

THE DEMOCRATIC SOCIALIST REPUBLIC OF SRI LANKA

**MINISTRY OF AGRICULTURE, LIVESTOCK, LANDS AND
IRRIGATION**



PROJECT MANAGEMENT UNIT

Integrated Watershed & Water Resources Management Project

PROCUREMENT OF WORKS UNDER OPEN COMPETITIVE BIDDING - NATIONALLY

Bidding Document

for

**Modernization and Instrumentation of channel system of
Sagamam Irrigation scheme in Thambiluvil Division, Ampara
range under IWWRMP.**

Contract No: LK-MoMDE-465692-CW-RFB

Issued: 17th February, 2025

<i>Bidder Number</i>	
<i>Name</i>	
<i>Address</i>	



MINISTRY OF AGRICULTURE, LIVESTOCK, LANDS AND
IRRIGATION



INVITATION FOR BIDS

Integrated Watershed and Water Resources Management Project (IWWRMP)

Project No: P166865, Loan No: IDA-6621-LK

1. The Government of the Democratic Socialist Republic of Sri Lanka has applied for financing from the International Development Association (World Bank) towards the cost of **Integrated Watershed and Water Resources Management Project (IWWRMP Project)** and it intends to apply part of the proceeds of this credit to payment under the contracts mentioned in the schedule below.
2. Project Director of IWWRMP Project, invites sealed bids from eligible and qualified bidders for the following **works** as given in the Table 01, on behalf of the Chairman, Project Procurement Committee of Integrated Watershed and Water Resources Management Project.

Table 01

No.	Contract No.	Description of Work	Experience / CIDA Registration	Bid Security and Validity Period	Non-Refundable Bidding Document Fee (Rs.)	Average annual volume of construction work & The minimum amount of liquid assets and/or credit facilities (Rs.)
1	LK-MOMDE-465688-CW-RFB	Strengthening of tank bund of Sagamam tank including Rip-Rap Protection and Improvements to Sillikody Anicut in Sagamam Irrigation Scheme (Contract Period: 365 days)	Grade: C5 or above Specialty: Irrigation & Drainage Canals	Bid security value: Rs. 1,350,000.00 Validity: Up to 13.08.2025 (147 days)	18,500.00	135.00 Mn & 22.5 Mn
2	LK-MOMDE-465689-CW-RFB	Reconstruction of Panichchayady Anicut in Sagamam Irrigation Scheme (Contract Period: 365 days)	Grade: C6 or above Specialty: Irrigation & Drainage Canals	Bid security value: Rs. 720,000.00 Validity: Up to 13.08.2025 (147 days)	12,100.00	72.00 Mn & 12 Mn
3	LK-MOMDE-465690-CW-RFB	Construction of Uruhudamoolai branch anicut in Sagamam Irrigation Scheme (Contract Period: 365 days)	Grade: C6 or above Specialty: Irrigation & Drainage Canals	Bid security value: Rs. 555,000.00 Validity: Up to 13.08.2025 (147 days)	9,600.00	55.50 Mn & 9.2 Mn
4	LK-MOMDE-465692-CW-RFB	Modernization and Instrumentation to channel system of Sagamam Irrigation Scheme (Contract Period: 365 days)	Grade: C6 or above Specialty: Irrigation & Drainage Canals	Bid security value: Rs. 750,000.00 Validity: Up to 13.08.2025 (147 days)	12,500.00	75.00 Mn & 12.5 Mn

No.	Contract No.	Description of Work	Experience / CIDA Registration	Bid Security and Validity Period	Non-Refundable Bidding Document Fee (Rs.)	Average annual volume of construction work & The minimum amount of liquid assets and/or credit facilities (Rs.)
5	LK-MOMDE-317179-CW-RFB	Rehabilitation of Welimaruthamadu Tank Downstream (Contract Period: 180 Days)	Grade: C6 or above Specialty: Irrigation & Drainage Canals	Bid security value: Rs. 690,000.00 Validity: Up to 12.08.2025 (147 days)	11,600.00	69.00 Mn & 11.5 Mn
6	LK-MOMDE-463537-CW-RFB	Improvements of Ponnalai SWE Bund – Retender (Contract Period: 180 days)	Grade: C6 or above Specialty: Irrigation & Drainage Canals	Bid security value: Rs. 258,000.00 Validity: Up to 01.07.2025 (105 days)	5,100.00	26.00 Mn & 4.3 Mn

- To be eligible for a contract award, the successful bidder shall not have been blacklisted and shall meet the requirements in the Bidding Document. Further the successful bidder shall have valid registration Grade in Construction Industry Development Authority (CIDA) as mentioned in above Table. Bidders are free to bid for more than one package, but selections will be made according to the capacity limits in CIDA registration.
- The Bidding documents may be available for inspection in the <https://www.iwrrmp.lk/web/procurement/section/procurement-notice> website for references.
- Interested bidders may obtain further information from **Senior Project Specialist (Procurement & Contracts)**, IWWRM Project, 2nd Floor, Mahaweli Centre Building, No. 96, Ananda Cumaraswamy Mawatha, Colombo 07 and inspect the bidding documents at the same address given above during 9.00 a.m. to 3.00 p.m. from **17.02.2025 to 18.03.2025** (on working Days) by prior notification. (**Contact No: 0112691163**).
- Prospective Bidders can obtain the Bidding Documents by a written request on a company/firm letter head, addressed to the Project Director, IWWRM Project, 2nd Floor, Mahaweli Centre Building, No. 96, Ananda Cumaraswamy Mawatha, Colombo 07. from **17.02.2025** up to **18.03.2025** from **9.30 hrs. to 15.00 hrs.** only on working days by **prior notification** (Contact No. 011-2691163), on payment of a non-refundable bid document fee as given above per set of Bidding Documents (Please refer Table: 01 for the amount) on Cash or sending the written request by email to iwrrmp@slt.net.lk with the scan copy of Bank Payment Slip paid the non-refundable bidding documents fee to the Integrated Watershed and Water Resources Management Project Bank Account no. of **7042633** at Bank of Ceylon, Hyde Park Branch.
- The pre-bid meeting and site visit will be conducted as mentioned in table 02. Bidders are requested to inspect the sites with the assistance of the relevant officer.

