Annexure VII

K/C –7

BELAGAVI SMART CITY LTD, BELAGAVI

REQUEST FOR PROPOSALS

CONSULTANCY SERVICES FOR FEASIBILITY STUDY FOR CONSTRUCTION OF FLYOVER FROM NH-4 TO CENTRAL BUS TERMINUS VIA ASHOK CIRCLE WITH APPROACHES IN BELAGAVI CITY

CONTENTS

SECTION: 1– LETTER OF INVITATION (LOI)

No.BSCL/Flyover/TND-18/2018-19 **Date:-25-08-2018**
(Name of the Consultant) (Location and Date)

Dear Sir:

Subject: Consultancy Services for feasibility study for construction of flyover from NH-4 to Central Bus Terminus via Ashok Circle with approaches in Belagavi City.

You are hereby invited to submit Technical and Financial proposals required for the above consultancy assignment, which could form the basis for future negotiations and ultimately a contract between your firm and Executive Engineer, Belagavi Smart City Ltd.

1.
2. The purpose of the assignment is to[1]: Study the feasibility of construction of flyover from NH-4 to Central Bus Terminus via Ashok Circle with approaches in Belagavi City.
3. The bidder shall furnish EMD of Rs.30,000 through e-procurement.
4. To qualify for award of this contract:
   a) The bidder shall be empaneled consultant, Category-I(B), MoRT&H, Govt of India.

   b) The bidder shall have minimum annual turnover of Rs. 12 Lakhs for at least two years during the previous five years. (2013-14 to 2017-18)

   c) The bidder shall have satisfactorily completed, as a prime consultant, at least one similar nature of work of value not less than 3 lakhs. Necessary certificate issued by an officer not below the rank of the Executive Engineer or Equivalent is to be uploaded.

   d) Consultant shall produce the ownership or hire certificates for required equipment's as below

Sl. No.	Equipment	Minimum No required	
		Own	Hire
1	Total Station-Minimum 1 second least count-(Must Own)	01No	01No
2	Dumpy level	01No	01No
3	Computers with Auto CAD or equivalent (No. of licenses to own)	05 No.	-
4	3DS Max or equivalent (No. of Licenses to own)	01 No.	-
5	Jet plotter	01 No.	01 No

Note: Original invoices showing product serial nos shall be scanned and uploaded.

5. The following documents are enclosed to enable you to submit your proposal:

   (a) Terms of Reference (TOR) – Annexure 1
   (b) Supplementary Information for the including suggested formats for the submission of Technical and Financial Proposals –Annexure 2
   (c) Form of Contract for Consultant's Services under which the Services will be performed. (Annexure 3)

3.[2] In order to obtain first-hand information on the assignment and local conditions, it is considered desirable that a representative of your firm may visit the Client before the proposal is submitted. Your representative shall meet the following official:

EXECUTIVE ENGINEER
BELAGAVI SMART CITY LTD, OPP. POLICE STATION,
TILAKWADI, BELGAUM, KARNATAKA 590006

Please ensure that advance intimation regarding your visit is sent to enable them to make appropriate arrangements.

6. **Submission of Proposals:**

The proposals shall be submitted in two parts viz., "**Technical" and "Financial"** and should generally follow the Forms given in the "Supplementary Information to Consultants"

5.1 The **"Technical"** and **"Financial"** proposals must be submitted in two separate sealed envelopes (with respective marking in bold letters) following the formats/schedules given in the Supplementary Information for Consultants. The first envelope marked **"Technical Proposal"**

[1] Give in brief the Objectives of the Assignment or give reference to the relevant paragraphs of the TOR.
[2] Delete if considered not necessary

should include the description of the firm/organization, the firms general experience in the field of assignment, the qualification and competency of the personnel proposed for the assignment and the proposed work plan, methodology and approach in response to suggested terms of reference. The first envelope should not contain any cost information whatsoever. The second envelope marked **"Financial Proposal"** must also be sealed with sealing wax and initialed twice across the seal and should contain the detailed price offer for the consultancy services.

You will provide detailed breakdown of costs and fees as follows:

- Remuneration of staff
- Travel, accommodation, communication
- Report Reproduction etc.; and

Both the sealed envelopes should again be placed in a sealed cover which will be received in the Office of the Client up to 16:30 hours on 05.09.2018

5.2 **Opening of Proposal**

The proposal (first envelope containing Technical Proposal only) will be opened by the Client or his authorized representative in his office at 11:00am on 08/09/2018 in presence of such consultants or their authorized representative who may choose to be present. It may please be noted that the second envelope containing the Financial Proposal will not be opened until evaluation of Technical Proposal has been completed and approved by competent authority.

6. **Evaluation of Proposals**

A two -stage procedure will be adopted in evaluating the proposals with the technical evaluation being completed prior to opening of financial proposals. The technical proposals will be evaluated using the following criteria:

(i) the consultant's relevant experience for the assignment (5 points);
(ii) the quality of the methodology proposed (25 points); and
(iii) the qualifications and experience of the key staff proposed for the assignment and equipment (70 points)

Curricula Vitae of key personnel in each discipline for assessing the qualifications and experience of the personnel proposed to be deployed for the assignment should be included with the proposal (in the format of the sample curricula vitae). These personnel will be rated in accordance with:

(i) General qualifications (30 points);
(ii) Adequacy for the assignment (suitability to perform the duties of the assignment). These include education and training, length of experience on fields similar to those required as per terms of reference, type of positions held, time spent with the firm etc. (60 points);
(iii) Their language and experience in the region (5 points)[3]
(iv) Involvement in skills transfer program and training ability (5 points)[4]

7. **Deciding the Award of Contract**

Quality and competence of the consulting services shall be the paramount requirement. The decision of the award of the contract would be made as under:

(i) Technical proposals scoring not less than 75% of the total points will only be considered for further evaluation;

[3] Delete if considered not necessary
[4] Delete if considered not necessary

(ii) The Client shall notify those consultants whose proposals did not meet the minimum qualifying points or were considered non-responsive to the Letter of Invitation and Terms of Reference, indicating that their Financial Proposals will be returned unopened after completing the selection process. The Client shall simultaneously notify the consultants that have secured the minimum qualifying mark, indicating the date and time set for opening of the Financial Proposals. The notification may be sent by registered letter, cable, telex, facsimile or electronic mail;

(iii) The Financial Proposals shall be opened publicly in the presence of the consultants' representatives who choose to attend. The name of the Consultant, the quality scores and the offered prices shall be read aloud and recorded when the Financial Proposals are opened. The Client shall prepare minutes of the public opening.

(iv) The Evaluation Committee will determine whether the Financial Proposals are complete [i.e., whether they have costed all items of the corresponding Technical Proposals. If not, the Client will cost them and add their cost to the initial price], correct any computational errors. The evaluation shall exclude the Consultant's Service Tax.

(v) The Client will select the lowest proposal ['evaluated' price] among those that passed the minimum technical score and invite them for negotiations.

(vi) During negotiations the Consultant must be prepared to furnish the detailed cost break-up and other clarifications to the proposals submitted by it, as may be required to adjudge the reasonableness of its Financial Proposal.

(vii) Negotiations will commence with a discussion of the Consultant's Technical Proposal, the proposed methodology (work plan), staffing and any suggestions you may have made to improve the TORs. Agreement will then be reached on the final TOR, the staffing and staff months, logistics and reporting. Special attention will be paid to optimization of the required outputs from the Consultants and to define clearly the inputs required from the Client to ensure satisfactory implementation of the Contract.

