



असम ASSAM

C 518470

AMENDMENT TO THE PRIME CONTRACT FOR INCLUSION OF ADDITIONAL SCOPE OF WORKS AND EXTENSION OF CEILING AMOUNT

This amendment is made on the 14 day of the month of March, 2016 to the Prime Contract signed between the Guwahati Metropolitan Development Authority (GMDA), Government of Assam and NJS Consultants Co. Ltd, Japan (Member-in-Charge, Consultant) made on the 16th day of August 2011.

Whereas

- (a) The original Prime Contract between Guwahati Metropolitan Development Authority (GMDA), Government of Assam and NJS Consultants Co. Ltd, Japan entered on the 16th day of August 2011 for providing Consultancy Services for Institutional and Capacity Building as part of the JICA assisted Guwahati Water Supply Project, is hereby amended to reflect the revised ceiling in International currency and local currency as a result of additional scope of work
- (b) The ceiling amount as per Clause 6.1 (b) of the original contract agreement in international currency was **JPY 334,373,973** (Japanese Yen Three Hundred and Thirty Four Million Three Hundred and Seventy Three Thousand Nine Hundred and Seventy Three Only), and local currency was **INR 283,597,444** (Indian Rupees Two Hundred and Eighty Three Million Five Hundred and Ninety Seven Thousand Four Hundred and Forty Four Only).
- (c) This ceiling amount was then revised through an amendment to the Prime Contract dated 23rd November 2012 to **JPY 360,446,419** (Japanese Yen Three Hundred and Sixty Million Four Hundred and Forty Six Thousand Four Hundred and Nineteen Only) in international currency, and to **INR 387,786,859** (Indian Rupees Three Hundred and Eighty Seven Million Seven Hundred and Eighty Six Thousand Eight Hundred and Fifty Nine Only) in local currency.


Executive Officer
Guwahati Metropolitan Dev. Authority

For N J S Consultants Co Ltd.


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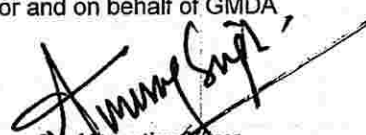
- (d) Additional scope of work is now entrusted under the original contract to provide Project Management Consultancy Services (PMC) to Guwahati Jal Board (GJB) & GMDA in completing all the water component packages as described in Appendix A1 – Terms of Reference for Additional works (TOR) and corresponding technical staffing required as presented in Appendix B1 – Manning Requirement for PMC Services and corresponding costs in Appendix G1 (JPY component) and Appendix H1 (INR component).

The additional scope of work of PMC services is considered for the period of 12 months (14th March 2016 to 13th March 2017) as per the GJB/GMDA, Government of Assam Letter No. GDD.178/2015/72 dated 01/03/2016 and JICA concurrence vide letter no. JICA (ID) 27-855, dated 03/12/2015 and according to the detailed cost breakdown (remuneration, reimbursable etc.) attached hereto.


- (e) On account of this additional scope of work, the ceiling amount is hereby revised to **JPY 433,066,419** (Japanese Yen Four Hundred and Thirty Three Million Sixty Six Thousand Four Hundred and Nineteen Only) in international currency, and to **INR 432,177,659** (Indian Rupees Four Hundred and Thirty Two Million One Hundred and Seventy Seven Thousand Six Hundred and Fifty Nine Only) in local currency.
- (f) This amendment to the Prime Contract shall not in any way be construed as an extension of the period of the ICDC services. For all intents and purposes, the periods of engagements of the two services shall be kept separate and independent of each other and be subject to the requirements of these services. In the event that the ICDC services under the Prime Contract are completed but the PMC services are still required then the Prime Contract shall remain valid and in force until the PMC services are completed. Any extensions to the individual services shall be separate and independent of each other.
- (g) Payments to PMC shall be done under the same ID-P 201, project. Separate invoices shall need to be prepared and submitted to GJB for this additional works in a format similar to currently being used for ICDC payments.
- (h) The following provisions shall apply to the advance payment and the advance payment guarantee for the additional PMC works:
- A total interest free advance payment of 10% in each currency (JPY and INR) of new works costs specified herein (part iii, below), shall be made within 30 days after the Effective Date. The advance payment will be set off by the Employer starting from the invoice statement for the second month of the Services in equal instalments against the statements for the next 10 months of the Services until the advance payment has been fully set off.
 - Bank guarantee shall be in the amount and in the currency of the local currency portion of the advance payment.
 - Additional Works Cost in **JPY 72,620,000** and **INR 44,390,800**.

IN WITNESS WHEREOF, the Parties hereto have caused this Amendment to the Prime Contract to be signed in their respective names as of the day and year first written above.

For and on behalf of GMDA

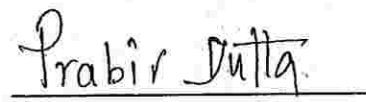

Chief Executive Officer
Guwahati Metropolitan Dev. Authority
[Authorized Representative]

For and on behalf of NJS Consultants
Co. Ltd. Japan
For NJS Consultants Co. Ltd.


Authorized Signatory
Dr. Uday Kelkar
[Authorized Representative]

Witness By


Name:


Name:

APPENDIX A1

TERMS OF REFERENCE

1. Background

Guwahati is the largest city in Assam and the North East region of India. The city has well developed connectivity with the rest of the country and as a gateway to the entire North Eastern region of India. Its population in 2001 was about 0.89 million and it has increased to about 1.11 million in 2007. It is estimated to further increase to around 2.8 million in 2025 and to about 3.23 million in 2040, which is two to three times more than the current level. With rapid growth of the urban population and the economy, the gap between water demand and water supply has been widening.

The current public water supply within Guwahati covers only about 30% of the city area, mostly South Central. Even within this area due to the degraded Water Treatment Plants and high water leakage rate (around 38% in 2008), the provision of water at individual households is limited to about 2-3 hours a day. Those citizens without access to piped water rely on groundwater, but the water quality is inadequate for drinking, with high iron & fluorine content.

At present there are three agencies that provide water supply in Guwahati, namely Guwahati Municipal Corporation (GMC), Public Health and Engineering Department (PHED), and Assam Urban Water Supply and Sewerage Board (AUWSSB). Most of these water facilities have outlived their lives as a result of budget deficiency for repair and replacement as well as poor maintenance.

The Master Plan for Guwahati Metropolitan Area 2025 has set a target that 100% of houses will be supplied with piped filtered water by the year 2025. Guwahati city is divided into four zones for water supply. The zones under JICA funding are the South Central and North Zones. South Central Zone is the centre of the city with the highest population among the four zones. North Zone is less populated where most of the area is under agricultural use. The South Central Guwahati and North Guwahati Drinking Water Supply Project aims to construct water works facilities in the South Central and Northern parts of Guwahati City to achieve potable water supply with 100% coverage of citizens within the above areas, thus leading to an upgrading of the citizens' living standards. Under JnNURM funding a water supply project is being taken up in the South Western zone of the city while a water supply scheme is being developed in the Western Zone of the City through ADB funding.