Table 02

No.	Contract No.	Site visit	Pre-bid meeting	Bid Closing and Opening (Date & Time)
1	LK-MOMDE-465688-CW-RFB	Date: 06/03/2025 Time: 10.00 a.m.	Date: 07/03/2025 Time: 2.00 p.m. Conference room, IWWRMP 2 nd Floor, Mahaweli Centre Building, No. 96, Ananda Cumaraswamy Mawatha, Colombo 07.	Date: 19/03/2025 Time: 2.00 p.m.
2	LK-MOMDE-465689-CW-RFB	<u>Location:</u> Divisional Irrigation Engineer,		
3	LK-MOMDE-465690-CW-RFB	Divisional Irrigation Engineer's Office, Thambiluvil Division,		
4	LK-MOMDE-465692-CW-RFB	Pottuvil Road, Thambiluvil		
5	LK-MOMDE-317179-CW-RFB	Date: 05/03/2025 Time: 10.00 a.m. <u>Location:</u> Divisional Irrigation Engineer, Divisional Irrigation Engineer's Office, Mannar Division, A32 Road, Pallamadu, Mannar.	Date: 06/03/2025 Time: 10.00 a.m. Conference room, IWWRMP 2 nd Floor, Mahaweli Centre Building, No. 96, Ananda Cumaraswamy Mawatha, Colombo 07.	Date: 18/03/2025 Time: 2.00 p.m.
6	LK-MOMDE-463537-CW-RFB	Date: 04/03/2025 Time: 10.00 a.m. <u>Location:</u> Irrigation Engineer, Irrigation Engineer's Office, Jaffna Division, Provincial Irrigation Department, Pannai Road, Jaffna	Date: 05/03/2025 Time: 2.00 p.m. Conference room, IWWRMP 2 nd Floor, Mahaweli Centre Building, No. 96, Ananda Cumaraswamy Mawatha, Colombo 07.	Date: 18/03/2025 Time: 2.00 p.m.

8. All pages of the Bidding Documents shall be signed by the bidder and affixed to his seal.
9. Completed Sealed Bid with **duplicate**, clearly marked the contract name and the number on the top left corner of the envelope may be dispatched either by Registered Post or hand delivered or courier to the **Project Director, IWWRM Project, 2nd Floor, Mahaweli Centre Building, No. 96, Ananda Coomaraswamy Mawatha, Colombo 07** as specified in the **Table 02**. Bids will be opened immediately thereafter. Bidders or their authorized representatives, not exceeding two (2) in numbers, are permitted to be present at the opening of bids.

Project Director,
Integrated Watershed and Water Resources Management Project
2nd Floor, Mahaweli Centre Building,
No.96, Ananda Coomaraswamy Mawatha,
Colombo 07.
13.02.2025

Section - 1

Instructions to Bidders (ITB)

**Available in ICTAD Publication Number ICTAD/SBD/02
Second Edition January 2007**

Instruction to Bidders shall be read in conjunction with Bidding Data under Section 2

Section - 2

Bidding Data

**Available in ICTAD Publication Number ICTAD/SBD/02
Second Edition January 2007**

This section shall be read in conjunction with Section 1 – Instructions to Bidders, and is intended to provide specific information in relation to corresponding clauses in Section 1. Whenever there is a discrepancy, the provisions in Section 2- Bidding Data shall supersede those provided in the Section 1 – Instruction to Bidders

Section 2 - Bidding Data

Instructions to Bidders Clause Reference	Entry
1.1	<p>Employer's Name and Address</p> <p>Name : <i>Project Director,</i> <i>Integrated Watershed & Water Resources Management Project</i></p> <p>Address: <i>2ndFloor, No.96, Ananda Coomaraswamy Mawatha, Colombo 07.</i></p>
1.1	<p>Scope of Works</p> <p><i>Modernization and Instrumentation of channel system of Sagamam Irrigation scheme in Thambiluvil Division, Ampara range under IWWRMP</i> which including</p> <ul style="list-style-type: none"> i. Improvements to existing irrigation structures ii. Construction of Irrigation structures iii. Fixing of gates and other associates for irrigation structures iv. Construction of channels v. Fixing of flow measuring device <p>Located at Sagamam scheme area in Ampara District</p>
1.2	<p>Time for Completion</p> <p>The Time for Completion for the whole of works shall be 365 Calendar Days</p>
2.1	<p>Source of funds</p> <p>The source of funds is <i>International Development Association (IDA) – World Bank</i></p>
3	<p>Substitute by the following:</p> <p>3.1 The World Bank requires that the Government of Sri Lanka (including beneficiaries of World Bank financing); bidders (applicants/proposers), consultants, contractors and suppliers; any sub-contractors, sub-consultants, service providers or suppliers; any agents (whether declared or not); and any of their personnel, observe the highest standard of ethics during the procurement process, selection and contract execution of World Bank-financed contracts, and refrain from Fraud and Corruption.</p> <p>3.2 The World Bank requires compliance with its policy in regard to corrupt and fraudulent practices as set forth below.</p> <p>3.3 In pursuance to this policy, The World Bank:</p> <ul style="list-style-type: none"> a. Defines, for the purposes of this provision, the terms set forth below as follows: <ul style="list-style-type: none"> i. “corrupt practice” is the offering, giving, receiving, or soliciting, directly or indirectly, of anything of value to influence improperly the