(viii) Changes agreed will then be reflected in the Financial Proposal using proposed unit rates (No negotiations of the unit rates including man-month rates)

(ix) Having selected Consultants, among other things, on the basis of the evaluation of proposed key professional staff, the Client expects to negotiate a contract on the basis of the staff named in the Technical Proposal and prior to contract negotiations will require assurance from the Consultant that these staff will be actually available. The Client will not consider substitutions during contract negotiations except in cases of unexpected delays in the starting date or incapacity of key professional staff for reasons of health.

(x) The negotiations will be concluded with a review of the draft form of contract. The Client and the Consultant will finalize the contract to conclude negotiations.

(xi) If the negotiations with the Consultant are successful, the award will be made to him and all other consultants notified. If negotiations fail, and if it is concluded that a contract with reasonable terms cannot be concluded with the winning Consultant, the Consultant quoting second lowest price will be invited for negotiations. This process will be repeated till an agreed contract is concluded.

8. Please note that the Client is not bound to select any of the firms submitting proposals.

9 It is estimated that about one Man-months of services will be required for this assignment and generally you should base your financial proposals on this figure. However, you should feel free to submit an alternative proposal on the basis of man-months considered necessary by you to undertake the assignment.

10 You are requested to hold your proposal valid for 90 days from the date of submission without change in the personnel proposed for the assignment and your proposed price. The Client will make its best efforts to select a consultant firm within this period.

11 Please note that the cost of preparing a proposal and of negotiating a contract including visits if any is not reimbursable as a direct cost of the assignment.

12 Assuming that the contract can be satisfactorily concluded in 09/2018, you should be expected to take up/commence the assignment in 09/2018.

13 We wish to remind you that any manufacturing or construction firm with which you might be associated with, will not be eligible to participate in bidding for any goods or works resulting from or associated with the project of which this consulting assignment forma a part.

14 Please note that if your firm does not have all the expertise for the assignment, there is no objection to your firm associating with another firm to enable a full range of expertise to be presented. However joint ventures between firms on the shortlist are not permitted except with the prior approval of Client. The request for a joint venture should be accompanied with full details of the proposed association.

15 Deleted

16. Please note that the remuneration which you receive from this assignment will be subject to normal tax liability as per rules. Kindly contact the concerned tax authorities for further information in this regard, if required.

17. We would appreciate if you inform us by Telex/Cable/E-mail/Facsimile

(a) Your acknowledgement of the receipt of this letter of invitation, and
(b) Whether or not you will be submitting a proposal

Yours faithfully

Executive Engineer

BSCL, Belagavi

Annexures:

1. Terms of Reference (TOR)
2. Supplementary Information to Consultants
3. Contract format under which Assignment will be performed

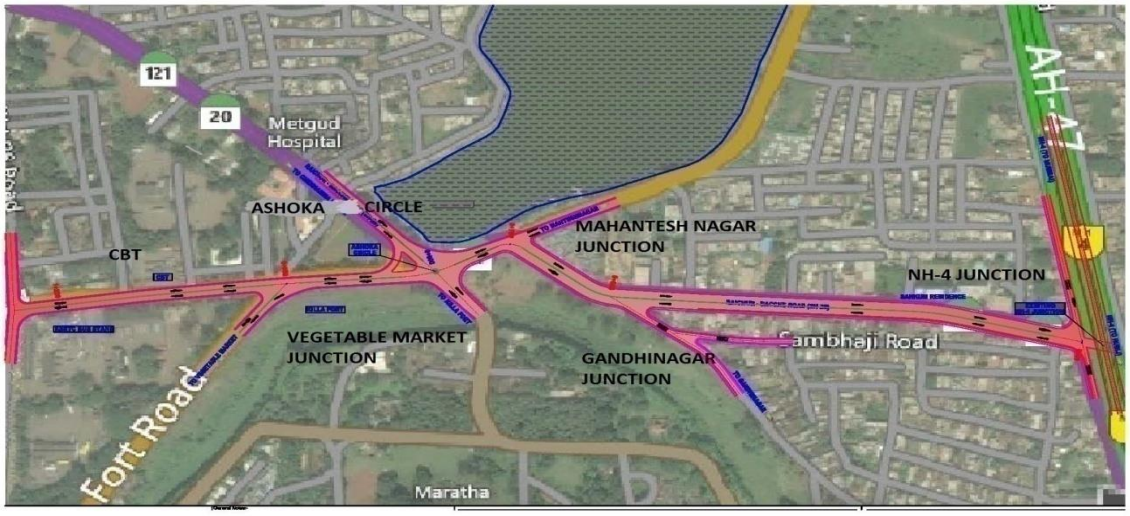
Annexure 1

TERMS OF REFERENCE (TOR)

The Terms of Reference should include the following:

1. Background
2. A concise statement of the objectives of the assignment
3. An outline of the tasks to be performed
4. Schedule for the completion of the tasks
5. Data, services, and facilities to be provided by the Client
6. Final outputs (i.e., Reports, drawings, etc.,) that will be required of the Consultant
7. Composition of the Review Committee and review procedure to monitor Consultant's work
8. List of Key positions, whose CV and experience would be evaluated.

1. **Background:** The Project road under consideration starts at NH-4 Junction. Project road is part of Raichur-Bachi road (SH-20) from NH-4 junction to Ashoka circle, from there project road deviates on Khade bazaar road passing through circuit house ending at CBT. Project road passes through four junctions namely Gandhinagar junction, Mahantesh Nagar junction, Ashoka circle junction and vegetable market Junction. Very high density of mixed traffic flows through the project area. Below Figure 1 shows key plan of Project road.



Project road passes through heavily built up area. Right of way varies from 30m to 35m throughout. Existing road is 4 lane divided carriageway. Bus and LCV type of traffic is dominating in this section. Due to heavy flow of mixed traffic in Ashoka circle and Mahantesh Nagar junction circle, many traffic jams occur causing inconvenience to road users, delay and fatal accidents leading to death of road users. The Authority seeks the services of qualified firms for preparing a feasibility Report for **CONSTRUCTION OF FLYOVER FROM NH-4 TO CENTRAL BUS TERMINUS VIA ASHOK CIRCLE APPROACHES IN BELAGAVI CITY.** The feasibility Report shall also include a pre-feasibility study for other alternatives to flyover for smooth flow of traffic.

2. **A concise statement of the objectives of the assignment:** The objective of this consultancy is to undertake feasibility studies and prepare a feasibility Report of the Flyover Project for the purpose of firming up the Authority's requirements in respect of development and construction of the Project flyover and Project Facilities and enabling the prospective bidders to assess the Authority's requirements in a clear and predictable manner with a view to ensuring:

(i) enhanced safety and level of service for the road users;

(ii) superior operation and maintenance enabling enhanced operational efficiency of the Project;

(iii) minimal adverse impact on the local population and road users due to road construction;

(iv) minimal adverse impact on environment;

(v) minimal additional acquisition of land; and

(vi) phased development of the Project for improving its financial viability consistent with the need to minimize frequent inconvenience to traffic that may be caused if additional works are undertaken within a period of seven years from the commencement of construction of the Flyover Projects.