Guwahati Water Supply Project also aims to support the establishment of the Guwahati Metropolitan Drinking Water and Sewerage Board, which is to take over all water supply schemes covering the entire city. In this regard, the Guwahati Metropolitan Drinking Water and Sewerage Board Act 2009 has been passed by the Assam Legislative Assembly, making way for the establishment of the Board and the Water Regulatory Authority.

Presently the South Central and North Guwahati Water Supply Project is at various stages of implementation through JICA funding and a consortium comprising Messrs Nihon Suido Consultants Co. Ltd, The Louis Berger Group Inc., and Shah Technical Consultants Pvt Ltd., are the Project Management Consultants (PMC).


However due to unavoidable circumstances, the Guwahati Metropolitan Development Authority has decided, with the concurrence of JICA, to discontinue with the present PMC team and to engage another organisation to take over and continue with the PMC services.

In this regard the scope of services envisaged for the new PMC is as contained herein.



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Guwahati Metropolitan Dev. Authority

For N J S Consultants Co Ltd.



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2. Location

Guwahati City, Assam

3. Project Description

Tentative scope of the Project is as follows

Items	Original	Current
Intake Facility	South Central: 1 Intake North : 1 Intake point (Intake tower and pump station in one structure)	South Central: 2 Intake points North : 1 Intake point (Each Intake tower and pump station in one structure)
Water Treatment Plant	South Central: 192 MLD North: 38 MLD	South Central: 191 MLD North: 37 MLD
Reservoirs	South Central: 6 North: 1	South Central: 8 North: 1
Distribution Networks	South Central: 890 km North: 86 km	South Central: 1094km North: 111.4 km
Consulting Services	Support for Project Management and Capacity Building	Support for Project Management and Capacity Building

4. Project Objectives

To construct waterworks facilities in the South Central & North Zones of Guwahati City to achieve potable water supply with 100% coverage of the citizens within the above areas, leading to upgrading of the citizens' living standards.


5. Objectives of Consulting Services

The main objectives of the planning, engineering and project management consultancy services for the Guwahati Water Supply Project are:

- a) Facilitate in the strengthening of the Project Implementation Unit
- b) Overall management of the Project
- c) Detailed design for water supply/other facilities envisaged under the Project
- d) Reviewing and finalisation of the detailed cost estimates.
- e) Assist in establishing procurement management system and tender process.
- f) Contract supervision and management
- g) Financial Management
- h) Environmental monitoring
- i) Liaison with JICA and other concerned authorities
- j) Monitoring and evaluation of the project
- k) Assist in establishing sound Operation & Maintenance system

The above original scope of the PMC Services is still applicable to the replacement PMC's scope and it is therefore required that the new PMC take over and continue with these services.

In the course of taking over these services, it is however recognised that there are various works and scopes that are already completed and which lies within the purview and responsibility of the earlier PMC team.


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To ensure a smooth transition and continuation of ongoing works undertaken by other agencies including contractors with minimal interruptions, all works undertaken by the previous PMC during their tenure shall remain under their professional liability while the new PMC shall assume liability for works carried out as of the date of effective appointment.

The basis of the separation of liabilities shall be the Final Handing-Over Reports submitted by the Nihon Suido – Louis Berger – Shah Technical Consultants Consortium, defining the status of works as at 20th October 2015.

The new PMC shall be required to take cognisance of issues raised in the reports and ensure corrective actions on these specific matters as part of the transition of responsibilities. The new PMC will not be required to review previously approved designs that are in the process of being implemented, but any issues in design that are observed or deemed as needing review and remedial action shall be accordingly addressed.


Construction works are also in progress and again no review of completed works or covered works are required as these are deemed to have been satisfactorily supervised and approved as part of the original PMC's responsibilities. However, any works that are identified or intimated via reports or records as being rejected or incomplete shall be followed through and attended to under the watch of the new PMC.

6. Current Progress of Work

The status of the progress of works as at 20th October 2015 under the various contract packages has been provided in the respective individual reports constituting the Handing Over Report.

The abstract of the status of works is as tabulated below:

Sl no	Package	Abstract of Progress of Works as on 20 th October 2015 from Handing Over Reports	Abstract of Progress of Works as from 22 nd October to 21 st December 2015	Balance work
1	C-01- Design, Supply, Installation & Commissioning of Intake Facilities, Transmission Mains, Water Treatment Plant & Reservoirs for North Guwahati Zone including 5 years O&M. Contractor: JWIL - RANHILL JV	<ul style="list-style-type: none"> ▪ Currently BEP has been approved by PMC. ▪ Intake location & design changed. Review by IIT Guwahati. ▪ Cut/fill in progress 	<ul style="list-style-type: none"> ▪ Joint verification for forest clearance has been completed ▪ Earth excavation for construction of Distribution Reservoir, PST Tube settler unit has been completed upto 1m above PCC ▪ Demolition of boundary for WTP & Intake site is completed ▪ 50% of approach road of WTP has been completed ▪ Alignment work of approach bridge for Intake is completed 	Overall Physical progress till date is 6%. 94% of works are remaining
2	C-02-Supply & Installation of pipes & fittings and installation of Employer furnished	<ul style="list-style-type: none"> ▪ Total 111.4km of which 62.41km completed; 31.28km hydro tested and 3.08km of road 	No progress of work after Ex PMC left	Overall Physical progress till date is 34%. 66% of works are remaining


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	DI Pipes for the water distribution network of the North Zone. Contractor: VISWA – BRCCPL JV	reinstatement done <ul style="list-style-type: none"> Several extensions granted but performance has been very poor. Conditional extensions made but Contractor failed to comply with the conditions stipulated. PMC has recommended termination due to severe failure. 		
3	C-03- Design, supply, installation & commissioning of Intake facilities, Transmission Mains, Water Treatment Plant and Clear Water Pumping Station for South Central Zone including 5years O&M. Contractor: JWIL – RANHILL JV	<ul style="list-style-type: none"> BEP not approved as yet. Final revisions agreed but re-submission by Contractor pending. WTP layout approved Pumps for CWR & Intake approved. Construction of CWR, Administration Building & Pre-Settling Tank in progress. Electro-mechanical equipment approval to date – LT Panel; Sluice Gate; Transformers; Self Starters and Capacitor Banks. Other structural & electro-mechanical designs pending submission. 	Construction of CWR cum Pump House up to 3rd lift completed. Pre-Settling Tank is completed upto 1st lift Construction of Administration Building: Brick work is completed	Overall Physical progress till date is 16 % 84% works remaining
4	C-04-Supply, installation, construction & commissioning of rising & transmission mains (gravity mains & pressure mains), reservoirs (MBR, Main Service Reservoirs & Sub Zone Reservoirs) for South Central Zone. Contractor: GAMMON INDIA LTD	<u>Reservoirs:</u> <ul style="list-style-type: none"> Ramsa Hill Main – Civil works for Cell 1 done but electro-mechanical works pending. Cell 2 civil works in progress. Amiya Nagar – Tank 1 yet to start. Tank 2 – 2 quadrants of 4 of base slab done. Remaining works pending rock breaking. Ramsa Hill 2 – Civil 	<u>Transmission Main(MS)</u> <ol style="list-style-type: none"> 700mm dia from Amiya Nagar to Ramsa Hill of 164m length 1500mm from WTP to Ramsa Hill of 55m length(Hill portion) 700mm dia from Maligaon to WTP of 430 m length 1400mm dia in ChandmariRajgarh of 30m legth Road Restoration GSB &WBM:135m 	Overall Physical progress till date is 36% 64% of works are remaining


