

Kathmandu Valley Wastewater Management Project
Kathmandu Upatyaka Khanepani Limited
Project Implementation Directorate
Anamnagar, Kathmandu, Nepal

ADDENDUM NO.2

Contract No.: KUKL/WW/DEWATS/01(ADB Loan No. 3000-NEP (SF))

of IFB published on 12 April 2021 on Kathmandu post

Construction of Decentralized Wastewater Treatment Plant at Gokarna & Hanumanghat

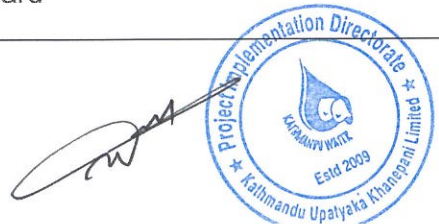
(Date of Issue of Addendum No.2:21/5/2021)

Pursuant to ITB Clause No.8 of Bidding document, all prospective bidders are hereby informed that the changes in bidding documents are made accordingly as follows:

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Section 3																																	
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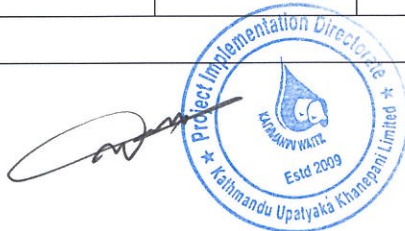
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Section 6- MBBR	Pg. 6a-178		<p>Add as following:</p> <p>9.2.8. Moving Bed Biofilm Reactor (MBBR)</p> <p>Attachment [Specification of MBBR]</p>																							
Section 6- Solid content and Additional Functional Guarantee during commissioning Period	<p>12.5. Performance Guarantee Tests</p> <p>Functional Guarantees of the Plant and Equipment</p> <p>Pg 6a-266</p>	<table border="1"> <thead> <tr> <th>No</th> <th>Parameters</th> <th>Limiting Values</th> </tr> </thead> <tbody> <tr> <td rowspan="2">1</td> <td>Dissolved oxygen in mixed liquor on the MBBR tank outlet:</td> <td>Not less than 0.5 mg/l</td> </tr> <tr> <td>Dissolved oxygen in Disinfection tank outlet:</td> <td>Not less than 2 mg/l</td> </tr> <tr> <td>2</td> <td>Solid content in the wet cake:</td> <td>Not less than 20%.</td> </tr> </tbody> </table>	No	Parameters	Limiting Values	1	Dissolved oxygen in mixed liquor on the MBBR tank outlet:	Not less than 0.5 mg/l	Dissolved oxygen in Disinfection tank outlet:	Not less than 2 mg/l	2	Solid content in the wet cake:	Not less than 20%.	<table border="1"> <thead> <tr> <th>No</th> <th>Parameters</th> <th>Limiting Values</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>Dissolved oxygen in mixed liquor on the MBBR tank outlet:</td> <td>Not less than 0.5 mg/l</td> </tr> <tr> <td>2</td> <td>Solid content in the wet cake for underflow of Dewatering Unit:</td> <td>Not less than 22%.</td> </tr> <tr> <td>3</td> <td>The chlorine concentration in the effluent water</td> <td>Not greater than 1mg/l.</td> </tr> </tbody> </table>	No	Parameters	Limiting Values	1	Dissolved oxygen in mixed liquor on the MBBR tank outlet:	Not less than 0.5 mg/l	2	Solid content in the wet cake for underflow of Dewatering Unit:	Not less than 22%.	3	The chlorine concentration in the effluent water	Not greater than 1mg/l.
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Minutes of Meeting

Pre-Bid meeting

Kathmandu Valley Wastewater Management Project
Construction of Decentralized Wastewater Treatment Plant at Gokarna & Hanumanghat
Contract Identification Number: KUKL/DEWATS/O1

IFB Publication Date: 12 April 2021
Last Date of Submission: 27 June 2021

Date : 10 May 2021 Time: 11.30 Hrs (NST)
Venue: Virtual

A. Attendance:

S.N	Name	Designation	Organization	Signature
Project Implementation Directorate (PID)				
1	Mr. Ujwol Prajapati	Deputy Project Director, Management		
4	Mr. Lokendra Yadav	Deputy Project Director, Technical		
2	Mr. Chandra Pan Shrestha	Project Manager		
3	Ms. Laxmi Pant Bhatt	Procurement Manager		
5	Ms. Sangitanjali Koirala	Engineer		
6	Mr. Dhruva Raj regmi	Project Management Specialist		
7	Mr. Rajesh Singh	Wastewater Specialist		
Design & Supervision Consultant (DSC 06)				
1	Mr. Cho Dae Whan	Authorized Representative		
2	Mr. Suraj Sigdel	Procurement/Contract Specialist		
3	Mr. Bharat Maharjan	Wastewater Expert		
Prospective Bidders				
1	Mr. Krishna Ram Yendyo	Representative	Eco-Concern Pvt Ltd	
2	Mr. LhakpaGyalu Sherpa	Representative	FINE INC	
3	Mr. SahityaThaman, Mr. Anil Thaman, Mr. Prakash Singh Rawal Mr. Inderjeet Sandhu Mr. Julfikar Sheikh	Representative	Ion Exchange India-Himalayan Builders & Engineers Joint Venture	
4	Ms, Radhika Chudhari Mr. Mahesh Sinde	Representative	IEI Ltd.	



5	Mr. Prakash chandra kharel Mr. Sitaram Shrestha	Representative	Kalika Construction Pvt. Ltd.	
6	Mr. Anis Thapa	Representative	CHINA GUANGZHOU INTERNATIONAL ECONOMIC & TECHNICAL COOPERATION COMPANY	
7	Mr. Suman Karmacharya	Representative		
8	Mr. Aarav Rimal	Representative		
9	Mr. Kamod Rai	Representative		

Proceedings/Discussions:

1. Mr. Ujwol Prajapati, Deputy Project Director formally opened the Pre-bid Meeting and welcomed all participants in the meeting held virtually. The DPD expressed his sincere apology for not being able to organize the field visit as well as the meeting as stipulated in the bidding document due to restriction in movement imposed by Government of Nepal in concern with rapid spread of COVID-19 pandemic in Nepal. However, he wished for fruitful discussion and elaboration on pertinent issues in regards to the impending contract for Construction of Decentralized Wastewater Treatment Plant at Gokarna & Hanumanghat.

2. In the beginning of the discussion, the Design and Supervision Consultant (DSC 06) made brief presentation highlighting key Technical and Contractual features of the Project. The presentation document made by Consultant is attached in this MOM.

3. After the brief presentation, elaborate discussion was held within the participants and proper responses were made to the issues raised by representatives of prospective bidders. All the bidders were requested to submit the queries in the written form. However, the summary of the discussions is presented hereunder:

i. Technical Aspect:

S.N	Issues raised by Bidders	Employer' Response
1	One of the representatives of the prospective bidders has put two queries: i) Discrepancies in Process flow diagram and P&ID diagram and asked which one to be followed. ii) Is the surface aeration for MBBR possible or not?	P&ID diagram provided in the bid document is for reference only as also noted in the diagram. The conceptual design is based on the process flow diagram provided in the bid document. During detail design, the P&ID diagram will also be finalized. The answer to the second question will be responded in response to the bidder's queries. However, the preliminary Experts answer is as follows: - Basically, the bidders can propose various options for secondary treatment process based on the MBBR process. In general, MBBR process, the contaminants are



		<p>treated through microorganism attached on the moving media. The oxygen transfer efficiency is key parameter to operate the system properly. Therefore, bubble diffuser type is recommended for aeration system in MBBR process. The bidders shall consider the functional guarantee, effluent water quality and budget for selecting of process combination.)</p>
2	<p>Another representative of the bidder, raised issue about design flows. How the design flows of 3 and 6 MLD considered for various facilities? Which Civil structures should consider 6 MLD?</p>	<p>Design flow description is clearly given in Bid Document Section 6. According to this, 3 MLD is considered for all treatment process except pretreatment facility (i.e inlet, coarse fine screen, grit removal, and equalization tank). Civil structures of Pretreatment facility, administration building, mechanical and electrical buildings and rooms should consider 6 MLD.</p>
3	<p>There is also a query from a representative of the bidder whether future Co-treatment of septic sludge need to be considered or not as for the 6 MLD.</p>	<p>For this bid, the treatment capacity of septic sludge is 10 m³/d and no need to consider for future capacity.</p>
4	<p>Again, a representative of one of the bidders put a query about alternative treatment units. According to him, as a tertiary treatment plant, dual filter or ACF will be more advanced and beneficial in terms of space requirement and treatment efficiency. Since it is a DBO contract, the Bidders expressed queries regarding possibility in change in conceptual setting of Treatment Plan to suit the modern and innovative technology in such fields. Similar query about alternative of tube settler as inclined plate settler was also raised.</p>	<p>In this context, the Employer replied that the space availability for the proposed plant is very limited and with this constraint, the plant is being designed with inclusion of MBBR system and compact facilities. So except this MBBR system, the plant can be modified in other components provided that it fulfills the Employer's Requirement in complete manner.</p>
5	<p>Some discrepancies are observed in layouts, drawings and technical requirements (eg. missing specification of brick masonry work etc.) and also some details may require as it is not possible to visit site during this COVID-19 lockdown time.</p>	<p>It was replied that any significant errors, discrepancies will be clarified through addendums in Bidding Document.</p>



ii. Contractual Aspect:

S.N	Issues raised by Bidders	Contractual Provision	Employer' Response
1	The Bidders requested to extend the Bid submission deadline considering the restriction on movement imposed by GON due to current situation of COVID-19 pandemic.	Section 1 ITB -24.1, 24.2 Section 2 Bid Data Sheet 24.1	The Project Implementation Directorate responded to consider this matter after assessment of the pandemic situation in coming days and decide accordingly.
2	The Bidders requested to amend some provision in Payment of Schedule in Price Schedule No.1- Plant and Mandatory Spare Parts Supplied from Abroad. The request was particularly made to increase the percentage in payment upon delivery to site and verification by Employer's Representative of said item to Eighty Five percent from Eighty Percent.	Section 8, Particular Condition of Contract, (A) Payment Installments, Payment during Design-Build Period, Price Schedule No.1- Plant and Mandatory Spare Parts Supplied from Abroad.	The Project Implementation Directorate declined this request citing that it was provisioned in contract document with well thought approach based upon the past experiences in implementation of such projects.
3.	One of the bidder's representatives requested to accept the bids electronically if possible considering the prevailing restrictions in movement due to lockdown.	ITB 24.1	The Project Implementation Directorate responded that it is not possible to submit the bids electronically due to the provisions made by ADB for the procurement of this contract package.

4. The meeting was conducted in well amiable manner and the Employer's side requested prospective Bidders to submit their concerns/queries via Email in comprehensible manner so that it could be responded appropriately.

5. At the end, DPD Mr. Ujwol Prajapati, expressed thanks from the side of organizer to all attendees for this active and fruitful participation and concluded the meeting.





