



**NEW JERSEY DEPARTMENT OF TRANSPORTATION  
Public Posting**

**POSTING #:** 19-00040

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

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

**TITLE CODE:** 16270

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

**DIVISION:** Capital Program Management

**LOCATION:** Ewing

**UNIT:** Bridge Engineering & Infrastructure Management

**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 Bridge Engineering & Infrastructure Management. 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**

**Bureau of Structural and Railroad Engineering Service - Structural Value Solutions**

The Bureau of Structural and Railroad Engineering Service's Structural Value Solutions Unit is responsible for providing engineering support in the determination of a project's final scope of work; conducting quality assurance review on all Capital and Local Aid projects, that will result in quality improvements based on function, cost and value. The unit reviews value engineering construction proposals and assists, as required, in the review of policies and standards.

The appointee to this position will be required to work on/be responsible for providing necessary support to Project Scope Development in the determination of a project's final scope of work; conducting Quality Assurance reviews on all Capital and Local Aid projects throughout the design process; reviewing Design Exceptions for bridge clearances; reviewing Value Engineering (VE) construction proposals for all capital projects; providing necessary support to Project Management, Construction and Operations in the resolution of field problems on construction projects and assisting in field visits to resolve construction issues, as required, in the development and maintenance of the NJDOT Bridges and Structures Design Manual and the bridge related construction specifications in the NJDOT Standard Specifications for Road & Bridge Construction; assisting, as required, in reviewing proposed changes to AASHTO Specifications for the design and construction of bridge structures; assisting, as required, in maintaining NJDOT Bridge Construction Detail standard drawings, Guide Plates for bridge design plan submissions; and assisting, as required, in reviewing structural calculations in upgrading standard drawings for various structures.

## **Bureau of Structural and Railroad Engineering Service - Railroad Diagnostics Team**

The Bureau of Structural and Railroad Engineering Service's Diagnostic Team Management Unit is responsible for providing safe and effective railroad crossings statewide through administration of the annual Grade Safety Inspection Program and the annual Rail - Highway Construction Program.

The appointee to this position will be required to work on/be responsible for assisting with the review of complex railroad matters to address Petition and Commissioner's Motions for Safety Improvements at railroad grade – crossings; obtaining funding authorization from the State or FHWA and process Change Orders required to proceed with construction projects; complete environmental documents for all Federal projects as required. Submit funding package for approval; tracking projects for all compliances, cutoff dates and completion. Provide staff with needed funding spread sheets; processing invoices for payments for safety improvements to railroad grade – crossings; conducting Safety Inspections of railroad grade - crossings, in the field, when necessary and notify, in writing, responsible parties of deficiencies; working with Construction Inspection personnel to ensure that the detour implementation and railroad grade - crossing rehabilitations are constructed according to plans and specifications; reviewing Local Aid construction plans involving railroad at - grade crossings, bridges, and tunnels; and ensuring that the Railroad Crossing Inventory Management System database is updated after funding, construction and safety inspections.

## **Structural Design & Geotechnical Engineering – Structural Design**

The Structural Design Unit provides structural design services for the in - house Department projects. These services include the design and preparation of structural contract documents, quality assurance reviews, construction shop drawing reviews, technical input during scope development, and technical advice for the resolution of construction field problems. This unit also provides quality assurance reviews for design of bridges, culverts, noise walls, retaining walls, and other miscellaneous structures on projects designed by consultants. These design projects could be on the State Highway System, on county or local highways, or New Jersey Transit facilities. Additionally, this unit provides technical input on unique design projects and provides constructability reviews for all structural design projects when required.

The appointee to this position will be required to work on/be responsible for assisting in field inspection of various structures to determine the deficiencies and prepare the scope of work; reviewing inspection reports of various structures to determine scope of work; performing basic structural engineering analysis and design for highway related structures in accordance with the NJDOT Design Manual and AASHTO standard specifications; using computer software for the analysis and design of structures; preparing structural engineering reports; preparing structural contract drawings using Computer Aided Design and Drafting software; preparing quantity calculations and engineering cost estimates for highway related structures; and assisting in field visits to resolve construction issues.