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		<p>works completed. Mechanical & electrical works pending.</p> <ul style="list-style-type: none"> ▪ Geeta Nagar 1 – 40% excavation done. Temple shifting issue not resolved. ▪ Geeta Nagar 2 – Civil works complete. Mechanical & electrical works pending. ▪ LeechuBagan – Structure completed. M&E pending. Service building construction completed but doors & windows pending installation. ▪ Narkasur – Cell 1 - Gravel filling & PCC completed. Structural works including base slab, columns & walls 75% completed. Cell 2 – 10% of gravel filling & PCC done. ▪ Sonaighuli – Cell 1 – excavation completed. Cell 2 – land allotment problem pending resolution with ASSTC. ▪ Transmission mains – Total 10.218km out of 36.09 km completed. Hydro testing – only 4.07km completed. ▪ Grid connection from JnNURM to CWR at Karghuli – 1343m out of 9080m done but hydro testing pending. ▪ Designs: Designs completed & approved – Ramsa Hill Main; Amiya 	<p>Concrete Work:</p> <ul style="list-style-type: none"> a) Ramsa Hill Main RCC 135 Cum b) Narkasu RCC 25Cum c) Amiya nagar - 3rdquardrant out of 4 quadrant completed 	
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		Nagar; Ramsa Hill 2; Geeta Nagar 1 & 2; LeechuBagan; Narkasur&Sonaighuli. Pending – Amiya Nagar pumps; Narkasur pumps; Structural design of Sonighuli Reservoir; Grid connection design to be submitted by GIL.		
5	C-05-Supply, installation & commissioning of MS Pipes and HDPE pipes & Installation and Commissioning of DI Pipes for distribution networks in Ramsa Hill & Amiya Nagar of South Central Zone. Contractor: IVRCL	<ul style="list-style-type: none"> Pipelaying progress: MS Pipes - 0.72 km out of 4.99km laid. Di pipes – 119.67 km out of 239.6km laid HDPE pipes 5.86 km out of 27.8km laid Total laid : 126.25km out of 272.39km Hydrotested: 105.22 km 	Pipe laid : 126Km out of 225Km Valve Chamber : 340 out of 2521	Overall Physical progress till date is 45% 55% of works are remaining
6	C-06-Supply, Installation, Construction & Commissioning of one (1) Pumping Station, MS Pipes and HDPE pipes & installation and commissioning of DI pipes for distribution networks in Geeta Nagar & LechuBagan area of South Central Zone Contractor: IVRCL	<ul style="list-style-type: none"> Pipelaying progress: Di pipes - 134.8 km out of 252.8 km laid HDPE pipes - 1.485 km out of 22.4 km laid Total laid : 136.285 km out of 275.2 km Hydrotested: 99.9km 	<ul style="list-style-type: none"> D.I pipe laid: 4.96Km Hydro test done: 7.11Km Valve Chamber installed: 15 Nos Gaps: 10 Thrust Block fitted: 18 Nos Total Hydro test done till date: 107.56 Km Total D.I pipe laid till date: 138.25Km Total MS pipe laid till date: .04Km Total no of Valve Chamber installed till date :465Nos Total Road R=restoration till date: 68.23 Km Thrust block till date :430 Power Block: 1.25Km 	
7	C-07-Supply, Installation & Commissioning of MS Pipes and HDPE pipes & installation and commissioning of DI pipes for	<ul style="list-style-type: none"> Pipelaying progress: MS Pipes – 2.23 km out of 6.195 km laid. Di pipes – 180.34 km out of 373.24 km laid HDPE pipes – 0.44 km out of 30.81 km 	<ul style="list-style-type: none"> Total no of valve/valve chamber as per revised network:2300 Valve Chamber constructed till date :375 Balance:1925 Total length of hydro 	Overall Physical progress till date is 33% 67% of works are remaining


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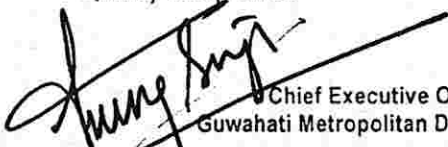

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	distribution networks in Narakur&Sonaighuli area of South Central Zone. Contractor: IVRCL	laid Total laid : 183 km out of 410.245 km Hydrotested: 133.52 km	testing required as per BOQ:407Km ▪ Length of pipe laid till date:205.32Km ▪ Hydro testing completed till date: 144.74Km ▪ Back log in Hydro test for laid pipes:60.58Kmj ▪	
8	C8a&C8b-Supply of 100mm to600mm DI pipes: C8a: JINDAL SAW; 522.299Km C8b: ELECTROSTEEL CASTINGS; 531.476Km Total: 1053.775Km	C-8a: Total 292.141 out of 522.299km pipes delivered to date. C-8b: Total 409.785 out of 531.476 km pipes delivered to date.	No progress after Ex PMC left	

7. Scope of Services

In general, the scope of the PMC services shall encompass the following activities

- a) Facilitating in the strengthening of the Project Implementation Unit
 - Evaluate current PIU set up;
 - Suggest improvements in staffing;
 - Suggest improvement in Management Systems
- b) Overall Project Management
 - Formulation of Project Management Plans, planning, monitoring, supervision, QA/QC and reporting;
 - Advice on physical & financial progress
 - Establish Health & Safety procedures and ensure conformance.
- c) Remaining detailed design for water supply / other facilities envisaged under the Project.
 - Prepare the remainder of detailed designs for outstanding components of the Project as required, after thorough examination of the technological options in consultation with PIU.
- d) Reviewing and finalisation of any outstanding detailed cost estimates if applicable
 - Assist in revision / updating of cost estimates based on detailed design / field survey.
- e) Assist in establishing procurement management system and tender process
 - Preparation of outstanding prequalification and tender documents
 - Assist in conduct of tender process like pre-bid meetings/ related correspondence.
 - Evaluation of prequalification proposals and bids and preparation of evaluation result reports.
- f) Continuation of Contract Supervision & Management
 - Physical contract wise progress
 - Quality compliance

