



National Kidney and Transplant Institute
Bids and Awards Committee
East Avenue, Quezon City 1100
981-0300 / 981-0400 local 1157
<http://www.nkti.gov.ph/>

SUPPLEMENTAL BID BULLETIN NO. 21-130-2

**ONE (1) LOT SUPPLY AND DELIVERY OF LABOR, TOOLS, MATERIALS, CONSUMABLES,
SUPERVISION AND TECHNICAL EXPERTISE FOR THE DESIGN AND BUILD (UPGRADING AND
RETROFITTING) OF EXISTING SEWAGE TREATMENT PLANT (STP) WITH 1500 CUBIC METER
CAPACITY**

Bid Reference IB No. 21-130

This Supplemental Bid Bulletin **No. 21-130-2** is being issued to inform all the prospective bidders on the following amendment:

- a. Section III. Bid Data Sheet**
Please see attached Revised Bid Data Sheet
- b. Section VI. Specifications**
Please see attached Revised Specifications
- c. Section VIII. Bill of Quantities**
Please see attached Revised Bill of Quantities

This Supplemental Bid Bulletin including Annexes, if any, shall form part of the Bid Documents. Any provisions in the Bid Documents inconsistent herewith is hereby amended, modified, and superseded accordingly.

For guidance and information of all concerned.

Issued this 11th day of October 2021 in Quezon City.

(SGD)VIOLETA M. VALDERRAMA, MD
BAC, Chairperson

Received by: (PLS SIGN) _____

Bidder's Name: (PLS PRINT) _____

Date: _____

SUMMARY COSTING

DESIGN AND BUILD (UPGRADING AND RETROFITTING) OF EXISTING SEWAGE TREATMENT PLANT (STP)					
CAPITAL EXPENSE (CAPEX)					
Equipment					
Machinery					
Warranty					
Quality Standard					
Quality Assurance					
Technical Expertise					
Technology Life Span					
Construction					
Consultancy / Professional Fees					
TOTAL COST					
OPERATIONAL EXPENSE (OPEX)					
NUMBER OF YEARS	1	2	3	4	5
Utilities					
Repair and Maintenance					
Desludging / Siphoning					
Consumables					
Chemicals					
Manpower Wages and Salary					
Permits / Licenses					
Penalties / Legal Fees					
Office Supplies					
System Upgrade					
Water Analysis / Sampling					
COST PER YEAR					
TOTAL COST					

Submitted by : _____
(Printed Name and Signature)

Company & Designation : _____

Date : _____



Revised Section III. Bid Data Sheet

ITB Clause	
5.2	<p>For this purpose, contracts similar to the Project refer to contracts which have the same major categories of work, which shall be: “Sewage Treatment Plant Installations / Retrofitting with at least 500 cubic meter (cu.m) capacity complying DAO-2016-08”</p> <p>Completed at least two (2) similar contracts, the aggregate amount of which should be equivalent to at least <i>fifty percent (50%) in the case of non-expendable supplies and services or twenty-five percent (25%) in the case of expendable supplies</i>] of the ABC for this Project.</p>
5.4	<p>The following persons/entities shall be allowed to participate in this Project:</p> <ul style="list-style-type: none">a) Duly licensed Filipino citizens/sole proprietorships; <u>or</u>b) Partnerships duly organized under the laws of the Philippines and of which at least sixty percent (60 %) of the interest belongs to citizens of the Philippines; <u>or</u>c) Corporations duly organized under the laws of the Philippines, and of which at least sixty percent (60%) of the outstanding capital stock belongs to citizens of the Philippines; <u>or</u>d) Cooperatives duly organized under the laws of the Philippines; <u>or</u>e) Persons/entities forming themselves into a joint venture, i.e., a group of two (2) or more persons/entities that intend to be jointly and severally responsible or liable for a particular contract: Subject to Executive Order No. 65 (EO 65), s. 2018. (Correlate with Clause 10.1 (g) and Clause 10.3 of the BDS) <p>NOTE: the persons/entities enumerated above may participate in competitive bidding if he has been issued a license by the PCAB to engage or act as a contractor. (Please see 23.4.2.1)</p> <ul style="list-style-type: none">f) Foreign bidders may be eligible to participate in the procurement of Infrastructure Projects when provided for under any Treaty or International or Executive Agreement as provided in Section 4 of the Act and this IRR; (Please see 23.4.2.2)g) The prospective bidder must have completed an SLCC that is similar to the contract to be bid, and whose value, adjusted to current prices using the PSA consumer price indices, must be at least fifty percent (50%) of the ABC to be bid.(Please see 23.4.2.3) Correlate with Clause 10.1 (f) of the BDS. <p>The SLCC shall be supported by an Owner’s Certificate of Final Acceptance issued by the project owner other than the contractor or a final rating of at least</p>



