Terms of Reference

Selection of IT Specialist to support implementation of IMIS for HPPWD/HPRIDC under HP State Road Transformation Project (HPSRTP)

1. Introduction

The Public Works Roads Department (HPPWD) & State Roads Project (HPRIDC), Government of Himachal Pradesh is responsible for construction and maintenance of the state roads infrastructure. The HPPWD now intends to transform its business processes through the use of information technology and to make it accessible through internet and roll it out to the all the field offices across the State. The implementation of ICT infrastructure for HPPWD/HPRIDC was initiated under the World Bank funded HPSRP-I but could not be completed due to administrative/technical reasons. In view of the urgency and importance of use of IT technology in infrastructure projects, the World Bank has approved implementation of Information Management Integrated System (IMIS) for HPPWD/HPRIDC under the HP State Road Transformation (Project) which has become effective in October, 2020. A part of World Bank loan shall be utilized to implement the intended IMIS for HPPWD/HPRIDC.

2. Objectives of Himachal Pradesh HPPWD Computerization Project (HPPWDCP)

The existing infrastructure of the Himachal Pradesh Public Works Department has to be modernized and geared up to meet the demand for growth of the sector and the economy of the State. Lack of an integrated information management system in the department leads to improper and inefficient monitoring of major projects and huge manpower and time are lost in procuring variety of information from the field and then consolidating the same for periodic reviews at Govt. level. As this manual information passes through several channels/offices, its quality becomes unreliable putting the authorities into an embarrassing situation. It affects the overall image and credibility of the department. It is one of the major activities envisaged to be implemented under the World Bank funded HPSRTP, so improve overall business processes for efficient and transparent working of the department. The project development objectives are as follows:

2.1. To improve the project management functions of the Department, including project reporting and voluntary dissemination of information using modern ICT tools so that the public works can be delivered more efficiently.

2.2. To establish computerized Road Maintenance Management System (RMMS) to streamline the road maintenance activities of the Department.

2.3. To integrate core activities of the Department, by way of automated business processes and work flow system and to facilitate informed decision making, using electronic information database, captured while working through the system.

The key performance indicators are:

a) Increased asset value of road network through faster implementation of larger number of projects resulting from reduced project cycle time and faster workflow based approvals.

b) Improved road network condition through better planning and maintenance.

c) Improved decision making based on MIS reports, on demand project reporting and voluntary dissemination of information to stakeholders.

To fulfill the above objectives, the key issues relating to the enhanced use of IT to support HPPWD functions which need to be addressed, are outlined below:

a) Adoption and full use of the system by departmental users which include sensitizing and training users as well as thrust from the senior officers of the department.

b) /gap between the existing manual business processes and the computerized online system processes to be utilized in the future.

c) Acceptance of the system by stakeholder organizations.

d) Providing networking connectivity to users in field offices.

e) Annual maintenance of the system.

3. Scope of work for the IT Specialist

Program management activity is essentially required to create dedicated full time efforts to steer the proposed online Application i.e. IMIS for HPPWD/HPRIDC. The scope of individual IT Specialist would include reviewing/updating existing As-is & To-Be reports, prepared by the PMC, recommending solution based on updated To-Be report, review of procurement documents for project System Integrator(SI), monitoring the work of System Integrator, networking and software; development of training strategy and implementation; planning on data migration; technical assistance for organizational change management process and co-coordinating with stake-holders to successfully operationalize and institutionalize the system.

The IT Specialist is expected to provide the following strategic directions to the client in addition to the tasks captured in the above para.

a)   An Audit Framework to monitor the performance of the entire system including connectivity and other external inputs;

b)   Advising the client on state of the art technology adoption and best practices in the similar systems in the road sector;

c)   Liaising with the hardware and the software and advising the client on the various enhancements which may be required for the better performance of the application. The brief scope of this application, to be developed and implementation by the S.I., includes:-

The SI will Review the As-Is, To-Be, FRS prepared by PMC, suggest changes to the Department and finalize the FRS before implementation. The Departments can also add or remove processes/modules/functionalities/items/ sub-items before or during SRS finalization to achieve the overall goal of the Project. Deliverables to be submitted include but not limited to:

-   Development of System Requirement Specifications (SRS) using Unified Modelling Language (UML)

- Design of Application Architecture
- Design of Security Architecture
- Design of Workflow with well-defined business rule for the solution
- Design of Overall IT Infrastructure
- Design of Logical and Deployment Architecture
- Design of Integration methodology
- Design of Change Management Policy
- Design of Quality Assurance Plan & Methodology
- Design of Transition policy and Plan, during and at the end of the tenure of the agreement or termination of the agreement

It is recommended for SI to adopt IndEA (India Enterprise Architecture) Framework for developing a holistic architecture treating the Government as a single enterprise.

The **COTS/Packaged Application/Application Development solution** should have a proven track record in the Government Sector.