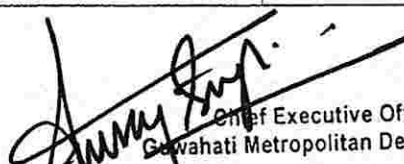

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- Suggest countermeasures
 - Fund flow management
- g) Overall financial management
- Tracking & recording of fund release to Contractors
 - Countermeasures in case of delays
- h) Environmental monitoring
- Review existing environmental assessment report and Final Environmental Management Plan (EMP) prepared by the earlier PMC. Suggest modifications where necessary.
 - Suggest relevant clauses for inclusion in the remaining tender documents regarding mitigation measures and monitoring
 - Assist in implementation of EMP of ongoing and new contracts
-
- i) Liaison with JICA and other concerned authorities
- Coordinate with JICA to ensure compliance with Loan Agreement and other such documents
 - Liaise with Government Authorities like Counsellor of Aid Accounts & Audit, Dept of economic Affairs, Govt of India, for fund disbursement.
- j) Monitoring and evaluation of the project
- Assist in Project Evaluation of at different stages as required by PIU/ JICA
- k) Assist in establishing sound Operations & Maintenance system
- Study and recommend appropriate Institutional arrangement for O&M
 - Assist in establishment of the institutional setup for O&M
 - Assist in development of processes, systems, protocols & manuals for efficient O&M
 - Conduct training need assessment for all O&M staff
 - Assist in conducting necessary training for all O&M staff
 - This role partially coincides with the role of ICDC

The following tabulates the anticipated scope of the Consultant's services with respect to the works outstanding, based on the current status of the respective packages as contained in the Handing-Over Reports. The list should serve as a guide and not be taken as exhaustive or conclusive.


Sl no	Package	Scope of PMC work
1	C-01- Design, Supply, Installation & Commissioning of Intake Facilities, Transmission Mains, Water Treatment Plant & Reservoirs for North Guwahati Zone including 5 years O&M.	<ul style="list-style-type: none"> a. Review the design and drawings of intake & WTP submitted by contractor; b. Review the intake works design and recommendation of IIT Guwahati; c. Based on these studies finalize the intake & WTP design and drawings; d. Assist the PIU to evaluate the construction methodology submitted by contractors; e. Assist the PIU to supervise the implementation of intake works, WTP pertaining to civil, installation of mechanical and electrical works; f. Assist PIU to develop QA & QC procedures to implement the


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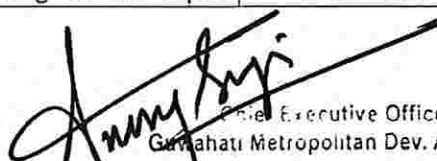
		<p>construction activities conforming to specifications;</p> <p>g. Prepare monthly, quarterly progress reports, review the works and attend monitoring meetings to evaluate the progress achieved by contractor w.r.t resources mobilized and suggest remedial measures if necessary;</p> <p>h. Assist PIU to review invoices submitted by contractors and prepare monthly, quarterly progress Reports and submission to JICA;</p> <p>i. Assist PIU to get reimbursement claims;</p> <p>j. Review as built drawings and completion report;</p>
2	C-02-Supply & Installation of pipes & fittings and installation of Employer furnished DI Pipes for the water distribution network of the North Zone	<p>a. Review designs & drawings and construction methodology submitted by contractors and communicate approval;</p> <p>b. Supervise the laying and construction of pipe lines and allied works and hydro testing. Supervise the civil works and installation of mechanical and electrical and instrumentation works.</p> <p>c. Review QA & QC procedures to implement the construction activities conforming to specifications and supervise the works;</p> <p>d. Review the resources mobilized by contractors with reference to their progress and suggest additional resources if required to meet targets;</p> <p>e. Prepare Monthly, Quarterly Progress Reports and attend review meetings and prepare MOM;</p> <p>f. Assist PIU to review invoices and certification procedures for the invoices submitted by contractors;</p> <p>g. Assist PIU in reimbursement of claims, if applicable;</p> <p>h. Review as built drawings and prepare completion reports.</p>
3	C-03- Design, supply, installation & commissioning of Intake facilities, Transmission Mains, Water Treatment Plant and Clear Water Pumping Station for South Central Zone including 5 years O&M.	<p>a. Review the designs and drawings of intake submitted by contractor;</p> <p>b. Review the intake works design and recommendation of IIT Guwahati;</p> <p>c. Based on these studies finalize the intake design, WTP design and drawings;</p> <p>d. Assist the PIU to evaluate the construction methodology submitted by contractors;</p> <p>e. Assist the PIU to supervise the implementation of intake works & WTP, Reservoirs PS pertaining to civil & structural and installation of mechanical and electrical works;</p> <p>f. Assist PIU to develop QA & QC procedures to implement the construction activities conforming to specifications;</p> <p>g. Prepare monthly, quarterly progress reports, review the works and attend monitoring meetings to evaluate the progress achieved by contractor w.r.t resources mobilized and suggest remedial measures if necessary;</p> <p>h. Assist PIU to review invoices submitted by contractors and prepare monthly, quarterly progress Reports and submission to JICA;</p> <p>i. Assist PIU to get reimbursement claims;</p> <p>j. Review as built drawings and completion report;</p>
4	C-04-Supply, installation, construction & commissioning of rising & transmission mains (gravity mains & pressure	<p>a. Review the design and drawings of pumping stations Amiyagar and Narakasur and communicate approval;</p> <p>b. Review the structural designs and drawings of Sonaiguli Reservoir and communicate approval;</p>


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	mains), reservoirs (MBR, Main Service Reservoirs & Sub Zone Reservoirs) for South Central Zone	<ul style="list-style-type: none"> c. Review the design of grid connection to be submitted by contractor; d. Review surveys and alternatives for approach Roads and propose suitable type of Roads; e. Supervise the construction of reservoirs, installation of mechanical and electrical works, booster pumping stations, reservoirs and civil works of approach Roads, laying of transmission mains etc; f. Review QA & QC procedures to implement the construction activities conforming to specifications; g. Prepare monthly, quarterly progress reports, review the works and attend monitoring meetings to evaluate the progress achieved by contractor w.r.t resources mobilized and suggest remedial measures if necessary;
		<ul style="list-style-type: none"> h. Assist PIU to review invoices submitted by contractors and prepare monthly, quarterly progress Reports and submission to JICA; i. Assist PIU to get reimbursement claims; j. Review as built drawings and completion report.
5	C-05-Supply, installation & commissioning of MS Pipes and HDPE pipes & Installation and Commissioning of DI Pipes for distribution networks in Ramsa Hill & Amiya Nagar of South Central Zone	<ul style="list-style-type: none"> a. Review the design and drawings of balance network and pipe lines feeder lines and communicate approval to the drawings; b. Supervise the laying and construction of pipe lines and allied works and civil works of laying of transmission mains and hydro test etc.; c. Review QA & QC procedures to implement the construction activities conforming to specifications; d. Prepare monthly, quarterly progress reports, review the works and attend monitoring meetings to evaluate the progress achieved by contractor w.r.t resources mobilized and suggest remedial measures if necessary; e. Assist PIU to review invoices submitted by contractors and prepare monthly, quarterly progress Reports and submission to JICA; f. Assist PIU to get reimbursement claims; g. Review as built drawings and completion report;
6	C-06-Supply, Installation, Construction & Commissioning of one (1) Pumping Station, MS Pipes and HDPE pipes & installation and commissioning of DI pipes for distribution networks in Geeta Nagar & LechuBagan area of South Central Zone	<ul style="list-style-type: none"> a. Review the design and drawings of balance network and pipe lines feeder lines and communicate approval to the drawings; b. Supervise the laying and construction of pipe lines and allied works and civil works of laying of transmission mains and hydro test etc.; c. Review QA & QC procedures to implement the construction activities conforming to specifications; d. Prepare monthly, quarterly progress reports, review the works and attend monitoring meetings to evaluate the progress achieved by contractor w.r.t resources mobilized and suggest remedial measures if necessary; e. Assist PIU to review invoices submitted by contractors and prepare monthly, quarterly progress Reports and submission to JICA; f. Assist PIU to get reimbursement claims;
7	C-07-Supply, Installation & Commissioning of MS Pipes	<ul style="list-style-type: none"> a. Review the design and drawings of balance network and pipe lines feeder lines and communicate approval to the drawings;