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	<p>Satisfactory in the Constructors Performance Evaluation System (CPES). In case of contracts with the private sector, an equivalent document shall be submitted. (Please see 23.4.2.5)</p> <p>h) The computation of a prospective bidder's NFCC must be at least equal to the ABC to be bid. (Please see 23.4.2.6) <i>Correlate with Clause 10.1 (i) of the BDS.</i></p>
7.1	Sub-Contracting Shall Not Be Allowed
10.1	<p>Section IX. Checklist of Technical and Financial Documents.</p> <p><u>Legal Documents</u></p> <p>(a) Valid PhilGEPS Registration Certificate (Platinum Membership) (all pages);</p> <p><u>or</u></p> <p>(b) Registration certificate from Securities and Exchange Commission (SEC), Department of Trade and Industry (DTI) for sole proprietorship, or Cooperative Development Authority (CDA) for cooperatives or its equivalent document;</p> <p><u>and</u></p> <p>(c) Valid Mayor's or Business permit issued by the city or municipality where the principal place of business of the prospective bidder is located, or the equivalent document for Exclusive Economic Zones or Areas;</p> <p><u>and</u></p> <p>(d) Valid Tax Clearance Certificate per E.O. No. 398, s. 2005, as finally reviewed and approved by the Bureau of Internal Revenue (BIR).</p> <p><u>Technical Documents</u></p> <p>(e) Notarized Statement of the prospective bidder of all its ongoing government and private contracts, including contracts awarded but not yet started, if any, whether similar or not similar in nature and complexity to the contract to be bid;</p> <p><u>and</u></p> <p>(f) Notarized Statement of the bidder's Single Largest Completed Contract (SLCC) similar to the contract to be bid, except under conditions provided under the rules;</p> <p><u>and</u></p> <p>(g) Valid and Appropriate Philippine Contractors Accreditation Board (PCAB) License;</p> <p><u>or</u></p> <p>Special PCAB License in case of Joint Ventures; (Correlate with 10.3)</p>



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	<p><u>and</u> registration for the type and cost of the contract to be bid; (Please refer to Clause 10.3 for details)</p> <p><u>and</u></p> <p>(h) Original copy of Bid Security. If in the form of a Surety Bond, submit also a certification issued by the Insurance Commission; <u>or</u> Original copy of Notarized Bid Securing Declaration;</p> <p><u>and</u></p> <p>(i) Project Requirements, which shall include the following:</p> <p>(i) Duly accomplished and signed Specifications using the form as provided for in Section VI;</p> <p>(ii) Organizational chart for the contract to be bid;</p> <p>(iii) List of contractor’s key personnel (e.g., Electronics and Communication Engineer and Construction Safety and Health Officer), to be assigned to the contract to be bid, with their complete qualification and experience data;</p> <p>(iv) List of contractor’s major equipment units, which are owned, leased, and/or under purchase agreements, supported by proof of ownership or certification of availability of equipment from the equipment lessor/vendor for the duration of the project, as the case may be;</p> <p><u>and</u></p> <p>(j) Original duly signed Omnibus Sworn Statement (OSS);</p> <p><u>and</u></p> <p>if applicable, Original Notarized Secretary’s Certificate in case of a corporation, partnership, or cooperative;</p> <p><u>or</u></p> <p>Original Special Power of Attorney of all members of the Joint venture giving full power and authority to its officer to sign the OSS and do acts to represent the Bidder.</p> <p><u>Financial Documents</u></p> <p>(k) The prospective bidder’s Audited Financial Statements, showing, among others, the prospective bidder’s:</p> <p>“Total and Current Assets and Liabilities, stamped “received” by the BIR or its duly accredited and authorized institutions, for the preceding calendar year which should not be earlier than two (2) years from the date of bid submission;”</p>
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	<p style="text-align: center;"><u>and</u></p> <p>(l) The prospective bidder's computation of Net Financial Contracting Capacity (NFCC).</p> <p style="text-align: center;"><i>Class "B" Documents</i></p> <p>(m) If applicable, duly signed Joint Venture Agreement (JVA) in accordance with RA No. 4566 and its IRR in case the joint venture is already in existence;</p> <p style="text-align: center;"><u>or</u></p> <p>duly notarized statements from all the potential joint venture partners stating that they will enter into and abide by the provisions of the JVA in the instance that the bid is successful.</p> <p style="text-align: center;">FINANCIAL COMPONENT ENVELOPE</p> <p>(n) Original of duly signed and accomplished Financial Bid Form; <u>and</u> <i>Other documentary requirements under RA No. 9184</i></p> <p>(o) Original of duly signed Bid Prices in the Bill of Quantities; <u>and</u></p> <p>(p) Duly accomplished Detailed Estimates Form, including a summary sheet indicating the unit prices of construction materials, labor rates, and equipment rentals used in coming up with the Bid including estimated yearly operating expenses (OPEX) based on their offered design or system. The excess power consumption (excluding lighting) that will be utilized over their submitted OPEX, shall be charged to the winning bidder; <u>and</u></p> <p>(q) Cash Flow by Quarter.</p>
10.3	<p>i. A current and valid PCAB License for Government Projects</p> <p>i. <u>General Engineering – at least small B</u></p> <p>ii. In case of Joint Ventures (JV), a valid Special PCAB License, and registration for the type and cost of the contract for this Project. Provided, that at least one (1) of the JV partners must possess all the above Classification and Category pursuant to GPPB NPM. 0623-2009 dated November 27, 2009)</p>
10.4	<p>The key personnel must meet the required minimum years of experience set below:</p> <p><u>Key Personnel</u></p> <p>a. Sanitary Engineer</p> <p>a. Licensed Sanitary Engineer</p> <p>b. At least three (3) years of experience in handling STP facility</p> <p>b. Construction Safety and Health Officer/Engineer</p>