Design a portal and the content to be displayed on the portal which will include but not limited to:
- Information About Departments/ Branches
- Services Offered
- Citizen Charter
- Dashboards
- Login Components
- Search Engine
- Other generic portal features
- Design data purging and optimization policies
- Design reports as required by the Departments

d)   A document outlining the Disaster recovery (DR) and Business continuity planning (BCP) strategy for the department

The IT Specialist selected for this assignment will not be eligible to bid for any of the downstream components or other procurement related to setting up proposed online solution for HPPWDCP.

The services of the IT Specialist would be required for about 18 months up to the setting up online applications by System Integrator and thereafter for another one year during the operationalization/sustenance check with phases. This engagement period is divided into three phases described as under, but some activities under the phases may run parallel:

3.1.   **Phase 1 – Preparation of bidding documents, support for Bid Management, and Vendor Selection (About 6 Months)**

The HPPWD/HPRIDC plans to engage System Integrator(s) and other consultants to develop & rollout the proposed online application across the state. IT Specialist shall provide necessary technical and management support to the HPPWD/HPRIDC in the entire process of selection of System Integrator and any other consultant proposed to be engaged for developing & rolling out application to all HPPWD& HPRIDC offices. Based on the above study and IT/IS strategy, as already completed by the PMC the IT Specialist shall prepare or modify the procurement documents wherever required. The scope of the IT Specialist in this phase shall include, but not limited:

3.1.1.   Review and finalize the RFB prepared by the PMC and finalized/cleared by the Bank but needs revision as the bidding process on that RFB has been unsuccessful.

3.1.2.   Assist the department in managing the procurement process for selection of the System Integrator. This will include review and the Request for Bid (RFB) as per the requirements of the accepted High Level solution using the Standard bidding Document (SBD) of the World Bank.

3.1.3   Assist the department   to answer all the technical queries raised during the Pre-Proposal meeting

3.1.4   Assist the department in short listing consultants/system integrators, evaluating proposals received from them and preparing the Evaluation Reports.

3.1.5   Assist the department in preparing the contract along with Service Level Agreement (SLA) with the successful vendor. The IT Specialist shall prepare this in consultation with all stakeholders involved.

3.2   Phase 2 - Project Management (About 18 months)

The IT Specialist shall provide proactive inputs to the department as well as to the consultant firms engaged under the project to ensure that results are achieved as per the desired objectives. The activities during the project management stage shall include, but not limited, to the following:

3.2.1   The IT Specialist shall monitor the activities of the System Integrator (SI) for the project progression of all the project components as per the laid down project plans.

3.2.2   The IT Specialist shall set up the controls and mechanisms for monitoring the progress of the project and work of SI through defined SLA. It will include supervising the functional analysis, system requirement study, deployment of the proposed application, commissioning of IT infrastructure, setting up networking infrastructure, software deployment and implementation, data migration, digitization of the existing data through manual files, training schedule, etc.

3.2.3   Throughout the implementation period, the IT Specialist shall undertake quality audits (including regular project audits, inspection and review of the deliverables, audit of the quality processes followed by the vendor(s), statistical sampling and reporting for trend analysis) to ensure that the quality processes as per the agreed standards are followed. The quality audits will also ensure the quality of the deliverables as per standards agreed during the inception report acceptance of the SI.

3.2.4   Ensure that all business process improvements as suggested in Phase 1 are implemented to derive the intended business benefits.

3.2.5 Implement a comprehensive change management program to streamline transition to proposed application, processes and training.

3.2.6 Undertake project completion activities like creating project status summary and project learning documents. The consultant is also expected to Review, Discuss and Identify possible options arrive at an agreement mutually acceptable to all in case of divergent views of HPPWD/HPRIDC and the SI consultant and see to the smooth completion and implementation.

3.2.7 Audit and finalize the User Acceptance Test (UAT) Plan and the rolling out plan to be submitted by the System Integrator for rolling out the application in the entire department across the state. It shall include review of Prototype of all the modules & Pilot implementation.

3.2.8 The IT Specialist shall assist the department in obtaining certification from Standardization Testing and Quality Certification (STQC) before the solution Go-live.

3.2.9 The IT Specialist shall facilitate monthly steering committee meetings for the project. It will include preparation of reports for the meetings which shall include issues and bottlenecks encountered if any in implementation of the project.

3.3 Phase 3 - Sustenance Phase (About 30 Months)

The IT Specialist shall supervise and monitor as well as provide guidance to the HPPWDCP team for ensuring post go-live Systems Operation by the Departmental staff. Key activities shall include, but not limited to:

3.3.1 Assist and guide the departmental staff for a period of 12 months after the go-live in fully adopting the new system and managing changes in the new system.

3.3.2 Provide change management services including facilitating workshops, seminars, exposure trips, etc for operationalizing and sustaining with the system.

3.3.3 Monitor the performance of the implementation vendor on various services as per defined SLAs.

3.3.4 Formulate Project learning documents, Project Status Summary, etc.

3.3.5 Ratify system integrator consultants Plan for withdraw and Post Withdrawal Support i.e. after completion of development, operationalization (1 year) and Maintenance Period of 1 year.