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	and HDPE pipes & installation and commissioning of DI pipes for distribution networks in Narakur&Sonaighuli area of South Central Zone	<p>b. Supervise the laying and construction of pipe lines and allied works and civil works of laying of transmission mains and hydro test etc.;</p> <p>c. Review QA & QC procedures to implement the construction activities conforming to specifications;</p> <p>d. Prepare monthly, quarterly progress reports, review the works and attend monitoring meetings to evaluate the progress achieved by contractor w.r.t resources mobilized and suggest remedial measures if necessary;</p> <p>e. Assist PIU to review invoices submitted by contractors and prepare monthly, quarterly progress Reports and submission to JICA;</p> <p>f. Assist PIU to get reimbursement claims; Review as built drawings and completion report;</p>
8	<p>C-8a&C8b-Supply of 100mm to600mm DI pipes</p> <p>C-8a-504 Km</p> <p>C-8b-504 Km</p> <p>Revised contract value</p> <p>C-8a-522.299Km</p> <p>C-8b-531.476Km</p> <p>Total-1053.775Km</p>	<p>a. Inspect the pipes received to check for compliance with specifications and damages if any and report to PIU.</p> <p>b. Monitor the storage and procedure for stacking and delivery of pipes</p> <p>c. Check the stock of pipes regularly</p> <p>d. Reconcile the pipes received, used and balance and report to PIU</p> <p>e. Check the invoice and certify for payment</p> <p>f. Monitor the requirement and suggest variations if required.</p> <p>g. Carryout final reconciliation and arrive at the shortages if any and report for recovery</p>

8. REPORTING

The consultants shall prepare the following reports and documents:

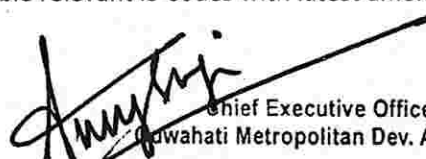
Sr. No.	Report / Documents	Draft (No. Of hard copies)	Final (No. of hard copies)
1	Detailed Design & Tender Documents (as required)	2	10
2	Tender Evaluation Reports (as required)	2	5
3	Progress Reports (Monthly & Quarterly)	As per requirement	
4	Project Completion Report (QPR/PCR)	2	10
5	Review of Operation & Maintenance Plan submitted by Contractors	2	10
6	Review and approval of Operation & Maintenance Manuals submitted by Contractors	2	10
7	Monitoring, Maintenance and Hand-Over Check List for WTPs and other facilities.	1	3
8	Necessary Technical Reports (as required)	As per requirement	
9	Other necessary reports and documents	As per requirement	


- Soft copy of reports to be given in the form of CDs.
- The available study reports such as Pre-Feasibility, Environmental Impact Assessment, Environmental Management Plan, Master Plan, SAPROF Study etc. shall be made available to the Consultants.

9. References to be followed

- a) Applicable relevant IS Codes with latest amendments

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- b) Manual on Water Supply & Water Treatment published by CPHEEO (GOI).
- c) Manual of Sewerage and Sewage Treatment published by CPHEEO (GOI).
- d) Wherever specifications are not available, International Standards/prevaling practices in consultation with the Employer.

10. Time Schedule

It is estimated that Project Management Consultancy will require 25 international person-months and 152 local person-months, besides appropriate number of support staff man-months. The man-months mentioned here are only indicative. The consulting service will commence in March 2016 and extend over a period of one (1) year (Excluding Maintenance period).

11. Project Management Consultancy Services (PMC)

Below is the indicative Expert-wise job responsibility. This is only indicative and only used as a guidance.

Project Manager – International Consultant

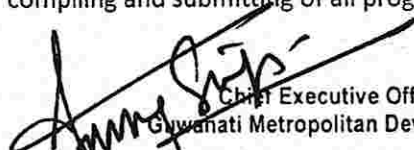
- i. Supervise the overall project management of the PMC team.
- ii. Assist the GDD and PIU for selection of experts.
- iii. Review the existing materials such as DPR and SAPROF report and assist the PIU to modify the scope of the Project to best fit the desired outcomes.
- iv. Assist the PIU to undertake tenders for contractors regarding main facilities.
- v. Assist the PIU to supervise contractors in implementing the construction work of the main facilities.
- vi. Assisting PIU to set up a system for monitoring the progress of the Project.
- vii. Preparing Monthly and Quarterly Progress Reports, Special reports for the Projects and assisting in preparation of communication output such as articles, promotional materials etc.
- viii. Attend meeting to review the progress of work of different Packages including preparation of minutes of such meeting.
- ix. Any other works as advised by PIU time to time.

Deputy Project Manager (Water Supply Engineer) – Local Consultant


- i. Assist the overall management with the local consultants and contractors.
- ii. Review overall project management on technical issues of the main facilities such as the detailed designs in terms of contractual specifications.
- iii. Assist the Project manager in overseeing and coordinating with the site teams supervising the various contractors implementing the construction works.
- iv. Assist in preparing of necessary Project related Report such as Monthly & Quarterly Progress Reports and any other Special reports for the Project and in preparation of communication output such as articles, promotional materials etc.
- v. Ensure all project reports are completed on time and submitted to PIU/JICA as required.

Construction Manager – International Consultant

- i. Oversee the PMC's supervisory team and responsible for overall supervision of construction works including quality control management, and adherence to Health, Safety and Environmental regulatory requirements. Head the team of Resident Engineers for the various packages, he shall be the focal point of all site related reporting; responsible for compiling and submitting of all progress related reports.


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- ii. Ensure standardised system for all site documentation applicable across multiple contracts. Manage & maintain all site documentation including quality records; other project & progress related documentation; as built information etc.
- iii. Assist PIU in coordination of multiple contracts and monitoring of project progress including providing recommendations.
- iv. Review and assist PIU in inventory management of pipe stock yards including checking of pipes and appurtenances to ensure no damage and compliance with contract specifications. Coordinate with PIU and suppliers to ensure timely delivery of all required pipe and fittings to avoid any delays to construction activities. Review and recommend on proper storage and management of pipe stock yard.
- v. Review contractors' progress claims and make appropriate recommendations.
- vi. As focal point in coordination between design and construction teams.