## **Structural Design & Geotechnical Engineering – Geotechnical Engineering**

The Geotechnical Engineering Unit is primarily responsible for providing Geotechnical Engineering, Rock Engineering, and Subsurface Engineering Services. The Geotechnical and Foundation Design staff perform and approve geotechnical engineering design for foundations, roadway embankments/cuts, and subsurface drainage for projects in the Capital Program. Technical specifications are provided and evaluation/implementation of new geotechnical engineering technology is performed. Construction and Maintenance Operations are supported by approving pile driving hammer systems, reviewing test pile records, recommending pile order lengths to the Resident Engineers, and providing general geotechnical guidance.

The appointee to this position will be performing geotechnical and foundation engineering calculations necessary for the new construction, widening and reconstruction of roadways and structures; writing geotechnical engineering reports; and performing the evaluation and implementation of new technology in geotechnical and foundation engineering, and reviewing construction plans and specifications at the various stages of project completion with regard to geotechnical and foundation engineering.

## **Structural Evaluation & Bridge Management**

The Bureau of Structural Evaluation and Bridge Management is responsible for the safety inspection of all bridges in New Jersey (State, County, Toll, etc.) in accordance with the National Bridge Inspection Standards (23 CFR 650). It is also responsible for the inspection programs for State - owned sign structures, minor bridges (culverts) and dams, as well as County minor bridges (culverts). For all assets inspected, significant deficiencies are identified and the bridge owner is notified to act, based on pre - established priority criteria. The Bureau also responds to emergencies, especially in response to risks to our infrastructure due to natural or man - made events. The Bureau is also responsible for the tracking of all structural assets, and to pro - actively identify Capital Projects and bridge preservation needs and initiates new structural project starts. In addition, the Bureau provides engineering design, construction, and maintenance support for all movable bridge projects.

The appointee to this position will be required to work on/be responsible for conducting in - depth inspections of New Jersey highway bridges; writing technical bridge inspection reports and estimation of costs and quantities of items required for proposed repairs or rehabilitation; updating structural inventory and appraisal sheets for each bridge inspected; maintaining compliance with the Federally mandated National Bridge Inspection Standards (NBIS); performing Load Rating analysis of various bridge types utilizing LARS and other software programs; designing detailed repair schemes to damaged bridges and recommending priority repairs as needed; processing invoices, assisting with agreements, and reviewing consultant work including Bridge Inspection reports; assisting in planning, organizing, and arranging for scheduled and emergency inspection tasks utilizing CombIS, as well as other supporting systems and computer technology.

## **Bureau of Structural & Railroad Engineering Services – Bridge Design Policy & Standards**

The Bridge Design Policy and Standards unit provides guidelines and criteria for designing and constructing safe, durable, and cost - effective bridges and highway related structures statewide through the development of the Design Manual, standard specifications, and standard drawings by incorporating the latest guidance from the American Association of State Highway Transportation Officials (AASHTO), the Federal Highway Administration (FHWA), and state of the art technologies and practices. This unit also manages the Bridge Resource Program, an effort by engineering professionals with the object of providing bridge engineering research expertise and practical solutions in highway bridge and structure design, construction, and management.

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

- Develop knowledge and assist in the updating of the Design Manual for Bridge & Structures and the structural portion of the Standard Specifications for Road & Bridge Construction.
- Develop knowledge and assist in the updating of the Standard Drawings for bridges and traffic structures.
- Develop knowledge and assist in the evaluation of products and technologies.
- Develop knowledge and assist in the review of AASHTO sub - committees recommendations for AASHTO standard changes.
- Receive training and develop a comprehensive knowledge and skills in development of problem statements, oversight of research projects, and design credentials for special projects.

Knowledge and/or experience with AASHTO and DOT design and construction standards of highway bridges and traffic structures is pre

## 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.

**New Jersey Is An Equal Opportunity Employer**