing positions are generally restricted to one specific area such as stone, extractions, physical testing or bituminous labs, but may circulate between the central labs. Location and Surveys positions perform standardized surveying tasks relative to field operations, litigation surveys, photogrammetric operations, hydraulic surveys and office operations. Work may include other duties and responsibilities as assigned.

III. COMPETENCIES

Competency	Definition
Knowledge - Technical	Possession of a designated level of technical skill or knowledge in a specific technical area(s) and the ability to keep up with current developments and trends in areas of expertise. May be acquired through academic, apprenticeship or on-the-job training or a combination of these. Possession of knowledge of program procedures, methods and practices and their application to specific situations, usually acquired on the job or in lower-level positions in the same or similar career path.
Communication	Ability to communicate technical information regarding programs and/or regulations to individuals and groups both within and outside work unit in a manner suited to the characteristics and needs of the audience. Ability to clearly and concisely convey information orally or in writing to individuals or groups. Ability to listen and respond appropriately to others.

Note: Not all competencies apply to every position/employee; evaluate only those that apply. Competency statements are progressive.

IV. COMPETENCY STATEMENTS BY LEVEL

Knowledge – Technical

Possession of a designated level of technical skill or knowledge in a specific technical area(s) and the ability to keep up with current developments and trends in areas of expertise. May be acquired through academic, apprenticeship or on-the-job training or a combination of these. Possession of knowledge of program procedures, methods and practices and their application to specific situations, usually acquired on the job or in lower-level positions in the same or similar career path.

Contributing	Journey	Advanced
Knowledge and understanding of the basic concepts, practices, and theories used in the technical specialty area with limited supervision. Professional level knowledge of applicable standards, guideline, methods, and the tools involved in the performance of surveying, testing, or technical specialty area. Ability to perform a limited variety of standardized assignments in the collection and processing of data. Surveying tasks are normally of a recurring nature and based on the type of survey being performed. Increased detail is required in the operation of instruments, assisting in the preparation of field notes and performing mathematical computations using geometric and trigonometric functions. Ability to collect vehicle speed and classification data by setting up electronic devices which requires installing pneumatic tubes or inductive loops on the pavement, selecting and loading the correct program in the collector, calibrating the equipment, observing during the collection operation, downloading the data to a storage device, downloading to flopping disk and hard copy and performing basic repair and maintenance to the collection equipment.	Thorough working knowledge and understanding of concepts, practices, and theories used in the technical specialty area. May possess the general knowledge to oversee compliance regarding multiple specialties, working independently with minimal day-to-day supervision. Knowledge and understanding of the organizational and business objectives of the section/specialty. Ability to perform a variety of standardized assignments in the collection and processing of data. Surveying tasks are normally of a recurring nature and based on the type of survey being performed. Increased detail is required in the operation of instruments, assisting in the preparation of field notes and performing mathematical computations using geometric and trigonometric functions.	Full knowledge and understanding of concepts, practices, and theories used in the technical specialty area. Displays an exceptional understanding of technical/professional information and demonstrates the ability to use it in practice. Thorough and demonstrated knowledge of internal organizational structure, business needs/objectives, budget, planning, legal/PR considerations, and/or other related factors required for the continued growth and viability of the organization. Ability to perform a wide variety of standardized assignments in the collection and processing of data or sampling, testing and inspection of highway materials or surveying.

Communication

Ability to communicate technical information regarding programs and/or regulations to individuals and groups both within and outside work unit in a manner suited to the characteristics and needs of the audience. Ability to clearly and concisely convey information orally or in writing to individuals or groups. Ability to listen and respond appropriately to others.

Contributing	Journey	Advanced
Ability to effectively use verbal and nonverbal skills to express routine or simple technical and/or program concepts and related facts in a clear, concise, organized and persuasive manner. Ability to use appropriate language that is easy for others to understand. Ability to communicate with other staff to ensure that tasks are completed correctly and in a timely manner.	Ability to effectively use verbal and nonverbal skills to express non-routine or moderately complex technical and/or program concepts and related facts in a clear, concise, organized and persuasive manner. Ability to modify delivery, language or material to account for the characteristics and needs of the audience. May lead co-workers in completing projects or surveys. Ability to report survey findings or project status to higher-level management.	Ability to effectively use verbal and nonverbal skills to express complex technical and/or program concepts and related facts in a clear, concise, organized and persuasive manner. Ability to modify delivery, language or material to account for the characteristics and needs of the audience. Ability to organize co-workers, outside employees, and/or contracted employees to correct concerns/issues.

V. MINIMUM TRAINING & EXPERIENCE

High school diploma or equivalency with coursework in mathematics and one year of experience relating to the area of assignment; or equivalent combination of training and experience.

Note: This is a generalized representation of positions in this class and is not intended to identify essential work functions per ADA. Examples of competencies are primarily those of the majority of positions in this class, but may not be applicable to all positions.