

PUBLIC NOTICE
MARYLAND DEPARTMENT OF TRANSPORTATION

BCS 2014-15

Supplementary Construction Management and Inspection (CMI) Services

NOTICE TO ARCHITECTS & ENGINEERS

TRANSPORTATION PROFESSIONAL SERVICES SELECTION BOARD

REQUEST FOR PROFESSIONAL SERVICES

The Secretary of the Maryland Department of Transportation (MDOT) has certified to the Transportation Professional Services Selection Board the need to utilize the services of architects or engineers for the following project(s).

Firms interested in being considered for work on any Project must submit an Expression of Interest for that Project as set forth herein. The Expression of Interest shall be in an envelope marked with the specified contract number for the Project. The letter portion of the Expression of Interest shall indicate the firm's desire to perform services and indicate the specific tasks or areas of expertise, which will be subcontracted, and to whom. Interested firms must submit the material required herein or the interested firm will not be considered for the Project.

Of all the firms expressing interest in a Project, those adjudged most qualified shall be requested to submit Technical Proposals. Additional information will be supplied to the selected firms so that they can prepare such proposals for the Project. The firms that submit the highest rated Technical Proposal will be requested to submit Price Proposals. For projects that are 100% State funded, Price Proposal cost limitations such as, but not limited to, a payroll burden and overhead limitation of 130%, may apply. This project will be federally funded and Price Proposal cost limitations on payroll burden and overhead shall not apply. However, MDOT reserves the right to require that split payroll burden and overhead rates be submitted appropriate for the type of services to be provided (example, Office Rate for planning/design activities and Field Rate for construction inspection). If negotiations with the firm are timely and successful, a contract may be awarded to that firm. If an interested firm is requested to submit proposals, their proposals should substantially reflect the same composition and area of involvement as their Expression of Interest.

If a Joint Venture responds to a project advertisement, the Department of Transportation will not accept separate Expressions of Interest from the Joint Venture constituents. A firm will not be permitted to submit on more than one (1) Joint Venture for the same project advertisement. Also a firm that responds to a project advertisement as a prime or a prime joint venture constituent may not be included as a designated subcontractor to another firm that responds as a prime to the project advertisement. Multiple responses under any of the foregoing situations may cause the rejection of all responses of the firms involved. The above does not

preclude a firm from being set forth as a designated subcontractor to more than one (1) prime responding to the project advertisement.

All questions concerning submissions and procedures must be submitted by email to opcm@sha.state.md.us no later than 4:00 pm one (1) week prior to the due date. The BCS number must be referenced in the email subject line. Problems submitting emails shall be reported to the Consultant Services Division (CSD) telephone number 410-545-0434.

All addendums to this advertisement will be posted only on eMaryland Marketplace and on the Consultant Services Center page of the Maryland State Highway Administration's Webpage (www.roads.maryland.gov).

Consultants shall have the ability to provide background investigation results for Consultant personnel assigned to work on Maryland State Highway Administration (SHA) projects.

Minority business enterprises are encouraged to respond to this solicitation notice.

RESPOND TO:

Norie A. Calvert
MARYLAND STATE HIGHWAY ADMINISTRATION
OFFICE OF PROCUREMENT AND CONTRACT MANAGEMENT
Fourth Floor, Mail Stop C-405
707 North Calvert Street
Baltimore, Maryland 21202

1. Project Description:

Performance of supplementary Construction Management and Inspection (CMI) services for the Maryland State Highway Administration's (SHA) Office of Construction (OOC) for various highway construction, facilities, environmental, and system preservation projects, Statewide.

SHA anticipates awarding three (3) contracts, each for a six (6) year duration and not to exceed Four Million Dollars (\$4,000,000). SHA reserves the right to modify the number of contracts and the total dollar value of each as deemed appropriate.

This contract will be administered solely by SHA's OOC located at 7450 Traffic Drive Building #4, Hanover, Maryland 21076, and through the respective District Offices to support the Architectural and Engineering needs of SHA, statewide, and will be funded with both State and Federal Funds. Assignments may be made anywhere in the state to support other SHA Offices with the prior approval of the SHA Deputy Administrator. In addition, this contract may be used to provide services to the Maryland Department of Transportation (MDOT), or any of the MDOT modal administrations, at the direction and with the express prior written authorization of the Secretary of Transportation or the Secretary's designee. Any tasks assigned under this contract must be for services as outlined in the contract scope of work and in conformance with all contract terms and conditions and payment provisions.

2. Consultant Services Required:

Firms with expertise in construction management and inspection to provide construction management and inspection services for:

- a. highways;
- b. bridges/structures;
- c. facilities;
- d. environment;
- e. utilities;
- f. system preservation projects;
- g. maintenance projects; and,
- h. all other engineering professional services related to construction management and inspection.

Some examples of work include, but are not limited to the following:

- a. constructability reviews;
- b. detailed inspection of all construction work;
- c. inspecting environmental measures;
- d. maintenance of traffic;
- e. scheduling and conducting progress meetings and other meetings;
- f. conducting materials testing;

- g. monitoring the project schedule and cash flow;
- h. reviewing and processing progress payments; and,
- i. all other engineering professional work related to construction management and inspection.

To perform the required services, the Consultant shall provide various experienced staff such as, but not limited to, the following job classifications:

- Professional Engineer (PE) - See Attachment A
- Structural Engineer/PE - See Attachment B
- Transportation Engineer Technician (TET) I Level - See Attachment C;
- TET II Level - See Attachment D;
- TET III Level - See Attachment E;
- TET IV Level - See Attachment F;
- TET V Level - See Attachment G;
- Transportation Engineer (TE) I Level - See Attachment H;
- TE II Level - See Attachment I;
- TE III Level - See Attachment J;
- TE IV Level - See Attachment K;
- TE V Level - See Attachment L;
- Transportation Engineer Manager (TEM) I Level - See Attachment M;

***Please see E Maryland Marketplace or the SHA Web Page, Consultant Services Center for the job classification specifications attachments. These will not be included at the end of the advertisement.**

Additional information regarding the requirements of the staff may be found under the Key Staff requirements listed in “Section 4 - Required Information”.

3. Potential Restrictions:

The firm(s) selected for a given Contract will be required to provide engineering services for any SHA design and construction project, including Design/Build projects. This may limit the firm’s potential for pursuing work with a contractor on the same Design/Build project after advertisement. State Government Article 15-508 of the Annotated Code of Maryland will dictate the Consultant’s eligibility to pursue work on Design/Build projects after advertisement.

As per State Finance and Procurement, State Government Article 17-701 – 17-707 of the Annotated Code of Maryland the firm(s) selected for a given Contract will be required to provide “Certification Regarding Investments in Iran”. See below 4(f.).

4. Required Information: The Consultant shall submit the following per the specified requirements listed below of:

- A Compact Disc (CD) in a protective case labeled with the BCS number, Project Title and Prime/JV’s firm name to include: One (1) full PDF version of the Expression of

Interest (EOI) submittal as well as Sub-Folders containing the associated individual PDF files for each Section required herein. Sub-Folders and Sections must be labeled to identify each accordingly. All PDF documents must follow the naming convention of (BCS #-Prime/JV Name-Name Identifying the Document (i.e.: BCS 2014-15-ABC Firm-Letter of Interest);

- One (1) original and five (5) copies of the EOI comprised of:
 - a. One (1) Letter of Interest - Limited to one (1) page which must contain the address of the firm's closest location to 7450 Traffic Drive, Hanover, Maryland 21076, information supporting the assertion that the Consultant has the financial capacity to provide the services requested, has measures in place to protect the State against errors and omissions, and provide the names, contact numbers and email addresses of the Primary Liaison, Disadvantaged Business Enterprise (DBE) Consultant Liaison Officer for Minority Affairs, and the firm's representative for this procurement process. The Primary Liaison, DBE Liaison Officer, and the firm's procurement contact may be the same or different individuals.

Note: US Government forms are to be completed with standard size typing and are not to be photo reduced. Computer generated forms are acceptable; however, the format and spacing is to be identical to that of the Standard Forms (SF) 254 and 255.

- b. One (1) SF 254 for each firm, including each subcontractor, proposed.
- c. One (1) SF 255.

The SF 255 must be completed paying special attention to the following:

- i. Item #4, Personnel by Discipline. The Consultant shall document personnel by discipline presently employed at the work location proposed. If more than one (1) location is being proposed by the Consultant, the Consultant must clearly document all locations proposed and show the total number of personnel by discipline for all locations proposed. Subcontractor personnel are not to be included.
- ii. Item #6, Outside Key Consultants (Sub-Consultants): Please follow directions provided in step 5. Special Requirements - DBE Provisions to complete Item #6 of the SF 255.
- iii. Item #7, Key Staff. Provide a brief resume for each of the Key Staff individuals outlined below, limited to two (2) Key Staff per page, not to exceed three (3) pages total. Key Staff individual experience shall be recent experience performed within the past eight (8) years. The Consultant must document in writing in Item #7 that the Key Staff individuals meet the following requirements:

1. **Key Staff 1:** A Transportation Engineering Manager (TEM), equivalent to the SHA TEM I classification (Attachment M), with the exception that the seven (7) years of experience must be in highway and/or bridge/structures construction management and inspection and shall be an employee of the Prime/JV; who will serve as the Contract's Project Manager;
2. **Key Staff 2:** A Transportation Engineer (TE), equivalent to the SHA TE IV classification (Attachment K) with the exception that the four (4) years of experience must be in highway and/or bridge/structures construction management and inspection and shall be an employee of the Prime/JV;
3. **Key Staff 3:** A Transportation Engineering Technician (TET), equivalent to the SHA TET V classification (Attachment G) with the exception that the eight (8) years of experience must be in highway and/or bridge/structures inspection and shall be an employee of the Prime/JV or any of the Sub-consultants;
4. **Key Staff 4:** A TET, equivalent to the SHA TET IV classification (Attachment F) with the exception that the five (5) years of experience must be in highway and/or bridge/structures inspection experience and shall be an employee of the Prime/JV or any of the Sub-consultants;
5. **Key Staff 5:** A Professional Engineer (PE) registered in the State of Maryland, equivalent to the SHA PE classification (Attachment A). This individual may be used on an on-call basis for an estimated time not to exceed five (5) hours per week and shall be an employee of the Prime/JV; and,
6. **Key Staff 6:** A Structural Engineer that is a registered PE in the State of Maryland, equivalent to the SHA PE classification (Attachment B), with the exception that the five (5) years of experience must be in structural engineering. This individual may be used on an on-call basis for an estimated time not to exceed five (5) hours per week and shall be an employee of the Prime/JV or any of the Sub-consultants.

