

No. CE/Admn/PLA/EMP/1014(a)/05.

Office of the Chief Engineer,
PWD, Roads & Bridges and
Administration,
Thiruvananthapuram,
Dated: 17/01/2014



PUBLIC WORKS DEPARTMENT

GOVERNMENT OF KERALA

Advertisement (Notification)

Public Works Department, Government of Kerala invites applications from the interested firms for empanelment of consultants for the period till 31/03/2016. Empanelment of experienced and competent consultants shall be considered for Traffic studies investigation, project preparation, Design and rehabilitation of Roads & Bridges, Architectural Planning and design, Structural design and rehabilitation of Buildings covered under seven major categories. The applicants can apply for more than one category as deemed eligible. For each category separate application shall be submitted. Intending consultants, should submit their application for empanelment to the **Chief Engineer, Roads & Bridges and Administration, Public Works Department, Public Office, Thiruvananthapuram 695033** latest by **19th February 2014**. The application without specific documents for proof and in prescribed format will summarily be rejected. The details can be obtained from www.keralapwd.gov.in


CHIEF ENGINEER

Government of Kerala

Public Works Department

www.keralapwd.gov.in

Thiruvananthapuram

No.No. CE/Admn/PLA/EMP/1014(a)/05

Dated 17/01/2014

APPLICATION FOR EMPANELMENT OF CONSULTANTS

Public Works Department, Government of Kerala intends to invite applications from the interested firms for empanelment of Consultants for the period till 31.03.2016 for the categories mentioned below. Consultants already empanelled with Ministry of Road Transport and Highways, Government of India, in various categories need not apply as they would be automatically included in this empanelment, however, they can apply for the categories they have not been empanelled for, if so preferred. This empanelment will nullify the validity of all previously approved lists if any in this regard by Government of Kerala.

2. Empanelment of experienced and competent consultants shall be considered for Traffic studies, investigation, project preparation, design and rehabilitation of roads and bridges- Architectural planning and design, structural design and rehabilitation of buildings covered under the following major seven categories.

CATEGORY – I Project preparation for all types of highway projects including bridges upto 10m length and having RCC superstructure.

CATEGORY-II Project preparation for all types of bridges/grade separators including approaches with detailed structural designs and drawings.

CATEGORY-III Bridge Inspection & Rehabilitation

CATEGORY -IV Geo-technical investigation for buildings, highway, bridge projects, high embankments.

CATEGORY -V Traffic and Transportation Studies

CATEGORY-VI Architectural design & Planning of Buildings

CATEGORY- VII Structural design of buildings of all types

3. Technical expertise and experience desired from the consultants for various categories are as under.

3.1 Category – I

The empanelled consultants is expected to possess necessary expertise and experience in carrying out feasibility studies, detailed project preparation for new road projects and highway structures as well as strengthening of existing roads. In addition, the consultants are expected to possess expertise and infrastructure for carrying out studies related to traffic and transportation engineering, highway planning and design.

3.2 Category II

Consultants are expected to possess necessary expertise and experience in carrying out feasibility studies, detailed project preparation & design of all types of bridge projects/grade separators, experience in conceptualizing schemes and in traffic and transportation studies

3.3 Category III

Consultants are expected to possess necessary expertise, equipments and experience in carrying out inspection and investigation of distressed bridges including non-destructive and partially destructive testing and preparation of repair and rehabilitation plan/estimate for such bridges, flyover and grade separators. Consultants are also expected to possess necessary experience and expertise in supervision of repair & rehabilitation of these types of structures.

3.4 Category- IV

Consultants are expected to possess necessary expertise, equipments and experience in carrying out all types of surface and sub-surface geo-technical exploration according to the guidelines given in Ministry's (MORTH) Specifications for Road and Bridge Works (latest Revision). Consultants are expected to possess expertise, facilities and infrastructure for carrying out drilling through rocks, carrying out preliminary

exploration by suitable type of sub-surface sounding method, carrying out in situ Vane Shear Test and laboratory test for physical properties, atterberg limits, shear parameters and consolidation properties etc. In addition to this, the consultants are expected to possess expertise, facilities and infrastructure for carrying out investigation for bridge foundations resting on rock by geo-physical methods such as electrical resistivity method, seismic method etc.

