

**Bihar Urban Infrastructure Development Corporation Ltd.,
(BUIDCO), Patna**

Revised Financial bid- 04.12.2020

Name of Work:

**Selection Of Consultant For Preparation Of Detailed Project
Report For Re-Use Of Treated Sewage**

**Only For BUIDCO's Empanelled consultant (Empanelled vide letter no.
275 dated 04.09.2020) to submit the prices.**

Corrigendum -1

Name of Work: Selection of Consultant for Preparation of Detailed Project Report For Re-Use of Treated Sewage.

Only for BUIDCO's Empanelled consultant (Empanelled vide letter no. 275 dated 04.09.2020)

Revised Bidding Schedule

| SL. No. | Description | Published | To be read as |
|---------|---|---|---|
| 1. | Financial bid | Published/Mailed Financial bid on – 02.12.2020 | Revised financial bid published/mailed on- 04.12.2020 |
| 5. | Last date & Time for submission of proposal . | 05.12.2020 till 15:00 Hrs. In BUIDCo office in Hard Copy. | 15.12.2020 till 15:00 Hrs. In BUIDCo office in Hard Copy. |
| | Time and date of opening of financial bids | 05.12.2020 till 16:00 Hrs. | 15.12.2020 till 16:00 Hrs. |

Note : EMD will be applicable because it is State Govt. Project & other terms & conditions will remain the same.

*Asst
04/12/20*

Chief Engineer,
Planning, Design & Monitoring
Urban Development & Housing Department.



Introduction:-

BUIDCO is entrusted to execute various project sanctioned under Namami Gange, GOI. BUIDCO invites to its empanelled consultant (Empanelled vide BUIDCO letter no. 275 dated 04.09.2020) to quote price for the Preparation of Detailed Project Report for Re-Use of Treated Sewage of Nine Project STPs In Various Towns Of Bihar.

At present Nine STPs have been identified for which DPRs have to be prepared for re-use of treated sewage.

| Group No. | Name of Work | EMD | Duration |
|------------------|--|------------|-----------------|
| Group-1 | Preparation of DPR for Re-use of treated sewage from Beur STP | 1 Lakh | 3 Months |
| Group-2 | Preparation of DPR for Re-use of treated sewage from Saidpur STP | 1 Lakh | 3 Months |
| Group-3 | Preparation of DPR for Re-use of treated sewage from Karmalichak STP | 1 Lakh | 3 Months |
| Group-4 | Preparation of DPR for Re-use of treated sewage from Pahari STP | 1 Lakh | 3 Months |
| Group-5 | Preparation of DPR for Re-use of treated sewage from Barh STP | 1 Lakh | 3 Months |
| Group-6 | Preparation of DPR for Re-use of treated sewage from Mokama STP | 1 Lakh | 3 Months |
| Group-7 | Preparation of DPR for Re-use of treated sewage from Sultanganj STP | 1 Lakh | 3 Months |
| Group-8 | Preparation of DPR for Re-use of treated sewage from Naugachiya STP | 1 Lakh | 3 Months |
| Group-9 | Preparation of DPR for Re-use of treated sewage from Sonapur STP | 1 Lakh | 3 Months |

Financial Proposal

FORM FIN-1: FINANCIAL PROPOSAL SUBMISSION FORM

[Location, Date]

To:

Managing Director

Bihar Urban Infrastructure Development Corporation

#West Boring Canal Raod (Rajapurpul), Patna -800 001

Tel:

Dear Sir /Madam:

We, the undersigned, offer to provide the consulting services for [***Insert name of Assignment***] in accordance with your RFP dated [*Insert Date*]. Our attached Financial Proposal is for the sum of [*Insert amount(s) in words and figures in Indian Rupee*]². This amount is exclusive of the GST.

Our Financial Proposal shall be binding upon us subject to the modifications resulting from Contract negotiations, up to expiration of the validity period of the Proposal.

No fees, gratuities, rebates, gifts, commissions or other payments have been given or received in connection with this Proposal.

We understand you are not bound to accept any Proposal you receive.