	<p>actions of another party;</p> <p>ii. “fraudulent practice” is any act or omission, including misrepresentation, that knowingly or recklessly misleads, or attempts to mislead, a party to obtain financial or other benefit or to avoid an obligation;</p> <p>iii. “collusive practice” is an arrangement between two or more parties designed to achieve an improper purpose, including to influence improperly the actions of another party;</p> <p>iv. “coercive practice” is impairing or harming, or threatening to impair or harm, directly or indirectly, any party or the property of the party to influence improperly the actions of a party;</p> <p>v. “obstructive practice” is:</p> <p>a. deliberately destroying, falsifying, altering, or concealing of evidence material to the investigation or making false statements to investigators in order to materially impede a World Bank investigation into allegations of a corrupt, fraudulent, coercive, or collusive practice; and/or threatening, harassing, or intimidating any party to prevent it from disclosing its knowledge of matters relevant to the investigation or from pursuing the investigation; or</p> <p>b. acts intended to materially impede the exercise of the World Bank’s inspection and audit rights provided for under paragraph 3.4 below.</p> <p>b. rejects a proposal for award if the World Bank determines that the firm or individual recommended for award, any of its personnel, or its agents, or its subconsultants, sub-contractors, service providers, suppliers and/ or their employees, has, directly or indirectly, engaged in corrupt, fraudulent, collusive, coercive, or obstructive practices in competing for the contract in question;</p> <p>c. In addition to the legal remedies set out in the relevant Legal Agreement, may take other appropriate actions, including declaring mis-procurement, if the World Bank determines at any time that representatives of the Government of Sri Lanka or of a recipient of any part of the proceeds of the loan engaged in corrupt, fraudulent, collusive, coercive, or obstructive practices during the procurement process, selection and/or execution of the contract in question, without taking timely and appropriate action satisfactory to the World Bank to address such practices when they occur, including by failing to inform the World Bank in a timely manner at the time they knew of the practices;</p> <p>d. Sanctions, pursuant to the World Bank’s Anti-Corruption Guidelines and in accordance with its prevailing sanctions policies and procedures as set forth in the WBG’s Sanctions Framework any firm or individual – determined at any time by the World Bank to have engaged in Fraud and Corruption in connection with the procurement process, selection and/or execution of a World Bank-financed contract;</p> <p>e. Requires that, for World Bank-financed operations to be implemented utilizing national procurement arrangements, as well as PPPs, agreed by the World Bank, bidders (applicants/proposers) and consultants submitting bids/proposals will be required to accept the application of, and agree to comply with, the Anti-Corruption Guidelines during the procurement process, selection and/or contract execution, including the World Bank’s right to sanction as set</p>
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	<p>forth in paragraph 2.2 d., and the World Bank’s inspection and audit rights as set forth in paragraph 3.4. The Employer shall consult and apply the World Bank Group’s lists of firms and individuals suspended or debarred. In the event the Employer signs a contract with a firm or an individual suspended or debarred by the World Bank Group, the World Bank does not finance the related expenditures and may apply other remedies as appropriate; and</p> <p>g. Requires that, when a United Nations (UN) agency is selected to provide goods, works, non-consulting services and technical assistance, the above provisions regarding sanctions on Fraud and Corruption shall apply in their entirety to all contractors, consultants, sub-contractors, sub-consultants, service providers, suppliers, and their employees, that signed contracts with the UN agency.</p> <p>3.4 In further pursuance of this policy, Bidders shall permit and shall cause its agents (whether declared or not), sub-contractors, sub-consultants, service providers, or suppliers and any personnel thereof, to permit the World Bank to inspect all accounts, records and other documents relating to any prequalification process, bid submission, and contract performance (in the case of award), and to have them audited by auditors appointed by the World Bank.</p>
4.1	<p>Qualification Information</p> <p>The following information shall be provided in Section 9 - Schedules:</p> <ul style="list-style-type: none"> • ICTAD registration <ul style="list-style-type: none"> Registration number Grade Specialty Expiry date • VAT registration number • Attach construction program • Attach legal status (Sole proprietor, Partnership, Company etc.) • Attach authentication for signatory • Total monetary value of construction work performed for each of the last five years • Experience in works of a similar nature and size for each of the last five years • Construction equipment • Staffing • Attach Work plan and methods;
4.2 (a)	<p>CIDA registration required</p> <p>The registration required; Specialty: <i>Irrigation and Drainage Canals</i> Grade: <i>C 6 or above</i></p>
4.2 (b)	<p>Average annual volume of construction work performed in last 5 years</p> <p>The average annual volume of construction work performed in the last five years shall be at least <i>Rs. 75.0 million</i></p>

4.2 (c)	Experience in works of a similar nature and site for each of the last five years shall be at least Rs. 34.0 Million (Excluding VAT)																																							
4.2 (d)	<p>Essential equipment</p> <p>Proposals for the timely acquisition (own, lease, hire, etc.) of the following essential equipment shall be;</p> <table><tr><th>No.</th><th>Equipment Type and Characteristics</th><th>Min. Number Required</th></tr><tr><td>1</td><td>Crawler excavator - 120 HP, Bucket capacity 1.0 m³</td><td>1</td></tr><tr><td>2</td><td>Loader backhoe</td><td>1</td></tr><tr><td>3</td><td>Dozer D4D, D6</td><td>1</td></tr><tr><td>4</td><td>Concrete mixers 1 m³</td><td>5</td></tr><tr><td>5</td><td>Tractor with trailers</td><td>5</td></tr><tr><td>6</td><td>Porker vibrators</td><td>5</td></tr><tr><td>7</td><td>Transport equipment / Tipper</td><td>3</td></tr><tr><td>8</td><td>Water Bowser with sprinkler 5000 L Capacity</td><td>2</td></tr><tr><td>9</td><td>Mobile Generator</td><td>2</td></tr><tr><td>10</td><td>Plate Compactor</td><td>3</td></tr><tr><td>11</td><td>Rammer</td><td>3</td></tr><tr><td>12</td><td>Vibrating Sheep foot roller not less than 10 Ton</td><td>1</td></tr></table>	No.	Equipment Type and Characteristics	Min. Number Required	1	Crawler excavator - 120 HP, Bucket capacity 1.0 m ³	1	2	Loader backhoe	1	3	Dozer D4D, D6	1	4	Concrete mixers 1 m ³	5	5	Tractor with trailers	5	6	Porker vibrators	5	7	Transport equipment / Tipper	3	8	Water Bowser with sprinkler 5000 L Capacity	2	9	Mobile Generator	2	10	Plate Compactor	3	11	Rammer	3	12	Vibrating Sheep foot roller not less than 10 Ton	1
No.	Equipment Type and Characteristics	Min. Number Required																																						
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4	Concrete mixers 1 m ³	5																																						
5	Tractor with trailers	5																																						
6	Porker vibrators	5																																						
7	Transport equipment / Tipper	3																																						
8	Water Bowser with sprinkler 5000 L Capacity	2																																						
9	Mobile Generator	2																																						
10	Plate Compactor	3																																						
11	Rammer	3																																						
12	Vibrating Sheep foot roller not less than 10 Ton	1																																						

4.2 (e)	<div>Qualifications and experience of the Contract Manager and other Key personnel</div> <table><tr><th>Key personnel</th><th>Qualifications</th><th>No. of Position</th><th>Experience</th><th>Similar work Experience</th></tr><tr><td>1. Contract Manager</td><td>B.Sc. Engineering Degree or equivalent qualification in a Relevant field</td><td>1</td><td>06 yrs</td><td>03 yrs</td></tr><tr><td>2. Site Engineer</td><td>B.Sc. (Civil Engineering) degree or equivalent</td><td>1</td><td>05yrs</td><td>03yrs</td></tr><tr><td>3.Engineering Assistant (Civil)</td><td>NDT or equivalent</td><td>1</td><td>03 yrs</td><td>01 yr</td></tr><tr><td>4. Quantity Surveyor</td><td>Q.S Degree or equivalent qualification in Relevant field</td><td>1</td><td>03 yrs</td><td>01 yrs</td></tr><tr><td>5.Environmental and Social officer</td><td>Degree or equivalent qualification in Relevant field</td><td>1</td><td>03 yrs</td><td>01 yr</td></tr><tr><td>6.Health and Safety officer</td><td>Degree or equivalent qualification in Relevant field</td><td>1</td><td>03 yrs</td><td>01 yr</td></tr><tr><td>7. Work Supervisor (Civil)</td><td>NCT</td><td>2</td><td>03 yrs</td><td>01 yrs</td></tr></table> <div>The Bidder must demonstrate that it will have suitably qualified Contract Manager and suitably qualified other key personnel in adequate numbers, as described in the table above.</div>	Key personnel	Qualifications	No. of Position	Experience	Similar work Experience	1. Contract Manager	B.Sc. Engineering Degree or equivalent qualification in a Relevant field	1	06 yrs	03 yrs	2. Site Engineer	B.Sc. (Civil Engineering) degree or equivalent	1	05yrs	03yrs	3.Engineering Assistant (Civil)	NDT or equivalent	1	03 yrs	01 yr	4. Quantity Surveyor	Q.S Degree or equivalent qualification in Relevant field	1	03 yrs	01 yrs	5.Environmental and Social officer	Degree or equivalent qualification in Relevant field	1	03 yrs	01 yr	6.Health and Safety officer	Degree or equivalent qualification in Relevant field	1	03 yrs	01 yr	7. Work Supervisor (Civil)	NCT	2	03 yrs	01 yrs
Key personnel	Qualifications	No. of Position	Experience	Similar work Experience																																					
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4.2 (f)	<div>Liquid assets and/or credit facilities required</div> <div>The minimum amount of liquid assets and/or credit facilities, net of other contractual commitments and exclusive of any advance payments that may be made under the Contract, shall be not less than Rs. 12.5 million</div>																																								
8.3	<div>The employer may conduct a site visit concurrently with the pre-bid meeting referred to in Clause 19.</div> <div>The site visit will be conduct as follow.</div> <div>Date & Time : 6th March 2025 at 10.00 AM Divisional Irrigation Engineer, Divisional Irrigation Engineer's Office, Thambiluvil Division, Pottuvil Road, Thambiluvil.</div>																																								
10.1	<div>Clarification of Bidding Documents</div> <div>Employer’s address for clarification of bidding documents is:</div> <div>Name of Officer: Project Director, IWWRMP</div> <div>Address: 2nd Floor, Mahaweli Centre Building,</div>																																								