3.3.6 Knowledge transfer to state listing the learning, best practices followed, and challenges faced (i.e. managerial, technical and financial) and improvements suggested.

3.3.7 Assessment of capacity building of departmental staff, follow up with capacity building/training. He/She should help HPRIDC/HPPWD with date analytics and report analytics.

3.3.8 To provide technical assistance to the client in integration and maintenance of the existing applications, development, customization, hosting, arranging security audits etc. of all future and present application.

4 Deliverables/outputs of the consultants

Sl.	Deliverable	Phase	Time period for deliverables from commencement
1.	Bidding documents including Terms of References, and Request for Proposal (RFP) using the World Bank standard procurement documents.	Phase-1 ó Bid Management and Vendor Selection	6 months
2.	Technical and combined evaluation report as per World Bank standard procurement procedure		
3.	Contract along with service Level Agreement (SLA) with the selected consultant(s).		

4.	Project plan for hardware procurement, networking, software development / implementation and rolling out, data entry and training		
5.	Review and finalized report on the SRS, System design, database design, hardware sizing projected, security design, application developed and implemented by System Integrator, testing etc.		
6.	Review of Prototype of all the modules & Pilot implementation including User Acceptance Testing (UAT)		
7.	Review report of training, change management, business process improvement etc. carried out by System Integrator (SI)	Phase-2 ó Project Management	18 months
8.	Quality Audit report with audit findings and action plan		
9.	Phase completion report incorporating detail report on works carried out by vendors for HPPWDCP implementation as well as compliance of Quality Audit and Review Reports		
10.	Framework for issue raising and tracking		
11.	Performance report on System Integrator		
12.	Assessment report on Capacity Building of departmental staff by SI	Phase 3 ó Sustenance Phase	30 months
13.	Project Learning/knowledge transfer Documents and/or Lessons Learned Report		

5.1   Intellectual Property Right (IPR) & Knowledge Transfer

5.1.1 The IT Specialist will ensure that the HPRIDC/HPPWD shall have sole proprietorship and copyright over all the documentation and custom software developed by the consultant as part of consultancy including legally acceptable perpetual user license in the name of the Department.

5.1.2 Transfer of all software, programs, Data collected etc. by the consultant including legally acceptable perpetual user license in the name of the department shall be part of deliverables.

5.1.3 All secondary data collected during the duration   of this assignment in soft copy (CD media).

5.1.4 Copies of all documents collected from various agencies during the duration of this assignment.

6.   Qualification Requirements

The IT Specialist shall be responsible for overall management of the IMIS implementation. He/She would work closely with the client for successful implementation of the project. He/she will provide technical advice during the entire project period.

Qualification:

- Should be a Senior IT Project Manager holding degree in B.Tech/M.Tech/MCA in Computer Science with preferably MBA from a recognized University, with relevant experience of 10+ years in managing large IT projects;
- Candidate holding Project Management Certifications like PMP/PMI etc. will be preferred;
- 7 year Experience of implementing at least 2 projects of similar nature preferably in road sector is desirable;
- Understanding of e-governance strategy and applications, experience in IT led business process re-engineering projects;
- Adequate knowledge and experience of IT infrastructure and related data security issues;
- Having knowledge of Multi-lateral Donor- aided projects, preferably of World bank, will be preferred;
- Good communication skills and ability to Draft Reports;
- Very good command of English. Fluency in local language would be an added advantage.

7. **Remuneration and payment terms:**

   a) The remuneration will be given in equal monthly. Taxes as applicable shall be dealt with as per applicable laws.

   b) Travelling, Boarding, Lodging and Food expenses for approved official tours outside Shimla will be reimbursed as per the applicable GoHP norms.

8. **Travel Requirements:** The **IT Specialist** may be required to undertake field-visits as per the project requirements, with prior approval of the Project Director and the travel costs will be reimbursed as per the applicable GoHP norm HPRIDC.

9. **Reporting and Performance Review**

   The IT Specialist shall report to the Superintending Engineer/Executive Director HPRIDC (under the overall command of the Project Director). The quality of service and performance of the IT Specialist will be reviewed by the Project Director, HPRIDC annually for taking appropriate action/way forward.

10. **Facilities to be provided by the PMU:** The PMU, ARIAS Society

    a. Will be given access to all documents, reports, correspondence, contacts available and any other information as deemed necessary for smooth accomplishments of tasks assigned.

    b. Will be provided with one office cubicle in the ICT Cell of HPRIDC along with computer, printer, computer/office consumables, and internet access.

    c. Will pay the fixed monthly remuneration as per the contract agreement. No house rent allowance or any other allowance shall be paid by the PMU. No other payment whatsoever (except reimbursement of travelling expenses and project allowance) shall be paid, except as agreed with the IT Specialist.

    d. Will not be provided with any clerical assistance.