We remain,

Yours sincerely,

Authorized Signature [*In full and initials*]:

Name and Title of Signatory:_____

Name of Firm:_____

Address:_____

² Separate Financial Offer must be submitted. Amounts must coincide with the ones indicated I in Form [FIN-2](#)

Project Title: Selection of Consultant For Preparation Of Detailed Project Report For Re-Use Of Treated Sewage of Nine Project STPs In Various Towns Of Bihar

| Sl no | Description of Services | Consultancy Fee (in INR) | |
|-------|--|--------------------------|----------|
| | | In Figures | In Words |
| (A) | Consultancy fee for providing services for PREPARATION OF DETAILED PROJECT REPORT FOR RE-USE OF TREATED SEWAGE As per Terms of Reference (ToR) complete to the satisfaction of Client. Note:- the price should be quoted work wise | | |
| | 1.Quoted Price for(<i>Insert Group No.</i>) | | |
| (B) | Add GST as per prevailing rates | | |
| (c) | Total Consultancy fee including GST [A]+[B] | | |

Authorized Signature [*In full and initials*]: _____

Name and Title of Signatory: _____

Name of Firm with Company Seal:

FIN-3: SUMMARY OF COST

Project Title: Selection of Consultant For Preparation Of Detailed Project Report For Re-Use Of Treated Sewage

The Summary of Cost shall be tabulated as under

| S No | Description | Consultancy Fee in (INR) | |
|--------------|---|--------------------------|----------|
| | | In Figures | In Words |
| A1 | Remuneration for Professional Staff | | |
| A2 | Remuneration for Sub-Professional Staff | | |
| A3 | Reports and Document Printing | | |
| A4 | Survey and Investigation Expenses | | |
| A5 | Any Other (Lump sum) | | |
| A6 | Over heads | | |
| | Total Costs of each STP treated sewage re-use work | | |
| Note: | | | |

Authorized Signature [*In full and initials*]: _____

Name and Title of Signatory: _____

Name of Firm with Company Seal: _____

Financial Proposal Standard Forms FIN-1, FIN-2, FIN-3 shall be used for the preparation of the Financial Proposal.

While quoting the financial offers, applicants shall submit their prices as per below mentioned criteria,

1. One empanelled consultant shall be awarded not more than 2 (two) STPs treated sewage re-use DPR work. Bidder shall submit undertaking that they will submit DPRs within stipulated time.
2. Empanelled consultants shall have to submit its prices in a separate envelope for each STP treated sewage re-use DPR work/ for each group. For example, if "X" empanelled consultant wishes to submit its prices for four (4) STPs out of Nine STP work, then the "X" empanelled consultant shall have to submit its prices in four (4) separate envelope. The interested BUIDCO's empanelled consultant are requested to submit their prices for the said work in sealed envelope to Chief Engineer, Planning Design and Monitoring, BUIDCO on or before **05.12.2020 till 15 Hrs**. The Price submitted by the empanelled consultant shall be opened on the same day at 16 Hrs. The following should be indicated in the envelope;
3. Consultant are advised to visit the site before quoting the rates.

Name of Empanelled Consultant:-

Name of Work: - Selection Of Consultant For Preparation Of Detailed Project Report For Re-Use Of
.....(*Insert group No.*)

Method of selection:

Successful firm will be selected under **Least Cost Based Selection (LCS) Method**. Envelope including the price submitted by empanelled consultants for different STPs treated sewage re-use work shall be opened as per the following sequence

| Sr. No. | Name of Scheme |
|---------|-----------------|
| 1 | Beur STP |
| 2 | Saidpur STP |
| 3 | Karmalichak STP |
| 4 | Pahari STP |
| 5 | Barh STP |
| 6 | Mokama STP |
| 7 | Sultanganj STP |
| 8 | Naugachiya STP |
| 9 | Sonepur STP |

Price quoted by participant firms shall be compared and the lowest quoted firms will be awarded the work. One empanelled consultant shall be awarded for preparation of the said DPR for maximum two (2) STPs treated sewage re-use DPR work/ maximum work for two groups. In case an empanelled consultant suppose "A" has submitted its price proposal for Beur STP, Saidpur STP and Karmalichak STP and if it is found that the price of empanelled consultant "A" is lowest for Beur STP and Saidpur STP, then its envelope for Karmalichak STP shall be kept unopened and returned back to him.

1. CONTRACT NEGOTIATIONS AND AWARD OF CONTRACT

1.1 The Consultant who is invited for contract negotiations will, as a pre-requisite for attendance at the negotiations, confirm availability of all experts named in its proposal except in the cases of absence on account of death or medical incapacity. Failure in satisfying such requirements may result in the Client proceeding to initiate the negotiation process with the next lowest bidder. Representatives conducting negotiations on behalf of the Consultant must have written authority to negotiate and conclude the Contract

1.2 **Technical Negotiations:** This will include a discussion of the Technical Proposal, the proposed technical approach and methodology, work plan and schedule, and organization and personnel, and any suggestions made by the Consultant to improve the TOR. The Client and the Consultants will finalize the TOR, personnel schedule, work schedule, logistics, and reporting. These documents will then be incorporated in the Contract as "Description of Services." Special attention will be paid to clearly defining the inputs and facilities required from the Client to ensure satisfactory implementation of the assignment. The Client shall prepare minutes of negotiations which will be signed by the

Client and the Consultant.