Process Expert – International Consultant

- i. Review designs and specifications for the Treatment Plants as given in the Contract Documents.
- ii. Assist PIU to assess and approve process designs for the Water Treatment Plants submitted by the Contractors.
- iii. Supervise process review during construction
- iv. Advise site team on process issues during construction stage.
- v. Coordinate the Contractors' testing and commissioning of the Treatment Plants with respect to meeting performance criteria
- vi. Review of O&M issues
- vii. Provide assessment and input on operation and maintenance during Defects Liability Period.
- viii. Review Contractors' proposed O&M and training.

Senior Instrumentation Engineer – International Consultant

- i. Review provisions in existing designs and contract drawings and specifications for I&C and SCADA equipment and make recommendations, if any.
- ii. Assist PIU in review and approval of complete design and integration of I&C system and SCADA from Contractors including related equipment.
- iii. Provide input on O&M issues relating to I&C and SCADA components and in O&M Manual preparation.
- iv. Review Contractors' proposed operator's training for SCADA & I&C.
- v. Provide assessment and input on operation and maintenance during Defects Liability Period.
- vi. Provide input in preparation of any reports in regards to the I&C and SCADA components of the project.
- vii. Where required provide input in the overall coordination of SCADA systems for the various water supply projects under implementation in Guwahati.

Quantity Surveyor – Local Consultant

- i. Review the quantities and prices developed in the DPR and SAPROF reports and revise them to the modified final plans specified by the PIU.
- ii. Assist the PIU to develop the tender documents for main facilities.
- iii. Preparation cost estimation using cost data and information and estimating local components of works as and when required.
- iv. Assist Deputy Project Manager & Resident Engineers in measuring quantities of contractors' works claimed for monthly payments and also assist Client and Project Manager in certifying contractors' monthly bills.
- v. Assist in contract administration, in particular variation orders and so on.


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- vi. Assist in monitoring financial progress of works and estimating payment/disbursement forecasting for the coming periods.
- vii. Assist in preparation of financial monitoring reports where required.

Contracts/Legal Expert - Local Consultant

- i. Assist the PIU to establish a procurement management system based on JICA's guidelines and standard procedures.
- ii. Assist the PIU to prepare the tender documents, to evaluate the tenders, to negotiate the tenders for the contractors.
- iii. Assist the PIU to supervise the compliance of the contractors with their contractual obligations and assess the extent of the validity of the claims issued by the contractors.
- iv. Any other related task that may arise in course of the assignment.

Process Engineer – Local Consultant

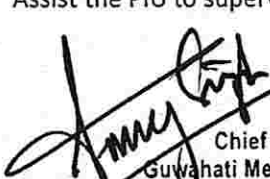
- i. Assist the PIU to develop a tender document related to water treatment works together with other engineers.
- ii. Assist the PIU to evaluate the tenders related to water treatment works.
- iii. Assist the PIU to assess the appropriateness of the implementation designs produced by the contractors.
- iv. Assist the PIU to supervise the implementation of water treatment works.

Instrumentation / SCADA Engineer- Local Consultant

- i. Assist the Senior Instrumentation Engineer in review of provisions in existing designs and contract drawings and specifications for I&C and SCADA equipment and make recommendations, if any.
- ii. Assist PIU in review and approval of complete design and integration of I&C system and SCADA from Contractors including related equipment.
- iii. Provide technical support to Resident site staff in supervision and coordination of installation of I&C and SCADA equipment.
- iv. Attend factory inspections/ acceptance tests as required by the Client.
- v. Attend trial runs and initial testing and commissioning stage.
- vi. Provide input on O&M issues relating to I&C and SCADA components and in O&M Manual preparation.
- vii. Assist the Senior Instrumentation Engineer in review of Contractors' proposed operator's training for SCADA & I&C.
- viii. Provide assessment and input on operation and maintenance during Defects Liability Period.
- ix. Provide input in preparation of any reports in regards to the I&C and SCADA components of the project.
- x. Where required provide input in the overall coordination of SCADA systems for the various water supply projects under implementation in Guwahati.

Mechanical Engineer – Local Consultant

- i. Assist the PIU to develop a tender document related to mechanical works together with other engineers.
- ii. Assist the PIU to evaluate the tenders related to mechanical works.
- iii. Assist the PIU to assess the appropriateness of the implementation designs produced by the contractors.
- iv. Assist the PIU to supervise the implementation of mechanical works.


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Electrical Engineer – Local Consultant

- i. Assist the PIU to develop a tender document related to electrical and control works together with other engineers.
- ii. Assist the PIU to evaluate the tenders related to electrical and control works.
- iii. Assist the PIU to assess the appropriateness of the implementation designs produced by the contractors.
- iv. Assist the PIU to supervise the implementation of electrical and control works.

Structural Engineer – Local Consultant

- i. Assist the PIU to undertake structural requirement calculations for the main facilities based on the data produced by the Geotechnical Engineer.
- ii. Assist the PIU to determine the structural requirements of the main facilities within tender documents.

Geotechnical Engineer– Local Consultant

- i. Recommend geotechnical investigations where required and supervise investigations carried out by geotechnical agencies.
- ii. Review Geotechnical Reports and advice on geotechnical parameters for design of foundations, retaining walls or any other structures as required.
- iii. Review and approve foundation designs including piling proposals submitted by Contractors
- iv. Provide technical support to site supervisory personnel in supervision of foundation construction whenever needed.

Quality Assurance/ Quality Control Manager – Local Consultant

- i. Review Project Quality Plans submitted by Contractors and ensure that these adequately cover all quality control needs of the project. Verify that these are in accordance with applicable codes/standards.
- ii. Ensure implementation of appropriate quality control procedures by the respective site supervisory team and Contractors following the approved plans.
- iii. Coordinate all QA/QC issues and activities including Inspection & Test programs with Project Manager/ QAQC Supervisor/ Resident Engineers and assist and advice in matters of Quality Control and Quality Assurance and reporting.
- iv. Responsible for QA/QC documents of the various packages including compiling all certificates, calibrations, test results, inspection requests, non-compliance reports and site instructions/observations, material delivery records and other QA/QC documents.
- v. Responsible for ensuring closure of Non-Conformance Report (NCR) and Site Instructions.
- vi. Ensure all technical documents on site quality are current.

Health Safety & Environment Officer

- i. Assist PIU in review of health & safety plan and environmental management plan and advice on any modifications necessary.
- ii. Ensure compliance by Contractors to accepted and approved industry practices.
- iii. Coordinate with Site Supervisory teams and Contractors HSE officers to ensure that health and safety policies are implemented on site and provisions made.
- iv. Alert PIU/PMC on any health, safety or environmental related issues that may arise in the course of construction works including recommending on preventive or remedial measures.
- v. Prepare necessary reports for PIU/JICA on HSE matters where required.