3.5 Category-V

Consultants shall be expected to possess necessary expertise and experience in traffic and transportation studies. The personnel should be trained and experienced in all aspects of traffic engineering. This includes collecting and processing traffic data, developing traffic projections, conducting site planning studies, evaluating the impact of new development on an existing roadway network. In addition, the firm may possess the related equipments and infrastructure.

3.6 Category-VI

Consultants shall be expected to possess necessary expertise and planning and preparation of architectural lay outs and plans of large scale multistoried buildings, involving various use patterns. Open space planning, green building approach, landscaping etc. essential.

3.7 Category-VII

Consultants shall be expected to possess necessary expertise and experience in the structural design of large scale multistoried public buildings of various utility. Innovative and faster design procedures using state of the art design techniques essential.

4 International firms & Joint Venture/Association of Firms:

4.1 International firms shall be considered for empanelment only when the firm has a representative office in India

4.2 In case there is a joint venture of two consultant firms (domestic/ international), the required information as per Annexure I, II, III & IV shall be furnished by each party separately along with joint venture agreement.

each of the above mentioned categories, otherwise the firm shall not be considered for empanelment.
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6. The firm shall furnish its relevant experience strictly as per format given at Annexure III. The firm must supplement the experience claimed by furnishing the copies of certificates from client, clearly indicating the actual service provided by the firm for that project.

7. The firm shall furnish the Curriculum Vitae of the Technical personnel as per format given at Annexure II. The C.Vs must be signed by Technical personnel and counter-signed by authorized representative in ink on each and every page and should not be older than three months from the date of submission of application. Photograph of the Technical personnel shall be affixed on their respective CV. The contact address with telephone / mobile number, e-mail ID of the Technical personnel should also be furnished. The C.Vs must indicate the actual service provided by the Technical personnel in detail. The retainer Technical personnel if any shall specifically mention the names of other firms also in which he is associated as a retainer. It may be noted that such Technical personnel may be associated as a retainer for a maximum number of 3 firms including the instant firm. A retainer will get only 50 % credit of that of a full time expert.

8. It is suggested that the firm should fill up Annexure –I, vis-à-vis the supporting details vide Annexure II, III & IV and any other information with due care so as to avoid any ambiguity

9. In case spaces available in the Annexure- I, II & III & IV are limited to accommodate all the information, separate sheets may be used for the purpose so that relevant information submitted are sufficient, neat and legible.

10. The applications not complying with the above mentioned stipulations and found to be deficient in any respect shall be summarily rejected

11. Consulting firms should note that only authenticated information should be provided in the prescribed format. Information provided by the consulting firms would be verified and if any of the information provided by the consultant is found incorrect / false, then it may lead to rejection of a firm's proposal summarily at any stage even after empanelment.

12. The fee for application is Rs. 5,000/- in the form of DD drawn in favour of the Chief Engineer, Roads&Bridges&Administration payable at Thiruvananthapuram. The applicants can apply for more than one category by paying an extra fee of Rs. 3000/- each per category. It may be mentioned that the firm shall be empanelled under a specific category categories and for each category separate application shall be submitted along with a soft copy of the same. The application should be properly bound, indexed and page numbered and strictly in sequence given in the format at Annexure I. Intending consultants, should submit their application for empanelment to the Chief Engineer, Roads&Bridges&Administration . Public Works Department Thiruvananthapuram latest by 19/02 /2014 . The application without specific documents for proof and in prescribed format will summarily be rejected.

13. Government of Kerala reserves the right to reject any or all applications without assigning any reason. After evaluation, a panel of consultants under the seven categories mentioned above will be formed depending on the capacity and experience of the consultants and the same will be communicated to all Chief Engineers and the chief Architect of, for the purpose of obtaining offers for particular projects,

14. Notwithstanding the formation of these panels, the Government may go in for separate empanelment for specific assignments, if it so decides.

Chief Engineer ,Roads&Bridges&Administration

Encl: Annexure I, II, III & IV.