3. An outline of the tasks to be performed:

To provide all engineering investigations, land acquisition requirements, design, drawings, specifications, data sheets, estimate and financial viability. Also, Consultant shall coordinate in finalization of proposal and for obtaining statutory clearances and approvals from the competent authority. Tasks to be carried out in this assignment are as follows:

i. To carry out geotechnical investigation and subsoil exploration of the proposed project site
ii. To carry out traffic investigations required for the project as per IRC.
iii. To carry out traffic surveys and all kind of surveys required for the project.
iv. To conduct Environment impact assessment or initial environment examination be carried out in accordance with Environmental Assessment Requirements as amended from time to time / Government of India Guidelines, as applicable.

v. To carry out detailed analysis and design of all structures/elements, roads and pavements of the project.

vi. To carry out designs for road furniture and road safety/traffic control features;

vii. To prepare detailed drawings

viii. Provide Data Sheets, specifications and Assist department in rate analysis of Items.

ix. The Consultants shall prepare estimates and project cost for the entire project, including the cost of environmental and social safeguards proposed based on MoRT&H's Standard Data Book and market rate for the inputs.

x. Attend the review meetings conducted by the department and to highlight Lacunae, if any, and also suggest Steps / Solutions for the same so that to achieve the Overall Target of Quality Assurance.

xi. Note: The designs for assignment should be in conformity with established relevant standards and IRC codes. Designs should be compatible with advanced/future technology.

(i) Traffic surveys and demand assessment
(ii) Engineering surveys and investigations
(iii) Location and layout of toll plazas
(iv) Location and layout of truck lay byes
(v) Location and layout of bus bays and bus shelters
(vi) Social impact assessment
(vii) Environment impact assessment
(viii) Preliminary designs of road, bridges, structures, etc.
(ix) Preparation of Cost Estimates

These services are briefly explained here under:

3.2 Traffic surveys and demand assessment

3.2.1 The types of traffic surveys and the minimum number of survey stations shall be as under:

S. No.	Description of Activity	Number of Survey Stations
1.	Classified Traffic Volume Count	One station closes to the proposed location and as directed by engineer in charge
2.	Intersection Volume Count	All major intersections
3.	Pedestrian/Cattle crossing traffic count	At all locations of settlements/habitations along the project location
4.	Axle Load Spectrum	One station each close to the proposed location

The Consultant shall, upon award of the Consultancy, submit its proposal regarding the locations of traffic survey stations for each of the above activities along with an index plan giving the rationale of its proposal. Care shall be taken in proposing the locations in a manner that they capture the traffic in different sections. This proposal shall form part of the Inception Report. The Authority may, within one week of receiving the Inception Report, modify the locations of traffic survey stations in accordance with the provisions of this TOR and the Consultant shall comply with the same.

3.2.2 Classified traffic volume count

For conducting the traffic volume count, the Consultant shall comply with the following:

(a) The classified traffic volume counts shall be carried out twice for 7 continuous days at the selected survey stations as per IRC guidelines on the subject (IRC: 9-1972). The timing for such counts shall be:

(i) Within five weeks of the commencement of services, and

(ii) During the thirteenth week of commencement of services.

The following classes of vehicles shall be captured separately.

Motorized vehicles		**Non-motorized vehicles**	
1.	Cars (include jeeps, vans)	1.	Bicycles
2.	Light commercial vehicles including mini buses	2.	Cycle Rickshaws
3.	Buses	3.	Animal Drawn Carts
4.	Two axle trucks	4	Handcarts
5.	Three axle trucks	5.	Any other non-motorized vehicles
6.	Four or more axle trucks		
7.	Tractors		
8.	Ambulance, fire tender, funeral vans		
9.	Three wheelers		
10.	Two wheelers		

(b) The traffic count data would be analyzed to depict hourly and daily variations. The Abstract of traffic data would also be provided for each survey station.

3.2.3 Traffic demand assessment

(a) The Consultant shall assess the traffic demand for the Flyover Projects for a period of 10 (ten) years, 15 (fifteen) years and 20 (twenty) years respectively based on analysis of traffic counts, trend growth and growth in the influence area of the Project flyover. Normally, an annual growth rate of 5% (five per cent) shall be assumed. Any variation would have to be justified with reasons, including analysis of past trends.

(b) Based on the assessment of the traffic demand on the various sections of the Project, the Consultant shall provide a broad assessment of the year in which six-lanes may be required. The Consultant shall also provide sensitivity analysis due to change in assumption of traffic projections.

3.2.4 Intersection volume count and design

(a) Volume count

For conducting the intersection volume count, the turning movement traffic surveys shall be carried out as per IRC: SP:41-1994 at all locations where the Flyover Projects intersects/meets the NH, SH or MDR. The turning movement surveys will be undertaken from 08:00 to 12:00 hours in the morning and 16:00 to 20:00 hours in the evening.

(b) Design

(i) The data at each location shall be presented and analyzed to identify suitable treatment

(ii) The amount of additional land required, if any, shall be clearly stated and brought out.

3.2.5 Pedestrian/ Cattle crossing demand assessment

For assessing the requirements of Pedestrian/ Cattle crossings, the traffic counts for two continuous days between 08.00 hours and 20.00 hours shall be carried out at the locations close to all habitations/ settlements along the Flyover Projects. The data so collected shall be analyzed to determine whether any pedestrian/cattle crossing by way of underpass/overpass is justified. If so, the locations and broad layout shall be proposed.

3.2.6 Axle load spectrum surveys

Axle load spectrum surveys shall be carried out at each proposed location of toll plaza on the Flyover Projects. The axle load survey shall capture buses, trucks and tractors with trailers in the traffic stream. The survey shall be for both directions. Sample size shall not be less than 10% (ten per cent) of the buses, trucks and tractors with trailers in the traffic stream and based on standard statistical techniques. The vehicle damage factor shall be calculated as per the equivalency factors given in IRC: 37.

3.3 Engineering surveys and investigations

3.3.1 The engineering surveys and investigations shall be divided into the following components:

Topographic, alignment and land use survey

Road inventory survey

Road condition survey

Bridge condition survey if any

Soil, geo-technical, material, hydrology and drainage surveys

3.3.2 Topographic, alignment and land use survey

The activities and Deliverables forming part of the topographic, alignment and land use survey are described below (see also Attachment A to the TOR):

(a) Divide the Flyover Projects into various stretches as per terrain classification.

(b) Identify sections of Flyover Projects which fall within marine environment (Condition of severe marine environment: alternate wetting and drying due to sea spray; alternate wetting and drying combined with freezing; buried in soil having corrosive effect; members of structures in contact with water where the velocity of flow and the bed material are likely to cause erosion of concrete. Moderate marine environment would be other than severe).

(c) Identify sections of Flyover Projects which require raising. Such sections will be identified with attention being paid to the previous history of submergence and the extent to which the subgrade is likely to be affected by the capillary action if the section is not raised.

(e) As far as possible, the existing alignment would be retained subject to the following requirements:

(i) Identify stretches which do not meet the criterion of ruling design speed, i.e. where radii of horizontal curves are less than desirable minimum. Prepare realignment plans for improving geometrics in such stretches.

(ii) Identify stretches out of (i) above, which meet the criterion of minimum design speed, i.e. where the radii of horizontal curves are more than the absolute minimum (This will enable the Authority to take a view on whether to include such stretches for improving geometrics in the initial stage or these can be postponed by a few years and in the meantime, steps can be taken to acquire the necessary land for the ROW).

(iii) Identify stretches where stopping sight distance is not available. Work out possible improvement plan to increase the sight distance to provide overtaking sight distance. Also work out option to increase the sight distance to provide at least the intermediate sight distance.

(iv) Identify stretches, other than those in (iii) above, where intermediate sight distance is not available. Work out possible improvement plan to increase the sight distance to provide overtaking sight distance. Also work out possible improvement plan to increase the sight distance to provide at least the intermediate sight distance.

(v) Identify stretches where the gradients are steeper than the ruling gradient for the relevant terrain condition. Work out and prepare an improvement plan for the vertical alignment in such stretches.