It is the Prime's responsibility to clearly and accurately represent all information for Key Staff individuals (i.e.: education, years experience, licenses/certifications etc.). Maryland Registered and the Maryland License Registration Certificate Number and year initial license issued must be included in the resume for each individual as applicable.

Where Maryland Registrations are required for the professional Key Staff, the Consultant shall include on line "f" of Item #7 of the SF 255 the words

"Maryland Registered" and the Maryland License Registration Certificate Number for the individual. Failure of the Consultant to properly document Key Staff requirements in writing will result in the firm being precluded from further consideration for the Project.

- iv. Item #8, Similar Projects: Limited to six (6) similar projects, one (1) similar project per page for a total of six (6) pages. The columns below the Similar Project Information entered under the Column A-E headers may be removed to create one large block to answer only Column B "Nature of the Firm's Responsibility." Photos are acceptable. However, all photos count in the overall space limitations for the page and are considered illustrations and not rated. The Similar Projects set forth shall be recent experience performed within the past eight (8) years. (Information provided in this section shall become part of the rating/evaluation criteria for this project.)
 - v. Items #9 and #10 are not required. Any information presented in Items #9 and #10 will not be reviewed or considered in the evaluation process.
 - d. In addition to the Key Staff's brief resumes required in Item #7 of the SF 255, provide a one (1) page resume for each of the six (6) proposed Key Staff, outlined above in Section 4.c.iii. Format is at the firm's discretion. Resumes can either be inserted after the SF 255 or in a separate section created just for the resumes. (NOTE: Please exclude any confidential personal information. If required the business address and phone number may be used).
 - e. A copy of the Prime/ JV's current certificate(s) of insurance.
 - f. As per State Finance and Procurement, State Government Article 17-701 – 17-707 of the Annotated Code of Maryland, a firm engaging in investment activities with companies appearing on the Investment Activities in Iran list is ineligible for bid/proposal/award. The Investment Activities in Iran list is located at www.bpw.state.md.us of the Maryland Board of Public Works (BPW) web site. As per the BPW Advisory No.: 2013-11, Date Issued January 1, 2013, an officer of the Prime/JV shall provide a signed original certification as per language listed on the BPW Advisory page.
 - g. The Consultant shall comply with the "Required Information" and "Special Requirements" set forth hereinafter when completing the aforesaid documentation.
5. Special Requirements - DBE Provisions:

The Maryland Department of Transportation (MDOT) hereby notifies all proposers that in regard to any contract entered into pursuant to this advertisement; DBEs will be afforded full opportunity to submit expressions of interest in response to this notice and

will not be subject to discrimination on the basis of race, color, national origin, age, sex or disability in consideration for an award (23 CFR § 200, 49 CFR § 21 and 26.

It is the goal of MDOT that certified businesses participate in all contracts. Each contract may contain a goal for DBE participation, on a contract-by-contract basis. Consultants interested in submitting an Expression of Interest must comply with the "SPECIAL PROVISIONS, AFFIRMATIVE ACTION REQUIREMENTS, UTILIZATION OF DISADVANTAGED BUSINESSES, THE SURFACE TRANSPORTATION AND UNIFORM RELOCATION ASSISTANCE ACT OF 1987, ISTEA OF 1991 AND MAP 21 OF 2012.

To comply with the aforesaid SPECIAL PROVISIONS, Consultants who submit Expressions of Interest must clearly set forth the DBE Prime firm(s) or DBE subcontractor(s) proposed for goal attainment indicating:

- a. The proposed work,
- b. Percentage of total work,
- c. MDOT certification number, and
- d. Applicable NAICS Codes

for each DBE. **Said information shall be shown in Item #6 of the SF 255 form.** Proposed DBE firms must be certified by MDOT to participate on federally funded Projects. If the proposed DBE firm is not certified by MDOT, the Consultant shall indicate the certification status of the proposed DBE firm in lieu of the certification number.

The Consultant's failure to submit all of the required DBE information, in the specified areas, will result in the Consultant being disqualified from further consideration for the Reduced Candidate List on this Project, unless it is in the best interest of the State to seek clarification or additional information from the Consultant.

CONTRACT GOALS

For the purpose of this contract, a goal of **Twenty-Five percent (25%)** has been established for DBEs. DBE proposers have to meet the established DBE goal by either their own forces or approved DBE subcontractor(s).

6. Additional Information: SHA reserves the right to develop multiple Reduced Candidate Lists from those firms responding to this advertisement or to make multiple selections from one (1) Reduced Candidate List.
7. Electronic Transfer: By submitting a response to this solicitation, the Consultant agrees to accept payments by electronic funds transfer unless the State Comptroller's Office grants an exemption. The selected Consultant shall register with the EFT Registration, General Accounting Division using the COT/GAD X-10 Vendor Electronic Funds (EFT) Registration Request Form, available at <http://compnet.comp.state.md.us/gad/pdf/GADX-10.pdf> . Any request for exemption must be submitted to the State Comptroller's Office

for approval at the address specified on the COT/GAD X-10 form and must include the business identification information as stated on the form and include the reasons for the exemption.

8. Rating Criteria: The major factors/criteria for the establishment of a Reduced Candidate List for this Project, in descending order of importance, will be:
 - a. Key Staff;
 - b. Similar Project Experience;
 - c. Past Performance; (Shall be based on past two (2) years performance rating for work performed for SHA. Firms with no ratings shall be given an average rating of all firms rated.)
 - d. Capacity to accomplish proposed work in required time;
 - e. Compatibility of size of firm with size of proposed project;
 - f. Firm's Location;
 - g. Financial Responsibility; and,
 - h. Consultant has measures of protection for the State against errors and omissions.
9. Additional Information: SHA may carry forward Key Staff or Similar Projects submitted at the Expression of Interest (EOI) stage. Changes to Key Staff are allowed at any time. All Key Staff changes must be approved by SHA and substitutions will be evaluated using the same rating criteria.
10. Facsimile/e-mail copies of the Expression of Interest are not acceptable. No response received after 12:00 P.M. (NOON) on the date specified for a Project will be accepted, no matter how transmitted.

The outside of the Expression of Interest submittal envelope/package must include the following:

Expression of Interest Submittal for BCS Number
Expression of Interest Service Title
Expression of Interest Due Date and Time
Firm Name
Firm Address

Respond by: May 6, 2015 prior to 12:00 P.M. (NOON)

RESPOND TO:
Norie A. Calvert
MARYLAND STATE HIGHWAY ADMINISTRATION

OFFICE OF PROCUREMENT AND CONTRACT MANAGEMENT
Fourth Floor, Mail Stop C-405
707 North Calvert Street
Baltimore, Maryland 21202

ATTACHMENT A

REGISTERED PROFESSIONAL ENGINEER

MINIMUM QUALIFICATIONS:

EDUCATION:

Possession of a Bachelor's degree in civil engineering or structural engineering from an accredited college or university approved by the Engineer's Council for Professional Development and/or approved by the Maryland State Board of Registration for Professional Engineers.

Persons currently registered as Professional Engineers in the State of Maryland or in a state with comparable requirements, are considered to have also met the educational requirements.

EXPERIENCE:

Five (5) years as a Project Engineer, Resident Engineer or equivalent, involved in highway engineering on bridge and roadway construction projects.

CONDITIONS OF EMPLOYMENT:

Employee must be in good health and physically able to perform the duties required of the positions.

ATTACHMENT B

STRUCTURAL ENGINEER

MINIMUM QUALIFICATIONS:

EDUCATION:

Possession of a Bachelor's degree in civil engineering or structural engineering from an accredited college or university approved by the Engineer's Council for Professional Development and/or approved by the Maryland State Board of Registration for Professional Engineers. Must be a registered Professional Engineer.

Persons currently registered as Professional Engineers in the State of Maryland or in a state with comparable requirements, are considered to have also met the educational requirements.

EXPERIENCE:

Five (5) years in structural design of highway structures and one (1) year in structural inspection on a highway construction project(s) with extensive structural involvement.

NOTE:

Persons having fifteen (15) years of full-time employment in Highway Engineering associated activities with five (5) years as a Project Engineer or equivalent on a project requiring extensive structural inspection, are considered to have met the educational and experience requirements.

CONDITIONS OF EMPLOYMENT:

Employee must be in good health and physically able to perform the duties required of the position.

ATTACHMENT C

TRANSPORTATION ENGINEERING TECHNICIAN I

MINIMUM QUALIFICATIONS:

EDUCATION: Graduation from a standard high school or possession of a State high school equivalence certificate.

EXPERIENCE: None.

NOTES: 1. Employees in this classification may be assigned duties that require the operation of a motor vehicle. Employees in some positions in this classification may be required to possess a motor vehicle operator's license valid in the State of Maryland.

2. Employees in this classification may be required to possess Federal Highway Administration (FHWA) certification for inspection of In-Service Bridges, or have the ability to acquire this certificate within a given time period.