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	<p>a. Must be a DOLE Accredited Safety Officer</p> <p>c. At least three (3) years of experience in handling STP facility</p>						
10.5	<p>The minimum major equipment requirements are the following (if applicable):</p> <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 33%;">Equipment</th> <th style="width: 33%;">Capacity</th> <th style="width: 33%;">Number of Units</th> </tr> </thead> <tbody> <tr> <td> </td> <td> </td> <td> </td> </tr> </tbody> </table>	Equipment	Capacity	Number of Units			
Equipment	Capacity	Number of Units					
15.1	<p>The bid security shall be in the form of a Bid Securing Declaration or any of the following forms and amounts:</p> <ol style="list-style-type: none"> 1. The amount of not less than 2% of the ABC if bid security is in cash, cashier's/manager's check, bank draft/guarantee or irrevocable letter of credit; 2. The amount of not less than 5% of the ABC if bid security is in Surety Bond. 						
16	<p>Each Bidder shall submit one original copy and copy 1 of the first and second components of its Bid arranged, numbered, tabbed in a soft book binded folders.</p> <div style="text-align: center;"> <p>SEALING AND MARKING OF BIDS (Two-Envelope System)</p> </div>						
19.2	<p>Partial bids shall not be allowed.</p>						
20	<p>Within a non-extendible period of five (5) calendar days from receipt by the Bidder of the notice from the BAC that it submitted the Lowest Calculated Bid, the Bidder shall submit:</p> <ol style="list-style-type: none"> (a) Original/Certified true copy of Latest income and business tax returns and paid through the BIR Electronic Filing and Payment System (eFPS) or manual/bank payment; (b) Original/Certified true copy of other appropriate licenses and permits required by law and stated in the Bidding Documents. (c) Original/Certified true copy of Bureau of Internal Revenue (BIR) Registration Certificate or equivalent for foreign bidder; 						



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	<p>(d) Certified True Copy of the latest General Information Sheet (GIS) duly filed and received by SEC, or equivalent for foreign bidder;</p> <p>(e) Certificate of PhilGEPS Registration (Platinum Member);</p>
21	Additional contract documents relevant to the Project that may be required by existing laws and/or the Procuring Entity, such as construction schedule and S-curve, manpower schedule, construction methods, equipment utilization schedule, construction safety and health program approved by the DOLE, and other acceptable tools of project scheduling.
21.1	<p>The LCB shall submit the following additional documents in two (2) sets within a non-extendible period of five (5) calendar days from receipt of the notification.</p> <ol style="list-style-type: none">1. Contracting Company's Profile (using NKTi Template);2. Certificate of Site Inspection issued by NKTi-General Services Division (GSD);3. Certificate that the proponent/bidder has completed at least two (2) projects (private or government) whether new design or retrofit only, provided both have passed two (2) consecutive compliance requirements under DAO 2016-08 with proof of laboratory test results on acceptance of the project and within twelve (12) months after from a reputable DENR/LLDA accredited laboratory company;4. For the single completed similar project, provide a copy of the validation test from LLDA/DENR;5. Contractor shall submit the certificate of at least 2-year warranty for workmanship and equipment except consumables with Preventive and Corrective Maintenance with 2-issued discharge permit from LLDA for 2 succeeding years;6. Certificate of experience that the proponent/bidder has an experience in the design, build or retrofitting of STP for the last three (3) years and compliance to the requirements under DAO 2016-08;7. System diagram for the proposed STP from influent to effluent reflecting all equipment and devices;8. Brochure/samples for finishes, equipment, devices and materials to be used;9. Certificate that the equipment and materials to be installed are brand new;10. Duly signed Organization Chart for the contract to be bid;11. Personnel Requirement:



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	<ul style="list-style-type: none">i. Sanitary Engineer<ul style="list-style-type: none">a. Licensed Sanitary Engineerb. At least three (3) years of experience in handling STP facilityii. Construction Safety and Health Officer/Engineer<ul style="list-style-type: none">a. Must be a DOLE Accredited Safety Officerb. At least three (3) years of experience in handling STP facility <p>12. Method Statement for the entire project execution with Quality assurance and control plan;</p> <p>13. Health and Safety Plan based on the submitted method statement.</p>
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Revised Section VI. Specifications

Project : **Design and Build of (Upgrading and Retrofitting) of Existing Sewage Treatment Plant (STP) with 1500 cubic Meter Capacity.**
Location : **NKTI Compound, East Avenue, Quezon City**

BACKGROUND OF THE PROJECT

The National Kidney and Transplant Institute (NKTI) is a tertiary medical specialty center formerly known as the National Kidney Foundation of the Philippines. It was created with a three-fold mission of Service, Training and Research primarily for the benefit of the Filipino people afflicted with kidney allied diseases and to secure the well-being of the people by providing them with the specialized health and medical services.