Divide improvement plans of such stretches into the following two parts:

Stretches where gradient is more than the limiting gradient

Stretches where gradient is more than the ruling gradient but less than the limiting gradient. (The Authority can take a view on whether improvements of stretches in this category shall be taken up or not.)

(vi) Identify stretches where extra width of roadway and carriageway at curves is required.

(f) Identify stretches involving construction of new bridges and other grade separated structures including those requiring reconstruction and their approaches. Work out proposal for location of such structures and alignment of approaches.

(g) Based on the improvement plans of horizontal and vertical alignment worked out as a result of tasks in (d), (e) and (f), prepare alignment plans, L-Sections and cross-sections of the entire Flyover Projects. Scale of drawings shall be as per IRC: SP:19. Proposed improvements shall be marked on the plans. Such improvements will include raising of road, widening of roadway, widening of existing carriageway, location of median and the side on which the new four lane carriageway is to be provided, provision of shoulders – both paved and granular, new structures, underpasses, grade separators, service roads, additional road signs, road furniture, safety devices, relocation of utilities, removal of trees, etc.

(h) Also prepare a separate Land Plan of the Flyover Projects showing the existing ROW (along with all the existing assets within the ROW e.g. structures, drains, service roads, trees, utilities and safety devices) and proposed additional land required in various stretches for improvement of geometrics, construction of new structures, provision of intersections, interchanges, service roads, toll plazas, project facilities, etc. The Land Plan should also show encroachments, if any. A list of such encroachments along with their brief description shall also be prepared and included in the feasibility report.

(i) For additional land proposed to be acquired as per final alignment plan of the Flyover Projects, the Land Plans shall be marked on duly certified maps showing khasra numbers and

shall be furnished along with a report which will include detailed schedules in respect of the proposed acquisition of land holdings as per revenue records in a format that would enable the Authority to initiate land acquisition proceedings.

(j) A set of cross-sections of the existing road at 20m intervals shall be provided by the Consultant. These cross-sections along with proposed improvement plan and preliminary design shall form the basis of preparation of indicative BOQ for the Flyover Projects.

3.3.3 Road inventory survey

Deliverables under this component shall include:

(a) An inventory of road, culverts, bridges and other structures like railway over/under bridges, flyovers (grade separated structures), underpasses and overpasses.

The proforma for road, culverts and bridges or other structures have been provided at Proforma1, 2 and 3 respectively.

(b) Identification of stretches of the Flyover Projects which -

Are affected by frequent flooding;
Are subjected to water logging;
Pass through black cotton soil area;
Pass through marshy area; or
Pass through weak soil stratum

(c) Typical cross-sections of the existing road showing the crust composition of pavement shoulders and drains (one cross-section for every 100m of the road).

(d) Identification of sections in cutting.

(e) Identification of culverts requiring:

(I) Reconstruction (all culverts which are structurally distressed shall be reconstructed as new structures).
(ii) Widening (all existing culverts which are not to be reconstructed shall be widened equal to the roadway width).
(iii) Repairs and/or rehabilitation along with preliminary proposals.
(iv) New construction

3.3.4 Road condition survey

The Consultant shall undertake a survey of the visual condition of the pavement and shoulders of the Flyover Projects and provide its report as per Proforma-4. The Consultant should also report if distresses are observed in the pavement and shoulders. It will also identify sections requiring reconstruction.

3.3.5 Bridge condition survey

The activities and Deliverables forming part of bridge condition survey are specified below:

(a) The Consultant shall carry out a detailed inspection of every bridge and other structures such as railway over/under bridges, overpasses, underpasses and grade separators including flyovers. (For guidance, see IRC: SP: 35 and IRC: SP: 52).

(b) For each structure, the Consultant shall indicate the distresses observed, if any, in respect of various components of the structures e.g. bearings, expansion joints, wearing coat, railings/crash-barriers, foundations, substructures (abutments, piers, pier caps), superstructure (Proforma-5).

On the basis of the distresses observed, the Consultant shall divide the structures into the following categories:

(i) Structures requiring reconstruction immediately as part of first stage development (all such structures shall be provided as new structures);
(ii) structures where distresses are not so severe and reconstruction can be postponed to a subsequent stage say for a period of 7 to 8 years; if any major repairs are required in the meantime, these shall be so indicated for each such location;
(iii) Structures requiring repairs and/or rehabilitation (for such structures indicate preliminary proposals for repairs and/or rehabilitation);
(iv) Structures requiring widening (for such structures indicate widening methodology); and
(v) Structures that shall be retained.

3.3.6 Soil, geotechnical, material, hydrology and drainage surveys

The activities and Deliverables forming part of the soil, geotechnical, material, hydrology and drainage surveys are described below:

(a) The characteristics of the existing soil, two samples from every km of the Flyover Projects or closer where change in soil type is encountered.

(b) The determination of subgrade CBR (soaked) every three km of the Flyover Projects or closer where change in soil type is encountered.

(c) Benkelman Beam Deflection measurements on the Project – one set of ten readings in 250 m for every km of the Flyover Projects.

(d) Investigations of the subsoil strata (one trial bore and/or test pit at embankment and one in river bed at locations where new bridges or other structures are proposed. The depth of trial bore/ test pit shall be as per IRC standards).

(e) Preliminary hydraulic data for bridges, design discharge, HFL, LWL, etc. with a view to checking adequacy of existing waterway.

(f) A broad assessment of the drainage condition and requirement of the Flyover Projects

3.4 Deleted

3.5 Protective works in hill sections, retaining walls, breast walls, etc.

For the stretches passing through hills, the Consultant shall identify the broad requirements of retaining walls, breast walls, etc. for the purposes of preparing rough cost estimates.

3.6 Road signs, safety devices

(a) The Consultant shall propose provision of Road Signs, Pavement Markings, Safety Barriers, Railings, Delineators, Chevron Markings, Traffic Attenuators, Road Boundary Stones, Km Stones, 200 m Stones.

(b) The Consultant shall propose overhead signs on the Flyover Projects and provide an outline of the same giving size and location.

3.7 Bus bays and bus shelters

The Consultant shall undertake field surveys and identify suitable locations for provision of bus bays and bus shelters on the Flyover Projects. As far as possible, bus bays shall not be located on horizontal curves, summit of vertical curves and bridges. Good visibility must be

ensured. Further, the bus bays should not be too close to major intersections. The length of each such bus bay shall also be indicated.

The Consultant shall also indicate the locations of bus stands/bus stops provided by the concerned State Transport Authorities on the Flyover Projects.

3.8 Social impact assessment

The Consultant shall undertake social impact assessment due to the improvements proposed on the Flyover Projects, especially the persons affected due to the Project and requiring resettlement and rehabilitation. The extant policies and guidelines of the government would be kept in view while undertaking the assessment. He shall prepare a plan for involuntary resettlement and land acquisition, which shall include the following:

(a) Prepare in accordance with guidelines of the Government, a draft Resettlement and Land Acquisition Plan;

(b) Prepare area specific social assessments to support development of a locally relevant approach to resettlement which provides benefits to people in the Project's area of influence, which include socioeconomic conditions, social service infrastructure, and social institutions and organization, in accordance with the Government policies and guidelines;

(c) These social assessments should include gender and local ethnic aspects;

(d) Provide recommendations and action plan for the Contractor to undertake, at the detailed design stage, a full census and inventory of lost assets (households, shops and agricultural and other lands, or access to current income-generating activities, including impacts caused by permanent or temporary acquisition) of affected people and a baseline socioeconomic survey of the affected population. Determine the scope and magnitude of likely resettlement and land acquisition effects, and list likely losses of households, agricultural lands, business and income opportunities, as well as affected communal assets and public buildings;

(e) In consultation with local stakeholders, government and the Authority, develop an entitlement matrix, on the basis of the consultations, socio-economic surveys, and inventories of losses that will determine the amount of compensation in accordance with the guidelines and policies of the Government;

(f) Prepare the plans with full stakeholder participation, including the Government and the Authority. Consult with affected persons and community-based organizations to ensure that all affected persons have been fully informed of their entitlements through the consultative processes initiated by the Government and the Authority. Ensure that communities and displaced persons understand the project, its impacts, and the responsibilities of the parties; and

(g) Analyze and confirm the following aspects that will apply to land acquisition and resettlement in the project area: (i) laws and regulations, including local practices; (ii) budgetary processes for involuntary resettlement and land acquisition; (iii) schedules for these activities that are coordinated with the construction schedule; and (iv) administrative arrangements and requirements.