Public Works Department

ANNEXURE-1

APPLICATION PROFORMA FOR EMPANELMENT OF CONSULTANTS		
	General Information	
	(i) Name and address of the consultant/consulting firm	
	(ii) Whether Pvt. Ltd. Company/JV/Public Co./Others (in case of J.V., indicate name of lead partner and furnish copy of agreement).	
	(iii) Name of the authorised contact person /representative duly certified by the head of the consulting firm.	
	(iv) Profile of the firm (Please elaborate field of activities)	
	(v) In case of Foreign firm, address of representative office in India with documentary proof from the head office abroad)	
	(vi) In case of foreign firm, certificate for accepting payment in Indian currency for domestic funded projects.	
	(vii) In case of association, indicate the name of lead firm and furnish letter of association.	
1	STRUCTURE & ORGANISATION OF FIRM	
A	Date, month and year of incorporation of Firm	
	NOTE: (i) Furnish a copy of incorporation/registration from appropriate authority. (ii) Firm incorporated/registered after 31.03.2013 shall not be considered.	
B	No. of full time technical personnel who are in the payroll of the firm for at least one year as on 31.03.2013 with following qualifications and experience:	
	(i) Masters degree (structures) with minimum 10 years of experience	
	(ii) Masters degree (Traffic & Transportation) with minimum 10 years of experience	
	(iii) Masters degree in any discipline of Civil Engineering/ Architecture with minimum 10 years of experience	
	(iii) Degree(Civil), Architecture with minimum 10 years of experience	
	(v) Degree (Civil) with minimum 5 years of experience	
	NOTE: The detailed information regarding technical personnel mentioned above may be furnished as per Annexure-IV.	
2	FINANCIAL STATUS	
	Average Annual Turnover of last three years (Rs. In lakhs) (i) Firm with average annual turnover less than 55lakhs will not be considered	

	<i>Note : Turn over should be certified by Chartered Accountant..</i>	
3	FIRM'S RELEVANT EXPERIENCE:	
	<i>Note: Please mention number of projects done by the firm against each of sub-item with documentary proof from client. For each project one sheet of Annexure-III should be filled up properly giving as much as details as possible. (Refer Para 6 of the forwarding letter regarding instructions). Experience prior to 31.12.2008 will not be considered.</i>	
Category I : Highway Projects (all the below)		
	A (i) Experience in Feasibility Study for widening to two lane for a length > 40 km.	
	A (ii) Experience in preparation of DPR of widening to two lane for a length > 20 km.	
	B (i) Experience in FS of two lane/four lane new alignment or widening to 4 lane/Expressway in a length more than 40 kms.	
	B (ii) Experience in preparation of DPR of two lane/four lane new alignment or widening to 4 lane/Expressway in a length more than 20 kms.	
	C. Experience in Survey & Investigation and detailed design of bridge projects.	
	D. Traffic surveys, Origin-Destination (OD) Survey, Design of Road Junctions/Traffic Circulation Studies etc.	
	<i>Note: In Annexure-III, narrative description of project must include No. of lane, length of project, whether widening or new alignment etc. Under the head actual Service provided by the firm, the firm must clearly mention whether the firm has done only topography survey, traffic survey, feasibility study or complete project preparation.</i>	
Category –II : Bridge Projects (all the below)		
	(i) Experience in feasibility study of	
	(a) bridges with overall length greater than 100m with at least one span length equal to or greater than 50m	
	(b) bridges with overall length greater than 100m with any span length (other than bridges mentioned under sub item (a) above).	
	(ii) Experience in preparation of DPR of	
	(a) bridges with overall length greater than 200m and with at least one span equal to or greater than 50m	
	(b) bridges with overall length greater than 200m with any span length (other than bridges mentioned under sub item (a) above).	
	(iii) Experience in Design review/Proof checking of	
	(a) bridges with overall length greater than 200m and with at least one span equal to or greater than 50m	
	(b) bridges with overall length greater than 200m with any span length (other than bridges mentioned under sub item (a) above).	
	<i>Note: In Annexure-III, narrative description of project must include total length of bridge, individual span length, no. of lane (2 lane, 4</i>	