1.3 Negotiations will conclude with a review of the draft Contract. To complete negotiations the Client and the Consultant will initial the agreed Contract. If negotiations fail, the Client will invite the second lowest Consultant to negotiate a Contract.

1.4 After completing negotiations the Client shall award the Contract to the selected Consultant and notify the other Consultants who could have been invited to negotiate a Contract that they were unsuccessful.

1.5 The selected Consultant is expected to commence the Assignment on the date and at the location specified in the Data Sheet.

2. DURATION OF ASSIGNMENT

The duration of the assignment shall be three (3) months and all activities are to be completed in this period. This will be applicable for all the sectors under this assignment.

- Inception Phase – 2 weeks
- Feasibility Phase – 4 weeks
- Draft DPR Phase – Within 2 Months
- DPR Preparation Phase – within 3 Months

Consultant shall ensure that their Team Leader/Deputy Team Leader must meet BUIDCo office fortnightly and also when required for meeting/discussion in BUIDCo office. Additionally there field level staff shall be available in project towns during the survey work and investigation works and their details of presence with their contact details shall be made available in BUIDCo so that, if need be, they may be called to BUIDCo office whenever required. Field level staff may leave the project sites only after BUIDCo being satisfied with the survey details submitted.

3. PERFORMANCE SECURITY

The consultant will furnish within 7 days of the issue of Letter of Acceptance (LOA), an Account Payee Demand Draft/Unconditional Bank Guarantee (in prescribed format) in favour of “**BUIDCo**” payable/en-cashable at **Patna**, from any nationalized or scheduled commercial Bank in India having its office at Patna for an amount equivalent to **5% (five percent) of the total contract value** towards Performance Security valid for a period of **six (6) months** beyond the stipulated date of completion of services. The Bank Guarantee will be released after six month and rectification of errors, if any, found during appraisal/approval of DPRs by competent authorities/Funding agency whichever is later.

4. Bid Security (Earnest Money Deposit)

4.1 The Bid Security of Rs. 1,00,000/- (Rupees One Lakh only) in favour of “**Managing Director, Bihar Urban Infrastructure Development Corporation Limited**” payable at Patna shall be in the form of Account Payee Demand Draft or from any of the **scheduled commercial bank or nationalized bank having its branch in Patna**. The Employer shall reject any bid not accompanied by appropriate bid security, as non-responsive. For each

4.2 The bid security of the successful Bidder shall be returned as promptly as possible once he has signed the Contract and furnished the required performance security.

4.3 Bid securities of the unsuccessful bidders shall be returned to them at the earliest after expiry of the final bid validity and latest on or before the 30th day after the award of the contract to successful bidder.

4.4 The bid security may be forfeited:

- 4.4.1.1 if a Bidder withdraws its bid during the period of bid validity.
- 4.4.1.2 if the Successful Bidder fails to:
 - 4.4.1.2.1 Sign the Contract within required time frame;

- 4.4.1.2.2 Furnish a performance security.
4.4.1.2.3 **Terms of Reference (TOR)**

1. INTRODUCTION

Bihar Urban Infrastructure Development Corporation (BUIDCO), a Govt. of Bihar undertaking, requires the services BUIDCO's empanelled consultant vide BUIDCO letter no. 275 dated 04.09.2020. BUIDCO intends to prepare DPR for re-use of treated sewage from following nine STPs.

- i) Beur STP
- ii) Karmalichak STP
- iii) Saidpur STP
- iv) Pahari STP
- v) Barh STP
- vi) Mokama STP
- vii) Sultanganj STP
- viii) Naugachiya STP
- ix) Sonapur STP.