In 2011, one of NKTI's operational facilities was the STP, which was designed to cater NKTI's requirements. The current bed capacity of 383 was recently increased to 500 beds. The capability of the STP to handle the processes was designed in accordance to DENR Administrative Order (DAO) No. 35, Series of 1990, and its capacity was designed for 1000 cu.m. per day.

In 2016, a new DENR Administrative Order (DAO) No. 2016-08 was released, with additional tests for Nitrate, Ammonia, Phosphate and Surfactant. One of the provisions of the new DAO is a grace period of five years for Compliance to upgrade or modify the existing STP. NKTI is implementations to fully comply with this requirement. It shall employ third party contractor specialized on retrofitting STP. After consultation with various service providers, upgrading of the existing STP is necessary to comply with the new parameters of DAO-2016-08.

I. PROJECT COMPONENTS AND SCOPE OF WORKS

A. DESIGN

The project is a retrofitting of the existing STP, to incorporate in the system diagram and treatment process of the DAO No. 2016-08 requirement. The lift station is not included in the project.

The proposed treatment method shall consider technologies with lower unit energy consumption and reduced sludge protection such as Fixed -Bed Biofilm Activated Sludge (FBAS), Moving Bed Biofilm Reactor (MBBR), Membrane Aerated Biofilm Reactor (MABR), Advanced Oxidation Process (AOP), or other best practice STP process complying with DENR / LLDA , DAO 2016-08.

1. The bidder shall provide a proposal with all the necessary functional diagrams and details of the proposed process subject to approval by technical team of GSD with reference to the existing STP.

CONFORME:
<i>(Company Name)</i>
<i>(Name and Signature of Authorized Representative)</i>

- a. The proponent or winning designer shall evaluate or assess the functionality of the existing STP structures, all engineering installations (but not limited to mechanical, electrical, electronics and plumbing) and all other installations within the system, which are deemed necessary in the operation of the STP system.
- b. The proposed retrofitting design diagram shall conform to the required standards by DENR and other statutory and regulatory bodies, specifically DAO No. 2016-08.
- c. The proponent or winning designer shall provide complete Engineers Report in relation to the proposed retrofitting design diagram and all other required components including calculations relative to the full operation of the system and in consideration of the **500-bed capacity and all other proposed buildings** deemed to be tapped to the existing STP.
- d. Ensure that the design shall accommodate present and for the future building sewage capacity as planned by NKTi.

2. Influent and Effluent Characteristics and LLDA DAO 2016-08 Required Parameters

LATEST NKTi INFLUENT AND EFFLUENT			
PARAMETERS	INFLUENT TEST	EFFLUENT TEST	DAO 2016-08
COLOR	25 TCU	Less than MDL (5 TCU)	150 TCU
PH	6.36 @25°C	6.68 @ 25°C	6.0 - 9.0 pH
TOTAL SUSPENDED SOLIDS	44 mg/L	Less than MDL (2.00mg/L)	100 mg/L
CHEMICAL OXYGEN DEMAND	664 mg/L	32 mg/L	100 mg/L
BIOCHEMICAL OXYGEN DEMAND	363 mg/L	18mg/L	50 mg/L
OIL & GREASE	3.22 mg/L	Less than MDL (2.2mg/L)	5.0 mg/L
TOTAL COLIFORM	5400000 MPN/100ml	Less than 1.8MPN/100ml	10,000 MPN/100ml
FLUORIDE	Less than 0.01mg/L	0.0156 mg/L	2.0 mg/L
NITRATE	0.146 mg/L	0.075 mg/L	14 mg/L
PHOSPHATE	Less than 0.02 mg/L	4.51 mg/L	1.0 mg/L
SURFACTANT	1.36 mg/L	1.70 mg/L	15 mg/L
AMMONIA	73.2mg/L	23.6 mg/L	0.5 mg/L
BORON			3 mg/L
CHLORIDE			450 mg/L
SELENIUM			0.04 mg/L
TEMPERATURE			3°C
ARSENIC			0.4 mg/L
BARIUM			6mg/L
CADIUM			0.01 mg/L

CONFORME:
(Company Name)
(Name and Signature of Authorized Representative)

CHROMIUM			0.02 mg/L
CYANIDE			0.2 mg/L
COPPER			
FECAL COLIFORM			
SULFATE			

3. Content of Proposal

All proposals shall include, but not limited to, the following items:

- a. Catalogs/brochures showing the Technical data of equipment, such as weights, physical dimensions and performance characteristics.
- b. Plant layout showing the arrangement and dimensions of all equipment mounting.
- c. Process flow diagram of Sewage Treatment Plant interrelated with other trades within the NKTl compound.
- d. Control and instrumentation diagrams of proposed Sewage Treatment Plant.
- e. Testing and commissioning procedures, as well as, operation and maintenance manuals for the start-up, operation, and maintenance of STP.
- f. Complete list of consumables and chemicals to be used in the proposed Sewage Treatment Plant. Chemicals needed for the Sewage Treatment Plant must be available in the local market.
- g. A full breakdown of plant operating and maintenance cost table on a monthly basis; assuming that the plant is treating 100%, 75%, 50% and 25% of the design flows, and also expressed as a cost per cubic meter of effluent treated.
- h. Equipment parts list indicating the source of supply and recommended spare parts.
- i. Details of proposed construction installation and commissioning schedule within the framework of the Owner's schedule as in this document.

4. Design Parameters complying to DAO 2016-08

- a. Odorless
- b. Aesthetically Pleasing
- c. Flood Protection

CONFORME:
<i>(Company Name)</i>
<i>(Name and Signature of Authorized Representative)</i>

- d. Sludge Reduction
- e. Energy Efficient

5. Codes, Inspections, Permits and Fees

- a. The work under this Contract is to be installed according to the latest applicable codes, ordinances and requirements of the following:
 - i. National Plumbing Code of the Philippines
 - ii. Sanitation Code of the Philippines
 - iii. Department of Health
 - iv. Rules and Regulations of Quezon City LGU
 - v. Effluent Regulations of 1990 – Environmental Management Bureau (EMB) formerly National Pollution Control Commission (NPCC).
 - vi. Rules and Regulations of the EMB for Domestic and Industrial Wastewater Disposal (Section 6g of Presidential Decree No. 984, otherwise known as the National Pollution Control Decree of 1976).
 - vii. DENR Administrative Order (DAO) 2016-08
 - viii. LLDA MC2017-05

The Contractor’s bid shall be deemed to include all costs to comply with the various code, inspections, permits and fees.

Nothing contained in this Specification shall be construed as to conflict with National and Local Ordinances or Laws governing the installation of Sewage Treatment Plant Work and all such laws and ordinances are hereby made part of this Specification. The Contractor is required to meet the requirements hereof.

- b. The completed project and/or its components shall comply to standards for STPs under the following Codes and Standards or their international equivalent:
 - 1. Equipment (any one of the following):
 - a. Underwriters Laboratories (UL) listed
 - b. American National Standards Institute (ANSI)
 - c. Factory Mutual (FM) Approved
 - 2. Materials and Workmanship:
 - a. Philippine Electrical Code (PEC), Part 1 & 2
 - b. National Electrical Manufacturer’s Association (NEMA)
 - c. National Building Code of the Philippines
 - d. The Fire Code of the Philippines
 - e. DENR/LLDA

CONFORME:
<i>(Company Name)</i>
<i>(Name and Signature of Authorized Representative)</i>

All construction permits and fees required for this work shall be obtained by and at the expense of the Contractor. The Contractor shall furnish the Architect, the Engineer and the Owner final certificates of inspection and approval from the proper government authorities after the completion of the work.

B. RETROFIT

The winning bidder shall secure all necessary permits relative to the project from the Quezon City LGU, DENR and LLDA. Plans and other Legal documents shall be provided by the winning supplier/bidder. NKTl will provide the necessary documents as proof of property ownership.

1. The winning bidder shall replace and retrofit all existing engineering installations, but not limited to mechanical, electrical, electronics, plumbing and all other components. (See attached plan of the existing STP). Based on the approved design of the proponent.
2. The winning bidder shall address all the necessary corrections of the concrete structures, fixing of cracks as necessary, re application of the waterproofing agent or membrane. To install roofing with provisions for open air on all sides of the two (2) external chambers and other architectural works necessary to complete the project.
3. During this phase , the winning bidder must ensure that the existing effluent will not be discharge to the environment untreated.

C. WARRANTY PERIOD

As for 2-year warranty after the Design and Construction including process proving, testing and commissioning with LLDA compliant test result for DAO 2016-08. The winning bidder must show proof of successful design by OPERATING the STP.