3. Employees in this classification may be required to achieve certification in field testing procedures in concrete, soil aggregate and Hot Mix Asphalt within a given time period.

CONDITIONS OF EMPLOYMENT:

Applicants must be in good health and physically able to perform the duties required of the position.

Applicants must also be able to read, write, comprehend and fluently speak the English language.

Applicants must have a valid driver's license. Applicants must have use of a vehicle to travel to, from and while on the project site.

Candidates must be willing to travel and be available for work in any geographical area within scope.

Candidates are subject to change of assignment as work requires. Candidates may also be required to work various shifts and on weekends depending on assignments.

Applicants will be required to obtain Mid-Atlantic Region Technician Certification Program (MARTCP) certifications in Soils & Aggregate Compaction Technician, Concrete Field Technician, and HMA Field Technician. They must also acquire the Maryland Department of the Environment green card and the SHA Erosion & Sediment Control yellow card. All other certifications that are deemed equivalent shall obtain reciprocity through SHA's Office of Materials & Technology for this condition of employment to be satisfied. Failure to obtain the required certifications within six (6) months of his/her start date will affect the approval and continuance of assignments, pay increments, and/or advancements.

All individuals supplied by the Consultant must also complete the SHA CORE Training courses prior to beginning work. These courses are Americans with Disabilities Act (ADA) Awareness, Diversity Awareness, Limited English Proficiency (LEP), Sexual Harassment Prevention and Awareness, and Workplace and Domestic Violence Awareness.

The costs for the various certifications and re-certifications will be paid for by the consultant firm or the consultant employees, not the State Highway Administration. These costs include, but are not limited to, course fees, exam fees, reciprocity fees, time, and travel expenses. Other construction related training may also be required.

ESSENTIAL REQUIREMENTS OF WORK:

Elementary knowledge of algebra, geometry, trigonometry and English; introductory knowledge of elementary engineering methods and techniques; ability to compute simple engineering data; Ability to work from simple plans and specifications; ability to make drawings, tracings and accurate notes; capacity to understand and follow written and oral instructions; able to work effectively with others.

NATURE OF WORK:

This is the entry level of work performing a variety of technical engineering support tasks. Specific duties depend on job assignments and may include, in a learning capacity, inspecting construction and maintenance projects; performing tests on soils and materials; evaluating methods for maintenance operations; serving on a survey crew; drafting design details, maintenance contract specifications and construction notes; calculating quantities for construction projects and maintenance activities. Employees in this class do not supervise.

Work is performed under the continuing supervision of an engineer or higher level technical employee. Working conditions vary depending on assignments and are performed in the office or in the field during survey and inspection assignments with exposure to varying weather conditions and rough terrain and requirements for walking, standing, bending, and lifting loads weighing up to 80 lbs.; may require working in close proximity with traffic on Maryland highways; requires hand/eye coordination in the efficient operation of computers and other office machines, survey and other equipment. Employees in some positions in this classification will be required to travel and be available for work in any part of the State, subject to change of assignment, as work requires.

EXAMPLES OF WORK: (Examples are illustrative only)

Learns to draft plans, plats and topographic maps for engineering improvements and installations using CADD and manual processes;

Learns to compute quantities for contract items for use in preparing project cost estimates;

Operates surveying equipment and assists in recording measurements and other data;

Assists in locating centerlines and property lines, setting grade stakes and other markers and reference points, inspection of construction and maintenance projects, inspection of existing roadways, structures and facilities, performing in-service bridge inspections in accordance with FHWA criteria;

Maintains records pertaining to highway and other public works installations; updates maps, plats and other records using computerized and manual processes;

Performs other related duties.

ATTACHMENT D

TRANSPORTATION ENGINEERING TECHNICIAN II

MINIMUM QUALIFICATIONS:

EDUCATION: Graduation from a standard high school or possession of a State high school equivalence certificate.

EXPERIENCE: One year of full-time experience relative to project administration.

NOTES: Applicants may substitute education in an engineering curriculum at an accredited junior college, college or university at the rate of thirty (30) semester credit hours for the one year of the required experience. While N.I.C.E.T. is not required, it will be given consideration.

CONDITIONS OF EMPLOYMENT:

Applicants must be in good health and physically able to perform the duties required of the position. Applicants must also be able to read, write, comprehend and fluently speak the English language.

Applicants must have a valid driver's license. Applicants must have use of a vehicle to travel to, from and while on the project site.

Candidates must be willing to travel and be available for work in any geographical area within scope. Candidates are subject to change of assignment as work requires. Candidates may also be required to work various shifts and on weekends depending on assignments.

Applicants will be required to obtain Mid-Atlantic Region Technician Certification Program (MARTCP) certifications in Soils & Aggregate Compaction Technician, Concrete Field Technician, and HMA Field Technician. They must also acquire the Maryland Department of the Environment green card and the SHA Erosion & Sediment Control yellow card. All other certifications that are deemed equivalent shall obtain reciprocity through SHA's Office of Materials & Technology for this condition of employment to be satisfied. Failure to obtain the required certifications within six (6) months of his/her start date will affect the approval and continuance of assignments, pay increments, and/or advancements.

All individuals supplied by the Consultant must also complete the SHA CORE Training courses prior to beginning work. These courses are Americans with Disabilities Act (ADA) Awareness, Diversity Awareness, Limited English Proficiency (LEP), Sexual Harassment Prevention and Awareness, and Workplace and Domestic Violence Awareness.

The costs for the various certifications and re-certifications will be paid for by the consultant firm or the consultant employees, not the State Highway Administration. These costs include, but are not limited to, course fees, exam fees, reciprocity fees, time, and travel expenses. Other construction related training may also be required.

ESSENTIAL REQUIREMENTS OF WORK:

Elementary knowledge of algebra, geometry, trigonometry and English; introductory knowledge of elementary engineering methods and techniques; ability to compute simple engineering data; ability to

Transportation Engineering Technician II (continued)

work from simple plans and specifications; ability to make drawings, tracings and accurate notes; capacity to understand and follow written and oral instructions; able to work effectively with others.

NATURE OF WORK:

This is the level of work requiring some background in sub-professional engineering. Work in this class includes technical tasks which follow well-prescribed methods and procedures which require the application of skills and techniques learned through experience. The employee in this class does not require continuous on-the-job instructions regarding methods and procedures and he/she is held responsible for the accurate and efficient completion of assigned tasks.

Work is performed under direct supervision and assignments are usually accompanied by specific instruction. Work does not require supervision of others.

EXAMPLES OF WORK: (Examples are illustrative only)

In construction inspection work, performs field inspections of construction and/or system preservation projects, inspects grading, surfacing and drainage structures for satisfactory work and adherence to plans and specifications;

Assists in establishing line and grade for this work, operates instruments, keeps notes and makes some computations;

Conducts basic tests on soils, asphalt, cements/concrete, aggregates, bituminous products, mental products and industrial coatings;

Performs other necessary duties as required.

ATTACHMENT E

TRANSPORTATION ENGINEERING TECHNICIAN III

MINIMUM QUALIFICATIONS:

EDUCATION: Graduation from a standard high school or possession of a State high school equivalence certificate.

EXPERIENCE: Three years of full-time employment in highway engineering technician activities.

LICENSES, REGISTRATIONS & CERTIFICATES:

- 1) Mid-Atlantic Region Technician Certification Program (MARTCP)
 - a. Soils & Aggregate Compaction Technician
 - b. Concrete Field Technician
 - c. HMA Field Technician
- 2) Maryland Department of the Environment's Green Card
- 3) State Highway Administration Erosion & Sediment Control Certification Card (Yellow Card)

NOTES: Applicants may substitute education in an engineering curriculum at an accredited junior college, college or university at the rate of thirty semester credit hours per year for up to one (1) year of the required experience. While N.I.C.E.T. is not required, it will be given consideration.

CONDITIONS OF EMPLOYMENT:

Applicants must be in good health and physically able to perform the duties required of the position. Applicants must also be able to read, write, comprehend and fluently speak the English language.

Applicants must have a valid driver's license. Applicants must have a vehicle to travel to, from and while on the project site.

Candidates must be willing to travel and be available for work in any geographical area within scope. Candidates are subject to change of assignment as work requires. Candidates may also be required to work various shifts and on weekends depending on assignments.

Applicants will be required to obtain Mid-Atlantic Region Technician Certification Program (MARTCP) certifications in Soils & Aggregate Compaction Technician, Concrete Field Technician, and HMA Field Technician. They must also acquire the Maryland Department of the Environment green card and the SHA Erosion & Sediment Control yellow card. All other certifications that are deemed equivalent shall obtain reciprocity through SHA's Office of Materials & Technology for this condition of employment to be satisfied. Failure to obtain the required certifications within six (6) months of his/her start date will affect the approval and continuance of assignments, pay increments, and/or advancements.

All individuals supplied by the Consultant must also complete the SHA CORE Training courses prior to beginning work. These courses are Americans with Disabilities Act (ADA) Awareness, Diversity Awareness, Limited English Proficiency (LEP), Sexual Harassment Prevention and Awareness, and Workplace and Domestic Violence Awareness.

Transportation Engineering Technician III (continued)

The costs for the various certifications and re-certifications will be paid for by the consultant firm or the consultant employees, not the State Highway Administration. These costs include, but are not limited to, course fees, exam fees, reciprocity fees, time, and travel expenses. Other construction related training may also be required.

ESSENTIAL REQUIREMENTS OF WORK:

Elementary knowledge of algebra, geometry, trigonometry and English; introductory knowledge of elementary engineering methods and techniques; ability to compute simple engineering data; ability to work from simple plans and specifications; ability to make drawings, tracings and accurate notes; capacity to understand and follow written and oral instructions; able to work effectively with others.