	<p>No. 96, Ananda Coomaraswamy Mawatha, Colombo 07.</p> <p>Phone: 0112691163</p> <p>Facsimile: 0112691163</p> <p>E-mail: iwwrmp@sltnet.lk</p>
<p>13.1(A) (j) 13.1(B) (d)</p>	<p>The Bidder shall submit the following additional documents in its Bid:</p> <p>Code of Conduct (ESHS)</p> <p>The Bidder shall submit its Code of Conduct that will apply to the Contractor's Personnel (as defined in Sub-clause 1.1.2.7 of the GC), to ensure compliance with its Environmental, Social, Health and Safety (ESHS) obligations under the contract. <i>[Note: Complete and include the risks to be addressed by the Code in accordance with Schedule 10, e.g. risks associated with: labor influx, spread of communicable diseases, sexual harassment, gender-based violence, sexual exploitation and abuse, illicit behavior and crime, and maintaining a safe environment etc.]</i></p> <p>In addition, the Bidder shall detail how this Code of Conduct will be implemented. This will include: how it will be introduced into conditions of employment/engagement, what training will be provided, how it will be monitored, and how the Contractor proposes to deal with any breaches.</p> <p>The Contractor shall be required to implement the agreed Code of Conduct.</p> <p>Management Strategies and Implementation Plans (MSIP) to manage the (ESHS) risks</p> <p>The Bidder shall submit Management Strategies and Implementation Plans (MSIP) to manage the following key Environmental, Social, Health and Safety (ESHS) risks.</p> <p>The Contractor shall be required to submit for approval, and subsequently implement, the Contractor's Environment and Social Management Plan (C-ESMP), in accordance with the Particular Conditions of Contract Sub-Clause 4.1, which includes the agreed Management Strategies and Implementation Plans described here.</p> <p><i>[Note: The extent and scope of these requirements should reflect the significant ESHS risks or requirements set out in Schedule 10 as advised by Environmental/Social specialist/s. The key risks to be addressed by the Bidder should be identified by Environmental/Social specialist/s, for example, from the Environmental and Social Impact Assessment (ESIA), Environmental and Social Management Plan (ESMP), Resettlement Action Plan (RAP), and/or Consent Conditions (regulatory authority conditions attached to any permits or approvals for the project), up to a maximum of four. The risks may arise during mobilization or construction phases, and may include construction traffic impacts on the community, pollution of drinking water, depositing on private land and impacts on rare species etc. The management strategies and/or implementation plans to address these could include, as appropriate: a mobilization strategy, a strategy for obtaining consents/permits, a traffic management plan, water resource protection plan, bio-diversity protection plan and a strategy for marking and respecting work site boundaries etc.]</i></p>
14.4	<p>Adjustments for change in cost</p> <p>The Contract is subjected to price adjustment</p>
15.1	<p>Currency of Bid</p> <p>Rates and prices shall be quoted by the bidders entirely in <i>Sri Lankan rupees.</i></p>

16.1	Period of Bid validity: The Bid shall be valid up to 119 days from the bid submission deadline date (16 th July 2025).
17.1	Amount of Bid security: The amount of Bid Security is Sri Lanka Rupees: Seven hundred and fifty thousand Sri Lanka Rupees (LKR 750,000.00) The Bid security shall, be in the form of an unconditional bank guarantee issued from a reputed bank recognized by the Central Bank of Sri Lanka bank located in Sri Lanka. The format of the bid security should be in accordance with the specimen form of bid security included in the bidding document (Section 11).
17.2	Validity of Bid Security The Bid Security shall be valid up to 147 days from the date of closing of the bids (excluding closing date) 13th August 2025 .
17.5	The bid security of the successful bidder will be returned when the bidder has signed the Agreement and furnished the required Performance Securities including the Environmental, Social, Health and Safety (ESHS) Performance Security pursuant to ITB 35.1.
17.6 (c) (ii)	Furnish the required Performance Securities including the Environmental, Social, Health, and Safety (ESHS) Performance Security pursuant to ITB 35.1.
19.1	Pre-Bid meeting Pre-Bid meeting <i>will be held</i> at the below mentioned Venue, time and date. Date: 7th March 2025 Time: 2.00 pm <i>Integrated Watershed & Water Resources Management Project</i> <i>2nd Floor, Mahaweli Centre Building,</i> <i>No.96, Ananda Coomaraswamy Mawatha,</i> <i>Colombo 07.</i>
21.2 (a)	Employer's Address for the purpose of bid submission is: <i>Project Director</i> <i>Integrated Watershed & Water Resources Management Project</i> <i>2nd Floor, Mahaweli Centre Building,</i> <i>No.96, Ananda Coomaraswamy Mawatha,</i> <i>Colombo 07.</i>
21.2 (b)	Identification number of Contract Identification Number of the Contract is: LK-MoMDE-465692-CW-RFB
22.1	Deadline for submission of Bids Deadline for submission of Bids: 19th March 2025 Time: 2:00 pm