1. During the warranty period all cost embedded in the Professional Operation and Management including labor, supervision and materials shall be borne by the winning bidder.
2. Energy Consumption allocation is based on energy consumption "As-Proposed" plus and additional energy allocation for lighting-
3. The winning bidder must be responsible for the training and technology transfer to trainees assigned by NKTl. Trainees will be assigned to for 24/7 to ensure smooth transition to the TRANSFER PHASE of this PROJECT. To ensure transfer of learning they should submit Training Program.
4. The winning bidder must guarantee a **Discharge Permit for 2- Succeeding years** and submit monthly Key Performance Report (KPI) for **6 months** and addressed to the General Services Manager thru the NKTl Pollution Control Officer such as but not limited to:

CONFORME:
<i>(Company Name)</i>
<i>(Name and Signature of Authorized Representative)</i>

- a. Effluent testing
- b. Influent testing
- c. Electric Consumption
- d. Water Consumption
- e. Flow meter monitoring for discharge
- f. Flow meter monitoring for reuse
- g. Financial Expenses for consumables
- h. Limits and capacity
- i. Active and status of machines

D. TURN-OVER

After successfully operating the STP, process proving, testing and commissioning and transfer of knowledge and training for (3) months, the winner bidder can transfer the management and supervision to General Services Division of the NKTl.

1. The winning Bidder must ensure that monthly preventive maintenance for the period of 2-years after the turned over must be performed and must ensure that all parts of the STP is in good operating condition prior to turn-over and upon validation of GSD/Engineering.
2. The winning bidder must turn over all equipment maintenance records and equipment history including all controls.

3. Installation Drawings and other Submittals

The Contractor shall prepare and submit for approval the following:

- a. Dimensional layout drawings of the Sewage Treatment Plant and its auxiliary equipment, pumping and piping systems, concrete tanks, control system and other systems which are complete in nature, or which require close coordination with other work of this trade and/or the work of other trades.
- b. Calculation of sewage treatment processes, equipment sizing and selections, and other processes involved in the preparation of proposed construction of the Sewage Treatment Plant.
- c. Dimensional drawings of all concrete tanks and other structures required in the review of structural design.
- d. Electrical control components to include Motor Control Center MCC's, starters, breakers, wires, etc.
- e. Complete control schematic and wiring diagrams for all equipment.
- f. Manufacturer's catalog sheets, marked as necessary to indicate materials or equipment being furnished for the following:
 - Pumps, blowers and other STP equipment complete with ratings and dimensions.
 - Controls, magnetic starters, pressure switches, valves, etc.
 - Valves: Gate, check and pressure reducing valves

CONFORME:
<i>(Company Name)</i>
<i>(Name and Signature of Authorized Representative)</i>

- Pipes and fittings
 - Flexible couplings
 - Riser supports, hangers and sleeves
- g. Marked sets of piping drawings showing mark number and exact location of hangers, anchors, guides and sway braces, and approximate location of random hangers.
 - h. Details of all anchors, guides and sway braces.
 - i. List of miscellaneous materials proposed, including pipe, fittings, valves, etc., and manhole accessories, identifying manufacturer and type.
 - j. Field test reports
 - k. Such other drawings as the Engineer may require.
 - l. All drawings should be signed and dry sealed by the Contractor's Registered Sanitary Engineer, Structural Engineer and other Professional Engineers concerned.
 - m. All drawings, etc., shall be submitted sufficiently in advance of field requirements to allow ample time for checking and no extension of the contract time will be granted this Contractor, by reason of his failure in this respect.

II. PRODUCT, EQUIPMENT AND MATERIALS

Waste Water Transport System:

- a. The water pump and controller shall be of triplex system, soft starter, with manual alternation of pumps. The controller shall have externally mounted, individual, visible indicators;
- b. Existing system voltage: 480Vac, 3-Phase, 60Hz. and 230Vac, 3-Phase, 60Hz (Verify actual voltage);
- c. The piping system and fittings including isolation valves and tapping point for water meter shall be ready available.

STP Roofing:

- a. Roofing shall be made of clear Polycarbonate solid sheets. Existing steel trusses shall be utilized and repainted with at least two (2) coats gray epoxy enamel and if necessary, modifications to trusses be made by design.

III. SCOPE OF WORKS

1. Design, Upgrading and Retrofitting of Existing Sewage Treatment Plant (STP) with 1500 Cubic Meter Capacity

- a. The proponent or winning designer shall evaluate the existing processes of the existing STP.
- b. The proponent or winning designer shall evaluate or assess the functionality of the existing STP structures, all engineering installations (but not limited to mechanical, electrical, electronics and plumbing) and

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all other installations within the system, which are deemed necessary in the operation of the STP system.

- c. The proposed retrofitting design diagram shall conform to the required standards by DENR and other statutory and regulatory bodies, specifically DAO No. 2016-08.
- d. The proponent or winning designer shall provide complete Engineers Report in relation to the proposed retrofitting design diagram and all other required components including calculations relative to the full operation of the system and in consideration of the 500-bed capacity and all other proposed buildings deemed to be tapped to the existing STP.
- e. The winning proponent/designer shall report to GSD all documentary maintenance reports (materials needed, daily consumption report, on-site lab test results or ROLA) and incident relative to the operation of the STP on regular monthly basis or as deemed necessary.
- f. General Condition:
 - i. The proponent/bidder shall have an experience in the design of STP for the last three (3) years
 - ii. The proponent/bidder shall have a professional manpower with enough experience in handling STP administrative and technical requirements including management works;
 - iii. The winning designer shall provide a warranty certificate of at least two (2) years after completion and turned-over of the project;
 - iv. The winning supplier/bidder shall certify the effectiveness of the design diagram and the functionality of the STP System in compliance to DAO 2016-08
 - v. Acceptance and turned-over of the project shall be after the validation test has been done and the tests results has complied with DAO 2016-08 with Discharge Permit LLDA/DENR.
 - vi. At least 2 water sampling from the accredited supplier by DENR