Nine STPs Brief:-

| Group No. | Name of Scheme | STP Capacity (In MLD) | AA Cost Issued by NMCG (In Crore) | Present Status |
|-----------|--|-----------------------|-----------------------------------|---|
| 1 | Beur STP Project, Patna | 43 | 68.16 | The STP Commissioned in Aug 2020 |
| 2 | Saidpur STP & Adjoining Network, Patna | 60 | 184.93 | Under commissioning |
| 3 | Karmalichak STP Project, Patna | 37 | 77.04 | The STP Commissioned in Aug 2020 |
| 4 | Pahari STP Project, Patna | 60 | 191.62 | The STP shall be commissioned by March 2021 |
| 5 | Barh I&D and STP Project | 11 | 58.27 | The STP shall be commissioned by March 2021 |
| 6 | Mokama I&D and STP Project | 8 | 53.81 | The STP shall be commissioned by March 2021 |
| 7 | Sultanganj&D and STP Project | 10 | 60.22 | The STP shall be commissioned by March 2021 |
| 8 | Naugachiya I&D and STP Project | 9 | 60.79 | The STP shall be commissioned by March 2021 |
| 9 | Sonapur I&D and STP Project | 3.5 | 30.93 | The STP shall be commissioned by March 2021 |

The Consulting Firm will be required to have staff of suitably qualified Professionals being competent to carry out all of related duties and equipped with necessary facilities for conducting desired tests.

- (i) **After acceptance of consultants' program by client, the Consultants will be fully** responsible to mobilize the resources required to maintain the agreed schedule of work within the total person months agreed under the contract for the services. In case of any delays, which are not beyond the control of consultants, the client reserves the right to require Consultancy Firm to provide additional resources and personnel as may be required to make up the lost time, for which no additional payment shall be made.
- (ii) Whenever power point presentation or otherwise are sought for, the consultants shall make themselves available to various committees.

2. OBJECTIVES OF THE ASSIGNMENT

The primary objective of the consultancy is to undertake necessary survey from the STP outlet point to the disposal point of treated sewage. The consultant shall do the necessary survey to ascertain the numbers of drains which are merging into the treated effluent channel. The number of drains from where the untreated sewage are merging into the treated effluent channel has to be notified and consultant shall include the proposal in the DPR for stopping the untreated sewage mixing into the treated effluent channel. Overall the consultant shall prepare DPR for the re-use of treated sewage.

It is proposed to obtain financial assistance under different schemes of GOI (like AMRUT/NMCG) or other External Funding, if available. Govt. of Bihar may also provide part financial assistance through State Plan for implementation of proposed projects. The objective of the Project proposed is to promote sustainable environment and basic urban infrastructure and sanitation facilities to the citizens and to ensure effective abatement of pollution by adopting a river basin approach for comprehensive planning and management, and to maintain minimum ecological flows in the rivers in vicinity with the aim of ensuring water quality and environmentally sustainable development. Following standards and guidelines laid by Ministry of Urban Development and Ministry of Environment & Forest, Govt. of India needs to be followed.

- CPHEEO's "*Manuals*". Govt. of India
- NGT Guidelines
- NMCG guidelines.
- *Guidelines for Preparation of Project Reports under National River Conservation Plan and National Ganga River Basin Authority* issued by Ministry of Ministry of Environment & Forest, Govt. of India
- *Environmental and Social Management Framework (ESMF)* issued by Ministry of Ministry of Environment & Forest, Govt. of India
- Any other Guideline issued by GOI and GOB for planning and design of project likely to be proposed for funding under AMRUT.

4. SCOPE OF WORK

The detailed scope of work of different components is as below:

The objective of the assignment is to study, analyze, design and prepare DPR for re-use of treated sewage by undertaking a technical, financial, economic, environmental and social study, prioritized capital investment plan, detailed designs, drawings, cost estimates and bidding documents for planning and implementation of such investments.

- All the drawings shall be good for construction.
- Hydraulic loading shall include maximum discharge from Different STP and storm water flow from surrounding catchments entering into Nala through intermediate drains.
- Structural loading on the drain shall be as per latest IRC /IS codes. Hydraulic design shall be based on the relevant IS codes and CPEEHO's manual..and cross section shall be adequately designed.
- Adequate provision for cleaning the Nalaboth manually and mechanically and draining out surface runoff to be kept as per best available practices.
- Augmentation of pumping facilities, if required, shall be considered.

The present assignment shall include the following but not limited to:

A. General Framework

- (i) Reviewing existing maps, studies, and other related documentation to obtain a better understanding of the

existing DifferentNala prior to the start of fieldwork.

(ii) Undertaking detailed topographic survey of the Project area and leveling survey and preparation of base maps showing the connecting drains and their catchment areas.

(iii) Consultant to collect data through primary investigation or secondary data collection Indicating the details of other underground services, mainly sewers and water mains (electrical cables) which are in the vicinity of the Nala and show their distance .

(iv) While formulating designs, the existing side drains, canals, other major storm water canals / rivers maintained by the PHED Department, Highways Department should be analyzed based on the maximum rainfall, storm water runoff and flow from various STP for the project area on a scientific basis.