	<i>lane etc.), whether widening or new alignment etc. Under the head service provided by the firm, the firm must clearly mention whether the firm has done only feasibility study, design review/proof checking or complete project preparation.</i>	
Category-III: Bridge Inspection & Rehabilitation (all the below)		
	(i) Experience in carrying out investigation and testing of major/minor bridges for rehabilitation Total bridge length (aggregate) 1000m	
	(ii) Experience in preparation of rehabilitation plan Total bridge length(aggregate) 1000m	
	(iii) Supervision of rehabilitation work	
Category-IV: Geo-technical investigation for highway, bridge projects, embankment (all the below)		
	(i) Experience in carrying out subsoil investigation (Exploration, sampling, testing, recording, reporting and preservation of test samples) for	
	(a) Deep foundation of any Civil Engg. Projects	
	(b) Shallow foundations	
	(ii) Experience in carrying out subsoil investigation for high embankment including stability analysis, determination of CBR etc. and sampling and testing of borrow pit material as per IRC Codes.	
	(iii) Experience in road pavement (i.e. condition survey of existing pavements, determination of CBR etc.)	
	(iv) Experience in Geophysical methods	
	(a) Electrical resistivity	
	(b) Seismic method	
Category-V: Traffic Survey/T &T Studies (all the below)		
	(i) Experience of conducting survey for road projects for 2 lane widening or a new alignment of length > 20 kms. or minor bridge projects	
	(ii) Experience in Traffic Engineering/Traffic Studies for projects of widening to 4 lane/expressway or a 4 lane new alignment of length > 20 kms.	
	(iii) Experience in carrying out traffic & transportation planning studies such as economic studies, cost benefit analysis, road users cost studies, economic feasibility studies etc.	
	(iv) Experience in carrying out traffic census.	
	(v) Any additional experience in the field of traffic studies not mentioned above.	
Category VI: Architectural design of buildings and complexes (all the below)		
	A (i) Experience in >5000 sq;m. 2 nos	
	A (ii) Experience in green building planning of more than 800 sq.m 1 nos	
	B (i) Experience in open space planning and landscaping – total 3 acres	
	B (ii) Experience in Hospital of more than 10000sq,m or university,	

	civil station of 2500 sq.m.	
Category VII: Structural design of Building (all the below)		
	A(i) Experience in DPR of	
	(a) Concrete building with overall area greater than 10000 sq.m and with at least one floor greater than 1000 sq.m.	
	(b) Hospital / college/ civil station buildings with overall area greater than 10000 sq.m with any floor area under sub item (a) above.	
	B(ii) Experience in design of	
	(a) Buildings of any purpose with overall length greater than 60m and with at least six floors	
	(b) Industrial building with steel fabrication of more than 2000 sq.m.	
	<i>Note: In Annexure-III, narrative description of project must include No. of stories, area, length of the bridges, individual floor area, etc. Under the head Service provided by the firm, the firm must clearly mention whether the firm has done only design review/proof checking of design of buildings or complete project preparation.</i>	
4	QUALIFICATIONS AND EXPERIENCE OF TECHNICAL PERSONNEL	
	<i>Note: 1. Minimum academic qualifications shall be degree in Civil Engineering/Architecture and minimum experience shall be as given against each technical personnel. The CVs of technical personnel not fulfilling these criteria shall not be evaluated. 2. A retainer will get only 50% credit of that of a full time expert.</i>	
4.1	List of technical personnel	
KP1	Sr. Highway Engineer	
KP2	Pavement Specialist	
KP3	Sr. Bridge/Structural Engineer	
KP4	Sr. Traffic Engineer	
KP5	Sr. Survey Engineer	
KP6	Environmental-cum-Resettlement Specialist	
KP7	Foundation / Geotechnical Engineer	
KP8	Sr. Transport Planner	
KP9	CAD Specialist	
KP10	Geologist	
KP11	Sr. Architect	
KP12	Bridge Rehabilitation Specialist	
4.2	Essential Technical Personnel required for various categories are as follows:	
	(i) Category I: KP1 to KP09 – One No. each	
	(ii) Category II: KP3 – 2 Nos. & KP1, KP5, KP7, KP9 – One No. each.	
	(iii) Category III: KP3, KP7& KP12– One No. each.	
	(iv) Category IV: KP7 – Two Nos. & KP10 – One No.	
	(v) Category V: KP 4, KP 5, KP 8 & KP 9- One No each.	
	(vi) Category VI: KP3, KP09 & KP11- One No. each.	
	(vii) Category VII:, KP03- 2 nos, KP7, KP09 - One No. each.	
4.3	Experience and qualifications required for Technical Personnel.	
KP1	Sr.Highway Engineer	

