

OFFICE OF THE CHIEF ENGINEER(PMGSY), PWD, RAJASTHAN, JAIPUR

No. F.1(363)/SE(WB)/RRSMP/RAMS/14-15/Part-III/D- 2107

Dated : 02.02.2017

NOTICE INVITING EXPRESSION OF INTEREST
(No.25/RRSMP/2016-17)

Expression of Interest for appointment of consultant to provide “**Consultancy Services to Develop and Implement a Sustainable Road Asset Management System, System Providing Consultant (SPC) in Rajasthan PWD, Government of Rajasthan, Jaipur**”, is invited from eligible firms under Rajasthan Road Sector Modernization Project (RRSMP) funded by The World Bank (CF/RRSMP/16).

Details are available at website <http://sppp.rajasthan.gov.in> /
<http://rrsmpwb.rajasthan.gov.in/> <http://pwd.rajasthan.gov.in> and
<http://dipr.rajasthan.gov.in>



(C.L.Verma)
Chief Engineer (PMGSY),
PWD,Rajasthan, Jaipur

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Copy to following:-

1. PS to Addl. Chief Secy., PWD, Govt. of Rajasthan, Jaipur.
2. PS to Secretary, PWD, Govt. of Rajasthan, Jaipur
3. PS to Chief Engineer(Roads) & Addl. Secy, PWD, Rajasthan, Jaipur- for needful action.
4. CE(PMGSY)/CE (SS) / CE (NH) / CE (QC)/ CE(Bldg),PWD,Raj, Jaipur.
5. Radia Benamghar, Task team leader, The World Bank.
6. Mesfin W. Jijo, Co-TTL, The World Bank.
7. Financial advisor, PWD, Rajasthan, Jaipur
8. Addl. Chief Engineer, PWD, Zone :..... (All)/PPP.
9. ACE (WB)/ SE(Road)/ System Analyst, CE office, PWD, Raj, Jaipur.
10. The Superintending Engineer, PWD, Circle :.....(All)
11. System Analyst, CE office, PWD, Rajasthan, Jaipur- for uploading on PWD website.
12. ITNO (PMGSY)/EE-I/II/III/IV(WB)/ AEn(WB), CE office, PWD, Raj, Jaipur.
13. Team Leader, PMC, RRSMP
14. Team leader, RAMS consultant (LASA), RRSMP.
15. Secy., Rajasthan builder association, Jaipur
16. Secy., Jaipur Builder association,Jaipur(PWD campus)


(Rajesh Chand Purohit)
Addl.Chief Engineer (WB)

OFFICE OF THE CHIEF ENGINEER(PMGSY), PWD, RAJASTHAN, JAIPUR

No. F.1(363)/SE(WB)/RRSMP/RAMS/14-15/Part-III/D-2107

Dated : 02.02.2017

REQUEST FOR EXPRESSION OF INTEREST
(No.25/RRSMP/2016-17)

(CONSULTING SERVICES – FIRMS SELECTION)
THE STATE OF RAJASTHAN - INDIA

RAJASTHAN ROAD SECTOR MODERNIZATION PROJECT (RRSMP)

Credit No.: 5310-IN

Assignment Title: Consultancy Services to Develop and Implement a Sustainable Road Asset Management System, System Providing Consultant (SPC) in Rajasthan PWD, Government of Rajasthan, Jaipur

Reference No.: CF/RRSMP/16

This request for Expressions of Interest (EOI) follows the general procurement notice for this project that appeared in Development Business, December 2012.

The Government of Rajasthan (GoR) has received a credit from International Development Association (IDA) towards the cost of Rajasthan Road Sector Modernization Project (RRSMP), and it intends to apply part of the proceeds of this credit for “Consultancy Services to Develop and Implement a Sustainable Road Asset Management System, System Providing Consultant (SPC) in Rajasthan PWD”.

The objective of the proposed road asset management system (RAMS) is to improve and implement a sustainable methodology for data collection on the road network and structures; set up application to support input of data via web/mobile and hosting of the system at a secured centralized facility at Rajasthan State Data Centre (RSDC); use tools in the application to identify, evaluate, select, and prioritize road/bridge works; and disseminate road/bridge information within the department and to the public using modern technology and best practices suitable for Rajasthan PWD.