25.1	<p>Bid opening</p> <p>Venue, time, and date of bid opening.</p> <p><i>2st Floor, Mahaweli Centre Building, No.96, Ananda Coomaraswamy Mawatha, Colombo 07.</i></p> <p>Time: 2:00 pm Date: 19th March 2025</p>
31.1	<p>Preference for Domestic Bidders</p> <p>Not Applicable</p>
32	<p>If the Procurement is within the authority limit of a MPC:</p> <p>After evaluation of Bids in accordance with the procedures described under Clauses 28, 29, 30 and 31, the Employer will inform to all the bidders in writing the selection of the successful bidder and the intention of contract award to such bidder. The unsuccessful bidders if they so wish, within one week of such notice may make representation to the Secretary to the Line Ministry at the address given below. Such representation shall be self-contained to enable the Secretary to arrive at a conclusion and a cash deposit to amount given below shall be made. The Employer may request the bidder who had made representation to submit further evidence during the investigation of such representation. The cash deposit will be forfeited unless the Employer has changed the original contract award decision in favour of the bidder who has made such representation.</p> <p>Address:</p> <p>Cash Deposit: Rupees 25,000/=</p> <p>If the Procurement is within the authority limit of PPC:</p> <p>After evaluation of Bids in accordance with the procedures described under Clauses 28, 29, 30 and 31, the Employer will inform to all the bidders in writing the selection of the successful bidder and the intention of contract award to such bidder. The unsuccessful bidders if they so wish, within one week of such notice may make representation to the Secretary to the Line Ministry at the address given below. Such representation shall be self-contained to enable the Secretary to arrive at a conclusion and a cash deposit to amount given below shall be made. The Employer may request the bidder who had made representation to submit further evidence during the investigation of such representation. The cash deposit will be forfeited unless the</p>

	<p>Employer has changed the original contract award decision in favour of the bidder who has made such representation.</p> <p>Address:</p> <p>Cash Deposit: Rupees 10,000/=</p>
35.1	<p>Amount of Performance Security</p> <p>The Standard Form of Performance Security acceptable to the Employer shall be a Guarantee from an Agency accepted and stated in the Procurement Guidelines.</p> <p>The amount of the Performance Security is 7% of the Initial Contract Price.</p> <p>The Performance Security shall be valid until 28 Days beyond the Time for Completion (<i>date</i>).</p> <p>In addition, the successful Bidder <i>shall</i> submit an Environmental, Social, Health and Safety (ESHS) Performance Security within 14 Days of receipt of the Letter of Acceptance.</p> <p>The amount of the Environmental, Social, Health and Safety (ESHS) Performance Security is 3% of the Initial Contract Price.</p> <p>The Environmental, Social, Health and Safety (ESHS) Performance Security shall be valid until 28 days beyond the defects liability period (<i>date</i>).</p> <p>Bid security shall only be an unconditional guarantee issued by a bank recognized by the Central Bank of Sri Lanka or Credit Guarantee Fund (CGF) in accordance with the format given.</p>
37	<p>Fees and types of reimbursable expenses to be paid to the Adjudicator shall be on a case-to-case basis and shall be shared equally by the Contractor and the Employer.</p>
37.1	<p>For contracts with estimated costs equal or exceeding Rs. 500 mn delete Clause 37 Adjudicator and insert the following;</p> <p>Dispute Adjudication Board (DAB)</p> <p>Within 28 Days from the Commencement Date each of the Parties shall appoint one member to serve on the Dispute Adjudication Board (DAB). The Parties shall consult both these members and shall agree upon the third member, who shall be appointed to act as the chairman.</p> <p>If either Party fails to nominate a member to the DAB or the Parties fail to agree upon the third member or the Parties fail to agree on the appointment of a replacement person to the DAB, then upon the request of either or both Parties the Institute for Construction Training and Development (ICTAD) shall appoint the relevant member to the DAB.</p>

Section - 3

Conditions of Contract

**Available in ICTAD Publication Number ICTAD/SBD/02
Second Edition January 2007**

Condition of Contract shall be read in conjunction with the
Section 4 – Contract Data

Section - 4

Contract Data

This section shall be read in conjunction with Section 3 – Condition of Contract, and is intended to provide specific information in relation to corresponding clauses in Section 3. Whenever there is a discrepancy, the provisions in Section 4- Contract Data shall supersede these provided in the Section 3 – Condition of Contract

Section 4 – Contract Data

Conditions of Contract Clause Number/s		
(*) 1.1.2.2 & 1.3	Employer's name and address	Name : Project Director, Integrated Watershed & Water Resources Management Project Address : 2 nd Floor, Mahaweli Centre Building, No.96, Ananda Coomaraswamy Mawatha, Colombo 07.
1.3	Contractor's name and address	Name: Address:
(*) 1.1.2.4 & 1.3	Engineer's name and address	Name: Deputy Director of Irrigation, Ampara Range Address: Deputy Director's office, Ampara Range, Provincial Irrigation Department, Yard Road, Kalmunai
	Engineer's Representative name and address	Name: Divisional Irrigation Engineer, Thambiluvil Division. Address: Office of the Divisional Irrigation Engineer, Thambiluvil Division, Pottuvil Road, Thambiluvil
1.1.2.5 Contractor's Personnel	Key Personnel The following is added at the end of the sub-clause: “Contractor's Personnel includes Key Personnel as named in the Contract.”	
1.1.2.5 Contractor's Representative	Name:..... Address:.....	
1.1.2.9	Replace existing Clause 1.1.2.9 with the following: “Dispute Adjudication Board” (DAB) means three persons appointed under Sub-Clause 19.2 [Appointment of the Dispute Adjudication Board] or Sub-Clause 19.3 [Failure to Agree on the Composition of the Dispute Adjudication Board] of the Conditions of Contract.	
(*) 1.1. 3.3	Time for Completion of the Works	The time for Completion is 365 calendar days from the commencement date.
(*) 1.1.3.7	Defects Notification Period	Defects Notification Period is 365 Days

