



**NEW JERSEY DEPARTMENT OF TRANSPORTATION  
Public Posting**

**POSTING #:** 19-00041

**TITLE:** Engineer Trainee, Transportation (Civil)

**ISSUE DATE:** 1/17/2019

**TITLE CODE:** 16270

**CLOSING DATE:** 2/28/2019

**DIVISION:** Capital Program Management

**LOCATION:** Ewing & Mt. Arlington

**UNIT:** Highway & Traffic Design

**SALARY:** \$55,420.53

The New Jersey Department of Transportation (NJDOT) is seeking applications for candidates for the position of **Engineer Trainee Transportation (ETT)** within the Division of Capital Program Management. Engineer Trainees are assigned a 40 - hour work week. Current starting salary is \$55,420 and \$57,557 after six months. As a NJ State Department, NJDOT offers a comprehensive benefits package including Health Care (medical, prescription drug, dental and vision care), Pension, Deferred Compensation, 12 paid holidays, and Benefit Leave (12 vacation days, 15 sick days and 3 administrative days). Standard workweek is Monday through Friday.

**This posting is recruiting for positions in multiple units within Highway & Traffic Design. If you are found to be eligible for this position, a Preference Form will be provided to you in which you must specify which units you are interested in being considered for.**

**Work experience within this unit WILL qualify as approved Design Experience for the issuance of a NJ PE License.**

**DESCRIPTION**

**Roadway Design Field Survey Unit                      Location: Mt. Arlington**

Responsible for the oversight, administration, and production of in - house design projects in support of the Capital Program. Types of highway improvement projects would involve resurfacing, restoration, and rehabilitation work, intersection improvements, widening, ramps, new alignment, pedestrians, sign structures, bridge deck or superstructure replacements and bridge replacements.

The appointee to this position will be required to work on/be responsible for the following:

- Becoming familiar with the CADD procedures necessary to produce a set of contract plans
- Performing all design work in accordance with the NJDOT Roadway Design Manual, the AASHTO Guide to the Design of Streets and Highways, and all other pertinent design guidelines for all types of highway improvement projects
- Acquiring thorough knowledge of the standards, specifications, policies, procedures and use of electronic engineering programs and CADD systems
- Assisting in the roadway design development of contract documents which would involve any of the following functional design elements: Key Map, Estimate of Quantities, Typical Sections, Construction Plans, Soil Erosion and Sediment Control Plans, Profiles, Ties, Grades, Traffic Control and Staging Plans, Detour Plans, Cross - sections and slope limits, Construction Details,
- Utility Impacts and Relocations, Drainage Design, Pavement Work, Safety Improvements, Construction Schedule, Cost Estimating,
- Specification Development, Field Survey and Base Mapping and Traffic Signing and Striping Plans

**Roadway Design, Group 1 & 2 Unit**                      **Location: Ewing**

Responsible for the oversight, administration, and production of in - house design projects in support of the Capital Program. Types of highway improvement projects would involve resurfacing, restoration, and rehabilitation work, intersection improvements, widening, ramps, new alignment, pedestrians, sign structures, bridge deck or superstructure replacements and bridge replacements.

The appointee to this position will be required to work on/be responsible for the following:

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- Performing all design work in accordance with the NJDOT Roadway Design Manual, the AASHTO Guide to the Design of Streets and Highways, and all other pertinent design guidelines for all types of highway improvement projects
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- Utility Impacts and Relocations, Drainage Design, Pavement Work, Safety Improvements, Construction Schedule, Cost Estimating,
- Specification Development, Field Survey and Base Mapping and Traffic Signing and Striping Plans

**CADD Development & Support Unit**                      **Location: Ewing**

The primary purpose of the CADD Development & Support unit is to develop and maintain CADD standards for the Department's CADD system, provide general CADD user support (Help desk); provide interagency and consultant coordination; develop and maintain CADD training and reference manuals and conduct in - house training for engineering (In - Roads) and drafting (MicroStation) applications.

The appointee to this position will be required to work on/be responsible for the following:

- Develop and maintain NJDOT CADD system
- Test and develop applications for CADD related work
- Develop standardization of operation & methodology of CADD work throughout the Department
- Provide CADD system development & support (hardware & software) for DOT
- Develop and maintain CADD standards, Manual & User Guides for the Department's CADD system
- Provide oversight of Bentley on - site consultant in CADD system support
- Set up CADD workstations, create images
- Provide hardware support
- Provide general CADD user support (Help desk) throughout CADD drawings production process for all NJDOT projects
- Interagency and consultant coordination
- Develop & maintain CADD training and reference manuals
- Software upgrades and implementation
- Upload CADD standards & Manuals on Web for the Design & Task order Consultants. Support in case of need
- Revise Construction Details & Sample Plans as directed by the Department published Baseline Document Changes

## **Pavement & Drainage Unit                      Location: Ewing**

The Pavement and Drainage Management Unit is responsible for preparing pavement designs for in - house design projects, reviewing and approving pavement designs prepared by consultants for both capital and developer projects, reviewing pavement and drainage field conditions and preparing recommendations for remediation, evaluating and implementing new pavement and drainage engineering technologies and using and maintaining pavement and drainage management systems and software applications.

