

 <b>JOB DESCRIPTION</b>	<b>DEPARTMENT: ENGINEERING</b> <b>OCCUPATIONAL GROUP: AFSCME</b>			
	<b>TITLE:</b> <b>Engineering Technician – Construction</b>	FLSA STATUS Non-Exempt	PAY GRADE 5/6/7	APPROVAL DATE 02/28/2018

### SUMMARY

An employee in this position oversees a variety of quality control inspection activities, participates in the review and preparation of plans and related documents, ensures compliance with Washtenaw County Road Commission and/or Michigan Department of Transportation procedures, specifications and documentation requirements as relates to transportation construction activities, including the construction of roadways and bridge structures, within Washtenaw County, Michigan.

### JOB CLASSIFICATIONS

There are three (3) classifications in this position. Employees generally progress through the series of classifications based on satisfactory performance and possession of the required experience.

**Technician I (Pay Grade 5)** – This is the entry level. The employee works in a training capacity performing a range of transportation construction quality control inspection assignments, including the review and preparation of plans and related documents, while receiving close supervision. Other work may include assisting other technicians with project assignments, thereby gaining a greater understanding of the applicable procedures, specifications and documentation requirements.

**Technician II (Pay Grade 6)** – This is the intermediate level. The employee works in a developing capacity with increased responsibility for performing a range of transportation construction quality control inspection assignments, including the review and preparation of plans and related documents. Other work may include imparting knowledge of construction inspection responsibilities, including applicable procedures, specifications and documentation requirements to lower-level technicians.

**Technician III (Pay Grade 7)** – This is the experienced level. The employee performs a full range of transportation construction quality control inspection assignments, including the review and preparation of plans and related documents using considerable independent judgment in making decisions in order to apply guidelines with considerable latitude to a variety of work situations. Other work may include imparting knowledge of construction inspection responsibilities, including applicable procedures, specifications and documentation requirements to lower-level technicians.

### SUPERVISION RECEIVED

Reports to and works under the direct supervision of the Senior Project Manager - Construction.

## **SUPERVISION EXERCISED**

This position has no supervisory responsibilities.

## **ESSENTIAL DUTIES AND FUNCTIONS**

The job duties listed are typical examples of the work performed by an employee in this position. These examples do not include all of the duties, which the employee may be expected to perform. Individuals seeking advancement may be given opportunities to perform at a higher level of responsibility to assess the individual's potential for advancement.

1. Ensures that transportation construction activities, including the construction of roadways and bridge structures, conform to Washtenaw County Road Commission and/or Michigan Department of Transportation procedures and regulations, approved plans, and specifications.
2. Considers project budgetary constraints; facilitates the efficient completion of tasks and site work; evaluates the cost of alternative construction techniques in providing suggested avenues of resolving jobsite complications.
3. Performs recordkeeping duties associated with office technician responsibilities, including but not limited to the drafting and review of daily inspection reports, site logs, sketches, and the computation of areas and volumes, and sets up and maintains engineering file systems to facilitate the timely processing of contractor payments and to provide accurate documentation to ensure compliance with federal and/or state funding requirements.
4. Reviews and prepares transportation construction plans and specifications, contract documents and estimates.
5. Prepares correspondence as necessary to document and facilitate the completion of tasks.
6. Inspects utility construction as related to transportation construction activities.
7. Assists the project engineer with the effective scheduling of construction project personnel, including but not limited to contractor, surveying and testing personnel, to facilitate the timely completion of jobsite tasks.
8. Provides appropriate and timely written and/or verbal response in areas of responsibility, responding to the inquiries and/or concerns of project stakeholders, including but not limited to Washtenaw County Road Commission staff, governmental representatives, contractors, project consultants, utility owners, business owners, residents, and motorists.
9. Attends meetings with project stakeholders to review, discuss and/or resolve issues related to transportation construction activities.

10. Analyzes and interprets laboratory and field data from investigations.
11. Effectively utilizes Washtenaw County Road Commission equipment, including but not limited to surveying and measurement instruments, office supplies, personal computers, jobsite office trailers and assigned vehicles in a responsible and appropriate manner.
12. Provide support to other engineering sections as needed.
13. Performs other duties as assigned.

### **EDUCATION**

Possession of an Associate's degree in Civil Engineering Technology, Construction Technology, Surveying Technology, or its equivalent.