A.	Academic Qualification	
	Degree in Civil Engineering	
	Masters degree in Highway/Transportation Engineering	
B.	Profession Related Experience	
B1	No. of years of Professional Experience in Highway Engineering	10 Years
B2	Experience in FS and project preparation of widening to 4-lane/expressway or 4-lane new alignment of length >20 kms	2 Projects
B3	Experience in FS/DPR of widening to 2-lane new alignment of length > 20 kms	2 Projects
B4	Experience in proof checking / Peer review of DPR	3 Project
B5	Experience in construction supervision of widening to 4 lane/expressways or new alignment of length > 10 kms.	1 Project
B6	Experience in construction supervision of widening to 2 lane or 2 lane new alignment of length >20 kms.	1 Project
KP-2	Pavement Specialist	
A	Academic Qualifications	
	Degree in Civil Engineering	
	Masters degree in Highway/Geo-technical/Foundation Engineering	
	Masters degree in other Civil Engg. Disciplines	
B	Profession Related Experience	
B1	No. of years of Professional Experience in Highway Engineering	10 Years
B2	Experience in pavement design or construction supervision of widening to 4 lane/expressways or 4 lane new alignment of length. 20 Kms.	2 Projects
B3	Experience in proof checking for widening to 4 lane/expressways or 4 lane new alignment of length. 20 Kms. As well as in widening to 2 lane or 2 lane new alignment of length > 20 kms.	2 Projects
B4	Experience in pavement design or construction supervision of widening to 2 lanes or 2 lane new alignment of length > 20 kms.	1 Project
B5	Experience in sub-soil investigation (sampling, testing, analysis) & quality control for road & bridge projects.	3Projects
B6	Experience as Independent Engineer for BOT Projects	1 Project
KP-3	Sr. Bridge Engineer/Sr. Structural Engineer	
A	Academic Qualification	
	Degree in Civil Engg.	
	Masters degree in Structural/Bridge Engineering	
B.	Profession Related Experience	
B1	No. of years of Professional Experience in Highway & Bridge Engineering	10 Years
B2	Experience in design of major bridges	5 Projects
B3	Experience in design of minor bridges	10 Projects
B4	Experience in construction supervision of bridges with bridge only length >250m	1 Project
B5	Experience in construction supervision of bridges with individual span length >45m	1Project
B6	Experience in Proof Checking for major bridges	3 Projects
B7	Experience in Proof checking for minor bridges	3Projects
B8	Experience as Independent Engineer for BOT Projects	1 Project
KP-4	Sr. Traffic Engineer	
A	Academic Qualification	

	Degree in Civil Engineering	
	Masters degree in other Civil Engg. Disciplines	
	Masters degree in Traffic & Transportation Engg.	
B.	Profession Related Experience	
B1	No. of years of Professional Experience in Highway/Traffic & Transportation Engineering.	10 Years
B2	Experience in similar capacity in Traffic Engineering/Traffic Studies for projects of widening to 4 lane/ expressway or a 4 lane new alignment of length > 20 kms.	5 Projects
B3	Experience in carrying out traffic & transportation planning studies such as economic studies, cost benefit analysis, road users cost studies, economic feasibility studies etc.	3 Projects
B4	Any other study on Traffic & Transportation Engineering not cover above (pl. elaborate).	5 Projects
KP-5	Senior Survey Engineer	
A	Academic Qualifications	
	Degree in Civil Engineering	
	Masters degree in Civil Engg./Advanced Surveying	
B	Profession Related Experience	
B1	No. of years of Professional Experience in Highway Engineering	10 Years
B2	Experience of conducting survey for road projects for widening to 4-lane/expressways or a 4-lane new alignment of length > 20 kms. Or bridge projects with individual span > 40 m	10 Projects
B3	Experience of conducting survey for road projects for 2 lane widening or a new alignment of length > 20 kms. Or minor bridge projects	10 Projects
KP-6	Environmental-cum-Resettlement Specialist	
A	Academic Qualification	
	Post Graduation in Social Sciences/related Sciences	
	Degree in Civil/Environmental Engg.	
	Masters degree in Environmental Engg.	
B.	Profession Related Experience	
B1	No. of years of Professional Experience in Environmental appraisal of Civil Engg. Projects	10Years
B2	Experience in any environmental appraisal of Highway/Bridge Projects	3 Projects
B3	Experience in conducting Environmental Impact Studies for projects of road/bridge projects for widening to 4-lane/expressways or a 4-lane new alignment of length >20 kms.	3 Projects
KP-7	Foundation Engineer/Geo-technical Engineer	
A	Academic Qualification	
	Degree in Civil Engg.	
	Masters degree in Foundation/Soil Engineering/Geo-technical Engineering	
B.	Profession Related Experience	
B1	No. of years of Professional Experience in Highway Engineering.	10 Years
B2	Experience in geo-technical investigation of high embankments/ design of deep foundation for major bridges/buildings	10 Projects
B3	Experience in geo-technical survey/sub-soil investigation (sampling, field testing, lab testing etc.) for deep foundation for any	5 Projects