(v) Suggesting suitable materials for construction with cost benefit analysis discussing the feasibility of using pre cast structures and providing structural designs and other design and details as appropriate

B. Stakeholder Consultation

(i) Detailed consultations shall be conducted with various stakeholders like Government departments like ULB, PHED, UDHD, NGOs, general public, etc with specific deliberations on project proposals, to receive opinions and identification of land. The suggestions received from the consultations shall be shall be documented and reviewed and be considered in finalizing the designs.

C. Project Cost & Financial Viability

- (i) Preparation of **project cost estimate** including capital, O&M Costs based on the above and preparation of financial analysis.
- (ii) The cost estimate shall be based on the latest schedule of rates of Government of Bihar. There shall not be any lump sum provision in the estimate for items not covered in the schedule of rates market rates shall be adopted with evidence.

D. Institutional Strengthening & Capacity Building

- (i) Recommending organizational set up for operation and maintenance of the system. Identify requirements of staff along with costs. Involve the concerned local body at all stages.

E. Implementation Plan

- (i) Prepare the project implementation schedule for execution. This will also include drawing up project budget with monthly/quarterly target; furnish network analysis such as CPM, PERT for purposes of effective project monitoring and regular reports.
- (ii) Suggesting use of modern technologies for implementation of project.

F. Environment & Social Consideration

- (i) Preparation of Environmental and Social assessment Report to prepare necessary impact assessment and Environmental Mitigation Plans and Resettlement action Plans
- (ii) Identifying specific protection arrangement for trees and other sensitive environmental components. Tree cutting requirement if any shall be clearly identified and listed with schedule of permission from regulatory authorities to facilitate cutting.

G. Approvals/ permissions

- (i) Wherever permission from a state or central government organization is required in implementation of the project, it would be endeavored to obtain the same while finalizing the DPR. However, in case same is not possible while finalizing DPR, proper proposal should be initiated from the ULB for sanction.
- (ii) Clearances/ Permission from other Ministries namely Ministry of Environment and Forest, SPBC/CPCB, NHAI and Railways, if required, shall be obtained and enclosed with the DPR.
- (iii) Whenever power point presentation or otherwise are sought for, the consultants shall make themselves available to various committees.

5. SURVEY, DATA COLLECTION AND INVESTIGATION

a) Field Survey

Planning and design of the I&D and STP Scheme shall require topographical survey of the project area to be carried out and necessary base plans with spot levels and contour levels shall be prepared.

where survey details are given by BUIDCo, the project area's details should be verified at random based on the given survey drawing and additional areas, if in the town, should be surveyed and the complete details got certified by the ULB for completeness of coverage, and a layout plan to scale as specified shall be prepared indicating the existing and proposed components along with RLs.

Where basic input data on survey is not given by BUIDCo, Consultant shall carry out Topographical survey project area and prepare road plan with levels along roads/streets at suitable intervals and junctions of roads, locations such as change in gradient, road turnings, zoning areas and selection of site for head works etc in the listed ULBs under consultancy and prepare contour map.

The survey shall be guided by the following:

Establishing Temporary Benchmarks at suitable places near the I&D and STP with respect to the known GTS benchmark or a benchmark transferred from GTS by departments like Public Works Department etc.

Landside features to be include but not limited to

- Electrical poles, telephone poles, transformers, manholes, trees, building lines, type of buildings (kutcha/semi pucca/pucca/shops/houses, no. of stores etc.), and also building frontage, Water Supply lines, taps, bore wells, open wells, overhead tanks etc., all water bodies – lakes, streams, ponds, canals places such as temples, temple mast, mosque, church, grave yard, road width, type of road surface etc.
- Locations of existing drains clearly identifying the type (open/closed/kutcha/pucca, within or outside foot path), width and invert level of drain including the beginning and end of drain.
- Location of existing sewers (if any), manholes etc
- Railway lines with details of culverts-ventway and levels
- Details of flood marks and Flood levels available at site
- During Field Survey, the Consultant is expected to coordinate with the relevant Local Body and identify potential sites for Over Head Tanks, Sewage Pump stations, Treatment Plant, Tube Wells etc. and collect Katha/Khesra details for the chosen sites
- Carry out Block level survey at suitable intervals of the chosen sites

b) Data Collection

The consultant shall be wholly responsible for all the details of the proposal, the physical and site conditions, the execution methodology etc. All data utilized in preparation of the proposal shall be presented indicating the source of the data and also the basis of assumptions, if any. The consultant shall be responsible for all the data or designs and drawings and cost estimate given by them.

c) Soil Investigations

Soil investigation along the I&D and STP Scheme and Nala shall be at approximately 500 m intervals and shall be used to profile the subsurface.