2. Project Management and Implementation During Retrofit

- a. The winning supplier/bidder shall act as Project manager and implementor, also shall manage the implementation of the Upgrading or modify the existing STP in accordance to the Philippine Standards; DAO No. 2016-08.
- b. The winning supplier/bidder as Project Manager and implementor shall see to it that the proposed retrofitting design diagram is well executed and implemented in accordance with the construction standards. Ensuring that the proposed new system is functional in accordance to the DAO No. 2016-08.
- c. The winning/supplier/bidder as the Project Manager shall likewise provide the monthly reports relative to the progress of the works being implemented in accordance to the approved GANTT-CHART.

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- d. The winning supplier/bidder as Project Manager shall provide a terminal report to the Management for the completion and acceptance of the project.
- e. The winning supplier/bidder as implementor shall coordinate properly with General Services Division (GSD) for any clarifications or updates during the implementation of the project.
- f. The winning supplier/bidder as implementor shall clean all waste materials from the site and turn-over the same to the General Services Division (GSD) with complete listings and description duly signed by the project manager assigned. All other waste not covered by COA Rules shall regularly be disposed by the winning supplier/bidder with approved gate pass.
- g. Ensure NKTl sewage system is uninterrupted during the construction / retrofitting period.
- h. The winning bidder have to submit also their estimated operating expenses (OPEX) based on their offered design or system. The excess power consumption (excluding lighting) that will be utilized over their submitted OPEX, shall be charged to the winning bidder.

3. Safety Measurement

The winning supplier/bidder as Project Manager shall responsibility to take extra precautions in the process of implementing the project. As a matter of policy, the ENGINEER is required to install warning signs for the safety of the general public. The concerned contractor will be held personally liable for any accidents that may occur during the execution of the project and as specified in the submitted Health and Safety Plan.

4. Other Works

- a. Cleaning and Hauling Debris
- b. All demolished/removed materials that are still usable will not be allowed to be used and shall be properly stocked, inventoried and turned over to in writing to the GSD.
- c. The winning supplier/bidder shall take due care to protect existing structures which will be affected and unaffected by the work to be implemented.
- d. The winning/bidder shall at all times keep the premises free from the accumulation of waste or rubbish, cause by his subordinates or work. Upon completion of each item of work, they shall remove all rubbish materials from and within the site including all his tools, scaffolding and surplus materials.

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IV. DELIVERABLES TIMELINE

1. Design and Project Management and Implementation for (6) months

- a. The proponent or winning designer shall deliver the retrofitting design diagram, complete rehabilitation plans with readable and complete details, signed and sealed by the designer and registered engineers concerned including all calculations, complete set of material specifications for the approval of the plans prior to implementation, including plans needed in all permits. All permits shall include the LGU, DENR, LLDA and other governing bodies.
- b. The design plans to be produced (signed and sealed by the winning bidder authorized professionals to be delivered and submitted to all concerned offices and agencies shall contain full details as necessary, but not limited to the following:
 - Detailed Architectural and Engineering Design on white print size 20"x30"
 - STP system printed diagram (colored) on sintra board (4"x3")
 - Engineer's Report, duly signed;
 - Complete Design Calculations, duly signed and sealed;
 - Complete Technical Specifications and Compilations or list of the designed tools and equipment;
 - Other necessary reports or submitting as deemed necessary;
- c. The winning designer acting as project manager shall submit all the copies of the required reports to NKTl.
- d. The winning designer as Project Manager shall submit the monthly progress report as per GANTT-CHART.
- e. The Project Manager shall submit the monthly reports including incidental reports needed, relative to the progress of the works being implemented.
- f. Submission of complete and correct As-Built plans, signed and sealed.
- g. The winning bidder submit the power consumption of their system.

2. Testing and commissioning, process proving and training for (3) Three Months

- a. The winning proponent/ designer shall submit the prepared reports needed and to be submitted to DENR and LLDA to be signed by NKTl's PCO and Managing Head.
- b. Final acceptance and turn-over shall be issued upon completion of testing and commissioning, process proving and the release of first DENR/LLDA discharge permit

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3. Warranty Period

- a. Warranty shall cover units, parts, services and workmanship for at least two (2) years from the date of release of discharge permit / final acceptance.
- b. Contractor shall also conduct monthly preventive maintenance service during the two (2) year warranty of their installed system and equipment.
- c. During the warranty period, all part of their scope for the maintenance of the system that includes repair or replacement of defective parts within at least Two (2) years period at no cost to NKTl.
- d. Shall act as a consultant during the same period for 2 years management of STP with regards to enable tapping of additional building sewer line.
- e. The contractor shall ensure two (2) successful discharge permit issuance during the warranty of two (2) years.

