



## **TOWN OF SMITHFIELD**

### **JOB DESCRIPTION**

#### **ENGINEERING AIDE**

**GENERAL SUMMARY:** This professional position as Engineering Aide, works under the general supervision of the Town Engineer. Responsible to assist in the design review of public and private construction projects, land developments, as well as the performance of a variety of duties, which will be assigned by the Town Engineer or the Town Manager. Work requires knowledge of civil engineering, computers, drainage, sewer, specifications and inspection, drafting and estimating. This person also works with related software and programs to create and maintain data and/or maps that can be combined with geographically referenced data. GIS software has the capacity to relate different types of data such as socioeconomic, demographic, administrative or political boundaries, land use, land cover, environmental, infrastructure, and transportation networks. This position works with several town ordinances; including, but not limited to the sewer, soil erosion and landscaping ordinances. Duties include plan review, approval and enforcement under the direction of the Town Engineer.

#### **ESSENTIAL FUNCTIONS:**

1. Plans, designs and inspects a variety of civil engineering projects, including storm drainage systems, sanitary sewers, water mains, pumping stations, new roads, road reconstruction and other municipal construction projects.
2. Helps prepare bid documents and specifications for various municipal construction projects.
3. Helps prepare requests for proposals for professional services.
4. Participates in the review of engineering plans for roads, site plans, storm drains, sanitary sewers, soil and erosion control plans, landscape plans, and other land developments for conformance with Subdivision regulations, Zoning Ordinance, Soil Erosion and Sediment Control Ordinance, and other local, state, and/or federal regulations and laws, as appropriate.
5. Participates in engineering related studies, survey work, construction inspection, development and administration of Town Standards, specifications and regulations for road construction, drainage projects and many varied projects.
6. Participates in the administration and enforcement of the following Smithfield local ordinances and regulations: Subdivision Regulations, Soil Erosion and Sediment Control Ordinance, Sewer Ordinance, Landscape Ordinance, Earth removal Ordinance, Flood Plain Management Ordinance, and Tree Ordinance.
7. Oversees and coordinates all operating aspects of the RIPDES Phase II Storm Water Management Program.

8. Prepares field survey work under supervision of the Town Engineer and Town Surveyor.
9. Investigates storm water runoff and related complaints.
10. Performs cost estimates for various projects, must be familiar with the public procurement and bid phase processes.
11. Must possess excellent writing skills and be able to orally communicate effectively.
12. Provides assistance to the Sewer Department, Town's Sewer Consultant and general public; including but not limited to, filing of applications, permits, sewer conveyance system layout and some inspection.
13. Provides assistance to the water department, Town's water consultant and general public; including but not limited to aiding in the development of capital planning for water infrastructure.
14. Create maps and graphs, using GIS software and related equipment.
15. Operate and maintain GIS system hardware, software, plotter, digitizer, color printer, and video camera.
16. Move, copy, delete, and add files, drawings, and maps to output reports in hard copy or electronic transfer.
17. Present information to users and answer questions.
18. Retrieve stored maps.
19. Perform additional duties as assigned by Town Engineer or his designee.

### **JOB REQUIREMENTS:**

#### Education/Training:

1. Bachelor's Degree in Civil Engineering or approved equal from an accredited college or university.
2. Minimum of one (1) year of hand's on experience.
3. Must possess a valid driver's license.
4. GIS knowledge and /or ability to learn.  
(\* Registered as an Engineer-In-Training / F.E. is desirable.)

### **OTHER FUNCTIONS:**

1. Ability to perform engineering computations and to prepare and review engineering plans and specifications under the direction of the Town Engineer.
2. Ability to express ideas effectively, both orally and in writing and to assist in the preparation of documents.
3. Ability to read and understand engineering plans, drainage calculations and to be able to explain them to all persons.
4. Ability to deal effectively and tactfully with the public in the enforcement of town ordinances and regulations.
5. Ability to act independently and to exercise firm professional discretion in choosing a course of action.
6. Must be able to start tasks independently and identify needs of the community, as it may relate to infrastructure work, and take initiative to develop valid recommendations for proper repair, replacement or upgrade of municipal infrastructure, as needed.
7. Ability to prepare written reports, maintain records and prepare correspondences as required or as assigned by the Town Engineer.