6. LAND REQUIREMENT

The Consultant shall obtain No Objection Certificate from Land belonging PMC before finalizing the feasibility report. BUIDCo will facilitate in obtaining the NOC from PMC Patna if required. No payment for Preparation of

DPR will be entertained if NOC not obtain for elected Location.

7. OUTPUTS AND DELIVERABLES

Under this contract the Consultant's payments will be on output and deliverables based. It is very important for the consultants to note the exact outputs required and their contents. The desired outputs & deliverables under this contract are as shown in the table below.

8. REPORTS TO BE SUBMITTED BY THE CONSULTANT TO BUIDCO

8.1. All reports, documents and drawings obtained by the consultant are to be submitted by him to the client under this assignment. The analysis of data and the design proposals shall be based on the data derived from the primary surveys and investigations carried out during the period of assignment. The sources of data and model relationships used in the reports shall be indicated with complete details for easy reference.

8.2. Since the project preparation is quite expensive and time consuming, the projects under this assignment are proposed to prepare in various stages and at the end of each stage decision shall be taken at competent level and conveyed to consultants whether to proceed for next stage. Project preparation activities will be split into four stages as brought out below.

Stage 1: Inception Report including Quality Assurance Plan;

Stage 2: Feasibility studies and Feasibility Report (FR)

Stage 3: Draft Detailed Project Report (DDPR)

Stage 4: Detailed Project Report (DPR) and

8.3. Time schedule in respect of all such stages has been indicated in earlier Paragraphs. Consultant shall be required to complete, to the satisfaction of the client, all the different stages of assignment within the time frame indicated in the schedule of submission pertaining to Reports and Documents for becoming eligible for payment for any part of the next stage.

8.4. The Consultant shall submit to the client the final reports and documents in **boundvolumes** (and not spiral binding form) after completion of each stage of work as per the schedule and in the number of prescribed copies. Further, the reports shall also be submitted in CDs in addition to the hard copies. The soft copy shall be in original version and shall not be converted in pdf form. Consultant shall submit all other reports mentioned specifically in the TOR.

8.5. The time schedule for various submissions shall be strictly adhered to. No time-over-run in respect of these submissions will normally be permitted. Consultant is advised to go through the entire terms of reference carefully and plan his work method in such a manner that various activities followed by respective submissions as brought out are completed as stipulated. Consultant is, therefore, advised to deploy sufficient number of supporting personnel, both technical and administrative, to undertake the assignment. As far as possible, the proposal should include complete information such as number of such persons, name, position, period of engagement, etc. The Consultant is also advised to start necessary survey works/data collection from the beginning so as to gain time in respect of various other activities in that stage.

STAGE -1

8.5.1. Quality Assurance Plan (QAP) Document

Immediately upon the award, the Consultants shall visit the town(s) and submit four copies of the QAP document covering all aspects of field studies, investigations design and economic analysis. The quality assurance plans/procedures for different field studies, engineering surveys and investigation, design and documentation activities should be presented as separate sections like engineering surveys and investigations, material geo-technical and sub-soil investigations, hydrological investigations, economic & financial analysis, drawings and documentation; preparation, checking, approval and filing of calculations, identification and traceability of project documents etc.

8.5.2. Inception Report (IR)

The Inception Report shall cover the following major aspects:

- (i) Project appreciation;
- (ii) Detailed methodology to meet the requirements of the TOR finalized in consultation with BUIDCO

officers; including scheduling of various sub-activities to be carried out for completion of various stages of the work; stating out clearly their approach & methodology for project preparation after due inspection of the entire project stretch and collection/ collation of necessary information;

- (iii) Task Assignment and Manning Schedule;
- (iv) Work programme;
- (v) Performa for data collection;
- (vi) Key plan and Linear Plan;
- (vii) Development plans being implemented and / or proposed for implementation in the near future by the ULB and other line agency and the possible impact of such development plans on the overall scheme for field work and design for the study;
- (viii) Draft design standards; and

STAGE -2

8.5.3. Feasibility Report (FR)

8.5.3.1. The Consultant shall commence the project preparation in accordance with the prescribed guidelines. Before going for detailed feasibility studies; the Consultant shall carry out pre-feasibility studies for screening and ranking of all project alternatives and to select an appropriate alternative for carrying out detailed feasibility studies.