Project Outline

Rajasthan PWD intends to setup a sustainable RAMS to manage assets on its road network in an efficient and effective manner. The entire process of software development, and data collection for the system will be carried out in two parts by two separate consultants/agencies. Part 1 will be carried out by a consultant (System Providing Consultant -SPC) and its services will initially include development of application software and tools necessary for RAMS; finalization of data collection methodology and format/forms for data collection; and testing on a pilot project of about 2000 km of roads (SH, MDR, ODR and VR) to ensure its adequacy and practicability. The consultant will also provide services related to coordination of data collection, preparation of plans and reports, and system maintenance and upgrade, described later (Item c), for a further period of five (5) years. Part 2 will consist of data collection on the remaining network of about 1,50,000km to be done by a separate data collection agency using the methodology and format/forms finalized by the consultant.

The Expression of Interest (EOI) herein refers only to the services required from the consultant for **Part 1 (SPC)** described above.

- a. **RAMS Software:** Set up a web-GIS based application to define Rajasthan PWD road network database with up to date traffic and socio-economic data, inventory and condition of assets, including pavements, culverts/bridges with appropriate tools for managing GIS based network data. The RAMS

will also allow storing of location and other data related to R-o-W features relevant to road safety assessment, and corridor and utility management. The web-GIS based application will have appropriate modern data reporting tools such as dashboard dynamic reporting, road chart, themebased interactiveGIS maps, and mobile application. The tools will allow monitoring of the performance of ongoing and completed works using selected parameters. It should also allow community participation through innovative technology, such as mobile application, to disseminate and upload photograph and information related to road condition, traffic, emergency, works etc.

The web-GIS based application will have appropriate analytical tools, to be designed and implemented by the consultant, for maintenance, preservation, rehabilitation and upgrading of the network and for prioritization and optimization of works for different funding levels. The application will also have the capability to indicate the necessary funding required to maintain the network at a given service level and the consequences of various funding levels on the health of the network. The RAMS analytical tools should predict the future asset condition and value, agency/user costs for maintenance/improvement/upgrading treatment alternatives and evaluate them using measurable economic and engineering parameters to be decided in discussion with PWD during the project. Using these parameters, RAMS will have the facility to prioritize a list of candidate sections requiring detail project evaluation and allocation of resources from the budget. The system will be able to prepare a short term (1-2 year) program and a long-term (5-year) plan.

The consultant will design, develop and test the RAMS using the data collected on the pilot project, and demonstrate its suitability and compatibility based on the agreed upon parameters. After successful testing and user acceptance it will migrate the application along with the data (to be collected through a separate agency) on the remaining road network comprising SH, MDR and ODR network to the infrastructure of Rajasthan State Data Centre to roll out the RAMS for the entire PWD.

- b. **Data Collection:**The project involves collection of spatial data for roads, bridges, culverts and other features within the R-o-W for an inventory of PWD assets; condition data including roughness, structure/strength of pavement; bridge and culvert inspection/condition using modern data collection methods. Historical data on road works and traffic volume count data will be collected from PWD offices. Some data on road safety, environment, and social impact will also be collected. Road/pavement data will be collected using automated equipment including high-resolution R-o-W imagery to improve the quality and reliability of data.

The consultant will collect data on a pilot project of about 2000 km (SH, MDR, ODR and VR) using a set of data forms designed for this purpose. The methodology and/or data collection forms may be updated/modified by the Consultant, if necessary, to make these more efficient and effective to collect data for the remaining network through a separate data collection agency. The consultant will finalise the ToR for data collection on the remaining network. During the data collection on the remaining network, the consultant will assist/advise Rajasthan PWD in collection and quality checking of these data in the field. The consultant will subsequently validate and input the data in the system.

- c. **Training, Implementation and Support:**In order to improve technical skills and management capabilities of the PWD, the consultant will impart appropriate training and undertake skill enhancement of PWD officers to manage the RAMS efficiently and effectively. The consultant will prepare a training plan and train PWD officers on data collection/verification, system use (data input, view, prepare maintenance plan etc.) and system backup/maintenance for five (5) years.

In order to maintain/troubleshoot/bug fix/upgrade the system and to safeguard the application in case of a technology upgrade the consultant will be retained to provide these services for a further period of five (5) years after successful completion of the system set-up.

The consultant will also provide assistance to PWD's RAMS Cell to coordinate data collection (annually by a separate agency) to ensure its continuity and consistency, check the compiled data and load the same to the RAMS and prepare annual maintenance plan, budget and annual report for the road network for five (5) years after the system set-up.

A consultancy services was retained to define the specifications for the proposed RAMS and a report on Needs Analysis, System Architecture, and data Collection for the proposed RAMS. The final report is available on RRSMP website (http://rrsmpwb.rajasthan.gov.in/Content/images/Uploadfiles/2c5d8b91-d226-4bde-b42d-b1c5d8dc5181_Final_Needs_Analysis_Report.pdf)

Project Duration

The project is envisaged to take place in two parts as described above. The first part will be undertaken by the consultant (SPC) in two phases. The first phase involves system design, development, testing, training and implementation using the data collected on the pilot project. This will last for the first twenty (20) months of the project. The second phase involves implementing the RAMS, and providing support and training for further five (5) years. The software and system maintenance period will also be for five (5) years after successful user acceptance testing.