8. Work independently with DPW personnel to understand, modify and prepare pavement management programs, storm water programs and GIS mapping, as directed by the Town Engineer.
9. Working knowledge of computers necessary to prepare tasks, as assigned by the Town Engineer.
10. Ability to establish and maintain effective working relationships with Town Officials and the general public.
11. Ability to perform field survey work and project design under the direction of the Town Engineer.
12. Ability to understand and perform engineering design.
13. Ability to perform calculations for drainage design.
14. Ability to use Microsoft Office programs such as, Excel and Word and possess skills to be proficient with AutoCAD 2004 or newer updates. Knowledge of SurvCADD program is preferred, but not required.
15. GIS knowledge is essential in day to day activities using ESRI base software ArcMap and ArcPad software. Working knowledge of GIS software based systems is essential.
16. Ability to work independently, seek grants, write grant applications on behalf of the Town and possess excellent organizational skills satisfactory to run and manage engineering files for project coordination.
17. Individual must be self-motivated, show initiative and be able to drive projects independently from start to finish while working in a team environment.

**PHYSICAL REQUIREMENTS:**

1. See functional job description (attached.)

**ADDITIONAL REQUIREMENTS:**

1. Ability to effectively communicate verbally with the general public.
2. Ability to effectively communicate with other government offices/employees.
3. Work well with others in an office environment.
4. Ability to adopt to people, personalities and situations that may arise when tending to the needs of the public.

**WORKING CONDITIONS:**

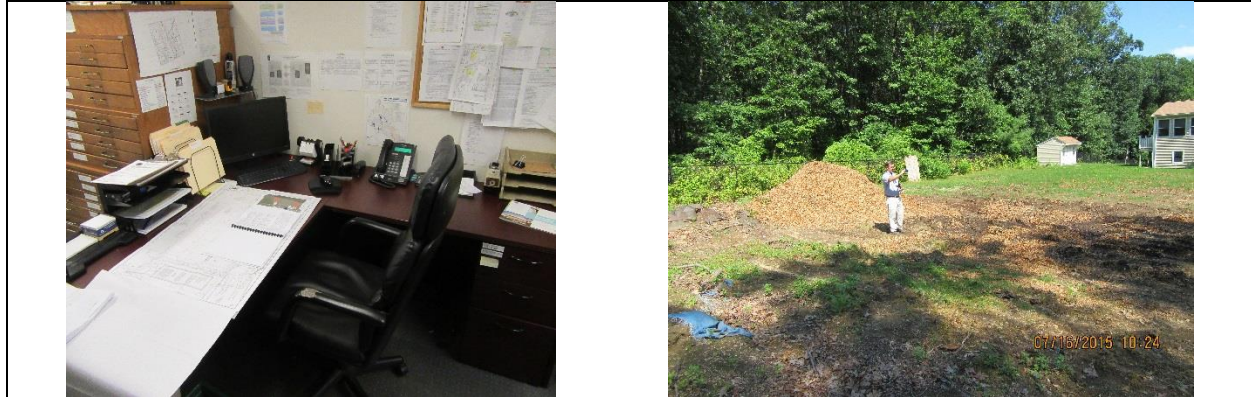
1. Perform most duties in an office environment.
2. Perform some duties outdoors, in a vehicle, at seminars, Council meetings, Zoning Board of Review meetings, Planning Board meetings, or in any other condition where expertise is required, or otherwise directed by the Town Engineer or the Town Manager.

**SALARY:**

As stipulated by the Town Manager.