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Intake Engineer - Local Consultant

- i. Assist the PIU to develop a tender document related to intake works together with other engineer.
- ii. Assist the PIU to evaluate the tenders related to intake works.
- iii. Assist the PIU to assess the appropriateness of the implementation designs produced by the contractors.
- iv. Assist the PIU to supervise the implementation of intake works.

Network Design Engineer – Local Consultant

- i. Review the design consistency of the proposed network designs in the DPR to finalize the specifications for distribution networks.
- ii. Assist the PIU to develop a tender document related to distribution network together with other engineers.
- iii. Assist the PIU to evaluate the tenders related to distribution networks.
- iv. Assist the PIU to assess the appropriateness of the implementation designs produced by the contractors.
- v. Assist the PIU to supervise the implementation of distribution networks.

Resident Engineers (5 nos)– All Packages; Local

- i. Reporting to the Construction Manager and responsible for day to day supervision of works under the respective contracts through a team of Site Supervisors.
- ii. Assist in review and approval of all proposals submitted by the Contractors including method statements, shop drawings, materials etc .
- iii. Assist in monitoring Contractors quality program and ensuring QA/QC procedures are implemented on site and that works being carried out are in compliance with the technical specifications and approved designs/drawings.
- iv. Recommend in approval and acceptance of works completed by the Contractors
- v. Ensure maintenance and safe keeping of all construction records.
- vi. Ensure proper coordination of the various disciplines of construction activities especially in the WTPs to avoid unnecessary corrective works.
- vii. Witness and approve successfully completed tests as with hydrostatic testing of completed pipelines and other tests related to the Civil & Structural elements.
- viii. Conduct site level site meetings with Contractors personnel and keep minutes of the same.
- ix. Review and provide recommendations in processing of Contractor's progress claims in conjunction with the Quantity Surveyor.
- x. Ensure appropriate health & safety standards are maintained on site and environmental management plan is complied with.

Resident Mechanical Engineer – Local

- i. Assist Mechanical Engineer in carrying out day-to-day supervision of all mechanical installations at the Treatment Plants, Intakes and Pumping Stations both in the North and South Zones.
- ii. Review with Resident Engineers of the respective contract packages with mechanical installations, to ensure proper coordination between civil and mechanical works to avoid the need for future corrective actions.
- iii. Review all mechanical plant & equipment delivered to site to ensure only approved makes are delivered and in compliance with the specifications. Ensure all factory test documentation are in order and in place.
- iv. Ensure equipment installations are in accordance with specifications and/or manufacturers recommendations.


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- v. Attend all on site testing and factory inspections/tests where required or requested by Client.
- vi. Ensure all QA/QC documentation with respect to mechanical installations including checklists are completed, endorsed by the respective parties and compiled.

Resident Electrical Engineer – Local

- i. Assist Electrical Engineer in carrying out day-to-day supervision of all electrical installations in the various packages. Review with Resident Engineers of the respective contract packages to ensure proper coordination between civil and electrical works to avoid the need for future corrective actions.
- ii. Review all electrical plant & equipment delivered to site to ensure only approved makes are delivered and in compliance with the specifications. Ensure all factory test documentation are in order and in place.
- iii. Ensure equipment installations are in accordance with specifications and/or manufacturers recommendations.
- iv. Attend all on site testing and factory inspections/tests where required or requested by Client.
- v. Ensure all QA/QC documentation with respect to electrical installations including checklists are completed, endorsed by the respective parties and compiled.
- vi. Assist PIU/Contractors in coordination with Authorities in securing main power supply to the respective facilities.

Resident Instrumentation Engineer – Local

- i. Assist Instrumentation Engineer in carrying out day-to-day supervision of installations of all instruments and SCADA equipment in the various packages. Review with Resident Engineers of the respective contract packages to ensure proper coordination between civil and instrumentation works to avoid the need for future corrective actions.
- ii. Review all instrumentation delivered to site to ensure only approved makes are delivered and in compliance with the specifications. Ensure all factory test documentation are in order and in place.
- iii. Ensure equipment installations are in accordance with specifications and/or manufacturers recommendations.
- iv. Attend all on site testing and factory acceptance tests & inspections where required or requested by Client.
- v. Ensure all QA/QC documentation with respect to instrumentation including checklists are completed, endorsed by the respective parties and compiled.


Supervisors (10 nos) – Local

- i. Responsible for standing supervision and inspection of assigned construction activities, to ensure compliance to standards and specifications.
- ii. Assist the Resident Engineer and other PMC Engineers in all site related matters including quality control, site measurements etc.
- iii. Check on accuracy of lines and levels to ensure compliance to approved drawings and designs.
- iv. Identify and alert including providing advice on any potential problems and issues that may arise in the course of any construction activities.
- v. Assist in ensuring contractors' compliance to approved health, safety and environmental standards and practices when carrying out construction work.

Quality Assurance/ Quality Control Supervisor – Local

- i. Assist QA/QC manager in ensuring implementation of appropriate quality control procedures by the respective site supervisory team and Contractors following the approved plans.



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- ii. Assist QA/QC Manager to monitor QA/QC documentation of the various packages including compiling all certificates, calibrations, test results, inspection requests, non-compliance reports and site instructions/observations, material delivery records and other QA/QC documents.
- iii. Act as coordinator between QA/QC Manager and Site teams.
- iv. Assist QA/QC Manager and site supervisory teams in ensuring closure of Non-Conformance Reports (NCR) and Site Instructions.

Administrative Staff - Local Staff

- i. Office Manager/Administrator – 1no.
- ii. CAD Draftsmen – 2 Nos.
- iii. Secretary – 1 No.
- iv. Document Control – 1 no.
- v. Accountant – 1 no.
- vi. IT & Data Management Personnel – 1 no.
- vii. Office Boys – 3 nos.


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APPENDIX B1 – MANNING REQUIREMENTS FOR PMC SERVICES

Sl. No.	Position	Person Months
<u>International Staff (Professional A)</u>		
1	Project Manager	11
2	Construction Manager	11
3	Process Expert	2
4	Instrumentation Expert	1
	Total	25
<u>Local Staff(Professional B)</u>		
1	Deputy Project Manager	12
2	Resident Engineer 1- North Zone	12
3	Contract Specialist / Legal Expert	1
4	Resident Engineer 2- Contract 3	12
5	Resident Engineer 3- Contract 4	12
6	Resident Engineer 4- Contract 5 & 6	12
7	Resident Engineer 5- Contract 7	12
8	Resident Mechanical Engineer	6
9	Resident Electrical Engineer	6
10	Resident Instrumentation Engineer	6
11	Health, Safety and Environmental Expert	6
12	Quantity Surveyor	12
13	Network Design Engineer	4
14	Intake Engineer	4
15	Process Engineer	6
16	Mechanical Engineer	6
17	Electrical Engineer	6
18	Instrumentation / SCADA Engineer	6
19	Structural Engineer	6
20	Geotechnical Engineer	2
21	Quality Control / Quality Assurance Manager	3
	Total	152
<u>Supporting Staff (Local Staff – Professional Staff C)</u>		
1	Drafting Personnel – 2 Nos.	24
2	Site Supervisors – 10 Nos.	120
3	QA/QC Supervisors – 1 No.	12
	Total	156
<u>Office Supporting Staff</u>		
1	Sr. Office Manager and Administrator – 1 No.	12
2	Secretary – 1No.	12
3	Accountant – 1 No.	12
4	Document Control	12
5	IT and Data Management Personnel – 1 No.	12
6	Office Boy – 3 Nos.	36
	Total	96