The second part involving data collection on remaining network of about 1,50,000 km will be initiated after finalization of data collection methodology and forms by the consultant. A separate data collection agency will be engaged through a separate procurement using the ToR prepared by the consultant. The procurement activity is expected to be initiated in the 3rd month of the first part, and the commencement of the services in the 6th month. The expected duration of the data collection services is about 15 months

The Government of Rajasthan (GoR), through the Chief Engineer (PMGSY) Rajasthan PWD, now invites eligible consulting firms ('consultants') to indicate their interest in providing the services for the SPC. Interested consultants should provide information demonstrating that they have the required qualification and relevant experience to perform the services.

The criteria for shortlisting are:

- 1) Experience of Design, development, configuration and implementation of pavement management system/ road asset management system of at least two large road networks totaling at least 2,000 km road length in the last seven (7) years, of which implementation of one road network should have been completed within the last five (5) years.
- 2) Experience of Planning and programming of road network maintenance, rehabilitation and improvement using HDM-4 / HDM-3 in the last seven (7) years for at least 5,000 km.
- 3) Experience of Field data collection for at least 5,000 km using vehicle mounted Differential GPS (DGPS), and automated road/pavement data collection equipment, and processing of data for asset management in the last seven (7) years
- 4) At least five (5) years' experience in design/maintenance/rehabilitation/improvement of highways, roads and bridges in the last seven (7) years.

Experience in South Asia region / India *will be an added advantage.*

Preference is for a commercial-off-the-shelf (COTS) solution to ensure ongoing support and maintenance of the system beyond the term of this contract. However non-COTS solutions will be considered where consultants can demonstrate a history of software support and upgrades.

For joint venture (JV), the lead member to be nominated should be the one which meets the criterion specified in Item (1).

The attention of the interested consultants is drawn to paragraph 1.9 of the World Bank's Guidelines: Selection and Employment of Consultants [under IBRD Loans and IDA Credits & Grants] by World Bank Borrowers, January 2011, ('Consultant Guidelines'), setting forth the World Bank's policy on conflict of interest.

The consultants may associate with other firms in the form of a joint venture or a sub-consultancy to enhance their qualification. A consultant will be selected in accordance with the Quality and Cost Based Selection

(QCBS) method set out in the Consultant Guidelines. Further information can be obtained from the address below during office hours i.e. 0930 to 1800 hrs.

Expression of Interest clearly marked "Expression of Interest to Develop and Implement a Sustainable Road Asset Management System in Rajasthan PWD" must be delivered to the address below (in person, or by email, or by fax) by 27/02/2017, 16:00 hours (IST).

Chief Engineer (Roads)

Public Works Department, Rajasthan, India

Civil Lines, Jacob Road, Jaipur – 302006

Tel: +91-0141-5110510 Fax: +91-0141-5110501

Email: seroad@rediffmail.com

Information Required from Consultants

The consultant should provide information whether it intends to participate in the selection process as a single entity or a joint venture; in the latter case, please indicate the respective roles of the partners in carrying out the assignment, and percentage of the value of share of each partner's services. Please also provide details of scope of services of past assignments with complete statement of assignments completed in the last seven (7) years, duly supported by completion certificate(s) from the Employers/Clients to whom services were provided so as to demonstrate suitability for the present assignment.

Instructions for Submission of Expression of Interest:

1. The consultant shall read thoroughly the "Guidelines for Preparation of Expression of Interest" provided herein later before preparing EOI. .
2. If the consultant wishes to submit certain information not covered in the Guidelines that would be in his interest, he may do so. But the required details must be submitted in the stipulated formats only.
3. An association of the consultants can take either the form of joint venture or a sub-consultancy. In case of joint venture a letter, indicating their intent to form a joint venture shall be submitted duly signed by all the members. An authorized representative of the lead member shall initial all pages.
4. The consultant (including the individual members of any joint venture) shall submit only one Application, either in its own name or as part of a joint venture member in another Application. If a consultant, including any joint venture member, submits or participates in more than one Application, all such Applications shall be disqualified and rejected.
5. The Application and all related correspondence and documents should be written in English language only. Any supporting documents and printed literature in any other language must be supplied with translations in English language. Supporting material not translated into English, may not be considered in evaluation of the Application.
6. Incomplete and / or conditional EoI shall be liable to rejection.
7. RFP will be issued to the short-listed consultants only.
8. The EOI submitted through post or by hand shall preferably be placed in a sealed envelope clearly marked "EOI PROPOSAL", to provide "Consultancy Services to Develop and Implement a Sustainable Road Asset Management System in Rajasthan PWD", reference number, name and address of the consultant, and with a warning "DO NOT OPEN UNTIL 28/02/2017, 15:00 HOURS(IST)."