3.9 Environment impact assessment

(a) The Consultant shall undertake environment impact assessment of the Flyover Projects as per provisions of the Applicable Laws on environment protection and identify a package of measures to reduce/eliminate the adverse impact identified during the assessment. An environmental impact assessment report and environmental management plan shall be prepared based on such assessment. The management plan shall include project specific mitigation and monitoring measures for identified impacts as well as management and monitoring plans to address them.

(b) The Consultant shall also assist the Authority in conducting public hearings and addressing the comments and suggestions received during the EIA process with a view to getting environmental clearance from the competent authority.

3.10 Designs

The Consultant shall arrive at the designs of various components of the Flyover Projects keeping in view the requirements of the Manual and the scope of services described in this TOR. It shall be responsible for the accuracy of the physical details such as alignment, right of way, abutting land use, assets within the right of way including safety devices, utilities, trees, service roads, cross drainage structures, etc. The layout and designs shall be supplemented with explanatory drawings, statements, charts, notes as necessary.

3.11 Project cost

The Consultant shall work out BOQ of various components and prepare cost estimates of the Flyover Projects with a break up of cost for each component separately. To the construction cost so arrived at, the Consultant may add some percentage thereof as a lump sum provision for physical and price contingencies, and other financing costs, pre-construction expenses etc.

3.12 Financial analysis and bid process

3.12.1 Detailed financial analysis is not required to be undertaken by the Consultant. However, the Consultant shall provide the estimated construction costs, operation and maintenance costs, traffic forecast, toll revenues etc. as part of its preliminary financial analysis and appraisal of the Project. The Consultant shall, also provide a preliminary assessment of the financial viability of the Project with a view to estimating the likely IRR over a Contract period of 10 (ten) years, 15 (fifteen) years, 20 (twenty) years and 25 (twenty-five) years respectively. It shall also aid during the Bid Process for selection of the Contractor.

3.12.2 While undertaking the financial analysis and projecting the IRR, the following assumptions shall be adopted:

(a) Capital cost shall be adopted as per estimates of construction cost
(b) O&M costs may be assumed as per norms of the Authority;
(c) the Contract period may be fixed by reference to the year in which the projected traffic would exceed the design capacity of the Flyover Projects; and
(e) growth rate of traffic may be assumed at 5% (five per cent) per annum.

3.12.3 The Consultant shall:

(a) calculate the NPV and EIRR for the Project. It will undertake sensitivity analysis by identifying the most critical factors and determine their impact on the EIRR, including varying project costs and benefits, implementation period, and combinations of these factors; and
(b) Conduct a risk analysis (using the Monte Carlo or any other suitable method) by considering the possible values for key variables based on records, and their occurrence probability.

3.12.4 If the IRR of the Project, based on the aforesaid calculations is less than minimum acceptable, an effort should be made to reduce the capital costs in consultation with the Authority. This may be done either by omitting/ modifying some of the proposed structures or by phasing them after a period of seven years or more, such that the IRR reaches a minimum acceptable percentage of IRR.

4. Schedule for the completion of the tasks:

The Consultant shall deliver the following deliverables (the "**Deliverables**") during the course of this Consultancy. The Deliverables shall be so drafted that they could be given to the prospective bidders for guidance in preparation of their bids. Ten hard copies and two soft copies in CDs of all the final reports, drawings, etc. shall be submitted to the Authority. For draft reports only five hard copies and one soft copy in CD shall be submitted to the Authority.

A. Inception Report

On commencement of the Consultancy, the Consultant shall submit an Inception Report. The Inception Report shall include the Consultant's submissions towards understanding of the RFP and the Work Plan. The Inception Report shall also include the Consultant's proposal regarding the traffic survey stations

Within a period of two weeks of submission of the Inception Report, the Consultant shall submit a Supplementary Inception Report where it must clearly spell out the broad strategy for structuring the project in a manner that would restrict the likely viability gap funding to a level not exceeding 20% (twenty per cent) of the capital cost of the project assuming an IRR of 15% (fifteen per cent). In making this assessment, the Consultant shall follow the assumptions specified in paragraph 3.12 above. In particular, the Consultant must make realistic assumptions about the traffic projections and the resulting revenue streams with a view to assessing the capital cost that can be sustained by such revenues. For this purpose, the Consultant shall undertake a 7 (seven) day classified traffic volume count and a topographic survey to identify geometric improvements, new bridges etc. The project components should be so formulated as to make the project viable.

In determining its aforesaid strategy, the Consultant shall also seek the advice of the Authority. In the event that a viable project does not seem feasible, the Consultant shall not proceed with the Consultancy and the same shall stand terminated. The Consultant shall be entitled to a payment of 10% (ten per cent) of the Agreement Value upon such termination.

B. Report on Alignment and First Traffic Survey

(a) The Consultant shall undertake topographic survey of the Flyover Projects, identify geometric deficiencies and construction of new bridges and other grade separated structures (refer para 3.3.2) and submit a Report on the alignment together with proposed geometric improvements. The Consultant shall finalize the alignment after considering the comments of the Authority on the Report on Alignment. The work of preparing cross-sections and Land Plans, etc. shall be undertaken based on the finalized alignment.

(b) The Consultant shall submit a Report on the first 7-day classified traffic volume count giving an analysis of hourly and daily variations. (Refer para 3.2.2).

C. Land Plan Schedules

(a) Land Plan schedules for acquisition of additional land where required for widening of road, geometric improvements, new bridges and other structures, inter-sections, inter-changes, service roads etc... (Refer para 3.3.2(i))

(b) Another plan of the Flyover Projects showing the existing ROW (along with all the existing assets within the ROW) and encroachments, if any, together with a list of such encroachments along with their brief description (Refer para 3.3.2(h)).

D. Utility Relocation Plans

Utility-wise preliminary plans together with approximate costs for shifting/relocation shall be provided for Four-laning.

E. Reports on Environment and Social impact assessment

The Consultant shall submit reports on social impact assessment (Refer para 3.11) and environment impact assessment (Refer para 3.12).

F. Report on indicative GAD of Structures

The Consultant shall submit report on indicative GAD of bridges and grade separators if any. (Refer paras 3.2.4, 3.2.5, 3.3.5 and 3.5).

G. Feasibility Report

The Feasibility Report of the Project shall include the following:

(1) Sets of drawings

(a) An Index Plan of the Flyover Projects

(b) Plans, L-sections, and typical cross-sections showing the existing features within the ROW (e.g. carriageway, structures, drains, crash barriers, service roads, utilities, adjoining land use, intersecting roads/access roads, road side developments etc.) with the proposed improvements marked thereon (e.g. raising of embankment, widening of embankment, location of median, placement of new carriageway, geometric improvements, widening or reconstruction of structures, new subways/underpasses/grade separators, service roads, arrangements for merging/diverging, traffic circulation, relocation of utilities, etc.) (Refer para 3.3.2).