PID response/ clarification of Bidders' queries

S. No.	Tender Clause	Tender Section & Page No.	Query By Bidder.	PID Response/Clarification
1.	VOLUME II A: EMPLOYER'S REQUIREMENT 11.ELECTRICAL SPECIFICATION 11.4 11kV Power incoming	SECTION 6: EMPLOYER'S REQUIRMENT (MAIN DOCUMENT) Page no : 6a-208	The incoming power line should be planned to supply electricity from nearest existing 11kV distribution line of NEA. The 11kV is the rated voltage from NEA D/L to the DEWATS through H-Pole with LA, DoF, and ToD Meter. Query: We understand incoming power supply from nearest existing 11 kV distribution line of NEA to proposed WTP's Plants is in Bidder Scope. Please clarify for the same. - Please provide distance between existing 11 KV distribution line of NEA to proposed WTP's Plants. - Please Provide initial power factor and fault level.	- the location of the existing 11kV distribution line is near about 50m from the boundaries of plants entrance. However, this distance might be changed at the construction stage. - NEA's exact Initial power factor is unknown. The power factor correction should be maintained a lagging power factor of above 0.95 in WTP's Plants. - Fault level has been mentioned in Clauses 11.1.4. Fault current in kA should be determined according to fault level calculation in the design stage.
2.	VOLUME II A: EMPLOYER'S REQUIREMENT 11.ELECTRICAL SPECIFICATION 11.4 11kV Power incoming	SECTION 6: EMPLOYER'S REQUIRMENT (MAIN DOCUMENT) Page no : 6a-208	The existing facilities consist of electrical pole, overhead cable and H-pole which are not used for the new electrical system in Gokarna WWTP should be removed. Query: Kindly provide the detail information of dismantling work like qty, any photographs etc. for cost estimation. Also confirm if bidder can use this existing facilities for proposed plant at Gokarna incoming power supply.	Refer to the attached document about the information of the existing facilities in the Gokarna WTP site. The Bidder may not be able to use the existing facilities as they may not be reliable. (refer Electrical Attachment#1, Civil Attachment#1)
3.	VOLUME II A: EMPLOYER'S REQUIREMENT 11.ELECTRICAL SPECIFICATION 11.8.7. Combination Starter Feeder Units	SECTION 6: EMPLOYER'S REQUIRMENT (MAIN DOCUMENT) Page no: 6a-227	DOL starter (below 20 HP) Soft Starter (Above 20 HP) Variable frequency drive component starter (Contractor shall consider the speed control for the following items) Query: Please Confirm if bidder can consider as follows. 1. DOL: up to 5.5 kW 2. S/D: From 7.5 kW to <75 kW 3. Soft Starter: Above 75 kW 4. VFD: As per process requirement	The provisions in the bidding documents remain unchanged.
4.	VOLUME II A: EMPLOYER'S REQUIREMENT 11.ELECTRICAL SPECIFICATION 11.8.13.Future Requirements	SECTION 6: EMPLOYER'S REQUIRMENT (MAIN DOCUMENT) Page no: 6a-227	Each motor control center shall have approximately 20-percent or minimum of two spare units. Query: We understand the 20% vacant feeders or each type and rating is provided in each MCC. Please confirm the same.	The feeder of 20% can be suggested by the Bidder with appropriate mix of vacant units and each motor ratings units in each MCC.
5.	VOLUME II A: EMPLOYER'S REQUIREMENT 11.ELECTRICAL SPECIFICATION 11.15.5. Fire Alarm Control Panel	SECTION 6: EMPLOYER'S REQUIRMENT (MAIN DOCUMENT) Page no: 6a-239	When the panel is used with addressable fire detectors, the panel shall be capable of Providing a signal which shall indicate Fire/Fault zone along with the detector which has operated by means of a digital Liquid Crystal Diode (LCD) display. Query: We understand separate HMI display requirement for fire alarm control panel. Please mention the size of HMI (LCD) display.	- LCD display should be consisted with HMI separately. The condition of the fire alarm system shall indicate on the control panel. (refer Instrumentation Attachment#1) - The size of LCD display should be proposed by bidder. (e.g. 4x40 – Character LCD alphanumeric display with back-light)






(Handwritten signature)

S. No.	Tender Clause	Tender Section & Page No.	Query By Bidder.	PID Response/Clarification
6.	VOLUME II A: EMPLOYER'S REQUIREMENT 11.ELECTRICAL SPECIFICATION 10.2.7. Uninterruptible Power Supply (UPS)	SECTION 6: EMPLOYER'S REQUIRMENT (MAIN DOCUMENT) Page no: 6a-194	Please confirm following. Type: Redundant or Non redundant. Please confirm if bidder can provide only one (1) No. UPS system capable to source UPS supply for entire plant (field instruments, PLC, SCADA system and as required).	Basically, each UPS must be supplied to the Central Control Room and RCS is installed everywhere. However, KUKL office's UPS maynot be required. please also refer Section-6/ 10.2.2/ 6), Page no. 6a-186, 187
7.		General	Please provide any conceptual SLD if any.	The SLD of schematic design is given in the Appendix of Employer's Requirement for the reference only. Refer to the attached document about the SLD of schematic design. (refer Electrical Attachment#3-1, 3-2)
8.		General	We understand that proposed STP Plant is in non-hazardous area, please confirm the same.	Any hazardous substance in the proposed plant area has not been observed yet.
9.		General	Please provide E&l Items approved vendor list or vendor can consider reputed Indian make and manufacturer for the same. Also confirm if bidder can supply E&l items from Indian vendors, OEM approved system integrators.	The appropriate vendor list for E&l Items shall be proposed by the Bidders.
10.		General	Requirement of Solar system, Bio-gas power generation is not mentioned. So we exclude the same.	Solar system and Bio-gas power generation is not applied in the DEWATS.
11	VOLUME II A: Cl: 10.1.3. General requirements	Section-6: Employer's Requirement, Page no. - 6a-179	As bid specification, our understanding, as follows: (i). Bidder shall consider common centralized PLC and SCADA based system for control & monitoring of the entire WWTP process. Kindly confirm. (ii) PLC panel and SCADA system shall be in same premises or separate control Room. Kindly confirm. (iii). Please define the Location of all RCS (remote control station). (iv). Operational data from each WWTP shall be exchanged to KUKL office at Dhobighat WWTP through GSM/GPRS (internet and mobile network) system. Kindly confirm. V) Please confirm the scope to avail telecomm connection from local telecom service company and its monthly rental. (vi). Please provide detail for third party interface with the system.	1) The bidder must install PLC and SCADA systems for each waste water treatment plant (Gokarna and Hanumanghat WWTP) and supply SCADA system for KUKL offices. 2) The SCADA system(POS, PES, Printer and miscellaneous) should be installed in Central Control Room, on the other hand RCS should be installed in the electrical room of waste water treatment plant. 3) For RCS, the bidder must suggest an appropriate location and quantity. (However, all electric load must be monitored and controlled in Central Control Room.) 4) and 5) Communcation service method is currently uncertain, so bidder should propose to transmit data method through the internet or mobile network in consideration of the reliability of communication. 6) Installation of SCADA in Gokarna, Hanumanghat and KUKL offices is a system exclusively for this project, and interfaces with other systems are not considered. * Refer instrumentation Attachment #1 -System configuration diagram
12	VOLUME II A: Cl: 10.2.5 Remote Control Station (RCS)	Section-6: Employer's Requirement, Page no. - 6a-191	We understand that PLC shall be Redundant Type i.e. redundant CPU, redundant communication Network & redundant Power Supply module and I/O modules shall be non-redundant Type. Kindly confirm.	Only CPU module, power module and communication module of PLC are configured as redundant, and the rest can be configured as non-redundant.
13	VOLUME II A: Cl: 11.15 Fire Alarm system	Section-6: Employer's Requirement, Page no. - 6a-238	We understand that Bidder shall consider an addressable Microprocessor based Fire Alarm system in each building and shall have independent system. Kindly confirm.	The Fire Alarm System should be configured as an independent facility.
14	VOLUME II B: Cl: 1.8 Surveillance Camera (CCTV)	Section-6: Employer's Requirement, Page no. - 6b-4	We understand that Bidder shall consider CCTV System for the WWTP plant to monitor the Site by Project Manager as well as Site guard. Please confirm Location of Monitoring station.	The bidder should plan to monitor facilities, and decide installation point that is important such as access gates, major equipment and etc.



S. No.	Tender Clause	Tender Section & Page No.	Query By Bidder.	PID Response/Clarification
15	VOLUME II A: 10.5.3. Recommended vendor lists	Section-6: Employer's Requirement, Page no. – 6a-204	Please confirm if any item required during detail engineering and its vendor is not defined in list, then bidder can propose reputed make and Indian supplies for the same.	The appropriate vendor list shall be proposed by the Bidders.
16	Bidding Document	General	PAGA and Access control system requirement is not defined in the tender specification, so bidder is excluding the same from scope of supply. Please confirm.	Any Equipment required for the proper functioning of the plant shall be proposed by the bidder considering the operation of the treatment plant.
17		General	Requirement of Online parameter monitoring system is not defined in tender, so bidder is excluding the same from scope of supply.	Any Equipment required for the proper functioning of the plant shall be proposed by the bidder considering the operation of the treatment plant.
18	Bidding Document	Approach Road	Kindly clarify that whether Approach road is to be provided. If yes, then kindly provide the Length and MOC (material of construction).	In Gokarna, the site is linked to the wide road of Jorpati- Sundarijal Road and in Hanumanghat, it is also linked to the road. In Section 6- 2.4. Site Boundary and Construction Area, it is mentioned about the contractors responsibility inside and outside of construction site. According to it, in order to minimize traffic conflict with operational staff and vehicles, the Contractor shall provide an independent dedicated access route within the site for construction related traffic and deliveries. The Contractor will not be allowed to work in other areas outside the limits of the Site. Should the Contractor wish to carry out any work outside the limits of the Site, the Contractor shall submit a written request to the Employer for approval. The request shall include details of fencing, security, access arrangements, proposed work to be undertaken and expected start and duration of the work. No work shall commence until written approval has been obtained from the Employer.
19	Bidding Document	Approach Road With Storm Water Drain	Kindly clarify that whether Storm water drain is to be provided along the Approach road. If yes, then kindly provide the Length and MOC.	The Bidders shall propose the storm water drain in accordance with their own design.
20	Bidding Document	Dismantling Work	Kindly provide the details of Existing structures, if any so that quantities of dismantling can be calculated.	Details of demolishing work is described in Section 6- 8.3. Demolition of Existing Structures. The existing structures are shown in the topographic map. The revised topographical map and google map are attached with it. (Refer Civil Attachment #1, 2-1 and 2-2)
21	Bidding Document	Contour plan	Provided contour plan is not clear. Kindly provide clear map.	A revised topographic map has been attached (Refer Civil Attachment #2-1, 2-2)
22	Bidding Document	Retaining wall	Kindly provide the length of retaining wall to be provided along the boundary wall.	The layout of schematic design is given in the Appendix of Employer's Requirement for the reference only. The Bidders shall propose the length of retaining wall in accordance with their own design layout.
23	Bidding Document	Internal Road	Kindly provide the details of internal road to be provided.	The bidders shall propose details of internal road in accordance with their own design philosophy.
24	Bidding Document	Pathway	Kindly provide the details of Pathway to be provided.	The bidders shall propose details of pathway in accordance with their own design philosophy.
25	Clause 1.4.1 Contracts of Similar Size and Nature	least one contract under Design Built Operate (DBO) or Built Operate and Transfer (BOT) of wastewater treatment plant (WWTP) of 3.0 MLD or morewithin the last Ten (10)	We understand from the referred clause that WWTP is universal term and includes Sewage Treatment plant/ common effluent treatment plant/ Effluent Treatment Plant etc. Hence bidder having experience in the category of STP/ETP/CETP/CETRP shall be eligible to qualify the PQ.	The provisions in the bidding documents are self explanatory and remain unchanged. Industrial effluent treatment plant will not be considered in evaluation process.