	Civil Engg. Projects.	
B4	Experience in construction/construction supervision of deep foundation for major bridges /buildings	1 Project
KP-8	Sr. Transport Planner	
A	Academic Qualification	
	Post Graduation in Operation Research/Transportation/Management without specialization in Transport Planning/Transport Economics.	
	Degree in Civil Engg.	
	Masters degree in Traffic/Transportation Engg. Or Master in Transport Planning or Degree in Civil Engg. With PG in Traffic & Transport Planning/Transport Economics , Post Graduation in Operation Research/Transportation/Management with specialization in Transport Planning/Transport Economics.	
B	Profession Related experience	
B1	No. of years of professional related experience in Transport Engineering/Planning	10 Years
B2	Comprehensive Traffic & Transportation Studies & Transport/Highway Planning including Route Location & Evaluation of various alternatives in Metropolitan/Urban areas, Multi-Model Transport Planning Studies/Corridor Analysis & Rout4 Selection Impact Analysis Study/Parking Analysis & Policy Formation Study etc.	5 Projects
B3	Any other Study on Traffic & Transportation Engineering & Highways Planning/Engineering (Pl. elaborate)	5 Projects
KP-9	CAD Specialist	
A	Academic Qualification	
	Any relevant qualification in Science	
	Degree in Civil Engineering /Architecture	
	MCA/Degree in Civil Engg. With post graduation in Computer Aided Design/Degree in Computer Engg.	
B	Profession related experience	
B1	No. of years of Professional Experience in Engineering	8 Years
B2	Experience in Highway/Transport related software development, its design, drafting.	2 Projects
B3	Experience in Highway /Structural/Transport related Software design and drafting (as the case may be in relevant sectors)	
KP10	Sr. Geologist	
A	Academic Qualifications	
	Degree in Geology	
	Masters degree in Geology	
B	Profession Related Experience	
B1	No. of years of Professional Experience as a Geologist in any Civil Engg. Projects.	10Years
B2	Experience in Geological mapping of sub surface for any Civil Engineering project	2 Projects
B3	Experience in other geological work (Pl. furnish details)	2 Projects
KP11	Sr. Architect	

A	Academic Qualifications	
	Degree in Architecture	
	Masters degree in Architecture	
B	Profession related Experience	
B1	No. of years of Professional Experience in Highway Engineering	10 Years
B2	Experience of planning and design of multistoried complexes with open space and landscape planning.	20 Projects
B3	Experience in green building and energy conservation oriented planning and design	2 Projects
KP12	Bridge rehabilitation Specialist	
A	Academic Qualifications	
	Degree in Civil Engineering	
	Masters degree in Bridge Engineering/Structural Engineering	
B	Profession related Experience	
B1	No. of years of Professional Experience in Bridge Engineering	15 Years
B2	Experience in inspection, preparation of plan for rehabilitation of pre-stressed bridges/composite bridges/RCC bridges.	10 Projects
B3	Experience in construction/construction supervision of rehabilitation/ strengthening work of pre-stressed bridges/composite bridges/RCC bridges.	5 Project
5	FIELD / LABORATORY EQUIPMENT (Please state availability of the equipment mentioned below).	
(a)	In-house Computer Hardware/Software facility (applicable for all categories.	
	i) Having at least one Pentium and printer/plotter facility	
	ii) CAD/ MX Road, INROADS, MIDAS, RM 2000,STAAD Pro or equivalent software for Highways & Bridge Designs (mention name & application of the software available with the firm).	
(b)	Survey Equipments (applicable for all categories)	
	i) Total Station or Distomat, Theodilite and Auto Level	
	ii) Plain Table Assembly	
	iii) Other Survey Equipments	
(c)	Soil/Material Testing Equipments : (applicable for categories, I, II, IV, V)	
	Expertise/facilities/infrastructure for carrying out :	
	(i) Auger/shell/percussion/wash/rotary boring	
	(ii) Drilling through rocks for a depth upto 3 meters for establishing the continuity of rock strata	
	(iii) Field/Lab. C.B.R. Test assembly	
	(iv) Static cone penetration, dynamic cone penetration	
	(v) Vane shear test, standard penetration test	
	(vi) Classification test and density test of soil sample	
	(vii) Triaxial (UU, CU) test, box shear test	
	(viii) Consolidation test	
	(ix) Standard and modified proctor test as per IS: 2720	
	(x) Permeability Test	
	(xi) Geo-textile testing facilities	
(d)	Additional facilities required for category –III	
	(i) Core cutter	
	(ii) Rebound hammer	
	(iii) Ultrasonic pulse velocity measurement device	

