

Title	Pavement & Material Engineering Senior Specialist
Vacancy Number	MoPW/SRTAP/PSC/1400-60
Ministry	Ministry of Public Works
Organization	Program for Service life enhancement and construction cost reduction of roads (PSC)
Project	Sustainable Reform & Technical Assistance Project
Duty Station	Kabul
Duration	1 year (with the possibility of extension)
No of Jobs	1
Nationality	Afghan
Sex	Male/Female
Salary Range	NTA Salary Scale (Grade B3 – B5)
Announcing Date	22 May 2021
Closing Date	03 June 2021
Job Type	Engineering
Shift	Full Time (chances of homebased or part time contract is also available, based on negociation)
Job Status	Sourcing
Experience	Specific 2 years, General 8 years

### **Background:**

The Ministry of Public Works (MoPW) is responsible for the planning, design, procurement, implementation, monitoring, and maintenance of the various transportation infrastructure projects such as roads, bridges, and its relevant drainage and retaining/protection structures in the government of the Islamic Republic of Afghanistan.

On a mission to reduce project costs and extend the service life of road infrastructures in Afghanistan, the MoPW aims to embark on a project to *develop new Standard Specifications for Roads and highway infrastructures* by taking into account the national and international standards, country's climatic and environmental conditions, economic situation, contractual procedures, safety requirements, local construction materials' engineering properties, and technical aspects of the established design criteria for designing of roads and highway structures.

For the effective accomplishment of this purpose, the ministry intends to establish a team of highly experienced experts with diverse affiliations and extensive partnerships with industry and government organizations that will collaborate for revising the available technical specifications and developing new Standard Specifications for the design and construction of roadways and highway infrastructures with sufficient quality to be adopted by the MoPW and other relevant highway agencies/contractors functioning in Afghanistan. The newly developed Standard Specifications will serve as a standard

reference in the construction contracts of roads and highway infrastructure (bridge, culvert, retaining/drainage structures) projects and outline minimum requirements for them. It will primarily encompass the limitations and standards for materials, equipment, and construction requirements that will ensure the delivery of quality, cost-effective, reliable, safe, and durable road and highway structure projects.

### **Scope of Work/Job Summary:**

The MoPW is looking to recruit a professional *Pavement & Material Engineering Senior Specialist* with extensive experience in the analysis, design, construction, and maintenance of various pavement types, as well as exhibit a thorough understanding of advanced pavement materials and current specifications.

The incumbent will function as a member of the team for developing the Standard Specifications and will work under the direct supervision, guidance, and direction of the International SME and leadership of the Team Leader/ Project Manager. The position holder will utilize their qualifications and experience in establishing specifications and guidelines for managing the roads and highway construction projects concentrating on designing, building, and maintaining pavement structures, as well as recommending material specifications based on field and laboratory tests, establishing acceptance standards for highway materials, The position will collaborate with the team of experts to develop a comprehensive Standard Specification for road projects in Afghanistan that is aligned with both the country's needs and the regional/international standards.

The potential candidate will remain active through all project phases and should work in close coordination with the senior management in the MoPW. He/She must directly report to the Team Leader/ Project Manager of the team.

### **Duties & Responsibilities:**

The selected candidate will function as a member of the team for developing Standard Specifications and provide necessary technical expertise in the mentioned area who will be responsible to perform the following tasks:

- Demonstrate thorough knowledge of engineering design principles for flexible/rigid pavements, with a particular emphasis on condition assessment and rehabilitation design, and having a broad awareness of materials science of concrete, aggregates, soil, and asphalt pavement engineering;
- Share expertise related to all aspects of designing, building, and maintaining pavement structures and materials used;
- Well knowledge of structure response model;
- Perform needs assessment and identify problems in current practices through field studies and regular meetings with engineers from various disciplines to ensure the compilation of a comprehensive standard specification with high accuracy and quality;
- Cooperate in the capacity building of field engineers in supervising and certifying construction in accordance with the contract conditions;
- Develop guidelines and checklists for supervising the Contractor's compliance with material specifications and testing;
- Develop, compare, and modify standards and procedures for reviewing and approving the quality test results of pavement materials;
- Demonstrate a comprehensive knowledge of currently adopted design, procurement, and construction procedures and approaches for infrastructural projects in Afghanistan;
- Develop and maintain effective working relationships with seniors and the standard specification team and provide the necessary advice and support to them;
- Ensure that the developed Standards Specification complies with national and international standards, country's climatic and environmental conditions, economic situation, and the engineering properties of available construction materials;
- Ensure projects meet legal, environmental, and health/ safety standards through the adoption of newly developed standard specifications;