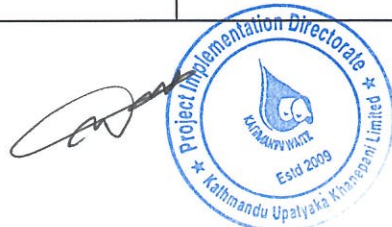
S. No.	Tender Clause	Tender Section & Page No.	Query By Bidder.	PID Response/Clarification
26	Clause 1.4.1 Contracts of Similar Size and Nature	least one contract under Design Built Operate (DBO) or similarity of the Bidder's participation shall be based on the physical size, nature of works, complexity, methods, technology or other characteristics as described in Section 6 (Employer's Req.).	We understand from the referred clause bidder can exhibit WWTP based on any aerobic technology to meet the pre-qualification criteria. Kindly confirm.	The provisions in the bidding documents are self explanatory and remain unchanged.
27	Currencies of Bid and Payment	Section 1 clause 19 Page 1-14	We understand bidder is free to quote the bid in Indian Rupees & US Dollars. Kindly confirm.	Refer ITB Subclause 19
28	Bidding Forms	Section 4: Bidding Forms Form FIN- 4: Financial Requirements for Current Contract Commitments Page 4-100	For the Works approaching the completion date however delayed due to unavoidable circumstances are expected to revise the completion date. In such scenarios we understand that "Contract Completion Date" shall be the date Anticipated by the bidder in which the contract shall be completed. The bidder may use the Anticipated date of Completion in column of "Contract Completion Date". Kindly confirm	The bidder may use the Anticipated date of Completion in column of "Contract Completion Date".
29	Bidding Forms	Section 4: Bidding Forms Form FIN - 1: Historical Financial Performance Page 4-97	In reference to the referred clause we understand that utilized cash credit limits of the company shall not be included for calculating the current Liabilities of the bidder. Kindly confirm our understanding of the above	The provisions in the bidding documents are self explanatory.
30	General		Kindly confirm the estimated contract value of the project.	The bidder shall make his own cost estimate based on the design and implementation
31	General		We understand that WWTP (CETP/ETP) treating domestic & industrial waste are eligible to be considered under criteria.	The provisions in the bidding documents are self explanatory and remain unchanged. Industrial effluent treatment plant will not be considered in evaluation process.
32	Clause 14.19	Section 8 - Particular Conditions of Contract Page 8-4	Since contractor shall submit performance security @15% of O&M value (as per clause 4.2), hence we request the department to kindly omit the Maintenance Retention Fund. Kindly confirm.	The provision in bidding document remains unchanged.
33	VOLUME II A: EMPLOYER'S REQUIREMENT	6.1.4. Secondary Treatment Facility (Biological Treatment Facility) Moving Bed Bio-Reactor (MBBR)	In Secondary Treatment Facility (Biological Treatment Facility) only Moving Bed Bio-Reactor (MBBR) technology is mentioned, we assume that we can proposed any technology. Please Confirm.	The bidders shall consider the MBBR as secondary treatment process with settling tanks. Other process shall not be allowed.
34	VOLUME II A: EMPLOYER'S REQUIREMENT	6.1.7. Treated Wastewater Effluent Discharge Pipe	Please provide the distance of Effluent Discharge point from STP	The layout of schematic design is given in the Appendix of Employer's Requirement for the reference only. The Bidders shall propose the distance of effluent discharge point from STP in accordance with their own design.
35	VOLUME II A: EMPLOYER'S REQUIREMENT	7.11. Reed Bed (or such tertiary treatment)	For Tertiary Treatment we understand that we can propose any technology to achieve the desired parameters.	The bidders shall include the Reed Bed system or other suitable technology for tertiary treatment system in the treatment plant. The Contractor shall guarantee the effluent quality before Reed Bed .
36	VOLUME II A: EMPLOYER'S REQUIREMENT	Sludge Disposal	Please suggest the location for disposal of Treated Sludge.	It is expected that all generated sludge would be sold to farmers and local residents. All profit generated from those sales shall be under the ownership of the contractor. Storage and disposal of the sludge is also under responsibility of the contractor as well. Therefore, the bidder shall not include the cost of sludge disposal in the price schedule. Any unused dried sludge will be transported to suitable location identified with the help of local municipality.
37	ITB 16.1 (b) and 2.2.6 (a)	The period following Contract Completion Date shall be 18 months for Design Build phase plus Five years Operation and Maintenance period.	We request you to kindly consider 24 months for design and build period as volume of the work is very huge.	The provision in bidding document remains unchanged.

Handwritten signatures and official stamps of the project authority, including a circular stamp with the text 'Project Implementation Unit' and 'Kathmandu Upatyaka Kasa'.

S. No.	Tender Clause	Tender Section & Page No.	Query By Bidder.	PID Response/Clarification
38	ITB 22.1	In addition to the original Bid, the number of copies is: Two Soft copies of the proposal (in Word or PDF format) and of the price schedules (in Excel format) are also required.	We request you to kindly provide excel sheet of price bid to enable us to submit the same.	The bidder can convert in desired format from pdf files uploaded in website.
39	ITB 22.2	Power of Attorney, which should either be notarized or attested to by the appropriate authority in the Bidder's home country.	Due to pandemic situation and lockdown enforced by India Govt , we request you to not to insist notaries power of attorney. Bidder can submit Board resolution instead of Power of attorney. pl confirm	The provision in bidding document remains unchanged.
40	ITB 27.1	Electronic bid opening procedure shall be as follows: Not Applicable	Due to pandemic and lockdown enforced by various countries, it's very difficult to submit the tender document in hard copy as courier services are taking more time to deliver the packet. In view of this , kindly allow to submit the bid electronically. PI confirm	The provision mentioned in bidding document remains unchanged.
41	ITB 39.1	The currency that shall be used for Bid evaluation and comparison purposes to convert all Bid prices expressed in various currencies into a single currency is: Nepalese Rupees The source of the selling exchange rate shall be: Nepal Rastra Bank (Central Bank of Nepal) The date for the selling exchange rate shall be: 28 days prior to the deadline for bid submission	We request you to kindly provided exact selling exchange rate shall be considered for currency conversion.	As stated in the bidding document, the date for the selling exchange rate shall be: 28 days prior to the deadline for bid submission. Please refer published Nepal Rastra Bank's Bulletin (NRB bulletin) for exchange rates on relevant website.
42	1.4.1 Contracts of Similar Size and Nature	Participation, as a contractor, JV partner, or subcontractor, in at least one contract under Design Built Operate (DBO) or Built Operate and Transfer (BOT) of wastewater treatment plant (WWTP) or decentralized wastewater treatment plant (DEWATS) of 3.0 MLD or more capacity that has been successfully or substantially completed within the last Ten (10) years and that is similar to the proposed contract where the value of the Bidder's participation shall exceed USD 3 Million. The similarity of the Bidder's participation shall be based on the physical size, nature of works, complexity, methods, technology or other characteristics as described in Section 6 (Employer's Requirements).	We understand that bidder can qualify for this condition by providing experience project certificate on activated sludge process technology. PI confirm	The provision in the bidding documents is self explanatory. The project completed with activated sludge process can be considered.
43	1.4.1 Contracts of Similar Size and Nature	Participation, as a contractor, JV partner, or subcontractor, in at least one contract under Design Built Operate (DBO) or Built Operate and Transfer (BOT) of wastewater treatment plant (WWTP) or decentralized wastewater treatment plant (DEWATS) of 3.0 MLD or more capacity that has been successfully or substantially completed within the last Ten (10) years and that is similar to the proposed contract where the value of the Bidder's participation shall exceed USD 3 Million. The similarity of the Bidder's participation shall be based on the physical size, nature of works, complexity, methods, technology or other characteristics as described in Section 6 (Employer's Requirements).	We understand that bidder completed project wherein scope of the project is design, engineer, manufactured, supply, erection and installation and commissioned of Waste water treatment is considered for this project. PI confirm	The provisions in the bidding documents are self explanatory and remain unchanged.



S. No.	Tender Clause	Tender Section & Page No.	Query By Bidder.	PID Response/Clarification
44	1.4.1 Contracts of Similar Size and Nature	Participation, as a contractor, JV partner, or subcontractor, in at least one contract under Design Built Operate (DBO) or Built Operate and Transfer (BOT) of wastewater treatment plant (WWTP) or decentralized wastewater treatment plant (DEWATS) of 3.1 MLLD or more capacity that has been successfully or substantially completed within the last Ten (10) years and that is similar to the proposed contract where the value of the Bidder's participation shall exceed USD 3 Million. The similarity of the Bidder's participation shall be based on the physical size, nature of works, complexity, methods, technology or other characteristics as described in Section 6 (Employer's Requirement)	We understand that Industrial effluent treatment plant (ETP) as waste water project will be considered for this project. pl confirm.	The provisions in the bidding documents are self explanatory and remain unchanged. Industrial effluent treatment plant will not be considered in evaluation process.
45	2.2.6 (b) Operating and Maintenance Costs	2.2.6 (b) Operating and Maintenance Costs Adjusted Operation and Maintenance Cost for 5 Years will be considered. Adjusted O & M Cost for 5 Years will be B+C where Following equation shall be used for conversion from future value to present values. $P = F / (1+i)^n$, Where P = Present value F = Future values n = Year i = Discount rate (5%)	We request you to kindly provide illustrate example of evaluation formula as mentioned in tender to avoid any confusion in evaluation process.	The provision in bidding document is self explanatory. It is normally accepted practice of calculation with conversion of amount in present value.
46		Taxes and Duties	Kindly percentage of tax and duties will applicable for this contract	Please refer PCC Sub-clause 14.1 'The Contract Price'
47		During Operation and maintenance period, the contractor shall pay the electricity charges which will be reimbursed by the Employer with five (5) percent overhead on the actual Bill paid by the contractor.	We understand that employer will charges extra 5 % on bill amount to the contractor . pl confirm	The provision in bidding document is self explanatory. The contractor shall pay the electricity charges which will be reimbursed by the Employer with five (5) percent overhead on the actual Bill paid by the contractor
48	Performance security	Contractor shall provide second Performance Security equivalent to 15% of Operation & Maintenance Cost	We request you to kindly accept 10 % Performance Security equivalent to Operation & Maintenance Cost.	The provision in bidding document remains unchanged.
49	Payment schedule Payments during the Design-Build Period	<ul style="list-style-type: none"> • 80% of the total or pro rata CIP or amount upon Incoterm "CIP," upon delivery to Site and verification by Employer's Representative within 45 days after receipt of invoice. • 15% of the total or pro rata CIP or amount upon successful installation of the plants and spare parts with the issuance of Operational Acceptance Certificate, within 45 days after receipt of invoice. • 5% of the total or pro rata CIP or amount upon one year of successful Operational Service, within 45 days after receipt of invoice 	<p>We request you to kindly accept the payment schedule as below :</p> <ul style="list-style-type: none"> • 85% of the total or pro rata CIP or amount upon Incoterm "CIP," upon delivery to Site and verification by Employer's Representative within 45 days after receipt of invoice. • 10% of the total or pro rata CIP or amount upon successful installation of the plants and spare parts with the issuance of Operational Acceptance Certificate, within 45 days after receipt of invoice. • 5% of the total or pro rata CIP or amount upon one year of successful Operational Service, within 45 days after receipt of invoice 	The provision in bidding document remains unchanged.
50	Schedule of Performance Guarantees	Life span expectancy of the facility to be designed, built and operated by the Contractor under the Contract- Civil Facilities: 60 years and Electromechanical: 15 years	The life of 60 years civil facility of waste water treatment plant is very high . The civil part comes in contract with waste effluent and it will	The Bidders shall follow the Employer's Requirements.