8.5.3.2. The Feasibility Report shall contain the following:

- (i) Executive summary
- (ii) Project Background, Introduction, Project Area and Need of the Project
- (iii) Long Term Plan to address project objectives
- (iv) The Proposed Project
 - a. Objectives
 - b. Project Users
 - c. Rehabilitation and De-bottlenecking of the Existing Systems
 - d. Project Description
 - e. Support Activities
 - f. Integration of the Project with the Existing and Future Systems
 - g. Agencies Involved in Project Implementation and Relevant Aspects
 - h. Establishing Feasibility may be based on Block Cost Estimates.
 - i. Implementation Schedule with detailed PERT/CPM Charts
 - j. Operation and Maintenance of the Project
- (v) Conclusions and Recommendations

8.5.3.3. The FR should clearly address the following points

- (i) Methodology adopted for the study
- (ii) Socio-economic profile of the project areas
- (iii) Possibility of Sewerage System and Storm Water Drainage System. It is intended to provide Sewerage and Drainage throughout the area of towns. Consultant need to bring out all such issues at the feasibility stage. This would particularly include but not be limited to:
 - a. Preliminary cost comparison (capital as well as O&M expenses)
 - b. Feasibility of implementation of sewerage and drainage in City where fully functional water supply system is already in place.
 - c. Stakeholder consultation and ULB approval for sewerage and drainage.
 - d. Preparedness of ULBs to implement sewerage and drainage.
 - e. Way forward and road map for ULBs/PHED for preparation of soft side components of Sewerage and Drainage system including assessment of staffing need, computerized billing & collection, volumetric measurement and metering.
- (iv) Indicative design standards, methodologies and specifications
- (v) Investigations, Surveys and analysis
- (vi) Alternatives considered for coverage, zoning, sewage treatment technology, water sources considered etc.
- (vii) Detailed analysis of recommendations made in CDP and CSP and how the same are proposed to be incorporated or found not feasible.
- (viii) Preliminary land acquisition/transfer requirements

(ix) Preliminary Cost estimates

8.5.3.4. The basic data obtained from the field studies and investigations shall be submitted as an Appendix to the FR.

8.5.3.5. **FR Approval:** Any comments, revisions and modifications in the FR suggested by BUIDCo shall be incorporated and submitted within 5 days of receipt of comments from BUIDCo.

STAGE: 3

8.5.4. Draft Detailed Project Report (DDPR)

8.5.4.1. The DDPR Submission as given below:

- Volume I – Main Report together with Economic, Financial and Environmental Reports
- Volume II – Survey, Investigations and Detailed Designs
- Volume III – Data for Materials and Works, Detailed Estimates of Quantities and Cost
- Volume IV – Drawings

8.5.4.2. **The DPR incorporating comments of clients group shall be submitted to Ministry of Urban Development/ Ministry of Environment & Forest (MoEF), Govt. of India or any other funding agency through Urban Development and Housing Department (UDHD), GoB for approval and for consideration of funding. GoB may also consider for funding of some infrastructure under State plan. Any comments, revision and modifications suggested by Govt. of India/GoB/Funding agency through UDHD shall be incorporated and DPR shall be suitably modified. The Final DPR will be accepted only after approval of DPR from sanctioning authority. Consultant will also facilitate for getting approval of DPR.**

STAGE: 4

8.5.5. Final Detailed Project Report (DPR)

- (i) The comments of BUIDCo/Gol/GoB and Funding agency, if any, on the Draft DPR shall be incorporated and shall be resubmitted as Final DPR.
- (ii) Consultant shall assist BUIDCo/UDHD in posing the DPR to the funding agency to get approval of DPR and sanction of funding.
- (iii) Five (5) Sets of Final Detailed Project Reports, incorporating all revisions deemed relevant following receipt of the comments from BUIDCo shall be submitted as per the schedule.

9. INTERACTION WITH BUIDCO AND OTHER LINE AGENCIES

9.2. During entire period of services, the Consultant shall interact continuously with BUIDCo and provide any clarification as regards methods being followed and carry out modification as suggested by BUIDCo. A programme of various activities shall be provided to BUIDCo and prior intimation shall be given regarding start of key activities such as survey/investigation etc. so that inspections of BUIDCo officials could be arranged in time.

9.3. BUIDCo officials and other Govt officials may visit the site at any time, individually or collectively to acquaint themselves with the field investigations and surveys.

9.4. All equipment, software and books etc. required for satisfactory services for this project shall be obtained by the Consultant at their own cost and shall be their property.