## FUNCTIONAL JOB DESCRIPTION

<b>Job Title:</b>	<b>Engineering Aide</b>
<b>Department:</b>	Engineering Department
<b>Brief Description of Job:</b>	
<p><b>General Summary:</b> This professional position as the Engineering Aide works under the general supervision of the Town Engineer. Responsible to assist in the design review of public and private construction projects, land developments, as well as the performance of a variety of duties, which will be assigned by the Town Engineer or the Town Manager. Work requires knowledge of civil engineering, computers, drainage, sewer, specifications, inspection, drafting and estimating. This person also works with related software and programs to create and maintain data and /or maps that can be combined with geographically reference data. GIS software has the capacity to relate different types of data such as socioeconomic, demographic, administrative or political boundaries, land use, land cover, environmental, infrastructure, and transportation networks. This position works with several town ordinances; including, but not limited to the sewer, soil erosion and landscaping ordinances. Duties include plan review, approval and enforcement under the direction of the Town Engineer.</p> <p><b>Essential Functions:</b> Plans, designs and inspects a variety of civil engineering projects, including storm drainage systems, sanitary sewers, water mains, pumping stations, new roads, road reconstruction and other municipal construction projects. Helps prepare bid documents and specifications for various municipal construction projects. Helps prepare requests for proposals for professional services. Participates in the review of engineering plans for roads, site plans, storm drains, sanitary sewers, soil and erosion control plans, landscaping plans, and other land developments for conformance with Subdivision regulations, Zoning Ordinance, Soil Erosion and Sediment Control Ordinance, and other local, state, and/or federal regulations and laws, as appropriate. Participates in engineering studies, survey work, construction inspection, development and administration of Town Standards, specifications and regulations for road construction, drainage projects and many varied projects. Participates in the administration and enforcement of the following Smithfield local ordinances and regulations: Subdivision Regulations, Soil Erosion and Sediment Control Ordinance, Sewer Ordinance, Landscape Ordinance, Earth removal Ordinance, Flood Plain Management Ordinance, and Tree Ordinance. Oversees and coordinates the RIPDES Phase II Storm Water Management Program. Prepares field survey work under supervision of the Town Engineer and Town Surveyor. Investigates storm water runoff and related complaints. Performs cost estimates for various projects, familiarity with the public procurement and bid phase processes. Must possess excellent writing skills and be able to orally communicate effectively. Provides assistance to the Sewer Department, Town's Sewer Consultant and general public including but not limited to, filing of applications, permits, sewer conveyance system layout and some inspection.</p>	
<b>Personal Protective Equipment:</b>	Hard Hat, Safety Glasses, High Visibility Vest, Steel Toe Shoes, Respirator, Ear Plugs



<b>Classification:</b>	Sedentary: <u>    </u>	Light: <u>  X  </u>	Medium: <u>  X  </u>	Heavy: <u>  </u>	Very Heavy: <u>  </u>
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**Classification Key:** **Sedentary** - Exerting up to 10 lbs of force occasionally; negligible amount of force frequently to lift, carry, push/pull or otherwise move objects; **Light** - Exerting up to 20 lbs of force occasionally and/or 10 pounds of force frequently or negligible amounts of force constantly to move objects; **Medium** - Exerting 20lbs-50lbs of force occasionally; 10lbs- 20lbs frequent; and/or greater than negligible up to 10lbs of force constantly to move objects; **Heavy** - Exerting 50 to 100lbs of force occasionally; in excess of 50lbs frequently; 10lbs- 20lbs of force constantly to move objects; **Very Heavy** - Exerting in excess of 100lbs of force occasionally; and or in excess of 50lbs of force frequently; in excess of 20 lbs of force constantly to move objects

<b>Driving Requirements:</b>	None: <u>    </u>	Manual: <u>    </u>	Automatic: <u>  X  </u>
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WORK ENVIRONMENT			
<b>Floor Surface:</b>	Office environment; rugged surface; varying terrain when performing outside tasks		
<b>Inside:</b>	At frequent to constant level	<b>Outside:</b>	Occasional level for inspections
<b>Lighting:</b>	Exposed to inside fluorescent or candescent lighting		
<b>Vibration:</b>	N/A		

**PHYSICAL DEMANDS**

LIFTING						
Maximum weight lifted: up to 50 pounds occasionally						
WEIGHT	Never	Occ.	Freq.	Constant	Heights	Description of object
0 - 10 lbs		X			All levels	Various tools/supplies
10 - 20 lbs		X			All levels	As above
20 - 35 lbs		X			To waist height	
35 - 50 lbs		X			To waist height	Manhole cover with magnetic lift

CARRYING	
Maximum weight carried: up to 20 lbs	

WEIGHT	Never	Occ.	Freq.	Constant	Distances	Description of object
0 - 10 lbs		X			Varying distance on site	Supplies/tools
10 - 20 lbs		X			As above	As above
20 - 35 lbs						
35 - 50 lbs						

<b>PUSHING/PULLING</b>						
Maximum push/pull: varying force						
WEIGHT or FORCE	Never	Occ.	Freq.	Constant	Distances	Description of object
0 - 10 lbs		X				Magnetic manhole lift
10 - 20 lbs		X				As above
20 - 35 lbs		X				As above
50 + lbs	X					

ACTIVITY	Never	Occ.	Freq.	Constant	Comments
Sitting			X		
Standing		X			
Walking		X			
Bending		X			
Twisting	X				
Crawling		X			
Kneeling		X			
Squatting		X			
Climbing		X			
Reaching - Vertical		X			
Reaching - Horizontal			X		
Grasping		X			
Pinching	X				
Manual Dexterity		X			
Fine Dexterity		X			

***FREQUENCY KEY: Never (0%), Occasional (0-33% of shift), Frequent (34-66% of shift), Constant (67-100% of shift)***