1.1.6.8	<p>The following is added after Sub-Clause 1.1.6.7</p> <p>“ESHS” means environmental, social (including sexual exploitation and abuse (SEA) and gender-based violence (GBV)), health and safety.</p>	
(*) 2. 1	Right to access to the Site	14 Days after Letter of Acceptance
(*) 3.1	Engineer’s Duties and Authority	<p>The Engineer shall obtain the specific approval of the Employer before taking action under the following Sub-Clauses of these Conditions:</p> <p>(a) Clause 13, where the final effect of the variations increases the Contract Price</p>
4.1 Contractor’s General Obligations	<p>Insert in the fifth paragraph after the words “<i>The Contractor shall, whenever required by the Engineer, submit details of the arrangements and methods which the Contractor proposes to adopt for the execution of the Works.</i>”</p> <p>“Notwithstanding Sub-Clause 8.1, the Contractor shall not carry out any Works, including mobilization and/or pre-construction activities (e.g. limited clearance for haul roads, site accesses, and work site establishment, geotechnical investigations or investigations to select ancillary features such as quarries and borrow pits), unless the Engineer is satisfied that appropriate measures are in place to address environmental, social, health and safety risks and impacts. At a minimum, the Contractor shall apply the Management Strategies, Implementation Plans, and Code of Conduct, submitted as part of the Bid and agreed upon as part of the Contract. The Contractor shall submit on a continuing basis, for the Engineer’s prior approval, such supplementary Management Strategies and Implementation Plans as are necessary to manage the ESHS risks and impacts of ongoing works. These Management Strategies and Implementation Plans collectively comprise the Contractor’s Environmental and Social Management Plan (C-ESMP). The C-ESMP shall be approved prior to the commencement of construction activities (e.g. excavation, earthworks, bridge and structure work, stream and road diversions, quarrying or extraction of materials, concrete batching, and asphalt manufacture). The approved C-ESMP shall be reviewed, periodically (but not less than every six (6) months), and updated in a timely manner, as required, by the Contractor to ensure that it contains measures appropriate to the Works activities to be undertaken. The updated C-ESMP shall be subject to prior approval by the Engineer.</p>	
(*) 4.2	Amount of Performance Security	<p>7 % of the Initial Contract Price, in the currencies and proportions in which the Contract Price is payable. The acceptable form is an Unconditional Guarantee.</p> <p>Performance Security shall only be an unconditional guarantee issued by a bank recognized by the Central Bank of Sri Lanka in accordance with the format given</p> <p>3 % of the Initial Contract Price</p> <p>The ESHS Performance Security will be in the form of a “demand guarantee” in the amount(s) of 3% percent of the Accepted Contract Amount and in the same currency (ies) of the Accepted Contract Amount.</p>

<p>4.2 Performance Security</p>	<p>Add the following</p> <p>The Contractor shall obtain (at his cost) an Environmental, Social, Safety, and Health (ESHS) Performance Security for compliance with the Contractor’s ESHS obligations, for 3% of the Initial Contract Price.</p> <p>The Contractor shall deliver ESHS Performance Security to the Employer within 14 days after receiving the Letter of Acceptance and shall send a copy to the Engineer. The ESHS Performance Security shall be issued by a reputable bank selected by the Contractor and shall be in the form annexed to the Particular Conditions, as stipulated by the Employer in the Contract Data, or in another form approved by the Employer.</p> <p>The Contractor shall ensure that the ESHS Performance Security is valid and enforceable until the Contractor has executed and completed the Works and remedied any defects. If the terms of the ESHS Performance Security specify its expiry date, and the Contractor has not become entitled to receive the Performance Certificate (which, if applicable, includes the satisfactory performance of the ESHS obligations), by the date 28 days prior to the expiry date, the Contractor shall extend the validity of the ESHS Performance Security until the Works have been completed and any defects have been remedied.</p> <p>The Employer shall return the ESHS Performance Security to the Contractor within 21 days after receiving a copy of the Performance Certificate.</p>
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<p>4.14 Progress Reports</p>	<p>Sub-Clause 4.21 (g) is replaced by the following:</p> <p>“4.14 (g) the Environmental, Social, Health and Safety (ESHS) metrics set out in Appendix B”</p> <p>At the end of, and as part of Sub-Clause 4.14 add a new paragraph as follows:</p> <p>“The Contractor shall provide immediate notification to the Engineer of incidents in the following categories. Full details of such incidents shall be provided to the Engineer within the timeframe agreed with the Engineer.</p> <ul style="list-style-type: none"> (a) confirmed or likely violation of any law or international agreement; (b) any fatality or serious (lost time) injury; (c) significant adverse effects or damage to private property (e.g. vehicle accident, damage from fly rock, working beyond the boundary) (d) major pollution of drinking water aquifer or damage or destruction of rare or endangered habitat (including protected areas) or species; or (e) any allegation of gender-based violence (GBV), sexual exploitation or abuse, sexual harassment or sexual misbehavior, rape, sexual assault, child abuse, or defilement, or other violations involving children.
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6.8 Contractor's Personnel	Key Personnel				
	Key personnel	Qualifications	No. of Position	Experience	Similar work Experience
	1. Contract Manager	B.Sc. Engineering Degree or equivalent qualification in a Relevant field	1	06 yrs	03 yrs
	2. Site Engineer	B.Sc. (Civil Engineering) degree or equivalent	1	05yrs	03yrs
	3.Engineering Assistant (Civil)	NDT or equivalent	1	03 yrs	01 yr
	4. Quantity Surveyor	Q.S Degree or equivalent qualification in Relevant field	1	03 yrs	01 yrs
	5.Environmental and Social officer	Degree or equivalent qualification in Relevant field	1	03 yrs	01 yr
	6.Health and Safety officer	Degree or equivalent qualification in Relevant field	1	03 yrs	01 yr
	7. Work Supervisor (Civil)	NCT	2	03 yrs	01 yrs
	Sub-Clauses 6.8 (d) is amended by inserting “or” at the end:				
	“6.9 (d).....; or”				
	Sub-Clauses 6.8 (e) is inserted as follows:				
	“6.9 (e) undertakes behavior which breaches the Code of Conduct (ESHS) (e.g. spreading communicable diseases, sexual harassment, gender-based violence, (GBV), sexual exploitation or abuse, illicit activity or crime).”				
	After the sentence: <i>“If appropriate, the Contractor shall then appoint (or cause to be appointed) a suitable replacement person.”</i> the following is added as a new paragraph:				
	“The Contractor’s Personnel includes Key Personnel. If the Contractor intends to replace a Key Personnel, the Contractor shall, not less than 30 days before the intended date of replacement, give notice to the Engineer, the name, address, academic qualifications and relevant experience of the intended replacement Key Personnel. The Contractor shall not, without the prior consent of the Engineer, revoke the appointment of the Key Personnel or appoint a replacement.”				

(*) 8.7	Liquidated damages for the Works	0.05 % of the Initial Contract Price per Day
(*) 8.7	Maximum amount of liquidated damages	5 % of the Initial Contract Price
12.2 (b)	Method of Measurement	The Method of Measurement shall be joint measurement and annexed in Section 8
13.3 Variation procedure	Sub-Clause 13.3. (a) is replaced with the following: “(a) a description of the proposed work to be performed, a programme for its execution and sufficient ESHS information to enable an evaluation of ESHS risks and impacts;”	
(*) 13.4(b)	Percentage for adjustment of Provisional Sums	10 %
13.7 Adjustment for changes in Cost	Last paragraph “The weightings for each of the inputs of cost” shall be substituted by the following: “The weightings for each of the inputs of cost given in this Clause shall be adjusted only if they have been rendered unreasonable, unbalanced or inapplicable, as a result of Variations.”	