	(iv) Corrosion meter	
	(v) Cover meter	
	(vi)	
(e)	Additional facilities required for category-IV	
	(i) Electrical resistivity method and seismic method for bridge foundation resting on rock	
	(ii) Visual identification of rock course fore texture, structural composition, colour and grain size, specific gravity, porosity, moisture contest and consolidation test for cohesive soil.	
	(iii) Drilling through rock to take out rock core of sufficient length for testing.	
	(iv) In-site tests on rocks as per IS 7292, IS 7317, IS 7746	
(f)	Additional facilities required for category-V	
	(i) Automatic traffic count & classifiers (ATCC)	
	(ii) Bridge weigh in Motion (WIM)	
	iii) Road Information System(RIS), Geographical Information System (GIS) software	
	(iv) Intelligent Transport System (ITS) equipment	
(g)	Additional facilities required for category-VII	
	(i) Detailing software	
	(ii) Material take off/Estimation software	

ANNEXURE-II

BIODATA FORMAT TO BE SUBMITTED WITH PROPOSAL PHOTOGRAPH

1. Proposed position :
2. Name:
3. Contact address with Tel. No. & e-mail ID
4. Date of birth:
5. Nationality:
6. Educational qualification:
7. Other training:
8. Language & degree or proficiency
9. Membership of professional societies:
10. Countries of work experience
11. Name of the firm where working
(indicate whether full time/ part time employee or retainer)
12. Years with the firm:
13. Employment record: from to
Name of the employer:
Position held :
Description of duties:
14. Overall Professional Experience in Highway /Traffic & Transportation/ Bridge Engineering or in related field. :
15. Related Work Experience (in years) :
16. Details of the Related Work Experience (During last 5 years only)

<i>Item</i>	<i>Sl. No.</i>	<i>Brief Description of the Project/ Study</i>	<i>Name of the Client</i>	<i>Cost of consultancy</i>	<i>Period of completion</i>		<i>Description of the actual services provided by the key person</i>
				Work (Rs. in lakhs)	Date of Start	Date of completion	
I. PROJECTS STUDIES COMPLETED	1 2 -						
II PROJECTS/ STUDIES IN HAND	1 2 --						

NOTE: The CVs must be signed by key personnel and counter-signed by authorised Representative in ink on each and every page and should not be older than three months from the date of submission of application. Photograph of the key personnel shall be affixed on their respective CV. The contact address with

telephone & mobile number, e-mail ID of the key personnel must be furnished. Unsigned CVs or CVs with incomplete information shall not be evaluated.

ANNEXURE-III

RELEVANT SERVICES CARRIED OUT BY THE FIRM WHICH ILLUSTRATES THEIR BEST QUALIFICATIONS DURING LAST 5 YEARS**

Project Name		Country
Project location within country		Professional staff provided: (a) No. of staff (b) No. of man-months
Name and address of client:		
Start date (month/ year)	Completion date (month/year)	Approx. value of CONSULTANCY services:(in Rs lakhs)
Whether project was done alone or as a JV or in association with other firm/ firms.		
Name of Lead partner in case of JV/association:		No. of man-months of professional staff provided by associated firm (s)
Name of Senior staff involved and functions performed : (Functions performed by the associated firm (s) to be given separately)		
Narrative Description of Project:		
Detail description of Actual Services Provided by the firm under different categories: (Please select from the following)		
<p>(i) For category I</p> <p><u>Feasibility Study</u></p> <ul style="list-style-type: none"> Road/Bridge Inventory Surveys: Traffic Surveys, road condition surveys, topographic surveys, soil surveys, hydrological surveys etc. Pavement Evaluation Condition assessment of existing bridges Preliminary Design Road Preliminary Design of Bridges & Bridge components ('x' no. of major/ Minor bridges) Rough Cost Estimate Economic Evaluation • Feasibility Report <p>• Add any other relevant item, if any</p>		<p><u>Project Preparation</u></p> <ul style="list-style-type: none"> Ground Surveys & Investigation • Material Surveys Geo-tech Investigation for Bridges & High Embankments Environmental Analysis, Impact assessment formulates, policies, mitigation measures, R&R etc. Preparation of designs for roads(pavement /Geometric design) Preparation of designs for bridges for(old and new, XX no of major/minor bridges) and bridge components Final project report and final drawings Tender documents: prequalification documents& tender evaluation \ <p>• Add any other relevant item if any.</p>