NATURE OF WORK:

This is the Journey level of work requiring some background in sub-professional engineering. Work in this class includes technical tasks which follow well-prescribed methods and procedures and which require the application of skills and techniques learned through experience. The employee in this class does not require continuous on-the-job instructions regarding methods and procedures and he/she is held responsible for the accurate and efficient completion of assigned tasks.

Work is performed under direct supervision and assignments are usually accompanied by specific instruction. Work does not require supervision of others although employee may be required to instruct lower-level personnel.

EXAMPLES OF WORK: (Examples are illustrative only)

In construction inspection work, performs field inspections of construction and/or system preservation projects, inspects grading, surfacing and drainage structures for satisfactory work and adherence to plans and specifications;

Assists in establishing line and grade for this work, operates instruments, keeps notes and makes some computations;

Conducts basic tests on soils, asphalt, cements/concrete, aggregates, bituminous products, mental products and industrial coatings;

Performs other necessary duties as required.

ATTACHMENT F

TRANSPORTATION ENGINEERING TECHNICIAN IV

MINIMUM QUALIFICATIONS:

EDUCATION: Graduation from a standard high school or possession of a State high school equivalence certificate.

EXPERIENCE: Five years of full-time employment in highway construction technician activities. Two years of which must have been at the level of responsibility equivalent to a Transportation Engineering Technician III.

LICENSES, REGISTRATIONS & CERTIFICATES:

- 1) Mid-Atlantic Region Technician Certification Program (MARTCP)
 - a. Soils & Aggregate Compaction Technician
 - b. Concrete Field Technician
 - c. HMA Field Technician
- 2) Maryland Department of the Environment's Green Card
- 3) State Highway Administration Erosion & Sediment Control Certification Card (Yellow Card)

NOTES: Applicants may substitute N.I.C.E.T. Level 3 or higher certification or education in an engineering curriculum at an accredited junior college, college or university at the rate of thirty semester credit hours per year for up to one (1) year of the required experience.

CONDITIONS OF EMPLOYMENT:

Applicants must be in good health and physically able to perform the duties required of the position. Applicants must also be able to read, write, comprehend and fluently speak the English language.

Applicants must have a valid driver's license. Applicants must have a vehicle to travel to, from and while on the project site.

Candidates must be willing to travel and be available for work in any geographical area within scope. Candidates are subject to change of assignment as work requires. Candidates may also be required to work various shifts and on weekends depending on assignments.

Applicants will be required to obtain Mid-Atlantic Region Technician Certification Program (MARTCP) certifications in Soils & Aggregate Compaction Technician, Concrete Field Technician, and HMA Field Technician. They must also acquire the Maryland Department of the Environment green card and the SHA Erosion & Sediment Control yellow card. All other certifications that are deemed equivalent shall obtain reciprocity through SHA's Office of Materials & Technology for this condition of employment to be satisfied. Failure to obtain the required certifications within six (6) months of his/her start date will affect the approval and continuance of assignments, pay increments, and/or advancements.

All individuals supplied by the Consultant must also complete the SHA CORE Training courses prior to beginning work. These courses are Americans with Disabilities Act (ADA) Awareness, Diversity Awareness, Limited English Proficiency (LEP), Sexual Harassment Prevention and Awareness, and Workplace and Domestic Violence Awareness.

Transportation Engineering Technician IV (continued)

The costs for the various certifications and re-certifications will be paid for by the consultant firm or the consultant employees, not the State Highway Administration. These costs include, but are not limited to, course fees, exam fees, reciprocity fees, time, and travel expenses. Other construction related training may also be required.

ESSENTIAL REQUIREMENTS OF WORK:

Elementary knowledge of algebra, geometry, trigonometry and English; introductory knowledge of basic civil engineering principles; working knowledge of highway construction inspection principles, practices, methods and tests, working knowledge of surveying principles and techniques; care and use of survey instruments, of making field notes and computations and establishing control points for linear measurement; ability to read and interpret plans and specifications; to use engineering tables and reference materials; ability to supervise, lend technical guidance and train lower level classes; to perform clerical and statistical work requiring application of basic engineering knowledge in all areas aforesaid and prepare necessary reports; ability to supervise the inspection of small or medium size highway construction projects for conformance to plans and specifications; to deal effectively with other employees of the State Highway Administration as well as others.

NATURE OF WORK:

This is advanced technical work in highway engineering. Work at this level is characterized by the responsibility for supervision of projects of moderate scope and complexity in construction inspection engineering work. Assignments are received orally or in written form and are general in nature permitting opportunity for the use of a degree of independent judgment.

Employees in this class receive supervision from a higher level Engineering Technician or professional engineer.

Work effectiveness is determined through a review of written reports and complete assignments.

Supervision may be exercised over lower level aides as assigned from time to time.

EXAMPLES OF WORK: (Examples are illustrative only)

Serves as a Construction Project Engineer on a small to medium-size construction project;
Lends technical guidance to personnel assigned to project and reviews contractor's operations to assure technical adherence to plans and specifications;
advises interested parties as to contractor's progress, possible over-run and under-run in quantities, and delays due to utility adjustments, lack of right-of-way, or lack of materials clearance;
Maintains accurate records and reports;
Performs and analyzes results of field tests;
Performs other necessary duties as required.

ATTACHMENT G

TRANSPORTATION ENGINEERING TECHNICIAN V

MINIMUM QUALIFICATIONS:

EDUCATION: Graduation from a standard high school or possession of a high school equivalency certificate.

EXPERIENCE: Eight years of full-time employment in highway or bridge construction engineering activities.

LICENSES, REGISTRATIONS & CERTIFICATES:

- 1) Mid-Atlantic Region Technician Certification Program (MARTCP)
 - a. Soils & Aggregate Compaction Technician
 - b. Concrete Field Technician
 - c. HMA Field Technician
- 2) Maryland Department of the Environment's Green Card
- 3) State Highway Administration Erosion & Sediment Control Certification Card (Yellow Card)

NOTES:

1. Applicants may substitute education in a civil engineering curriculum at an accredited junior college, college or university at the rate of 30 semester credit hours for each year of the required experience, up to a maximum of three (3) years.
2. Applicants who possess an Associate's Degree in an Engineering or Construction Management from an accredited community college, college or university are considered to have met two years of the eight year experience requirement.

CONDITIONS OF EMPLOYMENT:

Applicants must be in good health and physically able to perform the duties required of the position. Applicants must also be able to read, write, comprehend and fluently speak the English language.

Applicants must have a valid driver's license. Applicants must have a vehicle to travel to, from and while on the project site.

Candidates must be willing to travel and be available for work in any geographical area within scope. Candidates are subject to change of assignment as work requires. Candidates may also be required to work various shifts and on weekends depending on assignments.

Applicants will be required to obtain Mid-Atlantic Region Technician Certification Program (MARTCP) certifications in Soils & Aggregate Compaction Technician, Concrete Field Technician, and HMA Field Technician. They must also acquire the Maryland Department of the Environment green card and the SHA Erosion & Sediment Control yellow card. All other

Transportation Engineering Technician V (continued)

certifications that are deemed equivalent shall obtain reciprocity through SHA's Office of Materials & Technology for this condition of employment to be satisfied. Failure to obtain the required certifications within six (6) months of his/her start date will affect the approval and continuance of assignments, pay increments, and/or advancements.

All individuals supplied by the Consultant must also complete the SHA CORE Training courses prior to beginning work. These courses are Americans with Disabilities Act (ADA) Awareness, Diversity Awareness, Limited English Proficiency (LEP), Sexual Harassment Prevention and Awareness, and Workplace and Domestic Violence Awareness.

The costs for the various certifications and re-certifications will be paid for by the consultant firm or the consultant employees, not the State Highway Administration. These costs include, but are not limited to, course fees, exam fees, reciprocity fees, time, and travel expenses. Other construction related training may also be required.

ESSENTIAL REQUIREMENTS OF WORK:

Knowledge of algebra, geometry, trigonometry and English; introductory knowledge of basic civil engineering principles, practices, and methods; knowledge of highway construction inspection principles, practices, AASHTO and ASTM test specifications and methods; knowledge of surveying principles and techniques; care and use of survey instruments, of making field notes and computations and establishing control points for linear measurement; Knowledge of Temporary Traffic Control Standards and the Manual on Uniform Traffic Control Devices; ability to read and interpret complex plans and specifications; to use engineering tables and reference materials; ability to, lend technical guidance and train lower level classifications; to perform clerical and statistical work requiring application of basic engineering knowledge in all areas aforesaid and prepare necessary reports; ability to effectively supervise the inspection of medium or large size highway construction projects for conformance to plans and specifications; ability to establish and maintain effective working relationships with other State Highway Administration employees and the general public; ability to prepare project correspondence required by the District Office; ability to schedule, conduct, and document required project meetings.

NATURE OF WORK:

This is advanced technical work in highway engineering with project management responsibilities. Work at this level is characterized by the responsibility for supervision of projects of moderate to large scope and complexity in construction inspection engineering work. Assignments are received orally or in written form and are general in nature permitting opportunity for the use of a degree of independent judgment.

Employees in this class receive supervision from a higher level Transportation Engineer or professional engineer.

Work effectiveness is determined through a review of written reports, project documentation, and complete assignments.

Supervision will be exercised over lower level aides as assigned from time to time.