(2) Investigation Reports

(a) Report on traffic survey and demand assessment (Refer para 3.2).

(b) Inventory survey report (Refer para 3.3.3).

(c) Road and bridge condition survey report (Refer paras 3.3.4 and 3.3.5).

(d) Soil, geotechnical and drainage report (Refer para 3.3.6).

(3) **Designs**

Designs of the Flyover Projects including service roads, consistent with the existing facility and the additional requirements including:

(a) Traffic and toll forecasting for 10 (ten), 15 (fifteen), 20 (twenty) and 25 (twenty-five) years.

(b) Pavement design for new carriageway and strengthening of existing carriageway along with typical cross-sections.

(c) Options for retention of existing bridges and other structures or their replacement by new structures together with design. For new bridges, the length from abutment to abutment shall not be less than the length of the existing bridge and foundations need not be above the existing foundations unless soil conditions justify otherwise.

(d) Drainage assessment.

(e) Layout of inter-sections, grade separators and inter-changes with ramps.

(4) **Costing**

(a) Deleted

(b) Cost Estimate for construction of Flyover Projects.

(c) Total Project Cost (Refer paras 3.14 and 3.15).

(5) **Implementation schedule**

(a) Construction period.

(b) Likely delays, if any, on account of land acquisition.

H. Financial analysis

A preliminary financial assessment of the Project indicating the likely IRR for a 10 (ten) year, 15 (fifteen) year, 20 (twenty) year and 25 (twenty-five) year Contract period respectively (Refer para 3.15).

The Consultant shall, based on the assumptions specified in paragraph 3.15, indicate the likely viability gap funding for the project. In case the viability gap funding projected in the Feasibility Report exceeds the projection in the Inception Report by more than 10% (ten per cent) of the capital costs, a deduction of 10% (ten per cent) of the Agreement Value shall be made from the payment due to the Consultant. Such deduction shall be deemed to be mutually agreed genuine pre-estimated compensation and damages suffered by the Authority on account of inaccurate projections leading to higher costs.

5. Data, services, and facilities to be provided by the Client:

Client will help in coordinating amongst different stake holders such as pollution control board, City corporation, water supply board, HESCOM and others for obtaining necessary NOCs and any other necessary information required for preparing feasibility report.

6. Final outputs (i.e., Reports, drawings, etc.,) that will be required of the Consultant:

Key Date No.	Description of Deliverables	Week No.
KD1	Inception Report including alignment proposals	1
KD2	Report on Indicative GAD of structures	2
KD3	Report on Environment and Social Impact Assessment	2
KD4	Draft Feasibility Report	3
KD5	Final Feasibility Report	4

7. Composition of the Review Committee and review procedure to monitor Consultant's work:

Review committee for the said project shall include: a) GM (Tech), KUIDFC, Bengaluru, b) GM (Tech), BSCL, Belagavi, c) Executive Engineer, BSCL, Belagavi.
Consultants will have to present the concept plan to Local Technical Committee at Belagavi. On approval of concept plan and incorporation of comments by local TC, revised concept plan shall be submitted to KUIDFC, Bengaluru for in-principle approval. Further, feasibility Report shall be prepared and submitted to BSCL for submitting it to KUIDFC for clearance.

8. List of Key positions, whose CV and experience would be evaluated:

(a) Senior Highway Engineer-cum-Team Leader

Educational Qualifications	Graduate in Civil Engineering
Essential Experience	10 (ten) years in planning, project preparation and design of highway projects.
Job responsibilities	He will lead, coordinate and supervise the multi-disciplinary team. It will be his responsibility to guide the team in arriving at solutions within the constraints specified in the TOR.
Minimum time required on site	30 (thirty) days

(b) Bridge Engineer

Educational Qualifications	Graduate in Civil Engineering
Essential Experience	7 (seven) years in analysis of condition of existing bridges and design of major highway bridges, flyovers, road over bridges
Job responsibilities	He will be responsible for suggesting options for retention of existing bridges or their replacement and propose preliminary design solutions under the constraints described in the TOR.
Minimum time required at site	20 (twenty) days

(c) Traffic–cum-Safety Expert

Educational Qualifications	Post Graduate in Traffic and/or Transportation Engineering or Planning
Essential Experience	7 (seven) years in traffic surveys and studies, traffic safety facilities, etc. on highway projects.
Job responsibilities	He will be responsible for suggesting the broad layout of intersections, interchanges, grade separators and assessment of traffic forecast on the Flyover Projects, road safety devices etc.
Minimum time required at site	20 (twenty) days

(d) Surveyor

Educational Qualifications	Graduate in Civil Engineering or Diploma in Civil Engineering or Diploma in Surveying
Essential Experience	7 (seven) years' experience in surveying on highway projects
Job responsibilities	He will be responsible for quick traverse survey of the alignment, cross section, l-section, strip plan, land-use, etc. of the Flyover Projects.
Minimum time required at site	20forty) days

(e) Financial Analyst

Educational Qualifications	Post Graduate in Commerce/ Chartered Accountant or equivalent.
Essential Experience	7 (seven) years in financial analysis and mo of infrastructure projects.
Job responsibilities	He will be responsible for financial analys modelling of the Project.
Minimum time required at site	04 (Four) days

(f) Environmental Expert

Educational Qualifications	Masters/Bachelor in Environmental Science or equivalent
Essential Experience	7 (seven) years in environmental studies
Job responsibilities	He will conduct the environmental impact assessment of the Project
Minimum time required at site	7 (seven) days

Annexure 2

SUPPLEMENTARY INFORMATION FOR THE CONSULTANTS

Proposals:

1. Proposals should include the following information:

(a) Technical Proposals:

(i) Technical Proposal Submission in Form F-1
(ii) A brief description of the firm/organization and an outline of recent experience on assignments/projects of similar nature executed during the last three years in the format given in Form F-2;
(iii) Any comments or suggestions of the Consultant on the TOR
(iv) A description of the manner in which Consultants would plan to execute the assignment, work-plan, time schedule in Form F-3 and approach or methodology proposed for carrying out the assignment;
(v) The composition of the team of personnel which the Consultant would propose to provide and the tasks which would be assigned to each team member in Form F-4;
(vi) Curricula Vitae of the individual key staff members to be assigned for the assignment and of the team leader who would be responsible for supervision of the team. The curricula Vitae should be in Form F-5 and signed by the concerned personnel.
(vii) The Consultant's comments, if any, on the data, services and facilities to be provided by the Client as indicated in the TOR.

(b) Financial Proposals:

The financial proposals should include the following:

(i) Financial Proposal submission in Form – 6
(ii) Cost Estimate of Services, List of Personnel and Schedule of Rates in Form - 7

2. Two copies of the Proposals should be submitted to the Client.

3. The Consultants should note that the Contract for this Assignment will be with the Client Executive Engineer, BSCL. Payments to the Consultants shall be made in accordance with the agreed payment schedule and incorporated in the Contract. The Client proposes the following payment[5] schedule for consideration of the Consultant.

(i) 10% of Contract price: After signing of contract and submission of Inception Report.
(ii) 50% of Contract Price: On submission of Intermediate Reports as stipulated and them approval by the Client
(iii)20% of Contract Price: On submission of Draft Final Report
(iv) 20% of Contract Price: On approval of Final Report.