Guidelines for Preparation of Expression of Interest

The following information shall be submitted in the given formats, and where no such format is specified, an appropriate standard format may be used.

1. Complete name of firm, date established and type of organization, whether individual, proprietorship, partnership, private limited company, public limited company etc. (as per Annexure I).
2. Exact and complete corporate/registered/home office address, business address, telephone numbers, fax numbers, E-mail and cable address. For consultant of foreign registry, indicate if there is any branch office(s) established in India with details in the aforesaid manner. Information is to be furnished by the sole applicant or members of joint venture individually (as per Annexure I).
3. If the present firm is a successor to or outgrowth of one or more predecessor firms, name(s) of former entity(ies) and year(s) of their original establishment with details must be furnished in the aforesaid manner. Information is to be furnished by the sole applicant or members of joint venture individually (as per Annexure I).
4. A brief narrative description of the firm is to be furnished by the sole applicant or members of joint venture individually (as per Annexure I).
5. Consultant's substantial experience shall be given under the four categories shown in Annexure II.
6. The detail must include the project name, its initiation and completion dates, type and scope of work performed (segregated by each joint venture member). If the experience is for an asset management system, the details of modules, system architecture, technology, implementation framework and current status must be mentioned. Experience in data collection must mention the duration, equipment used, network covered etc. (Annexure III). Employer's completion certificates shall be required to be submitted by the shortlisted firms.
7. An undertaking for the information being true shall be given as per Annexure IV.



(C.L.Verma)

Chief Engineer (PMGSY),
PWD, Rajasthan, Jaipur

Annexure-I

Expression of Interest Form for Consulting Engineering Firm or Joint Venture (To be filled up by each constituent in case of a joint venture)

1.

consultant Name	Date of Establishment	Country	Type of Organization			
			Individual	Partnership	Corporation	Other

2. Corporate/Registered Office/Business Address/ Telephone Nos./ Cable Address/Email address of consultant, its branch offices (including members in case of joint venture)
3. Consultant's former name and year of establishment (including that of members in case of joint venture)
4. Narrative description of consultant firms if any (Use other sheet, if necessary)
5. Name of, not more than two(2) principals, who may be contacted with title, telephone number/fax number, Email address.

Annexure II

Experience

Sr. No	Project Name	Date of Start	Date of Completion	Category of Services Rendered (A,B,C and D)*	Category of Road Network and Length Covered	Details of Data Collection Equipment Used (For Category C Only)	Total Consultancy Fees in INR(Applicant's Share in Case of JV)	Client (With complete address, contact person, telephone No.,FaxNo.and E mail address)	Funding Agency	Reference Page No. for Certificate by Client &Other Details
1	2	3	4	5	6	7	8	9	10	11
1	Soleconsultant or for each of the members in case of JV,									

*Description of category of services-

- A) Experience of Design, development, configuration and implementation of pavement management system/ road asset management system of at least two large road networks totaling at least 2,000 km road length in the last seven (7) years, of which implementation of one road network should have been completed within the last five (5) years. Indicate if a COTS or custom solution was provided.
- B) Experience of Planning and programming of road network maintenance, rehabilitation and improvement using HDM-4 / HDM-3 in the last seven (7) years for at least 5,000 km.
- C) Experience of Field data collection for at least 5,000 km using vehicle mounted Differential GPS (DGPS), and automated road/pavement data collection equipment, and processing of data for asset management in the last seven (7) years
- D) At least five (5) years' experience in design/maintenance/rehabilitation/improvement of highways, roads and bridges in the last seven (7) years.

Annexure-III

Detail of Completed Assignments/Services and Name of Employer/Client

Each assignment must be separately supported by detailed Project Description Sheets containing the following details:

Name of overall assignment:

Location of overall assignment:

Client's name and address:

Completion (actual/estimated vis-à-vis stipulated):

Description of assignment:

Description of services provided by the firm(segreated by each JV member):

Annexure- IV

Undertaking

I certify that the information in the above Expression of Interest forms is true to the best of my knowledge. I also understand that any misleading or wrong information will disqualify this application by the client.

President/ Managing Director
or
Authorized Signatory of Applicant