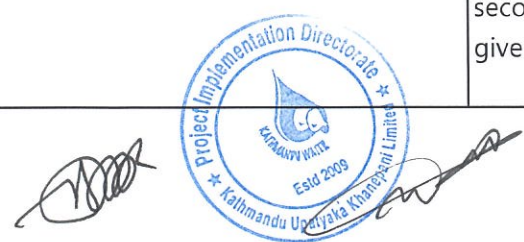


S. No.	Tender Clause	Tender Section & Page No.	Query By Bidder.	PID Response/Clarification
51	Section-4 Bidding form Page no- 4-56	Principal Manufacturers and Suppliers: I(item no. 1to 35) The details required in the following schedules shall give a factual indication of the Bidder's proposals. Descriptive literature shall be attached and shall give full specifications of the equipment offered. Bidders shall propose not more than three manufacturers or suppliers for each item	We understand that submission of vendor's/manufacturer general product catalogs and product range will satisfy this condition. Specific Detail shall provided after award of contract during detail engineering	PID has no objection.
52	Section 6 - Employer's Requirements, Page no- 6a-25	Design flow of DEWATS	We understood that this tender is for construction of DEWATS of capacity 3MLD at Gokarna and 1.0MLD at Hanumanghat. Provision for space to be kept for future expansion for 3MLD and 1 MLD at Gokarna and Hanumanghat respectively.	It is correct that this tender is for construction of DEWATS of capacity 3MLD at Gokarna and 1.0MLD at Hanumanghat. Provision of space for future expansion has to be kept in mind while designing the layout of additional 3MLD at Gokarna only. Please refer Section 6-Table: Design flow of DEWATS.
53	Section 6 - Employer's Requirements, Page no- 6a-25	Design flow of DEWATS	Different Peak hourly flow and peak factor is mentioned. In same plant two different peak factors cannot be used for different unit. So requesting you to kindly clarify which peak flow and peak factor to be considered for design the pretreatment system.	DEWATS shall be designed to accommodate the design flow given in the Chapter 4.4 of Employer's Requirements.
54	2.5. Utilities	Chargeable potable water. A line may be connected to the Contractor's site office at the Contractor's own cost.	Kindly provide water charges for construction	Potable water connection charge depends on various items e.g. the demand, supply points, meters valves etc. Therefore, only after fixing such provisions, the charge can be estimated. However, the bidder shall explore on its own.
55	Section 6 - Employer's Requirements, Page no- 6a-25	Influent Wastewater Quality	Oil and Grease is mentioned as 120ppm. This seems to be very high for sewage water. Requesting you to kindly clarify which type of Oil and Grease it is miserable of floating type.	Refer to the Addendum No. 2
56	Section 6 - Employer's Requirements, page no- 6a- 43 and 6.1.4. Secondary Treatment Facility (Biological Treatment Facility)	Tube Settlers as Clarifier	We request you to kindly consider other type of clarifier such as Lamella clarifier instead of Tube settler. we have supply many lamella clarifier for MBBR technology and working efficiently .	The bidders can propose proper type of settling tanks considering site area, sedimentation efficiency, construction and operation cost. Due to the space constraint, tube settlers or plate settlers are desirable.
57	Section 6 - Employer's Requirements, 6.1.5, page no- 6a-44	Disinfection Facility: Chlorite or UV disinfection system shall be installed for disinfection of treated wastewater from secondary treatment facility. Chlorite disinfection system shall be installed considering the following works.	We request you to kindly consider the disinfection by Sodium Hypochlorite rather than Calcium Hypochlorite and it is easy for dosing and doesn't form the chemical sludge in water. Further our understanding is that either Chlorine or UV system is used for disinfection but not both together. pl confirm	The bidders shall propose the proper disinfection type including disinfectant considering disinfection efficiency, operation cost and easy provision from local market.
58	8.17. Pile Foundation	Pile foundation may be necessary for supporting structures where the subsoil is considered to have insufficient bearing capacity. The Contractor shall carry out detailed design of these structures in accordance with the Standard and shall determine the type of foundation required, the number of piles and their working loads and the optimum arrangement of piles required for supporting the structures	Kindly advise whether pile foundation is required in plant area.	The bidders shall identify the necessity of pile foundation based on the soil test report considering their own design.



S. No.	Tender Clause	Tender Section & Page No.	Query By Bidder.	PID Response/Clarification
59	3.8. Environmental Protection and Landscaping	River Bank and Bed Protection The Contractor shall undertake adequate protection measures to maintain the existing configuration and bed profile of all existing waterways being utilized for any beneficial purposes including flood control and navigation. These measures will include paving riverbanks and other stabilization measures as required to minimize disturbance to the natural bed configuration	Kindly provide detail scope of work.	The bidder shall comply with Clause 3.8 in Section 6. In Gokarna, River embankment and river protection work is of about 330 m on the right bank of river. The typical cross section of this work is shown in Volume IIB Appendix – Drawings- Typical RCC Wall Gokarna Dewats. In Hanumanghat, Low height check dams have to be constructed at two places upstream and a place downstream of Hanumanghat Dewats across the Hanumante river and the typical section of this work is shown in Volume IIB Appendix – Drawings- Typical Check Dam. Other scope of works are explained in Section 6.
60	Section 6 -6.1.6 Employer's Requirements, page no- 6a- 44	Reed Bed (or such tertiary treatment): In order to maintain the stable treatment efficiency, it should be planned for the next treatment facility of main treatment process.	Requesting you to kindly consider the tertiary treatment system like Dual media Filter/ Carbon filter in place of Reed Bed system for Tertiary treatment as this requires very less foot print compared to Reed Bed	The Contractor shall guarantee the effluent quality before Reed Bed . Please also refer the response # 35 above.
61	Section 6 -6.1.6 Employer's Requirements, page no- 6a- 44	Reed Bed (or such tertiary treatment): In order to maintain the stable treatment efficiency, it should be planned for the next treatment facility of main treatment process.	In case bidder achieve outlet parameter in secondary treatment itself then tertiary treatment is not required to install, hence tertiary treatment is optional. pl. conform	The Contractor shall guarantee the effluent quality before Reed Bed . For polishing the effluent, tertiary treatment is also required.
62	Section 6 - Employer's Requirements, page no- 6a- 48	Roads and Footpath	Requesting you to kindly specify the distance of proposed plant from existing main road.	In Gokarna, it is linked to Jorpati-Sudarjal Road and distance of site is just 10-20 metres. Hanumanghat site is about 340 m North of Arniko Highway along Garud Kundal Road and then west of about 300 m from this road.
63	Section 6 - Employer's Requirements, page no- 6a- 48	HVAC and Fire protection	Requesting you to kindly consider the Split AC and Fire Extinguisher wherever applicable.	The bidders shall propose the location of AC and fire extinguishers considering their own design.
64	Section 6 - Employer's Requirements, page no- 6a-53		Design basis of secondary clarifier is not specified. Requesting you to kindly share the design basis for Secondary clarifier.	The bidders shall propose the Settler in accordance with their own design taking in account of limited space availability. Tube settlers /plate settlers are preferred as choice of design. The guiding design criteria can be taken as: Tank Type: Circular or Rectangle No. of tank: ≥ 2 nos Angle of inclination: 54 to 60 degree Velocity in clarification zone: 0.02 to 0.03 m/s Surface Loading Rate: $< 1 \text{ m}^3/\text{m}^2\cdot\text{hr}$ Water depth: 2.5~4.0 m Loading rate of weir $< 250 \text{ m}^3/\text{m}\cdot\text{d}$
65	Section 6 - Employer's Requirements, page no- 6a- 153	Mixer of Equalization Tank	Requesting to consider the diffused aeration system which is more efficient aeration system than Mixers.	The bidders shall propose the aeration system considering their own design.
66	Section 6 - Employer's Requirements, page no- 6a- 167	Mixer of Sludge Tank	Requesting to consider the diffused aeration system which is more efficient aeration system than Mixers.	The bidders shall propose the aeration system considering their own design.
67	Section 6 - Employer's Requirements, page no- 6a- 172	Septic Sludge Facility (Only Gokarna DEWATS)	Septage sludge has the sludge consistency in range of 3-4%. This will help in increase the solid concentration in feed to Centrifuge. So requesting you to kindly allow the cotreatment of Septage sludge along with waste biological sludge.	The pre-treated septic sludge can be treated with waste biological sludge after pre-treatment facility of septic sludge. Refer to the PFD.

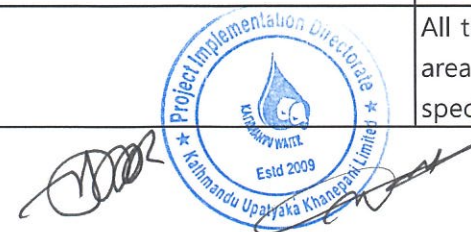
S. No.	Tender Clause	Tender Section & Page No.	Query By Bidder.	PID Response/Clarification
68	Section 6 - Employer's Requirements, page no- 6a- 208	11kV Power incoming	Requesting you to kindly specify the distance of taping point of NEA from main pole to proposed plant	The location of the existing 11kV distribution line is near about 50m from the boundaries of plants entrance. However, this distance might be changed at the construction stage. -Also refer response # 1 above
69	Section 6 - Employer's Requirements, page no- 6a- 54	Pipe and Drainage Works	In Piping and drainage work section, interconnection piping will be HDPE/DCIP. Whereas in P&ID it marks as STS(stainless Steel). Requesting you to kindly clarify what will be material of construction for raw sewage, sludge piping and chemical dosing system.	There may be confusion between civil piping and mechanical piping. Please note that the pressure piping will be basically stainless steel and non-pressure piping will be HDPE/DCIP.
70	Section 6 - Employer's Requirements, page no- 6a- 43	Secondary Treatment Facility (Biological Treatment Facility)	In this section aeration system is mentioned as Air blower whereas in P&ID Surface Aerator is shown. Which aeration system should we need to consider, Kindly clarify	The bidders shall propose proper aeration system considering their own design. P&ID is just for reference.
71	Section 6 - Employer's Requirements, page no- 6a- 43	Secondary Treatment Facility (Biological Treatment Facility)	In this section MBBR system is considered as treatment scheme for the sewage. But P&ID shown is for SBR system. We request you to kindly clarify which treatment system to be considered. MBBR, SBR or extended aeration system.	P&ID is just for reference. The bidders shall propose the MBBR system for wastewater treatment process.
72	Appendix - F	P&ID and plant Layout	We presume that P&ID and layout available with Tender document is only indicative in nature. Bidder can change or add the equipment or process unit as per his process design keeping KPI unchanged.	The bidders shall propose the MBBR system for wastewater treatment process. The bidders shall propose the element and sub-category based on their own design.
73	General		Kindly share the spare part philosophy for spare part to be provided.	The bidder shall submit his bid with a priced list of spares, which he considers necessary for the maintenance of the plant for 5 years in normal operation. Please also refer Employer's requirement Section 6-9.1.32.
74	General		Requesting you to kindly share the preferred vendor list for Electro-mechanical equipment.	The vendor list for Electro-mechanical equipment shall be proposed by the Bidders.
75	Section-6 Employer requirement, Electrical specification, page no - 360 to 815, clause number - 11.4	11KV Incoming Power	Kindly let us know exact distance from nearest 11kv terminating point at both Gokarna & Hanumanghat location.	Please refer response #1 above.
76	Section-6 Employer requirement, Electrical specification, page no - 360 to 815, clause number - 11.4	11KV Incoming Power	We assumed that 11kv overhead cable shall be laid from nearest terminating point to DEWATs at both the locations.	Please refer response #1 above.
77	Section-6 Employer requirement, Electrical specification, page no - 360 to 815, clause number - 11.4	11KV Incoming Power	Kindly clarify the number of incoming 11kv supply to be extender for each DEWAT else we shall assume 1No. 11kv supply, 1No. 11/0.433kv Transformer. Please confirm	One number of 11kv incoming power supply will be supplied by NEA under the provisional sum. The contractor shall provide 11/0.4~0.23kV Transformer in electrical room of each DEWATs.
78	Section-6 Employer requirement, Electrical specification, page no - 360 to 815, clause number - 11.4	11KV Incoming Power	Kindly clarify whether electrical equipment shall be designed for second implementation stage OR only space provision has to be given.	The electric equipment shall be designed for first stage only, however, the space for second implementation stage has to be allotted.