EXAMPLES OF WORK: (Examples are illustrative only)

Serves as the Construction Project Engineer on a medium, to large-size construction project;
Lends technical guidance to State & Consultant personnel assigned to project, and reviews contractor's operations to assure technical adherence to plans and specifications;
advise interested parties as to contractor's progress, possible over-run and under-run in quantities, and delays due to utility adjustments, lack of right-of-way, or lack of materials clearance;
Assigns, coordinates, and reviews survey work on the project;
Maintains accurate records and reports; performs and analyzes results of field tests
Oversees or performs plan review, field inspections, and field investigations during design, construction and maintenance of roadways, structures and traffic control devices for conformance to plans and specifications;
Operates electronic and mechanical equipment required in surveying, field inspection, and materials testing;
Provides information to and works with engineers, and contractors to ensure adherence to standards and codes;
Conducts or participates in project milestone meetings on transportation related projects;
Prepares correspondence to respond to or inform the public, elected officials, federal, state or local government agencies of project information;
Schedules and directs the work of construction inspectors assigned to construction and maintenance projects;
Monitors contract performance and project status for major construction and maintenance projects;
Develops and oversees material testing programs in permanent and portable labs and at material supplier facilities;
Monitors contractors, producers, and fabricators and assures quality control of materials used in the construction of roadways, bridges and facilities, and assures materials used meet state specifications;
Prepares construction drawings based on engineer's notes, survey notes, field and records research, and engineering calculations, updates plats, and other engineering records based on "as built," survey notes and other information, and conducts engineering surveys as needed;
Compiles quantities and reviews construction reports and other data;
Provides technical guidance and support to office and field personnel concerning design, survey, software, hardware and procedures;
Reviews special provisions, design agreements, and continuity of plans as necessary, and assists in determining if contract plans are complete;
Performs complex calculations to translate raw data into information for the construction of public works and other transportation-related projects;
Maintains records and prepares reports pertaining to public works installations and projects;
Compiles, documents, and reviews maintenance reports/studies including costs and other data, determining if maintenance contracts adhere to current maintenance practices and standards;
Oversees and is responsible for the clearance of utilities and other underground obstructions prior to and during construction activities;
Oversees and is responsible for locating subsurface features through the use of construction plans and documents;

Transportation Engineering Technician V (continued)

EXAMPLES OF WORK: (continued)

Reviews and evaluates Quality Control plans submitted by material producers and fabricators;
Provides data, analysis, recommendations and corrective measures for Erosion & Sediment
Control and Maintenance of Traffic;
Reviews work of other employees;
Perform other necessary duties as required.

ATTACHMENT H

TRANSPORTATION ENGINEER I

MINIMUM QUALIFICATIONS:

EDUCATION: Possession of a bachelor's degree in engineering from an accredited college or university.

EXPERIENCE: None

NOTES:

1. Persons currently registered as Professional Engineers in the State of Maryland, or in a state with comparable requirements, are considered to have met the education requirements.

LICENSES, REGISTRATIONS & CERTIFICATES:

- 1) Mid-Atlantic Region Technician Certification Program (MARTCP)
 - a. Soils & Aggregate Compaction Technician
 - b. Concrete Field Technician
 - c. HMA Field Technician
- 2) Maryland Department of the Environment's Green Card
- 3) State Highway Administration Erosion & Sediment Control Certification Card (Yellow Card)
- 4) Employees in this classification are assigned duties that require the operation of a motor vehicle. Employees will be required to possess a motor vehicle operator's license valid in the State of Maryland.

CONDITIONS OF EMPLOYMENT:

Applicants must be in good health and physically able to perform the duties required of the position. Applicants must also be able to read, write, comprehend and fluently speak the English language.

Applicants must have a valid driver's license. Applicants must have a vehicle to travel to, from and while on the project site.

Candidates must be willing to travel and be available for work in any geographical area within scope. Candidates are subject to change of assignment as work requires. Candidates may also be required to work various shifts and on weekends depending on assignments.

Applicants will be required to obtain Mid-Atlantic Region Technician Certification Program (MARTCP) certifications in Soils & Aggregate Compaction Technician, Concrete Field Technician, and HMA Field Technician. They must also acquire the Maryland Department of the Environment green card and the SHA Erosion & Sediment Control yellow card. All other certifications that are deemed equivalent shall obtain reciprocity through SHA's Office of Materials & Technology for this condition of employment to be satisfied. Failure to obtain the required certifications within six (6) months of his/her start date will affect the approval and continuance of assignments, pay increments, and/or advancements.

Transportation Engineer I (continued)

CONDITIONS OF EMPLOYMENT: (continued)

All individuals supplied by the Consultant must also complete the SHA CORE Training courses prior to beginning work. These courses are Americans with Disabilities Act (ADA) Awareness, Limited English Proficiency (LEP), Sexual Harassment Prevention and Awareness, and Workplace and Domestic Violence Awareness.

The costs for the various certifications and re-certifications will be paid for by the consultant firm or the consultant employees, not the State Highway Administration. These costs include, but are not limited to, course fees, exam fees, reciprocity fees, time, and travel expenses. Other construction related training may also be required.

ESSENTIAL KNOWLEDGE, SKILLS, AND ABILITIES:

Knowledge of professional engineering principles, practices and methods;
Knowledge of construction standards and regulations;
Knowledge of maps, deeds, plats and plans;
Ability to review and interpret plans, specifications, cost estimates and engineering reports;
Ability to make basic engineering computations and drawings;
Ability to communicate effectively and prepare technical documents and reports;
Ability to establish and maintain effective working relationships with other employees, engineers, contractors and the general public;
Ability to provide guidance and direction to technicians;
Ability to physically perform essential duties.

NATURE OF WORK:

This is entry level professional civil engineering work applying engineering theories, principles, and standards to a variety of construction projects and processes. In a learning capacity, assists with the office administrative duties of construction projects; trains on computer applications used on the assigned projects; assists in preparation of documentation; reviews plans and specifications; conducts material testing evaluation and quality assurance and conducts construction inspection under the direction of a higher level engineer. Positions in this class do not supervise, but may provide direction and guidance to technicians.

This is a training level for inexperienced civil engineers needing to develop engineering knowledge and skills. Employees receive close to moderate supervision from a higher level engineer or engineering supervisor. Work is performed in an office setting and in the field.

EXAMPLES OF WORK:

Reviews assigned areas of plans to ensure compliance with contracts, regulations and engineering standards;

In construction inspection work, performs field inspections of construction and/or system preservation projects, inspects grading, surfacing and drainage structures for satisfactory work and adherence to plans and specifications;

Assists in establishing line and grade for this work, operates instruments, keeps notes and makes some computations;

Conducts basic tests on soils, asphalt, cements/concrete, aggregates, bituminous products, mental products and industrial coatings;

Performs other necessary duties as required.

ATTACHMENT I

TRANSPORTATION ENGINEER II

MINIMUM QUALIFICATIONS:

EDUCATION: Possession of a bachelor's degree in engineering from an accredited college or university.

EXPERIENCE: One year of experience in professional engineering, specifically in highway or bridge construction engineering activities.

NOTES:

1. Additional work experience in professional engineering, or in technical engineering at the journey level or above, may be substituted on a year for year basis for the required education.
2. Possession of a Master's Degree in engineering may be substituted for the required experience.
3. Persons currently registered as Professional Engineers in the State of Maryland, or in a state with comparable requirements, are considered to have met the education requirements.

LICENSES, REGISTRATIONS & CERTIFICATES:

- 1) Mid-Atlantic Region Technician Certification Program (MARTCP)
 - a. Soils & Aggregate Compaction Technician
 - b. Concrete Field Technician
 - c. HMA Field Technician
- 2) Maryland Department of the Environment's Green Card
- 3) State Highway Administration Erosion & Sediment Control Certification Card (Yellow Card)
- 4) Employees in this classification are assigned duties that require the operation of a motor vehicle. Employees will be required to possess a motor vehicle operator's license valid in the State of Maryland.

CONDITIONS OF EMPLOYMENT:

Applicants must be in good health and physically able to perform the duties required of the position. Applicants must also be able to read, write, comprehend and fluently speak the English language.

Applicants must have a valid driver's license. Applicants must have a vehicle to travel to, from and while on the project site.

CONDITIONS OF EMPLOYMENT: (continued)

Candidates must be willing to travel and be available for work in any geographical area within scope. Candidates are subject to change of assignment as work requires. Candidates may also be required to work various shifts and on weekends depending on assignments.

Transportation Engineer II (continued)

Applicants will be required to obtain Mid-Atlantic Region Technician Certification Program (MARTCP) certifications in Soils & Aggregate Compaction Technician, Concrete Field Technician, and HMA Field Technician. They must also acquire the Maryland Department of the Environment green card and the SHA Erosion & Sediment Control yellow card. All other certifications that are deemed equivalent shall obtain reciprocity through SHA's Office of Materials & Technology for this condition of employment to be satisfied. Failure to obtain the required certifications within six (6) months of his/her start date will affect the approval and continuance of assignments, pay increments, and/or advancements.

All individuals supplied by the Consultant must also complete the SHA CORE Training courses prior to beginning work. These courses are Americans with Disabilities Act (ADA) Awareness, Limited English Proficiency (LEP), Sexual Harassment Prevention and Awareness, and Workplace and Domestic Violence Awareness.

The costs for the various certifications and re-certifications will be paid for by the consultant firm or the consultant employees, not the State Highway Administration. These costs include, but are not limited to, course fees, exam fees, reciprocity fees, time, and travel expenses. Other construction related training may also be required.

ESSENTIAL KNOWLEDGE, SKILLS, AND ABILITIES:

Knowledge of professional engineering principles, practices and methods;
Knowledge of construction standards and regulations;
Knowledge of maps, deeds, plats and plans;
Ability to review and interpret plans, specifications, cost estimates and engineering reports;
Ability to make basic engineering computations and drawings;
Ability to communicate effectively and prepare technical documents and reports;
Ability to establish and maintain effective working relationships with other employees, engineers, contractors and the general public;
Ability to provide guidance and direction to technicians;
Ability to physically perform essential duties.

NATURE OF WORK:

This is entry level professional civil engineering work applying engineering theories, principles, and standards to a variety of construction projects and processes. In a learning capacity, assists with the office administrative duties of construction projects; trains on computer applications used on the assigned projects; assists in preparation of documentation; reviews plans and specifications; conducts material testing evaluation and quality assurance and conducts construction inspection under the direction of a higher level engineer. Positions in this class do not supervise, but may provide direction and guidance to technicians.