4. **Review of reports:**

A review committee (to be restricted to three members) consisting of the following officers will review all reports of Consultants (Inception, Monthly, Quarterly and other re[ports) and suggest any modifications/changes considered necessary within 15 days of receipt.
GM (Tech), KUIDFC, Bengaluru.
GM (Tech), BSCL, Belagavi
Executive Engineer, BSCL, Belagavi

[5] Modify as appropriate for each case.

FORM F – 1

FORM OF SUBMISSION OF TECHNICAL PROPOSAL

From:	To:
…….	…….
…….	…….
…….	……...
…….	…….
…….	…….
(Name of Consultant)	*(Name of Client)*

Sir:

Hiring of Consultancy Services for ……
Reference: RFP No. Your letter dated ……..

We herewith enclose Technical Proposals for the above assignment

We undertake that, in competing for (and, if award is made to us, in executing) the contract for the above assignment, we will strictly observe the laws against fraud and corruption in force in India, namely "Prevention of Corruption Act 1988"

Yours faithfully,

Signature:……..

Name:…….

Address:……...

……

……
(Authorized representative)

FORM F – 2

ASSIGNMENTS OF SIMILAR NATURE SUCCESSFULLY COMPLETED DURING LAST THREE YEARS

1. Brief description of the Firm/Organization

2. Outline of the recent experience on assignments of similar nature:

Sl. No	Name of assignment	Name of project	Client	Cost of assignment	Date of commencement	Date of completion	Was assignment satisfactorily completed
1	2	3	4	5	6	7	8

[Note: Please attach certificates from the Client by way of documentary proof]

FORM F – 3

WORK PLAN TIME SCHEDULE

A. Field Study:

Sl. No.	Item	Month-wise Program[6]							
		1st	2nd	3rd	4th	5th	6th	7th	8th

B. A short Note on the Approach and Methodology outlining various steps for performing the Assignments

C. Completion and submission of Reports[7]

1Inception Report
2Monthly Reports
3Quarterly Reports
4Draft Final Report
5Final Report

D. Comments/Suggestions on Terms of Reference

E. Comments on the data, services and facilities to be provided by the Client.

[6] The period should match with the period of completion of assignment as given in the TOR.
[7] The Reports should match with that specified in the TOR.

FORM F – 4

COMPOSITION OF THE TEAM PERSONNEL AND THE TASK ASSIGNED TO EACH TEAM MEMBER

1. **Technical/Managerial Staff**

Sl.No.	Name	Position	Task assignment

2. **Support Staff**

Sl.No.	Name	Position	Task assignment

FORM F - 5

SUGGESTED FORMAT OF CURRICULA VITAE

FOR MEMBERS OF CONSULTANT'S TEAM

1. Name: ……..

2. Profession/
   Present Designation: ……

3. Years with Firm/Organization: _____ Nationality: ……..

4. Area of Specialization: ----------

5. Proposed Position on Team: ……

6. Key Qualifications:

   (Under this heading, give outline of staff member's experience and training most pertinent to assigned work on proposed team. Describe degree of responsibility held by staff member on relevant previous assignments and give dates and locations. Use up to half-a-page.)

7. Education:

   (Under this heading, summarize college/university and other specialized education of staff member, giving names of schools/colleges, etc., dates attended and degrees obtained. Use up to a quarter page.)

8. Experience:

   (Under this heading, list all positions held by staff member since graduation, giving dates, names of employing organization, title of positions held and location of assignments. For experience in last ten years, also give types of activities performed and client references, where appropriate. Use up to three quarters of a page.)

9. Languages:

   (Indicate proficiency in speaking, reading and writing of each language by 'excellent', 'good' or 'poor'.)

Signature of Staff Member

Date:……
Place……

FORM F – 6

FORM OF SUBMISSION OF FINANCIAL PROPOSAL

From:	To:
…….	…….
…….	…….
…….	……...
…….	…….
…….	…….
(Name of Consultant)	*(Name of Client)*

Sir:

Hiring of Consultancy Services for ……
Reference: RFP No. Your letter dated ……..

We herewith enclose Financial Proposals for the above assignment

We undertake that, in competing for (and, if award is made to us, in executing) the contract for the above assignment, we will strictly observe the laws against fraud and corruption in force in India, namely "Prevention of Corruption Act 1988"

Yours faithfully,

Signature:……..

Name:…….

Address:……..

……

……
(Authorized representative)

FORM F – 7

COST ESTIMATE OF SERVICES, LIST OF PERSONNEL, SCHEDULE OF RATES[8]

1. Remuneration of Staff(Professional/Managerial/Support)

Designation	Name	Rate (Rs.) (per day/month)	Period (days/months)	Total Amount (Rupees)
(a) Team Leader …….		……	……..	……
(b)…….	…….	…….	……..	……
(c) ……..	…….	…….	……	……
(d) ……	…….	…….	……	……
(e) ……	…….	……...	……	……
(f) ……	…….	……...	……	……

Sub-Total (1) ……..

2. Other Expenditures:[9]

Item	Rate (Rs)	Unit	Total Amount (Rs.)
(a) Travel	……..	……	……
(b) Local Transportation	……	……	……
(c) Per diem	……..	……..	……
(d) Others (Give details)	……...	……	……
…….	……	……	……
…….	……	……	……
…….	……	……..	……
……	……	……	……

Sub-Total (2) ……..

TOTAL COST (REMUNERATION & OTHER EXPENDITURES) …….

CONTINGENCY[10] …….

TOTAL COST ESTIMATE (Figures and Words) …….. (Figures)
…….(Words)

---

[8] The breakup of the cost estimate is for the information of the Client to judge the reasonableness of the cost. However, payments will be made on the basis of deliverables as specified in the Contract.

[9] To include expenses for travel, local transportation, per diem, communications, report preparation costs, and other costs as may be necessary for the satisfactory implementation of the assignment.

[10] It will range from 0 to 15% depending on the nature of the assignment and would be negotiated by the Client before finalization of Contract Price.

Proforma -1
ROAD INVENTORY

Date of Survey : Section: km _____ to km _____

Chainage	Type of Terrain	Land Use @	Right of Way (m)	Roadway Width (m)	Carriageway		Shoulder		Average height of Embankment or depth of cutting (m)	Road side drain		Service Roads, if any	Remarks
					Type #	Width (m)	Type #	Width (m)		Exists (F/NF)*	Does not exist**		
1	2	3	4	5	6	7	8	9	10	11	12	13	14
km ____ to km _____													

@ Land use, indicate built-up, agriculture, barren, industrial, forest etc.
# For type of carriageway/shoulder, indicate CC/BT/Metalled/Gravel/Earth
* F= Functional; NF = Non-functional
** If side drain does not exist, put a X mark.
Remarks: Indicate history of submergence or any other information of significance.

Indicate sections in built up area, sections requiring raising.

INVENTORY AND CONDITION SURVEY FOR CULVERTS

Date of Survey : Section: km _____ to km _____

S.No.	Location (chainage)	Type of structure (RCC Box/ Slab/Pipe/ MasonryArch)	Length (m)	Span arrangement		Width of culvert		Height above Bed level		Condition Assessment*			
				Number of Spans	Width of span (m)	Total (m)	Carriageway (m)	u/s side (m)	d/s side (m)	Box, slab, pipe,arch	Head wall	Wing wall	Return wall
1	2	3	4	5	6	7	8	9	10	11	12	13	14

Condition Assessment		Whether waterway adequate (Yes/No)	Remarks
Parapet/ Handrail	Recommendation on widening / reconstruction etc		
15	16	17	18

* Distressed requiring reconstruction
* Not distressed, only widening required
* No widening or reconstruction required

Remarks: Indicate presence of protection works, scour etc. A detailed note should be furnished separately for each culvert proposed for reconstruction, and/or addition of span (waterway).

