

Title	Pavement and Material Engineering Senior Specialist
Vacancy Number	MoPW/SRTAP /1400-78
Ministry	Ministry of Public Works
Organization	Survey and Design Directorate/MoPW
Project	STRAP
Duty Station	Kabul, Including Provinces
Duration	1 Year (with possibility of extension)
No of Jobs	2
Nationality	Afghan
Sex	Male/Female
Salary Range	According to NTA Salary Scale (Grade-B)
Announcing Date	27/May/2021
Closing Date	08/June/2021
Job Type	Engineering
Shift	Full Time
Job Status	Sourcing
Experience	Specific 5 years, General 7 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.

The Directorate of Survey and Design is a technical survey (Feasibility study, topographical survey, Geotechnical Investigation, Hydrology and hydrologic design,) and design (Geometric Design, pavement design, and structural design and bridge design) of all roads and bridges projects as per national and international standards. The survey and design process are required to complete as per approved and standard computer programs.

The survey and design directorate of MoPW is responsible to prepare standard drawings as per mentioned standards and approved programs applicable at construction site. The ministry is recruiting data collectors to carry out pavement and roadway structures' design and technical surveys of the various Road Network and of rural roads throughout Afghanistan.

Scope of Work/Job Summary:

Under the supervision of the Sr. Geotechnical Engineer, Geotechnical Engineer will provide site and laboratory data, and geotechnical report, and, he will assistance Sr. Geotechnical Engineer to achieve the target plan, and geotechnical engineer will supervision civil Servant counterparts in all aspects of MOPW's road and bridge projects. The Geotechnical Engineer will have a sound knowledge of engineering geology and research technical, engineering geological developments and will support the SADD/MoPW in the implementation of geotechnical issues in Afghanistan.

Duties & Responsibilities:

The Geotechnical Engineer will be a member of the Geotechnical team of MoPW. and he will do Specific responsibilities and duties include but are not limited to:

- Preparation of Daily, weekly, Monthly and Quarterly reports.
- Conduct/review the pavement structure design for flexible and rigid pavement considering the project site's climatic and environmental conditions, economic situation, traffic loading and roadbed soil requirements;
- Conduct/review the structure response model for the flexible and rigid pavements and determination of the performance life against the rutting, fatigue cracking and thermal cracking defects or deteriorations. The knowledge of any relevant software is preferable;
- Life cycle cost analysis of different alternative of pavement structures and determinate of the

most economic and site feasible one for the project;

- Conduct/review the traffic survey analysis for the design of pavement structure considering the MoPW regulations for the weight and dimensions of high tonnage vehicles;
- Analyzing the traffic growth factor for the ESAL analysis considering the country's economic growth and GDP situations;
- Preparation of traffic counting templates used by the traffic counters considering the classification of vehicles exists in the country;
- Instructing the geotechnical and soil testing engineers to incorporate the parameters required for the design of pavement structures in the geotechnical report;
- Modification of the construction material or technical specification considering the project size, type and site requirements;
- Proposing the material type and requirements for the for the construction of pavement structures, embankments, concrete works, masonry works, etc.;
- Familiarization with the polymer modified bitumen (PMB) and its usage in the production of asphalt concrete to avoid the permanent deformation and fatigue cracking;
- Proper knowledge for the selection suitable type of conventional asphalt concrete (fine and course) to avoid permanent deformation and fatigue cracking;
- Familiarization with the marshal stability method for the asphalt concrete mix design. The knowledge about the super pave mix design method is a plus point;
- Assisting the quality assurance and quality control engineers in preparation of remedy action plans for the defects occurring during the construction of pavement structures and relevant structures and roadway features;
- Having knowledge about causes of common defects of pavement layers in the country and proposing suitable solution considering the project site's requirements;
- Work with the construction supervision team to ensure quality of mix, materials and works meet the specifications;
- Review the Mix design of concrete, asphalt and modify the design for best practice;
- Should have comprehensive skill of material (Soil, Sand, aggregate, Steel, admixture & Asphalt) testing;
- Should have Practical experience with standards (AASHTO, MS Series, ASTM & ANSA);
- Provide better replacement for poor material with considering of cost based on project characteristics;
- Consider the economy in all portion of material and pavement of project;
- Travel to the project site and inspect the project activities based on the design drawings, technical specifications, contract documents & BoQs if required;
- Provide input to the technical team, review the test reports, technical recommendations, design reports and studies and issue comments for incorporation or compliances of nonconformance instances based on Contract provisions;
- Monitor Pavement design process, investigations, proposal and recommendations for approval;
- Conduct technical meetings with the counterparts and team members to efficiently address issues and concerns about pavement and materials;

- Monitoring and checking calibration of plants, equipment and testing instruments if instructed by the PMO director;
- Supervising quality control throughout the construction and production process;
- Helping to ensure that products comply with national and international legal and quality standards;
- Assist the construction supervision consultant in the issues relevant to quality related instructions, reviews, nonconformance and recommendations on the preparation of quality assessment reports;
- Assist in maintaining organized document archive for efficient tracking of all quality related documents, data, RFIs, NCRs, submittals, documents, reports, approvals etc.;
- Should have practical skill in the usage of AutoCAD and pavement design software;
- Regular site visits as directed by Program director of PMO.
- Any other task assigned by the program director.
- Work closely with road geometric design engineer and collaborating with various other engineers and construction staff including structural engineers, road and bridge engineers.
- Prepare accurate and standard geotechnical reports.
- Perform any other duties in line with these ToR's as required by the SADD/MoPW director and Management.

Job Location:

Kabul, Including Provinces

Skills & Competencies:

- The interested candidate should at least have 5 years work experience with master degree in civil engineering with specialization in transportation engineering, road constructions, material engineering and 7 years with bachelor degree in civil engineering with relevant experience in pavement and material engineering (pavement design, material specification, technical specifications, mix design, etc.) of large-scale infrastructure projects.
- Good written and oral communication skills in English, Pashto and Dari Languages.
- Professional familiarity with the International and National Highway Pavement design and Standards required

Job Requirements:

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- Master degree in Civil Engineering, Road Flexible/ Rigid Pavement Engineering with 3 years of experience and Bachelor degree with 4years of experience.
- Work Experiences: At least 7 years of work experience in implementation of large-scale road and bridge projects is required.
- Previous experience working in a UN or World Bank and Government project, INGO is an advantage.
- Knowledge of standard practices of Pavement engineering.
- Required verbal and written communication skills in English.
- Proven organizational and problem-solving skills. Co-operative and flexible work style to work in a team environment
- Willingness to learn new skills and acquire new knowledge
- Working knowledge of MS Office, AutoCAD and GIS.
- Willing and ready to travel extensively to visit project sites.
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Required Documents:

- CV with an application form 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;
- Copy of other relevant documents seem to be necessary.

Submission Guideline:

Interested candidates are requested to forward their applications; detailed CV and other required documents **hr.mopw@yahoo.com** indicate the vacancy number (**MoPW/SRTAP /1400-78**) and the post title (**Pavement and 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.

Office Address:

SRTAP Office, Railway Building, Kabul Jalalabad Road, in front of KMTC, MoPW, Kabul, Afghanistan.

Only short-listed candidates will be notified for written exam and interview