13.7	Weightings of Inputs	Indices No	Input Name	Input Percentage
		M3	Cement	26.00%
		M13	Reinforcement Steel	15.00%
		L1	Skilled Labour	10.00%
		M7	Metal	10.00%
		P3	Fuel	8.00%
		M8	Sand	6.00%
		P1	Small Equipment	5.00%
		L3	Unskilled Labour	5.00%
		M21A	Formwork (Plywood)	5.00%
Total			90%	
Nonadjustable element shall be: All Psum & Lsum items				
(*) 14.2	Total Advance Payment	20 % of the Initial Contract Price excluding provisional sums and contingencies		
(*) 14.3(c)	Percentage of retention	10 %		
(*) 14.3(c)	Limit of Retention Money	5 % of the Initial Contract Price		
14.5	Minimum amount of Interim Payment Certificates.	5% of the Initial Contract Price		

<p>(*) 14.5</p> <p>Issue of Interim Payment Certificate</p>	<p>The following is added to the third paragraph as (c):</p> <p>I. If the Contractor was, or is, failing to perform any ESHS obligations or work under the Contract, the value of this work or obligation, as determined by the Engineer, may be withheld until the work or obligation has been performed, and/or the cost of rectification or replacement, as determined by the Engineer, may be withheld until rectification or replacement has been completed. Failure to perform includes, but is not limited to the following:</p> <p>a) failure to comply with any ESHS obligations or work described in the Works' Requirements which may include: working outside site boundaries, excessive dust, failure to keep public roads in a safe usable condition, damage to offsite vegetation, pollution of watercourses from oils or sedimentation, contamination of land e.g. from oils, human waste, damage to archeology or cultural heritage features, air pollution as a result of unauthorized and/or inefficient combustion;</p> <p>b) failure to regularly review C-ESMP and/or update it in a timely manner to address emerging ESHS issues, or anticipated risks or impacts;</p> <p>c) failure to implement the C-ESMP e.g. failure to provide required training or sensitization;</p> <p>d) failing to have appropriate consents/permits prior to undertaking Works or related activities;</p> <p>e) failure to submit ESHS report/s (as described in Appendix B), or failure to submit such reports in a timely manner;</p> <p>f) Failure to implement remediation as instructed by the Engineer within the specified timeframe (e.g. remediation addressing non-compliance/s).</p>	
<p>(*)14.8</p>	<p>Alternative method for Payment of Retention</p>	<p>On reaching the limit of retention, stated in the Contract Data under Sub-Clause 14.3, the Contractor may substitute full retention money with an unconditional guarantee acceptable to the Employer to a value equal to the full retention money, and valid up to 28 Days beyond the end of Defect Notification Period. On receipt of such guarantee the Employer shall repay the full retention money. The guarantee will be released to the Contractor upon the certification of the Engineer that all Defects notified by the Engineer to the Contractor before the end of this period have been corrected.</p>

(*) 18.2	Third Party Insurance	<p>This Amount of insurance per occurrence is:</p> <table border="1"> <thead> <tr> <th></th><th>Minimum Insurance Amount</th><th>Maximum Deductible</th></tr> </thead> <tbody> <tr> <td>(a) for the works, Plant and materials:</td><td>110% of the contract Price</td><td>Rs 50,000/-</td></tr> <tr> <td>(b) For loss or damage to equipment</td><td>Replacement value of the Equipments</td><td>Rs 50,000/-</td></tr> <tr> <td>(c) for losses or damage to property (except the works, plant, Materials, and Equipment) in connection with the Contract</td><td>Rs 1.0 million</td><td>Rs 50,000/-</td></tr> <tr> <td>(d) for personal injury or death:</td><td>Rs 1,000,000 per employee</td><td>No Deductible</td></tr> <tr> <td>(i) of the Contractor's employees per event</td><td></td><td></td></tr> <tr> <td>(ii) of other people per event</td><td>Rs 1,000,000 per person</td><td>No Deductible</td></tr> </tbody> </table>		Minimum Insurance Amount	Maximum Deductible	(a) for the works, Plant and materials:	110% of the contract Price	Rs 50,000/-	(b) For loss or damage to equipment	Replacement value of the Equipments	Rs 50,000/-	(c) for losses or damage to property (except the works, plant, Materials, and Equipment) in connection with the Contract	Rs 1.0 million	Rs 50,000/-	(d) for personal injury or death:	Rs 1,000,000 per employee	No Deductible	(i) of the Contractor's employees per event			(ii) of other people per event	Rs 1,000,000 per person	No Deductible
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	<p><u>Clause 19.0 Claims, Disputes and Arbitration</u> Delete existing sub-clause 19.2 (Dispute Resolution), Delete existing sub-clause 19.3 (Procedure for Adjudication), Delete existing sub-clause 19.4 (Replacement of Adjudicator), Delete existing sub-clause 19.5 (Arbitration), and insert the following new sub-clauses;</p> <p>19.2 Appointment of the Dispute Adjudication Board 19.3 Failure to Agree on the Composition of the Dispute Adjudication Board 19.4 Obtaining Dispute Adjudication Board's Decision 19.5 Failure to Comply with Dispute Adjudication Board's Decision 19.6 Expiry of Dispute Adjudication Board's Appointment 19.7 Arbitration</p>																						

19.2	Appointment of the Dispute Adjudication Board	<p>Any dispute of whatever nature arising out of or in relation to this agreement shall in the first instance be referred to a Dispute Adjudication Board (DAB) for decision in accordance with Sub-Clause 19.4 [Obtaining Dispute Adjudication Board's Decision]. The Parties shall appoint a DAB within 28 Days from the Commencement Date.</p> <p>The DAB shall comprise, three suitably qualified persons ("the members"), who shall be professionals experienced in the type of construction involved in the Works and with the interpretation of contractual documents, one of whom shall serve as chairman.</p> <p>Within 28 Days from the Commencement Date each of the Parties shall appoint one member to serve on the Dispute Adjudication Board (DAB). The Parties shall consult both these members and shall agree upon the third member, who shall be appointed to act as the chairman.</p> <p>The agreement between the Parties and each of the three members shall incorporate by reference the General Conditions of Dispute Adjudication Agreement contained in the Appendix to these Contract Data, with such amendments as are agreed between them.</p> <p>The terms of the remuneration of the three members, including the remuneration of any expert whom the DAB consults, shall be mutually agreed upon by the Parties when agreeing the terms of appointment of the member or such expert (as the case may be). Each Party shall be responsible for paying one-half of this remuneration</p> <p>If a member declines to act or is unable to act as a result of death, disability, resignation or termination of appointment, a replacement shall be appointed in the same manner as the replaced person was required to have been nominated or agreed upon, as described in this Sub-Clause.</p> <p>The appointment of any member may be terminated by mutual agreement of both Parties, but not by the Employer or the Contractor acting alone. Unless otherwise agreed by both Parties, the appointment of the DAB (including each member) shall expire when the discharge referred to in Sub-Clause 14.11 [Discharge] shall have become effective.</p>
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19.3	Failure to Agree on the Composition of the Dispute Adjudication Board	<p>If any of the following conditions apply, namely:</p> <ul style="list-style-type: none"> (a) either Party fails to nominate a member of a DAB by such date, (b) the Parties fail to agree upon the appointment of the third member (to act as chairman) of the DAB by such date, or (c) the Parties fail to agree upon the appointment of a replacement person within 42 Days after the date on which one of the three members declines to act or is unable to act as a result of death, disability, resignation or termination of appointment, <p>The Institute for Construction Training and Development (ICTAD) shall, upon the request of either or both of the Parties and after due consultation with both Parties, appoint this member of the DAB. This appointment shall be final and conclusive. Each Party shall be responsible for paying one-half of the expenses/disbursements incurred by ICTAD.</p>
19.4	Obtaining Dispute Adjudication Board's Decision	<p>If a dispute (of any kind whatsoever) arises between the Parties in connection with, or arising out of, the Contract or the execution of the Works, including any dispute as to any certificate, determination, instruction, opinion or valuation of the Engineer, either Party may refer the dispute in writing to the DAB for its decision, with copies to the other Party and the Engineer. Such reference shall state that it is given under this Sub-Clause.</p> <p>The DAB shall be deemed to have received such reference on the date when it is received by the chairman of the DAB.</p> <p>Both Parties shall promptly make available to the DAB all such additional information, further access to the Site, and appropriate facilities, as the DAB may require for the purposes of making a decision on such dispute. The DAB shall be deemed to be not acting as arbitrator(s).</p>