### **EXPERIENCE**

Technician I – No specific type or amount of experience is required.

Technician II – A minimum of three years' experience as a Construction Technician I or equivalent required, performing technical quality control inspection activities on state and county construction projects, review and preparation of plans and related documents, and proficient use of Fieldbook software or approved equivalent.

Technician III – A minimum of five years' experience as a Construction Technician II or equivalent required, performing technical quality control inspection activities on state and county projects, review and preparation of plans and related documents, and proficient use of Fieldbook software or approved equivalent.

### **OTHER REQUIREMENTS**

Possession of a valid Michigan Driver's License.

Inspection experience on local agency and Michigan Department of Transportation construction projects.

The following certifications may be required and/or preferred, depending upon the specific assignments to which an employee is assigned at a given time:

- MDOT Density Technology
- MDOT HMA Paving OR HMA Paving Operations
- Michigan Concrete Field Testing – Level 1 (MCA or MCPA)
- Michigan Certified Aggregate Technician
- Soil Erosion and Sedimentation Control
- Storm Water Operator
- Field Manager and/or Fieldbook
- Office Technician

## **WORKING CONDITIONS**

Duties require sufficient mobility to work in a normal office setting and on construction sites. Duties require the use of standard office equipment including a computer, vision to read printed materials and a computer screen and hearing and speech sufficient to communicate in person or over the telephone. Duties may require employee to exert up to 50 pounds of force occasionally, or a negligible amount of force frequently to lift, carry, push, pull or otherwise move objects.

Construction site duties frequently necessitate exposure to weather conditions including high and low temperatures, rain and snow showers, and resultant jobsite conditions including dirt, dust, as well as hazardous working conditions (working in traffic and on construction sites). Often duties will include standing for long periods of time, climbing ladders and walking over rough terrain of construction sites.

## **KNOWLEDGE, SKILLS, AND ABILITIES**

All of the following qualifications, knowledge, skills, and abilities (KSA's) are essential. An employee in this class, upon appointment, should have the equivalent of the following:

**Knowledge** of the terminology used in engineering, with particular focus on the terminology employed in transportation construction activities.

**Knowledge** of the principles and practices of road, bridge, drainage, and utility construction.

**Knowledge** of the equipment, testing and investigative methods and laboratory procedures related to the field of transportation engineering.

**Knowledge** of source documents such as proposals, plans, specifications, standard plans, supplements, memorandums, and manuals.

**Knowledge** of mathematics including algebra, geometry and trigonometry.

**Knowledge** of proper use of survey equipment, grade and line, survey accuracy requirements, documentation requirements, and field notes requirements.

**Knowledge** of the proper use of a variety of testing equipment used in transportation construction.

**Knowledge** of personal and construction site safety practices applicable to transportation construction activities.

**Knowledge** of procedures, rules and regulations established by the Washtenaw County Road Commission.

**Skill** in the use of a variety of testing equipment.

**Skill** in the use of surveying instruments and equipment.

**Ability** to read and interpret plans and drawings.

**Ability** to compute areas and volumes.

**Ability** to carry equipment and materials; walk about rough terrain of construction projects, climb ladders and stand for long periods of time.

**Ability** to inspect selective clearing and topsoil removal.

**Ability** to inspect aggregate yield, shaping, placing and compacting.

**Ability** to inspect concrete forming, density, joint sealing and finishing, concrete curb and gutter, HMA surfacing shoulders ADA ramps and bridge components.

**Ability** to inspect traffic control device placement including signs, barricades, and pavement markings.

**Ability** to inspect landscaping, seeding, sodding, grading of slopes, soil erosion and sedimentation control and ditches.

**Ability** to inspect utilities.

**Ability** to inspect and identify project safety requirements.

**Ability** to oversee work in progress.

**Ability** to communicate effectively.

**Ability** to maintain favorable public relations.

**Ability** to use personal computers.

**Ability** to collect material tickets, document material acceptance, maintain inspection records and prepare daily reports in in construction management software.

**Ability** to work effectively in a stressful environment.

**Ability** to plan and organize work activity effectively.

**Ability** to understand and apply the details of plans, specifications, and related documents relative to the work.

**Ability** to work overtime as needed for individual construction projects such as evenings, weekends and overnight shifts.