S. No.	Tender Clause	Tender Section & Page No.	Query By Bidder.	PID Response/Clarification
79	Section-6 Employer requirement, Electrical specification, page no - 360 to 815, clause number - 11.1.4 & 11.6.4	11kv fault level	Kindly confirm the fault level at 11kv level as fault level in said clause contradicts each other.	Base MVA for fault level calculation is 350MVA. The fault current of clause 11.6.4 is the rating for circuit breaker.
80	Section-6 Employer requirement, Electrical specification, page no - 360 to 815, clause number - 11.1.4	415v fault level	Kindly re-confirm fault level at 415V 40KA OR 50KA.	400V fault level should be calculated on the basis of Base MVA.
81	Section-6 Employer requirement, Electrical specification, page no - 382 to 815, clause number - 11.9	Batteries and Battery system	We assumed that 110V DC system shall be standalone type without redundancy for both charger and Batteries. 1x100% FCBC, 1x100% Battery bank, DCDB shall be provided. Please confirm.	confirmed.
82	Section-6 Employer requirement, Electrical specification, page no - 389 to 815, clause number - 11.14	Earthing	Kindly provide the sizes of Earthing strips for electrical equipment. Else the same shall be provided based on best industrial standards.	The Earthing strips size is used 32x5mm but not be limited. The entire earthing system should be designed in accordance with IEEE 80-2000 and the sizes of Earthing strips could be selected by bidder. Also total resistance of the earthing system shall be between 1 to 5Ω.
83	General	PAGA, Telephone, CCTV system	We do not envisage ELV system ex. CCTV, PAGA, Telephone, FDA etc at both the location and hence not considered. Else kindly provide complete specification. Kindly confirm.	Refer the employer's requirement Section 6 Clause 3.14, 13.1. For CCTV is specified in Section-6: Page no. 6b-4 Other Equipment must be proposed by the bidder considering the operation of the treatment plant.
84	General	Electrical equipment specification	Kindly provide complete specification of LT Busduct, standby generator, UPS etc.	In case of LT Busduct, bidder shall suggest the specification. For the standby generator refer the specification in Section 6 Clause 11.10.
85	General	Electrical single line diagram	Kindly provide Electrical Single Line diagram to enable us to understand power distribution.	The SLD of schematic design is given in the Appendix of Employer's Requirement for the reference only. Refer to the attachment about the SLD of schematic design. (refer Electrical Attachment#3-1, 3-2)
86	General	Approved make list	Kindly provide approved make list for Electrical equipments.	The vendor list for E&I Items shall be provided by the Bidders.
87	General	Mandatory spares	Kindly provide mandatory spare list for Electrical equipments.	Please refer the attachment about mandatory spare parts for electrical equipment. (refer Electrical Attachment#2)
88	Section-6 Employer requirement, Civil specification, page no - 160 Clause No. 2.5	Utilities	As per clause Power and water is in bidder's scope, if client provides the same what will be the charges?	The Contractor shall be responsible for the provision of all utilities on his own cost. However, the employer will facilitate as required. Please also refer response # 54 above
89	Section-6 Employer requirement, Civil specification, from page no - 208	Civil specification	Civil Specs. Like Grade of concrete Brick work, plastering ,painting ,flooring, coating of water retaining structure, bitumen painting ,plinth protection etc. not mentioned in tender, please confirm.	During detail design stage, those civil specifications have to be proposed by contractor based on the standard codes and practice and submit in accordance with the Design Guideline Specification and get approval from the employer/employer's representative.



S. No.	Tender Clause	Tender Section & Page No.	Query By Bidder.	PID Response/Clarification
90	Section-6 Employer requirement, Civil specification, from page no - 201-203 Clause no 6.1.11	Ancillary Work	Road , drain, pipe work is in bidder's scope, but details for the same (size, type-RCC or brick, Road section etc.) not given in tender.	The bidders shall propose in accordance with their own design philosophy. All facilities developed shall not make any problems and inconvenience during operation and maintenance.
91	Section-6 Employer requirement, Civil specification, from page no - 209 Clause no 8.3	Demolition of Structure	Demolition of existing structure is in bidder's scope, please confirm with size ,drawing & other details of the structures.	Please refer response #20 above.
92	Section-6 Employer requirement, Civil specification, from page no - 201-203 Clause no 6.1.11	Ancillary Work	Please provide details of embankment and check dams to be construct.	Please refer response # 59 above.
93	Section-6 Employer requirement, Civil specification, from page no - 516	Topographical map	Topographical map provided in tender is not readable please provide the readable image.	The topographic map is given in the Appendix of Employer's Requirement for the information. (Please also Refer Civil Attachment #2-1, 2-2)
94	Section-6 Employer requirement, Civil specification, from page no - 518-706	Geotechnical investigation report	As per geotechnical report it is not clear which type of footing to be consider, please confirm.	With regard to selection of the type of footing, piling works, etc., the bidder shall consider the geotechnical report attached in the Appendix E which shall be confirmed after geotechnical investigation carried out by the contractor during design phase.
95	General	Approved vendor list	Please provide approved vendors for civil work (material)	The vendors for civil work shall be proposed by the Bidders.
96	Section-6 Employer requirement, Instrumentation specification, page no - 332, clause number - 10.1.3	Control/Monitoring of STP	We understand that only monitoring of the Plant at both the location Gokarna and Hanumanghat is envisaged. Control of the both STP shall be from elsewhere location. Kindly confirm the location.	The control should be performed in the Central Control Room of each treatment plant, and the two treatment plants must be configured to be monitored in the KUKL office.
97	Section-6 Employer requirement, Instrumentation specification, page no - 333, clause number - 10.1.4	UPS redundancy	Kindly confirm redundancy requirement of UPS system (UPS, Batteries)	Please refer response # 6 above.
98	Section-6 Employer requirement, Instrumentation specification, page no - 338, clause number - 10.2.2	Scope of supply	Contractor scope of supply is restricted to only for locations at Gokarna and Hanumanghat STP. We donot envisage equipments supply at KUKL office at Dhobighat. Please confirm.	The bidder must install PLC and SCADA systems for each waste water treatment plant (Gokarna, Hanumanghat WWTP) and supply SCADA for KUKL offices. * Please refer Section-6/10.2.2, Page no. 6a-185
99	General	Safe area classification	All the outdoor equipments/instruments shall be provided for SAFE area application. We donot envisage and flameproof/Ex proof specifications.	The bidders shall propose type and method for external and internal protection in accordance with their own design philosophy.



S. No.	Tender Clause	Tender Section & Page No.	Query By Bidder.	PID Response/Clarification
100	General	Wetted MOC	Instrument wetted part MOC shall be suitable to process requirement only. We donot envisage any Minimum MOC requirement.	The Bidders shall propose the wetted part MOC in accordance with their own design.
101	4.6. Set back from Existing River Bank	As per the decision on 2065/08/01 BS from the Cabinet of Ministry of Government of Nepal, 20 meter setback from the bank of Bagmati and Hanumante River should be considered as demarcation for the permanent construction and should be taken into account during bidder's design.	We understand the equipment sizes provided in the tender document are considered set back from existing river bank in design. Contractor need not consider addition impact on design pl confirm	Set back for Gokarna is 20 m and hanumanghat is 12 m. These set backs have been considered for the permanent structures and equipment sizes provided in the bidding documents
102	VOLUME II-B :EMPLOYER'S REQUIREMENT (APPENDIX-B-6)	Structural calculation requires to submit the Design to resist flotation under the worst conditions, excluding any allowance for Plant and contained liquors, with ground water at maximum credible level. Pressure relief valves within the floors or walls of structures are not permitted.	After the Geotechnical Bore log study all the bore log have water table around 1.3~1.5m. All the water treatment plants Civil related tanks such as Pre-Treatment Facility, Sludge storage tanks, Equalization tanks etc have the foundation depth in Reference drawings beneath 4m~8m. It means, anchor pipe may be used in order to check the flotation of these tanks under worst condition excluding any allowance for plant contained liquors.	The bidders shall propose the method to prevent the buoyance and floatation of structures in accordance with their own design philosophy.
103	Appendix F Reference Drawings	Typical RCC retaining wall and Typical Check Dam	Cut-off pile beneath the RCC retaining wall may be required to protect against scouring. Do we have any hydrological data to depict the Maximum flood water level of the return period more than the design period of structure.	Refer to clause 7.4 in Section 6A. The bidders also can refer to the geotechnical report.
104			After reviewing the tender document, we found some errors. PROCESS FLOW DIAGRAM, LAY-OUT DRAWING, HYDRAULIC FLOW DIAGRAM doesn't match with the P&ID. Treatment process is different between PFD and P&ID drawings. We should know which drawing is standard.	P&ID drawing provided in the bid document is for reference only. The bidders can propose various options for secondary treatment process based on the MBBR process.
105			If we apply the process of P&ID drawing for our bidding document, is it possible to change to blower+diffuser from aerator and submersible mixer.	The bidders shall propose proper aeration system considering their own design. P&ID is just for reference.
106			Possible extend of bid? From May 27, 2021.	The bid submission date has been extended till June 27, 2021. Please refer Addendum # 1





9.2.8. Moving Bed Biofilm Reactor (MBBR)

The Contractor shall provide all labor, materials, equipment, coordination and services necessary for and incidental to, the complete and satisfactory installation, startup and testing of the equipment specified herein.

The Contractor shall obtain the services of a Moving Bed Bioreactor (MBBR) system supplier that shall take full responsibility for the furnishing of the MBBR system and components specified.

The Concrete, mechanical equipment anchor bolts, access walkways and handrails, stainless steel air piping, fittings and valves, ductile iron piping, fittings and wall castings, certain process equipment and instrumentation not furnished by the MBBR System Supplier; electrical power and control wires/conduits; and all related materials, but not limited to the aforementioned, shall be furnished and installed by the Contractor for a complete operational MBBR system. The Contractor also understands that other materials and accessories required for a complete and operational system which are not furnished by the MBBR System Supplier shall be furnished and installed by the Contractor.

The Contractor shall provide and supply all equipment, materials, and accessories as specified herein;

- All chemicals/materials to seed the MBBR, lubricants and other supplies required for equipment startup and adjustment.
- All insulation and heat tracing for all tanks and piping subject to freezing temperatures.
- All stainless steel air piping, fittings, reducers and valves, ductile iron piping, fittings and wall castings required for the MBBR as indicated on the Contract Documents.
- All support beams and/or slabs, platforms, grating, floor plate, handrails, hatches, ladders, stairways and platforms.
- Spray water piping, valves, and fittings up to the yard hydrant connection point.
- All motor control centers, motor starters, panels, transformers.
- All control panels and instrumentation.
- All electrical power and control wiring, and conduit for the MBBR equipment, including wire, telephone lines, cable trays, cable, junction boxes, fittings, disconnects, conduit, etc.
- Coordination and timing of all interface points such as piping and electrical tie-ins.

The Contractor shall furnish the process equipment for a biological wastewater treatment system, as specified herein. The process equipment shall include, but not limited to mechanical equipment, instrumentation, and technology licenses.