This is a training level for inexperienced civil engineers needing to develop engineering knowledge and skills. Employees receive close to moderate supervision from a higher level engineer or engineering supervisor. Work is performed in an office setting and in the field.

EXAMPLES OF WORK:

Reviews assigned areas of plans to ensure compliance with contracts, regulations and engineering standards;
In construction inspection work, performs field inspections of construction and/or system preservation projects, inspects grading, surfacing and drainage structures for satisfactory work and adherence to plans and specifications;

Transportation Engineer II (continued)

Assists in establishing line and grade for this work, operates instruments, keeps notes and makes some computations;

Conducts basic tests on soils, asphalt, cements/concrete, aggregates, bituminous products, mental products and industrial coatings;

Performs other necessary duties as required.

ATTACHMENT J

TRANSPORTATION ENGINEER III

MINIMUM QUALIFICATIONS:

EDUCATION: Possession of a bachelor's degree in engineering from an accredited college or university.

EXPERIENCE: Two years of experience in professional engineering, specifically in highway or bridge construction engineering activities.

NOTES:

1. Additional work experience in professional engineering, or in technical engineering at the journey level or above, may be substituted on a year for year basis for the required education.
2. Possession of a Master's Degree in engineering may be substituted for the required experience.
3. Persons currently registered as Professional Engineers in the State of Maryland, or in a state with comparable requirements, are considered to have met the education requirements.

LICENSES, REGISTRATIONS & CERTIFICATES:

- 1) Mid-Atlantic Region Technician Certification Program (MARTCP)
 - a. Soils & Aggregate Compaction Technician
 - b. Concrete Field Technician
 - c. HMA Field Technician
- 2) Maryland Department of the Environment's Green Card
- 3) State Highway Administration Erosion & Sediment Control Certification Card (Yellow Card)
- 4) Employees in this classification are assigned duties that require the operation of a motor vehicle. Employees will be required to possess a motor vehicle operator's license valid in the State of Maryland.

CONDITIONS OF EMPLOYMENT:

Applicants must be in good health and physically able to perform the duties required of the position. Applicants must also be able to read, write, comprehend and fluently speak the English language.

Applicants must have a valid driver's license. Applicants must have a vehicle to travel to, from and while on the project site.

Candidates must be willing to travel and be available for work in any geographical area within scope. Candidates are subject to change of assignment as work requires. Candidates may also be required to work various shifts and on weekends depending on assignments.

Transportation Engineer III (continued)

CONDITIONS OF EMPLOYMENT: (continued)

Applicants will be required to obtain Mid-Atlantic Region Technician Certification Program (MARTCP) certifications in Soils & Aggregate Compaction Technician, Concrete Field Technician, and HMA Field Technician. They must also acquire the Maryland Department of the Environment green card and the SHA Erosion & Sediment Control yellow card. All other certifications that are deemed equivalent shall obtain reciprocity through SHA's Office of Materials & Technology for this condition of employment to be satisfied. Failure to obtain the required certifications within six (6) months of his/her start date will affect the approval and continuance of assignments, pay increments, and/or advancements.

All individuals supplied by the Consultant must also complete the SHA CORE Training courses prior to beginning work. These courses are Americans with Disabilities Act (ADA) Awareness, Limited English Proficiency (LEP), Sexual Harassment Prevention and Awareness, and Workplace and Domestic Violence Awareness.

The costs for the various certifications and re-certifications will be paid for by the consultant firm or the consultant employees, not the State Highway Administration. These costs include, but are not limited to, course fees, exam fees, reciprocity fees, time, and travel expenses. Other construction related training may also be required.

ESSENTIAL KNOWLEDGE, SKILLS, AND ABILITIES:

- Knowledge of professional civil engineering principles, practices and methods;
- Knowledge of construction standards and regulations;
- Knowledge of maps, deeds, plats and plans;
- Knowledge of effective supervisory methods and practices;
- Ability to review and interpret plans, specifications, cost estimates and engineering reports;
- Ability to make basic engineering computations and drawings;
- Ability to communicate effectively and prepare technical documents and reports;
- Ability to maintain a variety of technical records and adapt records systems for computerization;
- Ability to establish and maintain effective working relationships with other employees, engineers, contractors and the general public;
- Ability to plan, organize, coordinate, assign and evaluate the work of engineering technicians and other support staff;
- Ability to provide guidance and direction to technicians;
- Ability to physically perform essential duties.

NATURE OF WORK:

This is journey level professional civil engineering work applying engineering theories, principles and standards to a variety of construction projects and processes. Those in these positions may serve as Construction Project Engineers and provide guidance and direction to a project inspection team consisting of technicians and/or consultants.

Employees receive general supervision from a higher level engineer or engineering supervisor. Work is performed in an office setting and in the field.

Transportation Engineer III (continued)

NATURE OF WORK: (continued)

Positions assigned to the Transportation Engineer III classification are journey level positions distinguished from the Transportation Engineer II by the responsibility for project management or supervisory duties, requiring greater independent decision making and a broad range of engineering knowledge and skills.

EXAMPLES OF WORK: (Examples are illustrative only)

Serves as a Construction Project Engineer on a small to medium-size construction project;
Lends technical guidance to personnel assigned to project and reviews contractor's operations to assure technical adherence to plans and specifications;
Advises interested parties as to contractor's progress, possible over-run and under-run in quantities, and delays due to utility adjustments, lack of right-of-way, or lack of materials clearance;
Maintains accurate records and reports;
Performs and analyzes results of field tests;
Reviews plans and specifications for transportation facilities submitted for new construction, rehabilitation or improvements to ensure compliance with contracts, regulations, and engineering standards;
Answers inquiries from other agencies, interested parties and the public regarding construction projects;
Attends a variety of meetings;
Plans, organizes, coordinates, schedules, assigns and evaluates the work of engineering technicians;
Provides training and work performance counseling as needed;
Performs other necessary duties as required.

ATTACHMENT K

TRANSPORTATION ENGINEER IV

MINIMUM QUALIFICATIONS:

EDUCATION: Possession of a bachelor's degree in engineering from an accredited college or university.

EXPERIENCE: Four years experience in professional engineering, specifically in highway or bridge construction engineering activities.

NOTES:

2. Additional work experience in professional engineering, or in technical engineering at the journey level or above, may be substituted on a year for year basis for the required education.
3. Persons currently registered as Professional Engineers in the State of Maryland, or in a state with comparable requirements, are considered to have met the education requirements.

LICENSES, REGISTRATIONS & CERTIFICATES:

- 1) Mid-Atlantic Region Technician Certification Program (MARTCP)
 - a. Soils & Aggregate Compaction Technician
 - b. Concrete Field Technician
 - c. HMA Field Technician
- 2) Maryland Department of the Environment's Green Card
- 3) State Highway Administration Erosion & Sediment Control Certification Card (Yellow Card)
- 4) Employees in this classification are assigned duties that require the operation of a motor vehicle. Employees will be required to possess a motor vehicle operator's license valid in the State of Maryland.

CONDITIONS OF EMPLOYMENT:

Applicants must be in good health and physically able to perform the duties required of the position. Applicants must also be able to read, write, comprehend and fluently speak the English language.

Applicants must have a valid driver's license. Applicants must have a vehicle to travel to, from and while on the project site.

Candidates must be willing to travel and be available for work in any geographical area within scope. Candidates are subject to change of assignment as work requires. Candidates may also be required to work various shifts and on weekends depending on assignments.

Applicants will be required to obtain Mid-Atlantic Region Technician Certification Program (MARTCP) certifications in Soils & Aggregate Compaction Technician, Concrete Field Technician, and HMA Field Technician. They must also acquire the Maryland Department of the Environment green card and the SHA Erosion & Sediment Control yellow card. All other certifications that are deemed equivalent shall obtain reciprocity through SHA's Office of Materials & Technology for this condition of employment to be satisfied. Failure to obtain the

Transportation Engineer IV (continued)

required certifications within six (6) months of his/her start date will affect the approval and continuance of assignments, pay increments, and/or advancements.

All individuals supplied by the Consultant must also complete the SHA CORE Training courses prior to beginning work. These courses are Americans with Disabilities Act (ADA) Awareness, Diversity Awareness, Limited English Proficiency (LEP), Sexual Harassment Prevention and Awareness, and Workplace and Domestic Violence Awareness.

The costs for the various certifications and re-certifications will be paid for by the consultant firm or the consultant employees, not the State Highway Administration. These costs include, but are not limited to, course fees, exam fees, reciprocity fees, time, and travel expenses. Other construction related training may also be required.

ESSENTIAL KNOWLEDGE, SKILLS, AND ABILITIES:

Knowledge of professional civil engineering principles, practices and methods;
Knowledge of design principles required in construction/rehabilitation projects;
Knowledge of construction standards and regulations;
Knowledge of effective supervisory methods and practices;
Skill in reading maps, deeds, plats and complex plans;
Skill in reviewing specifications, cost estimate and engineering reports;
Skill in making accurate engineering computations and drawings;
Ability to maintain a variety of technical records;
Ability to plan, organize, coordinate, lend technical guidance, train, assign and evaluate the work of engineering technicians and other support staff;
Ability to communicate effectively both orally and written;
Ability to establish and maintain effective working relationships with other SHA employees, contractors, engineers, and the general public;
Knowledge of algebra, geometry, trigonometry and English;
Knowledge of highway construction inspection principles, practices, AASHTO and ASTM test specifications and methods;
Knowledge of surveying principles and techniques;
Knowledge of Temporary Traffic Control Standards and the Manual on Uniform Traffic Control Devices;
Ability to use engineering tables and reference materials;
Ability to effectively supervise the inspection of medium or large size highway construction projects for conformance to plans and specifications;
Ability to schedule, conduct, and document required project meetings

NATURE OF WORK:

This is senior or advanced level professional civil engineering work applying engineering theories, principles and standards to a variety of very large, highly complex road or bridge construction projects as a Construction Project Engineer or as a coordinator on multiple complex construction projects. These projects are typically characterized by their high profile and politically or environmentally sensitive nature, involving major urban interstate construction or reconstruction. Special procedures to minimize contract duration time and inconvenience to the traveling public are frequently included in the bidding documents. Due to these projects having multiple complexities or independently handling more complex engineering projects, greater decision making is required. Assignments are received orally or in written form and are general in nature permitting opportunity for the use of a degree of independent judgment. This is

Transportation Engineer IV (continued)

advanced technical work in highway and bridge construction with project management responsibilities.