The appointee to this position will be required to work on/be responsible for the following:

- Assist in the development and review of pavement designs and pavement related specifications
- Become familiar with department pavement design methodology and AASHTOWare Pavement ME design software
- Represent the Pavement and Drainage Unit at project scoping, pre - construction and pre - paving meetings
- Assist in pavement and drainage field investigations, participate in national pavement design and management initiatives
- Participate in pavement research
- Assist in the evaluation and implementation of new pavement engineering technologies
- Learn to maintain and use pavement design, pavement management and drainage management databases and software applications
- Assist in reviewing pavement and drainage data reports
- Assist in preparing project specific Ride Quality Specifications using engineering data and software and performing pay adjustment analysis

## **Traffic Engineering Unit                      Location: Ewing**

The Traffic Engineering unit within Highway & Traffic Design provides Traffic Engineering and Electrical Engineering design and support. The unit conducts design reviews of Capital Program Management projects, prepares traffic signal plans and timings, designs signing and pavement markings, highway/sign lighting, and traffic control plans for detours and stages construction for in - house design efforts. It also conducts reviews of Traffic Impact Studies, Concept Plans and Construction Plans for Developer Access Applications. The unit negotiates intersection improvements and fair share monies. Unit also works closely with the resident engineers to provide traffic engineering support during construction projects. It is responsible for collecting crash data, vehicle turning movement and pedestrian counts to facilitate new or revised traffic signal designs to be built by maintenance.

The appointee to this position will be required to work on/be responsible for the following:

- Run Highway Capacity analysis and Synchro / SimTraffic software simulations for existing and proposed intersection designs conditions
- Review technical memorandums prepared by others for Developer Access permits and large Capital projects
- Prepare portions of the in - house design documents for Divisional projects such as signal plans and timings, quantity sheets, sign text sheets, detour plans
- Accompany regional Traffic Control / Work Zone staff on active construction sites as well as accompany senior staff on construction/staging for traffic signal activations
- Accompany senior staff on the investigation of requests for new or revised traffic signals from the Operations support perspective
- Learn regulations such as speed limits, bus stops, passing zones, etc. from former police officers within the Bureau
- Accompany the electrical work order staff on field constructability investigations
- Learn and apply the Microstation CADD standards

## REQUIREMENTS

Graduation from an accredited college or university with a Bachelor's Degree in **Civil Engineering**.

**Note:** Possession of a valid Professional Engineer's License issued by the New Jersey State Board of Professional Engineers and Land Surveyors may be substituted for the Bachelor's degree in Engineering.

**Note:** An Engineer - In - Training (EIT) certification issued by the Division of Consumer Affairs, New Jersey Office of the Attorney General may be substituted for the above education requirement. Applicants must submit proof of the EIT certification and the Fundamentals of Engineering (FE) exam results. The area of discipline indicated on the FE exam results (e.g., Civil, Electrical and Computers, Chemical, Industrial and Systems, Environmental, Mechanical, and Other Disciplines) must be appropriate to the position.

For more information regarding this position, please refer to: <http://info.csc.state.nj.us/jobspec/16270.htm>

**License:** Appointee will be required to possess a Driver's License valid in New Jersey.

**Work Authorization:** Applicants must be authorized to work in the United States according to the Department of Homeland Security, United States Citizenship and Immigration Services regulations. NJDOT does not provide sponsorship or accept student OPT/CPT programs, F1 or H1B work authorization visas.

**Residency:** All persons hired on or after September 1, 2011 have one year from the date of appointment to establish, and then maintain, principal residence in the State of New Jersey subject to the provisions of N.J.S.A. 52:14 - 7 (P.L. 2011, c. 70), also known as the "New Jersey First Act."

## TO APPLY

**You must apply through the NJDOT website at: <https://www.state.nj.us/transportation/about/employ/openings.shtm>**

Submit a complete packet by the closing date that includes the following documents:

- NJ State Application for Employment (Application and instructions can be found at link above)
- Letter of interest
- Current resume
- Copy of unofficial transcript OR foreign degree evaluation that verifies degree in Civil Engineering was awarded

**NJDOT Employees:** Submit a letter of interest and current resume **only** by closing date to [DOT.NJDOTJOBS@dot.nj.gov](mailto:DOT.NJDOTJOBS@dot.nj.gov).

## IMPORTANT NOTES

**Applying to Multiple Positions:** If applying to multiple opportunities, only **ONE** application packet need be submitted. In your letter of interest, include a list of all the posting numbers you are interested in (example: 19 - 00031, 19 - 0032, 19 - 00040).

Once we review your application, if you are found to be eligible for this position. we will provide you with a Preference Form so that you can specify which specific units within each Division you would like to be considered for. The Preference Form will serve as the official record of which positions NJDOT will consider you for.

**Proof of Degree:** You must provide transcript or evaluation of your **UNDERGRADUATE** degree. Foreign degree evaluation must be evaluated by a USA recognized evaluation service and include your course - by - course evaluation.

**Incomplete Packets:** Applicants MAY NOT be considered if they fail to provide all requested documents upon initial submittal or fail to follow instructions when submitting electronically. Applicants will be selected for an interview on the basis of their application/resume.

**Anticipated Graduation:** NJDOT will accept applications from students anticipating graduation in May 2019. No offer of employment will be made without proof of degree.

**Current State employees:** Any appointments made that involve movement may result in a forfeiture of rights to any promotional lists in their former unit.