- Plan and coordinate the activities for the development of standard specifications to ensure compliance to procedures and regulations as required by the MoPW;
- Assist the team in disseminating and publishing the finalized standard specification draft;
- Complete all work in conformance with the MoPW core values;
- Assist the Project Manager in reviewing/preparing the progress reports (weekly, monthly, quarterly);
- Assist the team in drafting the standard specifications and oversee the writing quality;
- Ensure that the language used in draft Standard Specifications is clear, simple, precise, and appropriate to the intended audience; and
- Other duties as assigned/required by the senior management.

### **Skills & Competencies:**

- Demonstrate in-depth knowledge of pavement materials' engineering behavior, the production of these materials, and their deterioration manner under the combined effects of traffic and the environment;
- Have a thorough understanding of penetration grading, viscosity grading, and SUPERPAVE grading systems of asphalt binder;
- Experience in advanced rigid/flexible pavement analysis and design in compliance with the MoPW standards and regional as well as international standards, including IRC, AASHTO, ASTM;
- Hands-on experience with current pavement design methods and software such as AASHTOWare, StreetPave, WinPAS, etc. would be an asset;
- Experience in adopting Mechanistic-Empirical Design methods for pavement design;
- Acquaintance with the Asphalt Institute Method for pavement design;
- Able to perform service life and durability evaluations for pavement and highway structures;
- Demonstrate technical expertise in pavement condition assessments - flexible, rigid, and composite; expertise in various pavement rehabilitation methods and techniques as per current industry practice;
- Experience in material characterization through testing;
- Expertise in asphalt mix design (Marshall and SuperPave) and concrete mix design;
- Acquaintance with national, regional standards, and international standards, such as ASTM, AASHTO, BS, Indian Standards (IS) for pavement material testing and quality controlling;
- Experience in pavement construction and pavement maintenance/rehabilitation and have a good understanding of non-destructive pavement testing, such as FWD and GPR survey;
- Know the process of reviewing and approval of the submitted work program by the contractor as well as monitoring the work progress during the construction;
- Able to develop specifications/guidelines and write clear, concise, and accurate technical reports/documents;
- Preferably, fully conversant with the standard forms of contracts used in highway projects;
- Highly motivated and enthusiastic team player with a strong desire to succeed;
- Able to manage conflicting priorities; and
- Demonstrate leadership in handling and working with multidisciplinary teams.

### **Job Requirements:**

- A bachelor's degree holder in Civil engineering with emphasis on pavement materials and design or a master's in civil engineering, transportation, or related field (preferred) with specialization in pavement engineering and construction materials technology;
- Have at least 8 years of experience in leading large-scale highway projects, mainly focused on pavement design, pavement materials, construction, maintenance, testing, technical specification

- etc.;
- Having 2 years of experience in preparing technical documents and developing standards/manuals is highly preferable;
  - Must be fully familiar with the currently practiced construction techniques and standards for highway structures in Afghanistan and have the knowledge of methodology concerning standard specification development;
  - Must have completed several high-profile infrastructural projects in high-profile companies/organizations;
  - Must demonstrate robust technical writing and English communication skills;
  - Proven organizational and problem-solving skills;
  - Able to travel to the remote area all over Afghanistan, collect required data, and work as part of a team;
  - Perform any other job-related duties and tasks as assigned by the senior management.

#### **Required Documents:**

- CV with a cover letter for the relevant position;
- Copy of verified Degree by the Ministry of Higher Education;
- Copy of verified Afghan ID Card (Tazkera) or Passport;
- Copy of verified last Posting Contract; and
- Copy of other relevant documents that support the application.

#### **Submission Guideline:**

Interested candidates are requested to forward their applications, detailed CV and other required documents to [jobs.mopw@yahoo.com](mailto:jobs.mopw@yahoo.com) indicate the vacancy number (**MoPW/SRTAP/PSC/1400-60**) and the post title (**Pavement & Material Engineering Senior Specialist**) in the subject line when applying by email to the Human Resource Unit – Sustainable Reform and Technical Assistance Project of Ministry of Public Works (MoPW) at Kabul, Afghanistan.

**Address:** SRTAP Office, Railway Building, Kabul-Jalalabad Rd., opposite KMTC, MoPW, Kabul, Afghanistan.

Note: Only short-listed candidates will be contacted.