Work effectiveness is determined through a review of written reports, project documentation, and completed assignments.

Employees in this class receive supervision from an Area Engineer or professional engineer.

Supervision will be exercised over Transportation Engineering Technicians.

EXAMPLES OF WORK:

Serve as the Construction Project Engineer on a very large, highly complex road or bridge construction project or as a coordinator on multiple complex construction projects;
Act as primary source of technical advice for this project staff, providing guidance, technical assistance, directions and solutions to construction and engineering problems;
Review the contract drawings and documents on a daily basis for completeness and accuracy, identifying, resolving or referring any and all discrepancies;
Direct and monitor the complete and accurate documentation of the construction project files to ensure that all files are current and all progress estimates are accurate;
Manage, direct and supervise a staff of subordinate inspectors;
Evaluate the capabilities and dependability of the project staff to ensure competent and thorough inspection of all aspects of the construction project;
Ensure that all applicable safety regulations are adhered to by all SHA and contractor personnel and visitors to the project;
Administer required conferences and meetings such as partnering, monthly job progress, pre-paving, pre-concrete placement, erosion and sediment control;
Coordinate the project(s) amount outside agencies, property owners, business owners and SHA offices to discuss work progress and resolve problems that may arise during construction.
Advise interested parties as to contractor's progress, possible over-run and under-run in quantities, and delays due to utility adjustments, lack of right-of-way, or lack of materials clearance;
Assigns, coordinates, and reviews survey work on the project;
Oversees or performs plan review, field inspections, and field investigations during design, construction and maintenance of roadways, structures and traffic control devices for conformance to plans and specifications;
Operates electronic and mechanical equipment required in surveying, field inspection, and materials testing;
Provides information to and works with engineers, and contractors to ensure adherence to standards and codes;
Prepares correspondence to respond to or inform the public, elected officials, federal, state or local government agencies of project information;
Schedules and directs the work of construction inspectors assigned to construction projects;
Monitors contract performance and project status for major construction projects;
Monitors contractors, producers, and fabricators and assures quality control of materials used in the construction of roadways, bridges and facilities, and assures materials used meet state specifications;
Prepares construction drawings based on engineer's notes, survey notes, field and records research, and engineering calculations, updates plats, and other engineering records based on "as built," survey notes and other information, and conducts engineering surveys as needed;
Compiles quantities and reviews construction reports and other data;

Transportation Engineer IV (continued)

Reviews special provisions, design agreements, and continuity of plans as necessary, and assists in determining if contract plans are complete;

Performs complex calculations to translate raw data into information for the construction of public works and other transportation-related projects;

Oversees and is responsible for the clearance of utilities and other underground obstructions prior to and during construction activities;

Oversees and is responsible for locating subsurface features through the use of construction plans and documents;

Reviews and evaluates Quality Control plans submitted by material producers and fabricators;

Provides data, analysis, recommendations and corrective measures for Erosion & Sediment Control and Maintenance of Traffic;

Reviews work of other employees;

Performs other necessary duties as required.

ATTACHMENT L

TRANSPORTATION ENGINEER V

MINIMUM QUALIFICATIONS:

Education: Possession of a bachelor's degree in engineering from an accredited college or university.

Experience: Five years experience in professional engineering, specifically in highway or bridge construction engineering activities.

LICENSES, REGISTRATIONS & CERTIFICATES:

- 1) Mid-Atlantic Region Technician Certification Program (MARTCP)
 - a. Soils & Aggregate Compaction Technician
 - b. Concrete Field Technician
 - c. HMA Field Technician
- 2) Maryland Department of the Environment's Green Card
- 3) State Highway Administration Erosion & Sediment Control Certification Card (Yellow Card)
- 4) Employees in this classification are assigned duties that require the operation of a motor vehicle. Employees will be required to possess a motor vehicle operator's license valid in the State of Maryland.
- 5) Employees in this class may be required to possess a Professional Engineer, Land Surveyor or Property Line Surveyor License.

Notes:

1. Additional work experience in professional engineering, or in technical engineering at the journey level or above, may be substituted on a year for year basis for the required education.
2. Possession of a Master's Degree in engineering may be substituted for one year of the required experience.
3. Persons currently registered as Professional Engineers in the State of Maryland, or in a State with comparable requirements, are considered to have met the education requirements.

CONDITIONS OF EMPLOYMENT:

Applicants must be in good health and physically able to perform the duties required of the position. Applicants must also be able to read, write, comprehend and fluently speak the English language.

Applicants must have a valid driver's license. Applicants must have a vehicle to travel to, from and while on the project site.

CONDITIONS OF EMPLOYMENT: (continued)

Candidates must be willing to travel and be available for work in any geographical area within scope. Candidates are subject to change of assignment as work requires. Candidates may also be required to work various shifts and on weekends depending on assignments.

Applicants will be required to obtain Mid-Atlantic Region Technician Certification Program (MARTCP) certifications in Soils & Aggregate Compaction Technician, Concrete Field Technician, and HMA Field Technician. They must also acquire the Maryland Department of the Environment green card and the SHA Erosion & Sediment Control yellow card. All other certifications that are deemed equivalent shall obtain reciprocity through SHA's Office of Materials & Technology for this condition of employment to be satisfied. Failure to obtain the required certifications within six (6) months of his/her start date will affect the approval and continuance of assignments, pay increments, and/or advancements.

All individuals supplied by the Consultant must also complete the SHA CORE Training courses prior to beginning work. These courses are Americans with Disabilities Act (ADA) Awareness, Limited English Proficiency (LEP), Sexual Harassment Prevention and Awareness, and Workplace and Domestic Violence Awareness.

The costs for the various certifications and re-certifications will be paid for by the consultant firm or the consultant employees, not the State Highway Administration. These costs include, but are not limited to, course fees, exam fees, reciprocity fees, time, and travel expenses. Other construction related training may also be required.

ESSENTIAL KNOWLEDGE, SKILLS, AND ABILITIES:

Knowledge of professional civil engineering principles, practices and methods;
Knowledge of design principles required in construction/rehabilitation projects;
Knowledge of construction standards and regulations;
Knowledge of effective supervisory methods and practices;
Skill in reading maps, deeds, plats and complex plans;
Skill in reviewing specifications, cost estimate and engineering reports;
Skill in making accurate engineering computations and drawings;
Ability to maintain a variety of technical records;
Ability to plan, organize, coordinate, lend technical guidance, train, assign and evaluate the work of engineering technicians and other support staff;
Ability to communicate effectively both orally and written;
Ability to establish and maintain effective working relationships with other SHA employees, contractors, engineers, and the general public;
Knowledge of algebra, geometry, trigonometry and English;
Knowledge of highway construction inspection principles, practices, AASHTO and ASTM test specifications and methods;
Knowledge of surveying principles and techniques;
Knowledge of Temporary Traffic Control Standards and the Manual on Uniform Traffic Control Devices;
Ability to use engineering tables and reference materials;

ESSENTIAL KNOWLEDGE, SKILLS, AND ABILITIES: (Continued)

Ability to effectively supervise the inspection of medium or large size highway construction projects for conformance to plans and specifications;
Ability to schedule, conduct, and document required project meetings

Nature of Work:

This is expert level professional civil engineering work performing and applying engineering theories, principles and standards to a variety of very large, highly complex road or bridge construction projects as a Construction Project Engineer or as a coordinator on multiple complex construction projects. These projects are typically characterized by their high profile and politically or environmentally sensitive nature, involving major urban interstate construction or reconstruction. Special procedures to minimize contract duration time and inconvenience to the traveling public are frequently included in the bidding documents. Due to these projects having multiple complexities or independently handling more complex engineering projects, greater decision making is required. Assignments are received orally or in written form and are general in nature permitting opportunity for the use of a degree of independent judgment. This is advanced technical work in highway and bridge construction with project management responsibilities.

Work effectiveness is determined through a review of written reports, project documentation, and completed assignments.

Employees in this class receive supervision from a higher level engineering manager.

Supervision will be exercised over Transportation Engineering Technicians and lower classified Transportation Engineers.

EXAMPLES OF WORK: (Examples are illustrative only)

Serve as the Construction Project Engineer on a very large, highly complex road or bridge construction project or as a coordinator on multiple complex construction projects;
Act as primary source of technical advice for this project staff, providing guidance, technical assistance, directions and solutions to construction and engineering problems;
Review the contract drawings and documents for completeness and accuracy, identifying, resolving or referring any and all discrepancies;
Direct and monitor the complete and accurate documentation of the construction project files to ensure that all files are current and all progress estimates are accurate;
Plan, organize, coordinate, manage, direct and supervise a staff of subordinate engineers and technicians;
Provide training and work performance reviews/counseling as needed;
Evaluate the capabilities and dependability of the project staff to ensure competent and thorough inspection of all aspects of the construction project;
Ensure that all applicable safety regulations are adhered to by all SHA and contractor personnel and visitors to the project;
Administer required conferences and meetings such as partnering, monthly job progress, pre-paving, pre-concrete placement, erosion and sediment control;
Coordinate the project(s) amount outside agencies, property owners, business owners and SHA offices to discuss work progress and resolve problems that may arise during construction.