Proforma -3

INVENTORY OF STRUCTURES
(Bridges and other Structures)

Date of Survey : Section: km _____ to km_____

Location (Chainage)	Year of Construction	Type of Structure			Type of Bearing	Type of Expansion Joint	Type of Wearing Coat	Whether High level Yes/No	Length (m)*	Span or viaduct arrangement		Average vertical clearance** (m)	Width of carriageway between kerbs (m)
		Super structure	Sub structure	Foundation						Number of Spans	Length of span (m)		
1	2	3	4	5	6	7	8	9	10	11	12	13	14

Width of Footpath (m)	Whether water way adequate (Yes/No)	High flood level (HFL)	Low Water Level (LWL)	Design Discharge (cumecs)	Maximum Design velocity (m/sec)	Protection work		Remarks
						Bed	Approaches	
15	16	17	18	19	20	21	22	23

* face to face of dirt wall ** Below bottom of girder/soffit Remarks : Indicate any other feature considered important

Proforma - 4
ROAD CONDITION SURVEY

Date of Survey :

Section: km _____to km _____

Chainage	Visual condition of pavement (Good/Fair/ Poor)	Visual condition of shoulders (Good/Fair/ Poor)	Visual condition of roadside drains (Good/Fair/ Poor)	Visual condition of side slopes and embankment (Good/Fair/ Poor)	Length affected with shoulder drop more than 50 mm		Remarks
					LHS (m)	RHS (m)	
1	2	3	4	5	6	7	8
km 0.000 to km 1.000 km 1.000 to km 2.000							

Notes: (1) Information will be given in block of one km each, i.e. from km 0.000 to 1.000 km, 1.000 to 2.000, etc.
(2) Shoulder drop will be counted when it is more than 50 mm in depth.

Proforma - 5
BRIDGE CONDITION SURVEY
(Bridges and other Structures)

Date of Survey :

Section: km _____to km _____

Location (chainage)	Type of structure	Flooding history	Condition of												Remarks*
			Bearings	Expansion joints	Wearing coat	Parapets/ Railings/crash barriers	Foundations	Abutments	Piers	Super Structure	Approach slabs	Guide bunds	Other protective works	Other items (specify	
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16

- Indicate whether the structure requires widening, reconstruction, repairs and/or rehabilitation, addition of span (waterway)
- A detailed report should be furnished for each structure proposed for reconstruction and /or addition of span (increase in length).

Annexure 3

CONTRACT FOR CONSULTING SERVICES

THIS CONTRACT ("Contract") is entered into this *[insert starting date of assignment]*, by and between Executive Engineer, BSCL having its principal place of business at Tilakwadi, Belagavi, and *[insert Consultant's name]* ("the Consultant") having its principal office located at *[insert Consultant's address]*.

WHEREAS, the Client wishes to have the Consultant performing the services hereinafter referred to, and

WHEREAS, the Consultant is willing to perform these services,

NOW THEREFORE THE PARTIES hereby agree as follows:

1. Services:

(i) The Consultant shall perform the services specified in Attachment A, "Terms of Reference and Scope of Services," which is made an integral part of this Contract ("the Services").

(ii) The Consultant shall provide the personnel listed in Attachment B, "Consultant's Personnel" to perform the Services.

(iii The Consultant shall submit to the Client the reports in the form and within the time periods specified in Attachment C, "Consultant's Reporting Obligations".

2. Term:

The Consultant shall perform the Services during the period commencing *[insert start date]* and continuing through *[insert completion date]* or any other period as may be subsequently agreed by the parties in writing.

3. Payment:

A. Ceiling

For Services rendered pursuant to Attachment A, the Client shall pay the Consultant an amount not to exceed *[insert amount]*. This amount has been established based on the understanding that it includes all of the Consultant's costs and profits as well as any tax obligation that may be imposed on the Consultant.

B. Schedule of Payments

The Schedule of payments shall be as under[11]:

(i) 10% of Contract price-	After signing of contract and submission of Inception Report.
(ii) 50% of Contract Price-	On submission of Intermediate Reports as stipulated and their approval by the Client
(iii)20% of Contract Price-	On submission of Draft Final Report
(iv) 20% of Contract Price-	On approval of Final Report.

[11] Modify as necessary in order to reflect the output required as described in Attachment C

Note: All payments shall be made on submission of pre-receipted invoices by the Consultant in duplicate for the respective stages.

D. Payment Conditions:

Payment shall be made in Indian Rupees, no later than 60 days following submission by the Consultant of invoices in duplicate to the Coordinator designated in Clause 4.

4. Contract Administration:

A. Coordinator:

The Client designates Executive Engineer, As Client's Coordinator; The Coordinator shall be responsible for the coordination of activities under the Contract, for acceptance and approval of the reports and other deliverables by the Client and for receiving and approving invoices for the payment.

B. Reports:

The Reports listed in Attachment C, "Consultant's Reporting Obligations" shall be submitted in the course of the assignment, and will constitute the basis for the payments to be made under Clause 3.

5. Performance Standards:

The Consultants undertakes to perform the Services with the highest standards of professional and ethical competence and integrity. The Consultant shall promptly replace any employees assigned under this Contract that the Client considers unsatisfactory.

6. Confidentiality:

The Consultants shall not, during the term of the Contract and within two years after its expiration, disclose any proprietary or confidential information relating to the Services, this Contract or the Client's business or operations without the prior written consent of the Client.

7. Ownership of Material:

Any studies, reports or other material, graphic, software or otherwise, prepared by the Consultants for the Client under the Contract shall belong and remain the property of the Client. The Consultants may retain a copy of such documents and software; but shall not use them for purposes unrelated to this Contract without prior written approval of the Client.

8. Consultants not to be engaged in certain activities:

The Consultants agree that during the term of this Contract and after its termination, the Consultants and any entity affiliated with the Consultants, shall be disqualified from providing goods, works or services (other than the Services or any continuation thereof) for any project resulting from or closely related to the Services.

9. Insurance:

The Consultant will be responsible for appropriate insurance coverage. In this regard, the Consultant shall maintain workers compensation, employment liability insurance for their staff on the assignment. The Consultant shall also maintain comprehensive general liability insurance, including contractual liability coverage adequate to cover the indemnity of obligation against all damages, costs, and charges and expenses for injury to any person or damage to any property

arising out of or in connection with the services which result from the fault of the Consultant or its staff. The Consultant shall provide the Client with certification thereof up on request.

10. Assignment:

The Consultant shall not assign this Contract or to sub-contract any portion without the Client's prior written consent.

11. Law governing the Contract:

The contract shall be governed by the Laws of India.

12. Indemnify the Client:

The Consultant shall indemnify and hold harmless the Client against any and all claims, demands and/or judgements of any nature brought against the Client arising out of the Services by the Consultant and its staff under the Contract. The obligation under this Clause shall survive the termination of the Contract.

13. Taxes:

The Consultant shall pay the taxes, duties, fees, levies and other impositions payable under the Applicable Law. The Client will perform such duties in this regard to the deduction of such tax as may be lawfully imposed. However, Consultancy Service tax payable for providing this Consultancy Services shall be paid/reimbursed by the Client separately.

For the Client	**For the Consultants**
Signed by:	Signed by:
Name and designation	Name and designation
Date: Place	Date: Place:

List of Attachments to the Contract:

Attachment A: Description of Services
Attachment B: Consultants Personnel
Attachment C: Consultant's reporting Obligations