Process equipment includes, but is not limited to, the following equipment to provide a complete and functioning system:

- Polyethylene Biofilm Carrier Elements ("Media")



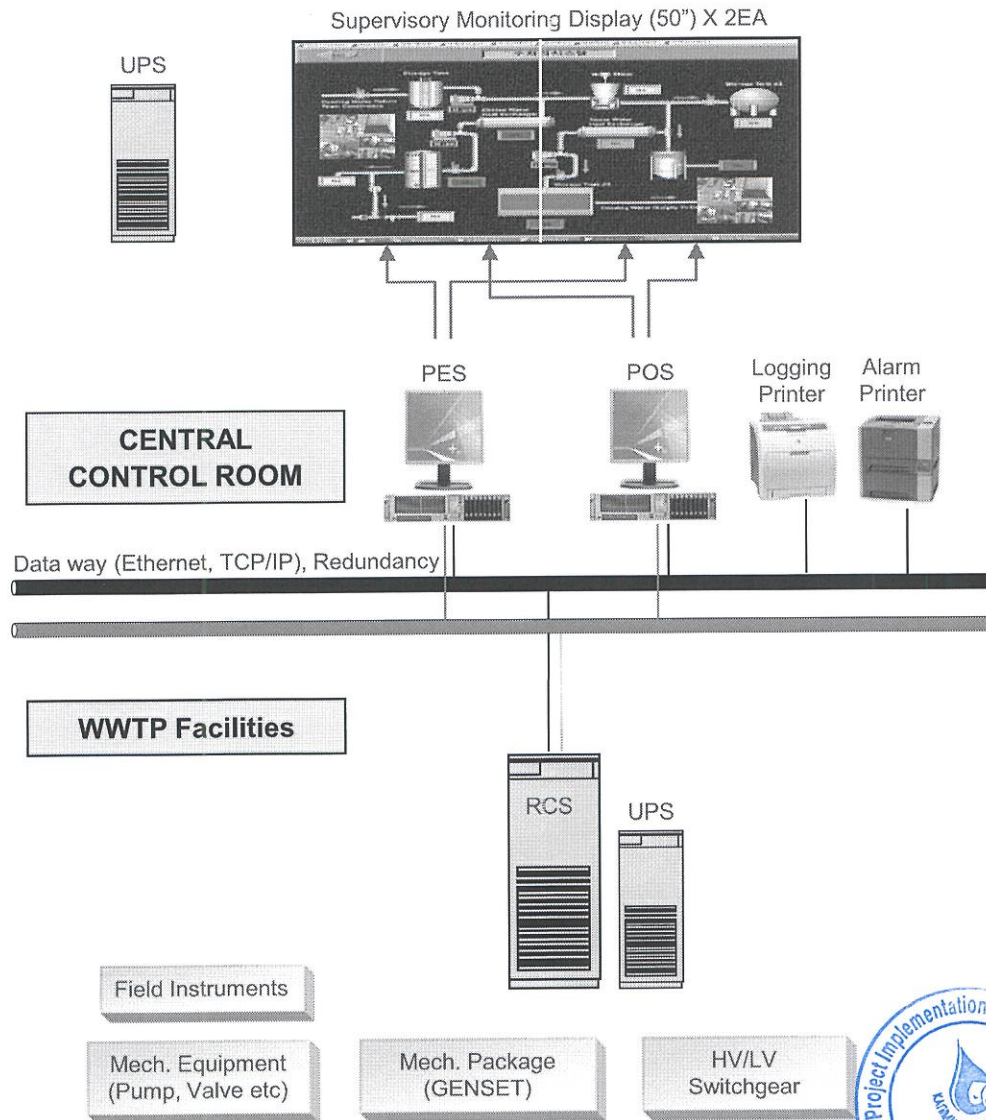
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- Stainless steel (SS) MBBR Air Distribution Header, valves, and bellows expansion joints
- SS Air Zone Headers and valves
- SS Drop Pipes and valves
- Medium Bubble Aeration System, SS piping, automated valves and fitting up to and including the manual V-Notch Ball valves in the vertical pipe outside the MBBR reactor
- SS Air Scour/Sparging piping, valves, valves and fitting up to and including the manual V-Notch Ball valves
- SS Cylindrical and flat Screens
- PD Blowers, inlet, discharge piping, valves and fittings
- Unloading vent silencer, pipe and valves
- Platform Mounted Mixers
- Instrumentation (float switches, DO probes, pH, Ammonia probes, air cleaning compressors, transmitters, and Orifice flowmeters) with SS probe support arms
- PLC Control Panel
- Motor actuated and solenoid actuated valves and electric operators.
- Manual Valves on the Drop Pipes with hand wheels and drop chains located on top of the MBBR wall
- Weir Gates and electric operators, weir plates
- PLC & System Control, integration, and operation




2) Instrument and Control System

SCADA System Configuration for Each DEWATS



LEGEND

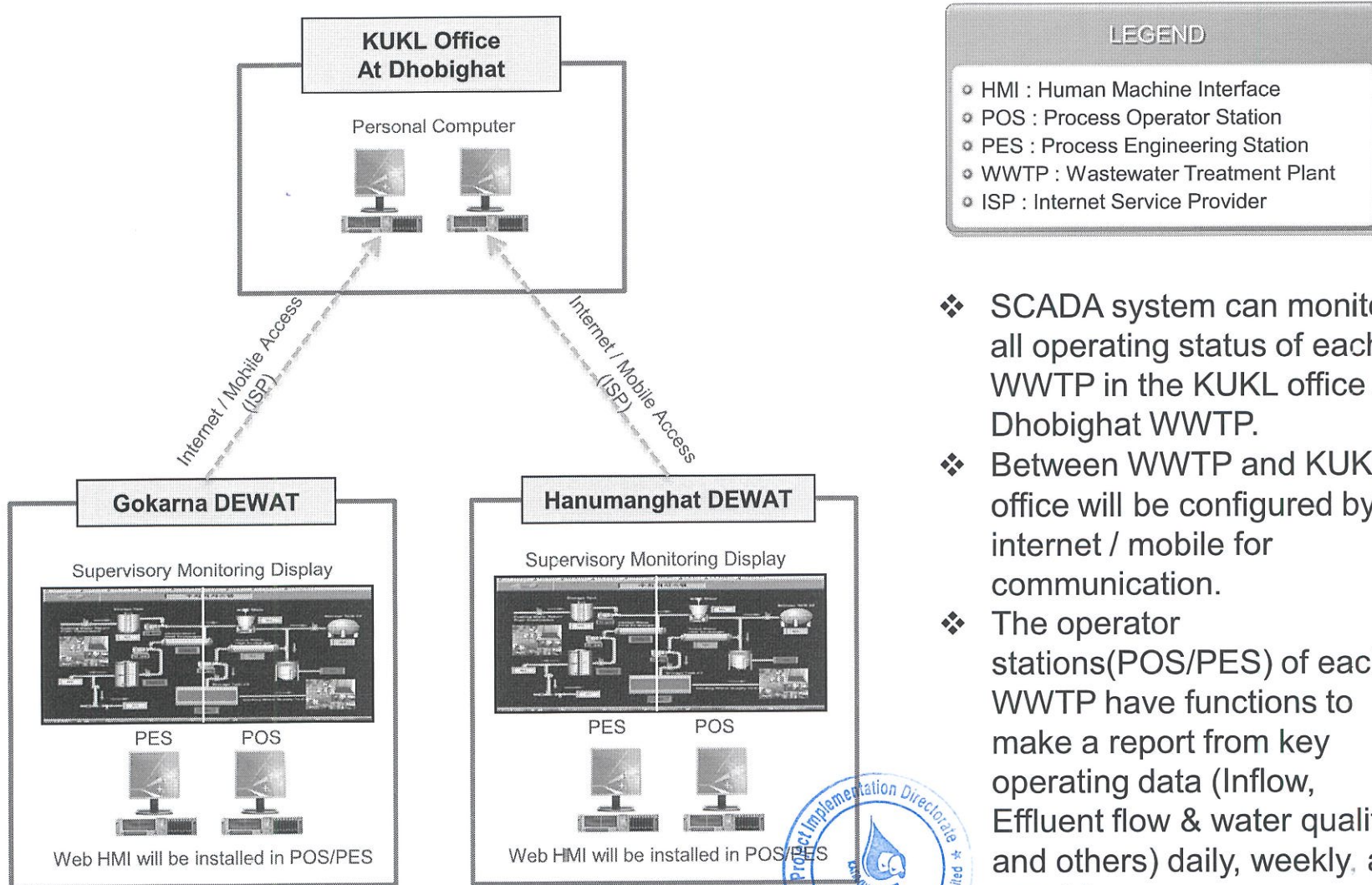
- POS : Process Operator Station
- PES : Process Engineering Station
- RCS : Remote Control Station
- UPS : Uninterruptible Power Supply

- ❖ The SCADA can be function to monitor and control about flow, level, pressure, temp., water quality, and operating status of equipment at central control room.
- ❖ The SCADA system will be configured in a redundant for continuous operation.



1) Instrument and Control System

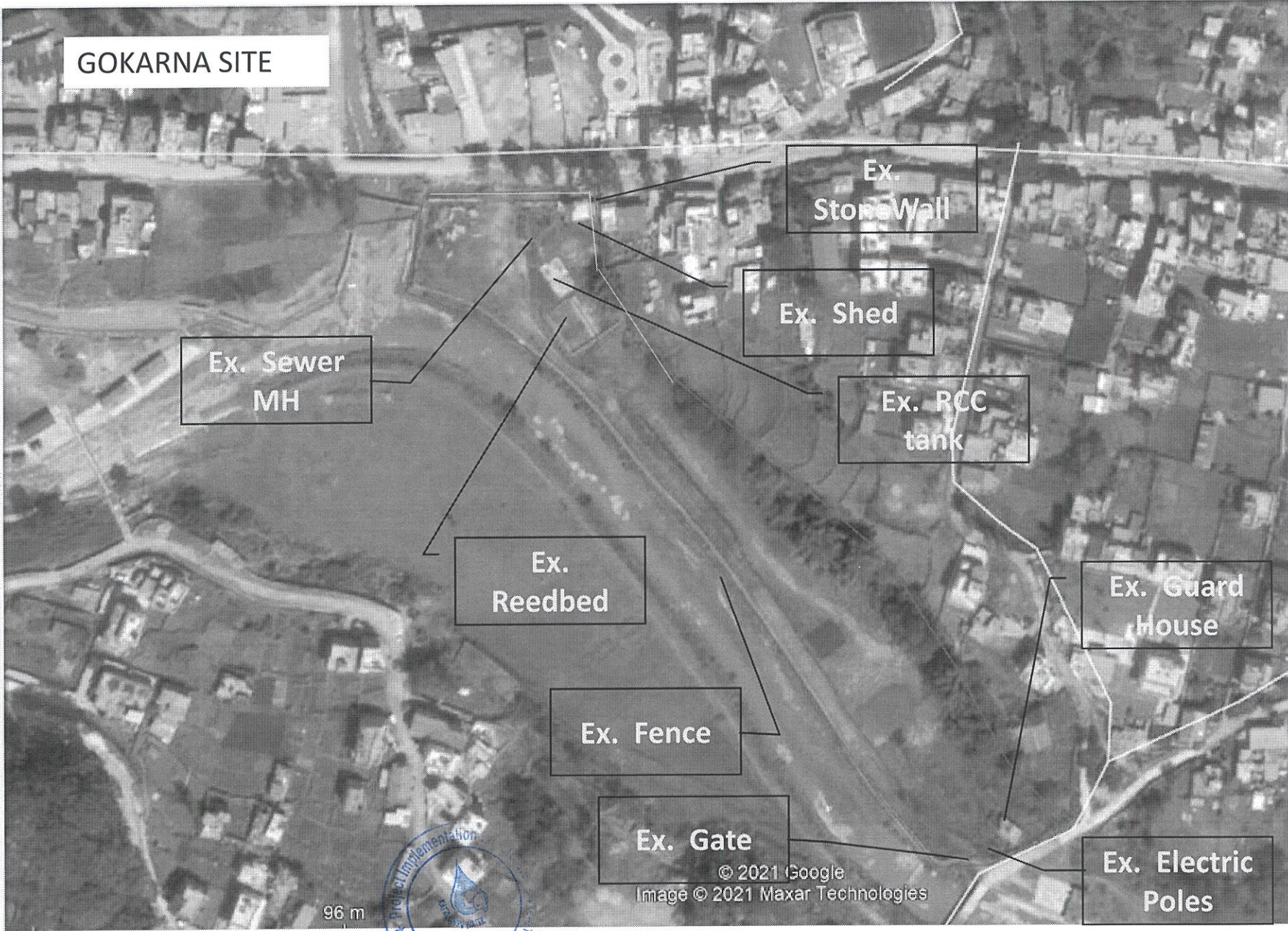
SCADA System Configuration for Monitoring at KUKL Office



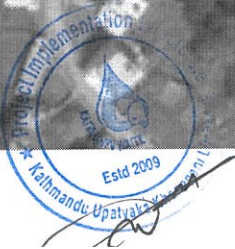
- ❖ SCADA system can monitor all operating status of each WWTP in the KUKL office at Dhobighat WWTP.
- ❖ Between WWTP and KUKL office will be configured by internet / mobile for communication.
- ❖ The operator stations(POS/PES) of each WWTP have functions to make a report from key operating data (Inflow, Effluent flow & water quality and others) daily, weekly, and monthly.