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Appendix G1 – JPY Component

A. International Staff Remuneration Details(Professional A)

Sl. No.	Position	Person Months	Fixed Monthly Remuneration Rate (in Yen)	Total Amount (in JPY)
1	Project Manager	11	30,00,000	33,000,000
2	Construction Manager	11	28,00,000	30,800,000
3	Process Expert	2	25,00,000	5,000,000
4	Instrumentation Expert	1	28,00,000	2,800,000
Sub Total A				71,600,000

B. International Staff Reimbursable Expenses

Sl. No.	Position	Origin / Destination	No. of Round Trips	Cost in Yen (at fixed Rates) - escalated annually per trip	Flight Cost in Yen	Miscellaneous Cost (at fixed Rates) - escalated annually in JPY	Total Travel Cost in JPY
1	Project Manager	From Japan, Australia, USA, Europe, Asia to Guwahati	1	245,000	245,000	10,000	255,000
2	Construction Manager	From Japan, Australia, USA, Europe, Asia to Guwahati	1	245,000	245,000	10,000	255,000
3	Process Expert	From Japan, Australia, USA, Europe, Asia to Guwahati	1	245,000	245,000	10,000	255,000
4	Instrumentation Expert	From Japan, Australia, USA, Europe, Asia to Guwahati	1	245,000	245,000	10,000	255,000
Sub Total B							1,020,000
JPY COMPONENT GRAND TOTAL (A+B)						Fgr N J S Consultants Co Ltd.	72,620,000

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Appendix H1 – INR Component

A. REMUNERATION


Sl. No.	Position	Person Months	Fixed Monthly Remuneration Rate (in INR)	Total Amount (in INR)
Local Staff Remuneration Details(Professional B)				
1	Deputy Project Manager	12	2,10,000	25,20,000
2	Resident Engineer 1- North Zone	12	1,80,000	21,60,000
3	Construction Specialist / Legal Expert	1	1,85,000	1,85,000
4	Resident Engineer 2- Contract 3	12	1,80,000	21,60,000
5	Resident Engineer 3- Contract 4	12	1,80,000	21,60,000
6	Resident Engineer 4- Contract 5 & 6	12	1,80,000	21,60,000
7	Resident Engineer 5- Contract 7	12	1,80,000	21,60,000
8	Resident Mechanical Engineer	6	1,80,000	10,80,000
9	Resident Electrical Engineer	6	1,80,000	10,80,000
10	Resident Instrumentation Engineer	6	1,80,000	10,80,000
11	Health, Safety and Environmental Expert	6	1,80,000	10,80,000
12	Quantity Surveyor	12	1,80,000	21,60,000
13	Network Design Engineer	4	1,90,000	7,60,000
14	Intake Engineer	4	2,00,000	8,00,000
15	Process Engineer	6	1,90,000	11,40,000
16	Mechanical Engineer	6	1,90,000	11,40,000
17	Electrical Engineer	6	1,90,000	11,40,000
18	Instrumentation / SCADA Engineer	6	1,90,000	11,40,000
19	Structural Engineer	6	2,00,000	12,00,000
20	Geotechnical Engineer	2	2,00,000	4,00,000
21	Quality Control / Quality Assurance Manager	3	1,90,000	5,70,000
Supporting Staff Remuneration Details (Local Staff – Professional Staff C)				
1	Drafting Personnel – 2 Nos.	24	30,000	7,20,000
2	Site Supervisors – 10 Nos.	120	44,000	52,80,000
3	QA/QC Supervisors – 1 No.	12	40,000	4,80,000
Office Supporting Staff Remuneration Details				
1	Sr. Office Manager and Administrator – 1 No.	12	45,000	5,40,000
2	Secretary – 1 No.	12	20,000	2,40,000
3	Accountant – 1 No.	12	35,000	4,20,000
4	Document Control – 1 No.	12	25,000	3,00,000
5	IT and Data Management Personnel – 1 No.	12	30,000	3,60,000
6	Office Boy – 3 Nos.	36	10,000	3,60,000
Sub Total A				3,69,75,000

B. REIMBURSABLE COSTS – LOCAL STAFF TRAVEL

Sl. No.	Description	No. of Personal Trips	Rate (INR)	Total Rate (INR)
1	Domestic Air Travel	45	20,000	9,00,000
2	Domestic Train Travel	45	5,000	2,25,000
Sub Total B				11,25,000


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C. ACCOMMODATION COST

Sl. No.	Position	Person Months	Total No. of Days	Fixed INR rate per month	Fixed INR rate per day	Total Amount in INR
1	Project Manager	11		15,000		1,65,000
2	Construction Manager	11		15,000		1,65,000
3	Process Expert	2	60		3,000	1,80,000
4	Instrumentation Expert	1	30		3,000	90,000
5	Local Non Guwahati Staff Accommodation	12		49,000		5,88,000
Sub Total C						11,88,000

D. MISCELLANEOUS & OTHER SPECIFIED COST

Sl. No.	Description	Months	Quantity	Rate (INR)	Total Amount (INR)
1	Office Space Rent including water & Electricity Bill, Maintenance etc.	12	1	1,00,000	12,00,000
2	Telephone Units	-	12	1000	12,000
3	Telephone/Telex/Telegram/Fax		10	5,500	55,000
4	Telephone & Internet Bill	12		11,000	1,32,000
5	Mobile Phone Bill	12	40	500	2,40,000
6	Office Stationeries and Other Expenses	12	-	77,650	9,31,800
Sub Total D					25,70,800

E. TRANSPORTATION

Sl. No.	Description	No. of Unit	Months	Rate (INR)	Total Amount (INR)
1	Vehicle Rental (4 Wheeler)	4	12	25,000	12,00,000
2	Vehicle Fuel	4	12	10,000	4,80,000
3	Motor Cycle	6	-	72,000	4,32,000
4	Motor Cycle Fuel	10	12	2,500	3,00,000
5	Motor Cycle Maintenance	10	12	1,000	1,20,000
Sub Total E					25,32,000

INR COMPONENT SUMMARY

SUB TOTAL A	3,69,75,000
SUB TOTAL B	11,25,000
SUB TOTAL C	11,88,000
SUB TOTAL D	25,70,800
SUB TOTAL E	25,32,000
INR COMPONENT GRAND TOTAL	4,43,90,800


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