V. APPROVED BUDGET FOR THE CONTRACT:

- 1. Design and Build of Upgrading or modify the existing STP with capacity of 1500 cubic meter
- 2. Project Implementation, Permits, Management and Testing and Commissioning

(see approved ABC)

VI. ADMINISTRATIVE REQUIREMENTS FOR THE RELEASE OF FINAL PAYMENT:

- 1. Final payment shall only be processed once discharge permit is released by LLDA or STP discharges have already complied to the DAO 2016-08 requirements and 100% completion of the project based on scope of works.

Conforme:
Name: _____
Legal Capacity: _____
Signature: _____
Duly authorized to sign the Bid for and behalf of: _____

CONFORME:
<i>(Company Name)</i>
<i>(Name and Signature of Authorized Representative)</i>

Revised Section VIII. Bill of Quantities

Category No.	Particulars	UOM	QTY.	APPROVED BUDGET COST	Supplier	BID PROPOSAL	Remarks
				AMOUNT		AMOUNT	
1. GENERAL REQUIREMENTS		1	lot	1,500,000.00			
<p>Note: The bidder shall make a detailed breakdown of the components of this specific item</p> <p>The treatment facility using STP System shall be capable to comply with the Biochemical Oxygen Demand (BOD), Chemical Oxygen Demand (COD), Total Suspended Solids (TSS), pH and O/G including other parameters set under DENR DAO 2016-08 based on the type C Classification. Engineering design using STP and Build incorporating related disciplines from process, Mobilization & Demobilization, Temporary Facilities, Cleaning Works, Dismantling of obsolete electro-mechanical component, Painting works of STP chamber outside perimeter, Pumps Room and railings, controls and instrumentations.</p> <p>Breakdown: -Engineering, Drawing and Design -Mobilization & Demobilization -Management and supervision -Cleaning Works -Coring Works -Dismantling of obsolete electro-mechanical component -Waste Water Effluent Laboratory Testing *Biochemical Oxygen Demand (BOD) *Chemical Oxygen Demand (COD) *Total Suspended Solids (TSS) *pH and *Oil Grease *Color</p> <p>Including other parameters set under DENR DAO 2016-08 based on the type C Classification *Fluoride *Ammonia *Phosphate *Nitrate</p>							

	*Surfactant Accreditation for Discharge Permit by LLDA						
2. INSTRUMENTATION, EQUIPMENT AND MATERIALS PRODUCT COVERED BY STP SYSTEM		1	lot	12,000,000.00			
	Note: The bidder shall make a detailed breakdown of the components of this specific item						
	Providing all electro-mechanical equipment needed for STP System. Control Panel, Pumps, Electrical Materials, Plumbing Materials, Roofing(Clear polycarbonate solid sheets with Steel trusses), Piping work, tools and instrumentation controls. Breakdown: -As per STP design offered						
3. LABOR for INSTALLATION OF STP SYSTEM, MECHANICAL, ELECTRICAL AND INSTRUMENTATION		1	lot	3,000,000.00			
	Note: The bidder shall make a detailed breakdown of the components of this specific item						
	Installation of STP System and all electro-mechanical equipment, Filtrations, Control Panel, Pumps, Electrical Materials, tools and instrumentation controls.						
4. CIVIL WORKS AND MISCELLANEOUS WORKS		1	lot	2,000,000.00			
	Note: The bidder shall make a detailed breakdown of the components of this specific item						
	A.						
	The scope includes re-assessment of the concrete structures and possible corrections on walls with cracks, re-application of waterproofing agent or lining, replacement of existing flow meters and possible installation of additional (2) two if deemed necessary. Re-painting of the concrete structures inside and out. and no additional concrete structures if possible due to lack of space at site.	1	lot	1,500,000.00			
	B.						

	Labor for civil work and miscellaneous works: -Piping's works (Plumbing) -Roofing system -Repainting -Structural Retrofitting -Labeling and Signages *Name of Building *OSH requirements Signages *Installation of Treatment Process Diagram	1	lot	500,000.00			
5. CONSUMABLES PARTS		1	lot	3,000,000.00			
<i>Note: The bidder shall make a detailed breakdown of the components of this specific item</i>							
	Consumables: (Bidders to specify Quantities, Unit of measurement and Specific price) -As per design offered						
6. START-UP, TESTING AND COMMISSIONING (INCLUDE IN ITEM 5) for 3 MONTHS 1. Utilities 2. Manpower		1	lot	500,000.00			
APPROVED BUDGET FOR THE CONTRACT (ABC) The ABC includes all indirect cost including profit, mark-up and 12% VAT				22,000,000.00			

Note: The bid offer shall not exceed the cost per category stated above.

Please accomplish the attached Annex A (Summary Costing of CAPEX & OPEX).

 Printed Name of Company

 Signature

 Address

 Printed Name and Designation