GOKARNA SITE



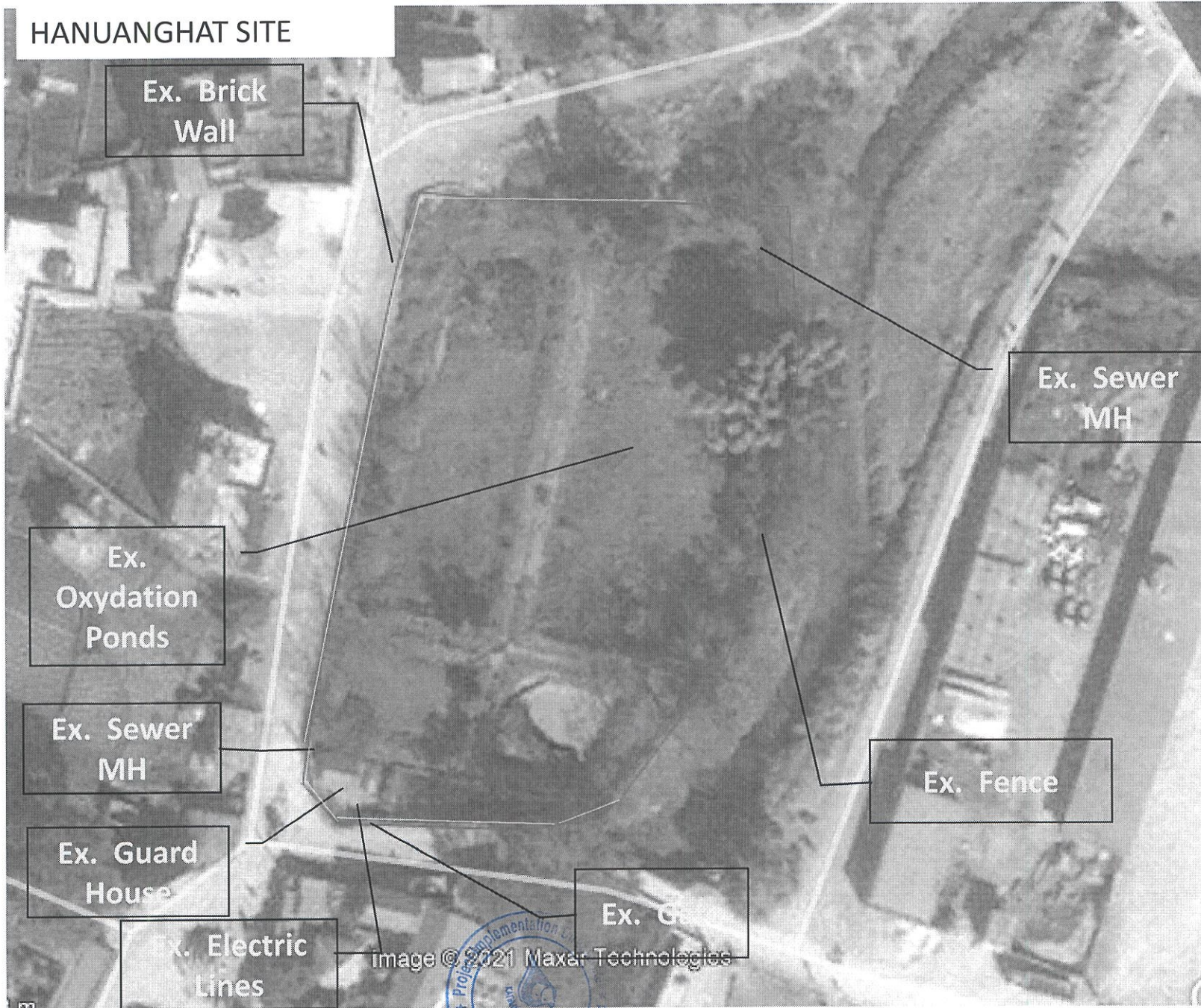
96 m



Ex. Gate

© 2021 Google
Image © 2021 Maxar Technologies

HANUANGHAT SITE



Ex. Brick Wall

Ex. Sewer MH

Ex. Oxidation Ponds

Ex. Sewer MH

Ex. Fence

Ex. Guard House

Ex. Electric Lines

Ex. Gate

Image © 2021 Maxar Technologies





Legend

HOUSES	
BENCH MARK	
AXIS	
KULO TRACK	
Footpath	
ROAD	
TEMPLE	
WALL	
TREE	
ELECTRIC POLE	
BRIDGE	
KHD	
MSW	
MH	
tap	
football ground	
SLAB	
Culvert	
Telephone pole	
water level	
Oxidation Ditch	
Fence baar	
Temple	

HOUSES	
SHED	
CHAMBERS	
PONDS	
WALL	
SEWER	
ELECTRIC POLE	
MH	
Fence bar	

FOR REFERENCE

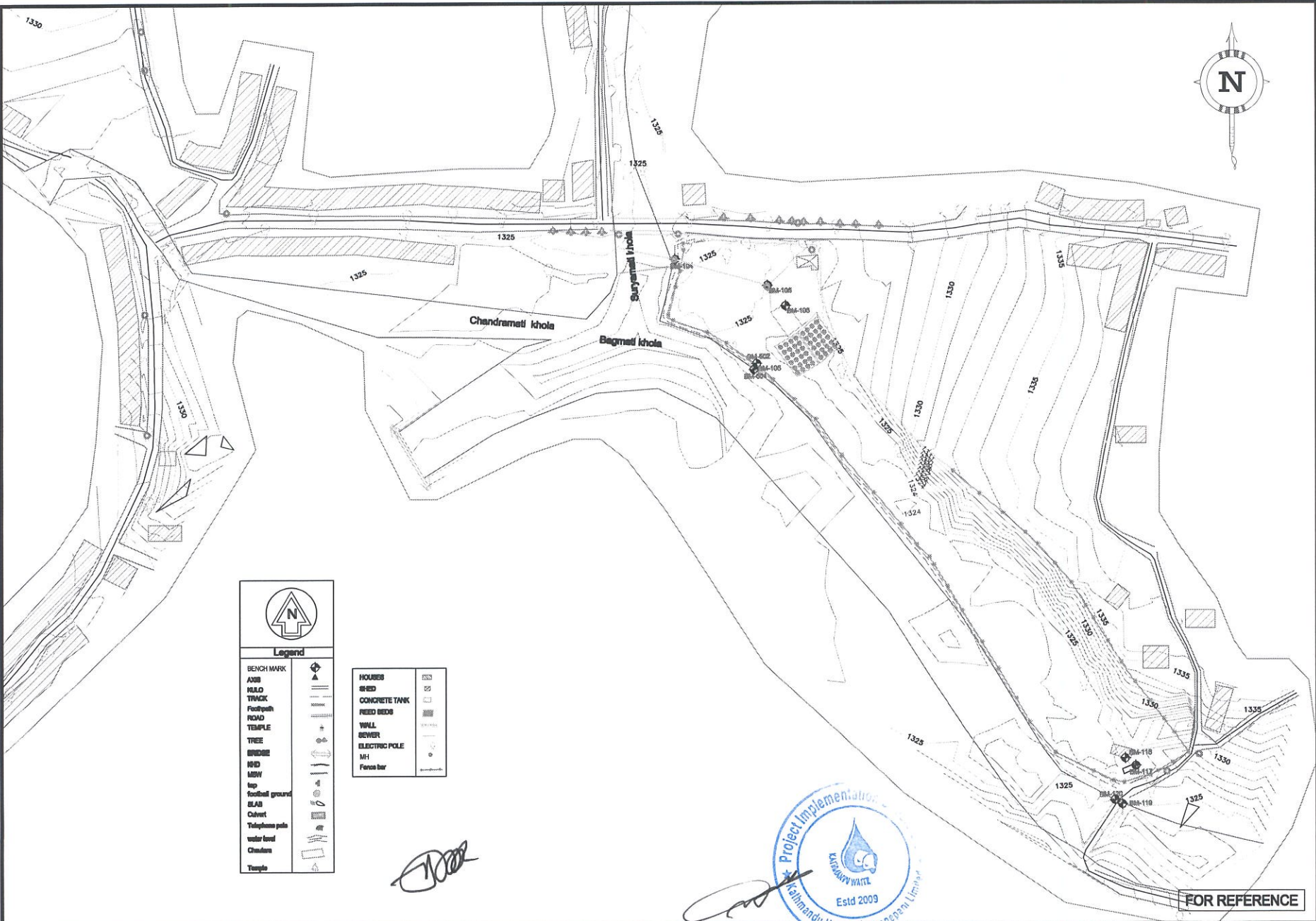


HBM-66

[Handwritten signature]

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Kathmandu Upatyaka Khanepani Limited (KUKL)	NO.	DATE	REVISED	CHECKED	APPROVED	DOWHA DOWHA Engineering Co., Ltd Environment & Resource Management Consultant (P) Ltd. TAEC Consult (P), Ltd.	PROJECT Kathmandu Valley Wastewater Management Project Decentralized Wastewater Treatment Plant at Gokarna & Hanumanghat	TITLE TOPOGRAPHIC MAP OF HANUMANGHAT DEWATS	DRAWN BY	SCALE	DATE	2021_05
	DESIGNED BY	SHEET NO.	OF									
	CHECKED BY	DRAWING NO.										
	APPROVED BY	KUKL / WW / DCTP / TM										



Legend

BENCH MARK		HOUSES	
AXIS		SHED	
WALL		CONCRETE TANK	
TRUCK		REED BEDS	
Footpath		WALL	
ROAD		BEWER	
TEMPLE		ELECTRIC POLE	
TREE		MH	
BRIDGE		Fence bar	
WFD			
MSW			
top			
footbal ground			
BLAB			
Culvert			
Telephone pole			
water tank			
Chandara			
Temple			

[Handwritten signature]



FOR REFERENCE



about 250m

Poles

Poles

Poles

Estd 2009
Mandu Upatvaka Khanejani

APPENDIX H: MANDATORY SPARE PARTS

	Item	Number	Spares	Quantity
Electrical				
1	Emergency Generator	1	Oil Filter	6 ea
			Fuel Filter	4 ea
			AVR	1ea
			Bearing	1ea
			Thermal Relay	1ea
			Fuse	3ea
			MCCB	2ea
			Aux Relay	2ea
2	Switchgear	1	Aux Relay	5ea
			Fluorescent Lamp	2ea
			Space Heater	2ea
			Cam Switch	2ea
			Pilot Lamp	2ea
			Push button Switch	2ea
3	Motor control center	1	MCCB	5% of total
			Magnetic Switch	10% of total
			Fuse	20ea
			Aux Relay	10ea
			Fluorescent Lamp	5ea
			Space Heater	5ea
			Pilot Lamp	10ea
			Push button Switch	10ea