EXAMPLES OF WORK: (continued)

Advise interested parties as to contractor's progress, possible over-run and under-run in quantities, and delays due to utility adjustments, lack of right-of-way, or lack of materials clearance;

Assigns, coordinates, and reviews survey work on the project;

Oversees or performs plan review, field inspections, and field investigations during design, construction and maintenance of roadways, structures and traffic control devices for conformance to plans and specifications;

Operates electronic and mechanical equipment required in surveying, field inspection, and materials testing;

Provides information to and works with engineers, and contractors to ensure adherence to standards and codes;

Prepares correspondence to respond to or inform the public, elected officials, federal, state or local government agencies of project information;

Schedules and directs the work of construction inspectors assigned to construction projects;

Monitors contract performance and project status for major construction projects;

Monitors contractors, producers, and fabricators and assures quality control of materials used in the construction of roadways, bridges and facilities, and assures materials used meet state specifications;

Prepares construction drawings based on engineer's notes, survey notes, field and records research, and engineering calculations, updates plats, and other engineering records based on "as built," survey notes and other information, and conducts engineering surveys as needed;

Compiles quantities and reviews construction reports and other data;

Reviews special provisions, design agreements, and continuity of plans as necessary, and assists in determining if contract plans are complete;

Performs complex calculations to translate raw data into information for the construction of public works and other transportation-related projects;

Oversees and is responsible for the clearance of utilities and other underground obstructions prior to and during construction activities;

Oversees and is responsible for locating subsurface features through the use of construction plans and documents;

Reviews and evaluates Quality Control plans submitted by material producers and fabricators;

Provides data, analysis, recommendations and corrective measures for Erosion & Sediment Control and Maintenance of Traffic;

Reviews work of other employees;

Performs other necessary duties as required.

ESSENTIAL KNOWLEDGE, SKILLS AND ABILITIES:

Knowledge of professional civil engineering principles, practices and methods;

Knowledge of design principles, strength of materials and stress analysis required in planning construction/rehabilitation projects;

Knowledge of computer applications relative to engineering projects;

Knowledge of construction standards and regulations

Knowledge of effective supervisory methods and practices;

Skill in reading maps, deeds, plats and plans;

ESSENTIAL KNOWLEDGE, SKILLS AND ABILITIES: (continued)

Skill in reviewing and interpreting plans, specifications, cost estimates and engineering reports;

Transportation Engineer V (continued)

Skill in making accurate engineering computations and drawings;

Ability to maintain a variety of technical records and adapt records systems for computerization;

Ability to plan, organize, coordinate, assign and evaluate the work of engineering technicians and other support staff;

Ability to communicate effectively and to prepare technical reports;

Ability to establish and maintain effective working relationships with other employees, engineers, architects and the general public;

Ability to physically perform essential duties.

ATTACHMENT M

TRANSPORTATION ENGINEERING MANAGER I

MINIMUM QUALIFICATIONS:

Education: Possession of a bachelor's degree in engineering from an accredited college or university.

Experience: Seven years experience in professional engineering, including one year of supervisory experience.

LICENSES, REGISTRATIONS & CERTIFICATES:

- 1) Mid-Atlantic Region Technician Certification Program (MARTCP)
 - a. Soils & Aggregate Compaction Technician
 - b. Concrete Field Technician
 - c. HMA Field Technician
- 2) Maryland Department of the Environment's Green Card
- 3) State Highway Administration Erosion & Sediment Control Certification Card (Yellow Card)
- 4) Employees in this classification are assigned duties that require the operation of a motor vehicle. Employees will be required to possess a motor vehicle operator's license valid in the State of Maryland.
- 5) Employees in this class may be required to possess a Professional Engineer, Land Surveyor or Property Line Surveyor License.

Notes:

1. Additional work experience in professional engineering, or in technical engineering at the journey level or above, may be substituted on a year for year basis for the required education.
2. Possession of a Master's Degree in engineering may be substituted for one year of the required experience.
3. Persons currently registered as Professional Engineers in the State of Maryland, or in a State with comparable requirements, are considered to have met the education requirements.

CONDITIONS OF EMPLOYMENT:

Applicants must be in good health and physically able to perform the duties required of the position. Applicants must also be able to read, write, comprehend and fluently speak the English language.

Applicants must have a valid driver's license. Applicants must have a vehicle to travel to, from and while on the project site.

Candidates must be willing to travel and be available for work in any geographical area within scope. Candidates are subject to change of assignment as work requires. Candidates may also be required to work various shifts and on weekends depending on assignments.

Applicants will be required to obtain Mid-Atlantic Region Technician Certification Program (MARTCP) certifications in Soils & Aggregate Compaction Technician, Concrete Field Technician, and HMA Field Technician. They must also acquire the Maryland Department of the Environment green card and the

Transportation Engineering Manager I (continued)

CONDITIONS OF EMPLOYMENT: (continued)

SHA Erosion & Sediment Control yellow card. All other certifications that are deemed equivalent shall obtain reciprocity through SHA's Office of Materials & Technology for this condition of employment to be satisfied. Failure to obtain the required certifications within six (6) months of his/her start date will affect the approval and continuance of assignments, pay increments, and/or advancements.

All individuals supplied by the Consultant must also complete the SHA CORE Training courses prior to beginning work. These courses are Americans with Disabilities Act (ADA) Awareness, Limited English Proficiency (LEP), Sexual Harassment Prevention and Awareness, and Workplace and Domestic Violence Awareness.

The costs for the various certifications and re-certifications will be paid for by the consultant firm or the consultant employees, not the State Highway Administration. These costs include, but are not limited to, course fees, exam fees, reciprocity fees, time, and travel expenses. Other construction related training may also be required.

ESSENTIAL KNOWLEDGE, SKILLS, AND ABILITIES:

Knowledge of professional civil engineering principles, practices and methods;
Knowledge of design principles required in construction/rehabilitation projects;
Knowledge of construction standards and regulations;
Knowledge of computer applications suitable to construction projects;
Knowledge of effective managerial methods and practices;
Knowledge of algebra, geometry, trigonometry and English;
Knowledge of highway construction inspection principles, practices, AASHTO and ASTM test specifications and methods;
Knowledge of surveying principles and techniques;
Knowledge of Temporary Traffic Control Standards and the Manual on Uniform Traffic Control Devices;
Ability to organize and coordinate human and material resources in the carrying out of large and complex construction activities;
Ability to assure the effective application of proper engineering standards and principles to the project;
Ability to maintain a variety of technical records;
Ability to plan, organize, coordinate, lend technical guidance, train, assign and evaluate the work of engineering technicians and other support staff;
Ability to communicate effectively both orally and written;
Ability to establish and maintain effective working relationships with other SHA employees, contractors, engineers, and the general public;

ESSENTIAL KNOWLEDGE, SKILLS, AND ABILITIES:

Ability to use engineering tables and reference materials;
Ability to effectively supervise the inspection of medium or large size highway construction projects for conformance to plans and specifications;
Ability to schedule, conduct, and document required project meetings
Skill in reading maps, deeds, plats and complex plans;
Skill in reviewing specifications, cost estimate and engineering reports;
Skill in making accurate engineering computations and drawings;

Transportation Engineering Manager I (continued)

Nature of work:

This is a supervisory, administrative and managerial transportation engineering position which applies engineering theories, principles and standards to a variety of large, highly complex road or bridge construction projects. These managers are typically assigned area-wide responsibility. Work includes managing and reviewing work on numerous construction projects, providing quality assurance reviews, coordinating work with other offices and agencies, and providing guidance and training to Construction Project Engineers and subordinate staff. The projects can be high profile, politically or environmentally sensitive, involve major urban interstate construction or reconstruction or have high community involvement and coordination. This position may require expert level knowledge within one or more highly specialized areas within the field of Transportation Engineering such as highway, bridge, rail, traffic, or hydraulics.

Work effectiveness is determined through a review of written reports, documentation, and completed assignments.

Employees in this class receive supervision from a higher level engineering manager.

Supervision will be exercised over Transportation Engineering Technicians and Transportation Engineers.

EXAMPLES OF WORK: (Examples are illustrative only)

Plans, manages, organizes, coordinates, supervise and evaluates the work of those assigned to construction projects within a designated area;
Act as a source of technical advice for project staff, provide guidance, technical assistance, directions and solutions to construction and engineering problems;
Review the contract drawings and documents for completeness and accuracy, identifying, resolving or referring any and all discrepancies;
Assure the effective project management of a variety of construction projects;
Assure the effective conduct of administrative and fiscal activities, including proper documentation, contract and budget monitoring;
Provide training and work performance reviews/counseling as needed;
Review the capabilities and dependability of the project staff to ensure competent and thorough inspection of all aspects of the construction project;
Ensure that all applicable safety regulations are adhered to by all SHA and contractor personnel and visitors to the project;
Attend required conferences and meetings such as partnering, monthly job progress, pre-paving, pre-concrete placement, erosion and sediment control;

EXAMPLES OF WORK: (continued)

Provide assistance to the Construction Project Engineer with outside agencies, property owners, business owners and SHA offices to discuss work progress and resolve problems that may arise during construction.
Monitor contractor's progress, possible over-run and under-run in quantities, and delays due to utility adjustments, lack of right-of-way, or lack of materials clearance;
Monitors contractors, producers, and fabricators and assures quality control of materials used in the construction of roadways, bridges and facilities, and assures materials used meet state specifications;
Reviews special provisions, design agreements, and continuity of plans as necessary, and assists in determining if contract plans are complete; Performs other necessary duties as required.