10. DATA AND SOFTWARE

10.1. The CDs containing all basic as well as the processed data from all field studies and investigations, report, appendices, annexure, documents and drawings shall be submitted to BUIDCo at the time of the submission of the DDPR. The data can be classified as follows:

- (i) **Engineering Investigations and Other Studies:** Geo-technical surveys, Hydrological Studies (for proposed cover Nala sites), source water quality analysis, physiochemical Analysis of Wastewater Inventory data for existing water supply/sewerage/drainage facilities (if any), their rehabilitation, new construction requirement etc. in MS EXCEL or any other format which could be imported to

widely used utility packages.

- (ii) **Topographic Surveys and Drawings:** All topographic data would be supplied in(x, y, z) format along with complete reference so that the data could be imported into any standard design software. The drawing files would be submitted in *.dwg format.
- (iii) **Rate Analysis:** The Consultant shall submit the rate analysis for various worksitems including the data developed on computer in this relation so that it could be used by the client later for the purpose of updating the cost of the project.
- (iv) Economic and Financial Analysis.

10.2. Software

10.2.1. Consultant is required to design the cover Nala Sewerage/Drainage works using relevant software like STAAD Pro, Sewer Gems or Sewer Cad/Storm CAD/Auto Sewer/ spread sheet format for Sewerage, drainage.

10.2.2. The CDs should be properly indexed and a catalogue giving contents of all CDs and print-outs of the contents (data from field studies topographic data and drawings) should be handed over to BUIDCo at the time of submission of the Final Report.

11. EXPERTISE AND INPUTS

11.1. Personnel Requirement

The Consultant shall be required to form a multi-disciplinary team for this assignment. The consultant Team shall be manned by adequate number of experts with relevant experience in the execution of similar detailed design assignments. The Consultant's minimum personnel requirements are estimated and shown in Table-1. This contains information about the personnel to be provided by the consultants stating type of expertise and the required skills and experience. The criteria are desirable and not restrictive, such as stating an exact degree might preclude other good candidates from the job. Ultimately, the CVs provided will form the largest component of the evaluation. So it is important that CVs are described well in prescribed format.

Table 3: Personnel Requirement

| Sl no | Designation of key Experts | No's of Experts | Man Month |
|----------------------|--|-----------------|-----------|
| 1 | Team Leader cum Structural Engineering Expert. | 1 | 3 |
| 2 | Storm water drainage /cover Nala Expert | 1 | 3 |
| 3 | Road Expert | 1 | 1 |
| 4 | Structural Engineer | 1 | 1 |
| 5 | Survey & Geotechnical | 1 | 1 |
| 6 | Social and Institutional Expert | 1 | 2 |
| 7 | Environmental Engineer-cum-EIA Expert | 1 | 1 |
| SUPPORT STAFF | | | |
| (i) | Support Engineers (Civil) | 1 | 3 |
| (ii) | Drafting Support/CADOperator | 1 | 1 |

12. PAYMENT TO THE CONSULTANTS

- (i) The consultancy charges for performance of the services under the contract shall be paid by the client as per payment schedule given in Terms of Reference.
- (ii) The client shall pay the Consultant, the Service Tax, on prevailing rates as applicable on the consultancy charges.
- (iii) It is expected that consultant has quoted amount considering all requirements for satisfactory performance of the services included in ToR. If the consultant has not considered any component for performance of the services, no extra payment shall be made on this account.
- (iv) The Consultant will be paid consultancy fee as a percentage of the quoted price of the specific DPR as per the schedule given below :-

Table 5: Payment Terms

| SNo | Description | Payment |
|------------|--|----------------|
| 1 | On submission of Stage-I Report (Inception Report and Quality Assurance Plan) and its approval by BUIDCo | 5% |
| 2 | On Submission of Stage-2 Reports (Feasibility Report) including survey and investigation reports | 5% |
| 3 | On approval of Stage-2 Report (Feasibility Report) by BUIDCo | 5% |
| 4 | On Submission of Stage-3 Reports (Draft DPR) | 20% |
| 5 | On approval of Stage-3 Reports (Draft DPR) by BUIDCo based on comments of BUIDCo | 20% |
| 6 | On Submission of State-4 (Final DPR) | 30% |
| | | |
| 7 | On approval of State- 4, (Final DPR) from the funding agency | 15% |
| | | |
| | Total | 100% |

- (v) **The client reserves the right to stop the consulting assignment for full or part of the assignment at any stage of its execution by the Consultant in specific cases, if required by funding agency. In the event of such discontinuation of full or part of the assignment, the Consultant shall be compensated to the extent of the work done by it.**