<p>(ii) For category II</p> <p><u>Feasibility Study</u></p> <ul style="list-style-type: none"> • Bridge Inventory • Surveys: Traffic survey, topographic survey, soil survey, hydrological survey etc. • Condition assessment of existing bridges, flyover and grade separator • Preliminary design of bridges, flyovers and grade separators. • Preparation of rough cost estimate • Economic evaluation • Feasibility report. • Add any other relevant item, if any 	<p><u>Project Preparation</u></p> <ul style="list-style-type: none"> • Material survey • Environmental impact studies • Geo-technical investigation for bridge and high embankment • Detailed structural design of bridges (old and new) • Preparation of project report and drawing • Preparation of tender documents, construction specification etc. • Quality control and supervision • Add any other relevant item, if any <p><u>Design review / proof checking</u> of bridges</p>
<p>(iii) For category III</p> <p><u>Feasibility Study</u></p> <ul style="list-style-type: none"> • Condition survey and assessment of rehabilitation/repair required for existing bridges and bridge components through detailed inspection, investigation and testing. • Formation of preliminary rehabilitation plan • Preparation of rough cost estimate • Economic evaluation • Feasibility report. • Add any other relevant item, if any 	<p><u>Project Preparation</u></p> <ul style="list-style-type: none"> • Preparation of project and drawing for rehabilitation of bridges • Preparation of tender document specification and quality assurance plan and maintenance manual • Load testing • Instrumentation • Add any other relevant item, if any
<p><i>Note :- Consultants entrusted with the job of repair and rehabilitation of bridges will also be responsible for supervision of the work of repair and rehabilitation and he will also suggest a suitable team of experts for the purpose.</i></p>	
<p>(iv) For Category IV</p> <ul style="list-style-type: none"> • Ground Surveys & Investigation • Material Surveys • Geo-tech Investigation for Bridge • Geo-tech Investigation for high embankment • Preparation of designs for road pavement • Preliminary investigation for bridge foundations resting on rock using geo-physical methods • Investigations for bridge foundations resting on rock by drilling through rocks 	

<p>(v) For Category V</p> <p><u>Project Preparation</u></p> <ul style="list-style-type: none"> • Traffic Survey, Analysis and Projection • Various methods employed for traffic survey • Condition Survey • Use of ATCC/WIM • Add any other relevant item, if any 	
<p>(vi) For Category VI</p> <p><u>Project Preparation</u></p> <ul style="list-style-type: none"> • Appraisal of site and preparation of concept design • Preparation of detailed plan • Open spaces and landscaping • Green building/energy conservation techniques • Add any other relevant item, if any 	
<p>(vii) For category VII</p> <p><u>Project Preparation</u></p> <ul style="list-style-type: none"> • Condition survey and assessment of rehabilitation/repair required for existing buildings and components through detailed inspection, investigation and testing. • Formation of preliminary rehabilitation plan • Preparation of rough cost estimate • Detailed structural design of Buildings/Foundation analysis 	<ul style="list-style-type: none"> • Contract Management • Design review • Preparation of project report and drawing • Preparation of tender documents, construction specification etc. • Quality control and supervision • Add any other relevant item, if any
<p>** For each project done by the firm, separate sheet of Annexure – III shall be filled up and accompanied by documentary proof from client.</p>	

Annexure – IV

**DETAILED INFORMATION IN RESPECT OF TECHNICAL PERSONNEL
AVAILABLE WITH THE FIRM**

Sl. No.	Name	Academic Qualification Degree in Engg/ Masters*	Year of passing	No. of years of experience in the field of Highways/ Bridges & Buildings	Signature of respective technical personnel

Signature of the authorised signatory of the firm

- In case of Masters, please mention the discipline like Masters (Structure), Masters (Traffic & Transport) etc.