Terms and Condition

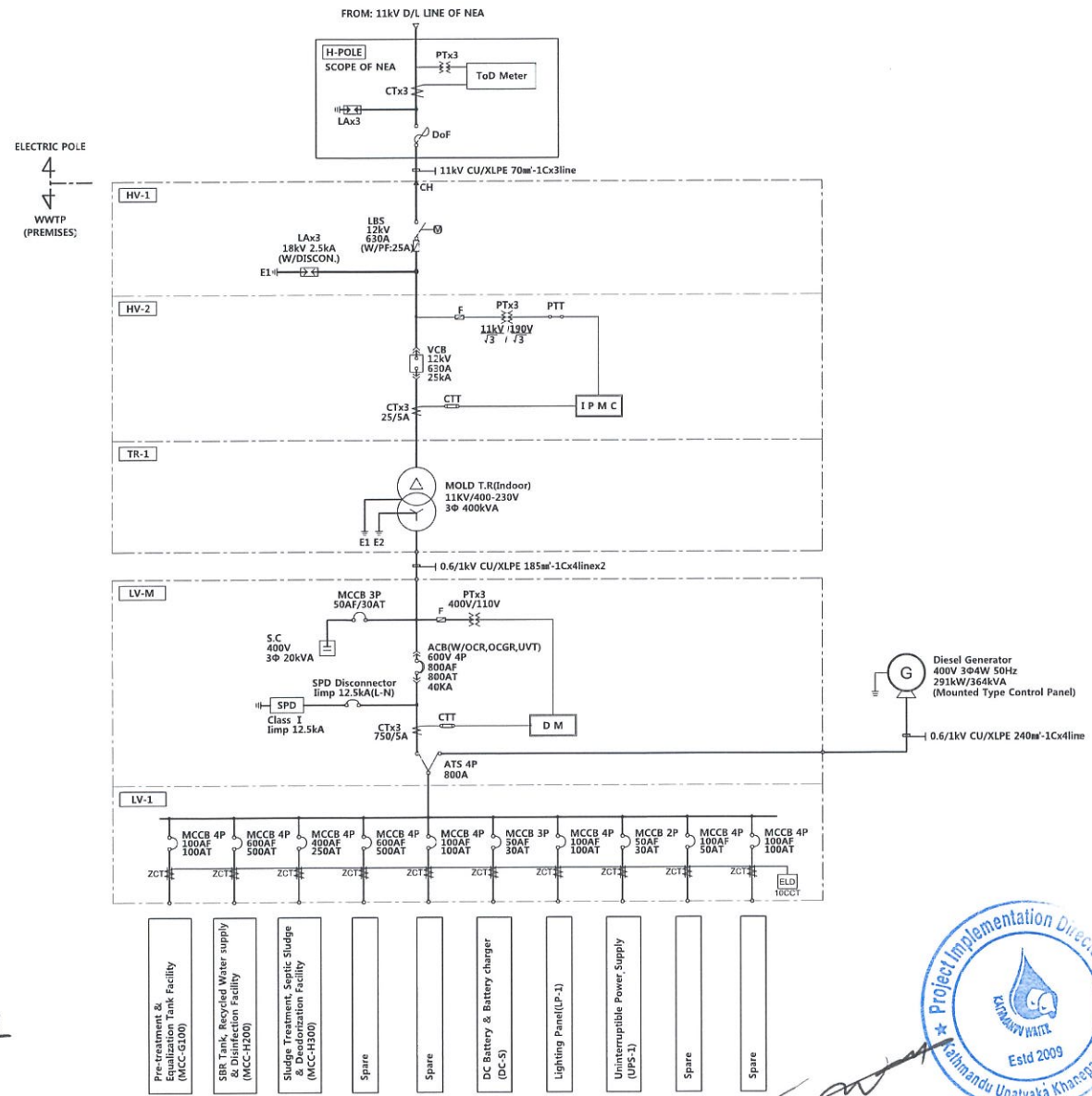
1. Quantities of the mandatory spare part are based on one unit of equipment. The bidder should provide mandatory spare part as per the equipment according to bidder's design.
2. The bidder should propose any other mandatory spare part if required for operation in separate column.





Single Line Diagram at Gokarna

S=NONE



PANEL NAME	NO.	DESCRIPTION	REMARK
HV - 1	1	11kV Switchgear with LBS	HV Switchgear
HV - 2	1	11kV Switchgear with VCB	HV Switchgear
TR - 1	1	Distribution Transformer Panel	
LV - M	1	400V Switchgear with ACB	LV Switchboard
LV - 1	1	LV Distribution board	LV Switchboard

NOTE	
	Load Breaker Switch with fuse Motorized Type
	VACUUM CIRCUIT BREAKER OVER 600V
	AIR CIRCUIT BREAKER BELOW 600V
	MOLDED CASE CIRCUIT BREAKER BELOW 600V
	WITHDRAWABLE CONNECTOR
	POWER FUSE
	FUSE
	LIGHTNING ARRESTER
	SURGE ABSORBER
	CURRENT TRANSFORMER
	VOLTAGE TRANSFORMER
	ZERO PHASE SEQUENCE CURRENT TRANSFORMER
	INTEGRATED PROTECTION METERING & CONTROL DEVICE
	DIGITAL INTEGRATED METERING DEVICE
<ul style="list-style-type: none"> The components of the H-POLE cab be changed according to the discussion with the NEA. The contractor shall pay all expenses for 11kV incoming line and ToD meter which will be supplied and installed by NEA. Power Factor Correction should be above 95%. 	

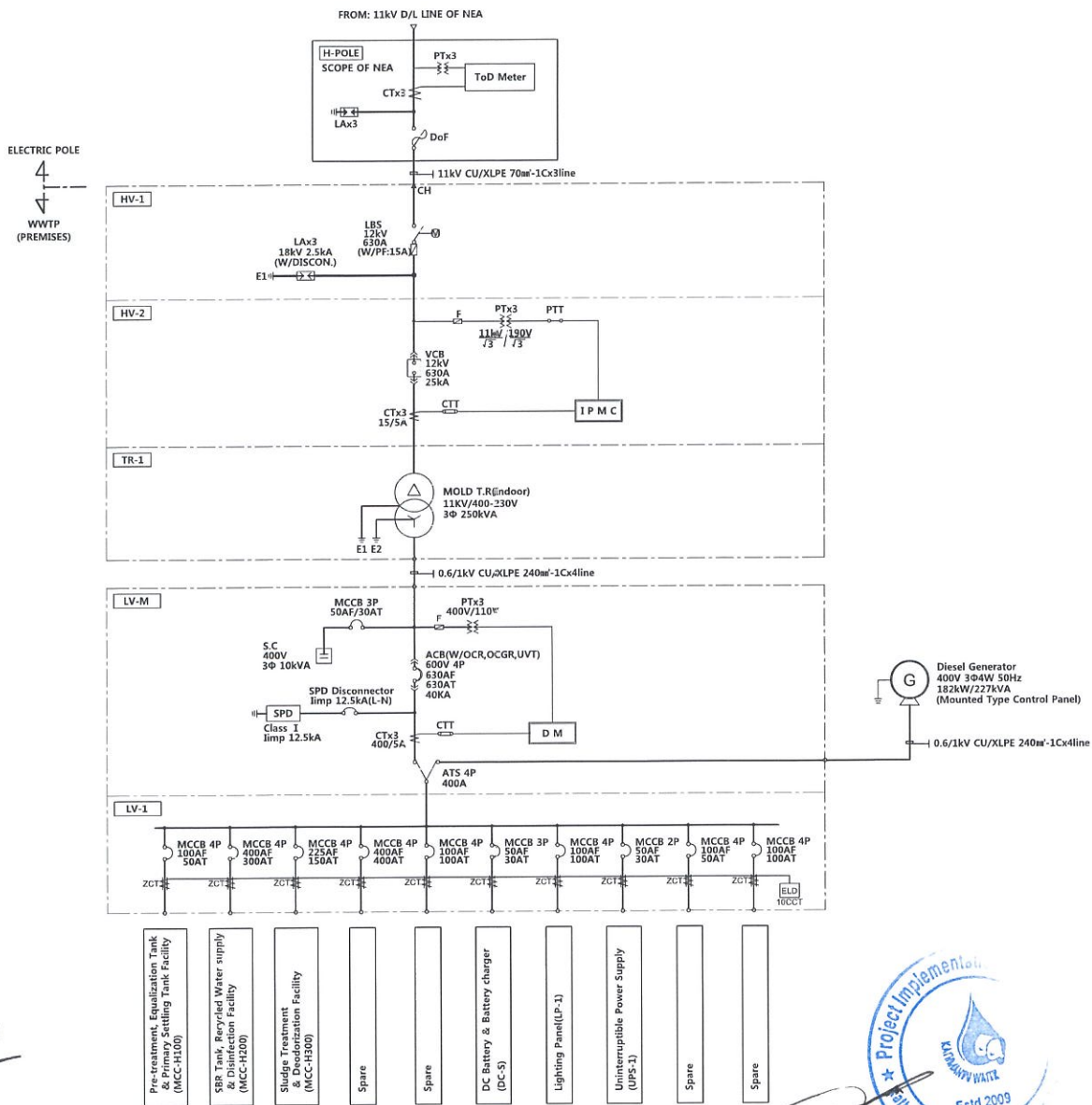
FOR REFERENCE





Single Line Diagram at Hanumanghat

S=NONE



PANE NAME

NO.	DESCRIPTION	REMARK
HV - 1	11kV Switchgear with LBS	HV Switchgear
HV - 2	11kV Switchgear with VCB	HV Switchgear
TR - 1	Distribution Transformer Panel	
LV - M	400V Switchgear with ACB	LV Switchboard
LV - 1	LV Distribution board	LV Switchboard

NOTE

LBS	Load Breaker Switch with fuse Motorized Type	FUSE	
VCB	VACUUM CIRCUIT BREAKER OVER 600V	LA	LIGHTNING ARRESTER
ACB	AIR CIRCUIT BREAKER BELOW 600V	SA	SURGE ABSORBER
MCCB	MOLDED CASE CIRCUIT BREAKER BELOW 600V	CT	CURRENT TRANSFORMER
W/C	WITHDRAWABLE CONNECTOR	PT	VOLTAGE TRANSFORMER
PF	POWER FUSE	ZPS	ZERO PHASE SEQUENCE CURRENT TRANSFORMER
IP M C	INTEGRATED PROTECTION METERING & CONTROL DEVICE		
D M	DIGITAL INTEGRATED METERING DEVICE		

- The components of the H-POLE cab be changed according to the discussion with the NEA.
- The contractor shall pay all expenses for 11kV incoming line and ToD meter which will be supplied and installed by NEA.
- Power Factor Correction should be above 95%.

FOR REFERENCE

Kathmandu Upatyaka
Khanepani Limited (KUKL)

NO.	DATE	REVISED	CHECKED	APPROVED
△				
△				
△				

DJHWA DOW-A Engineering Co., Ltd
Environment & Resource Management Consultant (P) Ltd.
Building Design Authority (P) Ltd

PROJECT
Kathmandu Valley Wastewater Management Project
Decentralized Wastewater Treatment Plant
at Gokarna & Hanumanghat

Single Line Diagram at Hanumanghat

DRAWN BY	SCALE	NONE
DESIGNED BY	DATE	2018.08
CHECKED BY	SHEET NO.	1 OF 1
APPROVED BY	DRAWING NO.	KUKL / WW / DCTP / 24