		<p>Within 84 Days after receiving such reference, or within such other period as may be proposed by the DAB and approved by both Parties, the DAB shall give its decision, which shall be reasoned and shall state that it is given under this Sub-Clause. The decision shall be binding on both Parties, who shall promptly give effect to it unless and until it shall be revised in an amicable settlement or an arbitral award as described below. Unless the Contract has already been abandoned, repudiated or terminated, the Contractor shall continue to proceed with the Works in accordance with the Contract.</p> <p>If either Party is dissatisfied with the DAB's decision, then either Party may, within 28 Days after receiving the decision, give notice to the other Party of its dissatisfaction and intention to commence arbitration. If the DAB fails to give its decision within the period of 84 Days (or as otherwise approved) after receiving such reference, then either Party may, within 28 Days after this period has expired, give notice to the other Party of its dissatisfaction and intention to commence arbitration.</p> <p>In either event, this notice of dissatisfaction shall state that it is given under this Sub-Clause, and shall set out the matter in dispute and the reason(s) for dissatisfaction. Except as stated in Sub-Clause 19.5 [Failure to Comply with Dispute Adjudication Board's Decision] and Sub-Clause 19.6 [Expiry of Dispute Adjudication Board's Appointment], neither Party shall be entitled to commence arbitration of a dispute unless a notice of dissatisfaction has been given in accordance with this Sub-Clause.</p> <p>If the DAB has given its decision as to a matter in dispute to both Parties, and no notice of dissatisfaction has been given by either Party within 28 Days after it received the DAB's decision, then the decision shall become final and binding upon both Parties.</p>
19.5	Failure to Comply with Dispute Adjudication Board's Decision	<p>In the event that a Party fails to comply with a DAB decision which has become final and binding, then the other Party may, without prejudice to any other rights it may have, refer the failure itself to arbitration under Sub-Clause 19.7 [Arbitration]. Sub-Clause 19.4 [Obtaining Dispute Adjudication Board's Decision] shall not apply to this reference.</p>

19.6	Expiry of Dispute Adjudication Board's Appointment	<p>If a dispute arises between the Parties in connection with, or arising out of, the Contract or the execution of the Works and there is no DAB in place, whether by reason of the expiry of the DAB's appointment or otherwise:</p> <p>(a) Sub-Clause 19.4 [Obtaining Dispute Adjudication Board's Decision] shall not apply, and</p> <p>(b) the dispute may be referred directly to arbitration under Sub-Clause 19.7 [Arbitration].</p>
19.7	Arbitration	<p>(a) Any dispute of whatever nature arising from, out of or in connection with this agreement, on the interpretation thereof, or the rights, duties, obligations or liabilities of any Party, or the operation, breach, termination, abandonment, foreclosure or invalidity thereof, shall be referred to by either Party to arbitration for final settlement, in accordance with the Arbitration Act No. 11 of 1995, or any amendment thereof.</p> <p>(b) Pending the award in any arbitration proceedings hereunder,</p> <p>(i) this Contract and the rights and obligations of the Parties shall remain in full force and effect and</p> <p>(ii) each of the Parties shall continue to perform their respective obligations under this Contract. The termination of this Contract shall not result in the termination of any arbitration proceedings pending at the time of such termination nor otherwise affect the rights and obligations of the Parties under or with respect to such pending arbitration.</p> <p>(c) Any award rendered by the arbitral tribunal shall determine the extent to which the cost of arbitration is to be borne by each Party. The arbitration centre charges and the compensation to the arbitrator shall be equally shared by the Parties initially.</p>

		<p>Composition of the Arbitral Tribunal :</p> <p>The arbitral tribunal shall consist of a sole arbitrator who shall be appointed in the manner provided in the Selection Procedure as given below.</p> <p>Selection Procedure :</p> <p>The Party desiring arbitration shall nominate three arbitrators out of which one to be selected by the other Party within 21 Days of the receipt of such nomination. If the other Party does not select one to serve as Arbitrator within the stipulated period then the Arbitrator shall be appointed in accordance with the Arbitration Act No. 11 of 1995, or any amendments thereof.</p> <p>Venue & Language :</p> <p>The venue of arbitration shall be in Sri Lanka.</p> <p>Unless otherwise agreed to by the Parties the proceedings shall be conducted and the award shall be rendered in the English language.</p>
	<p>In the following sub-clauses the term “Performance Security” is replaced with: “Performance Security and, if applicable, an Environmental, Social, Health and Safety (ESHS) Performance Security”:</p> <p>2.1- Right of Access to the Site 14.2- Advance Payment 14.5- Issue of Interim Payment Certificate 14.11- Discharge 15.5- Employer’s Entitlement to Termination for Convenience 16.4(a)- Payment on termination”</p>	

APPENDIX TO CONTRACT DATA

APPENDIX A

A General Conditions of Dispute Adjudication Agreement

1. Definitions

Each “Dispute Adjudication Agreement” is a tripartite agreement by and between:

- (a) the “Employer”;
- (b) the “Contractor”; and
- (c) the “Member” who is defined in the Dispute Adjudication Agreement as being one of the three persons who are jointly called the “DAB” (or “Dispute Adjudication Board”) and, where this is the case, the other two persons are called the “Other Members.”

The Employer and the Contractor have entered (or intend to enter) into a contract, which is called the “Contract” and is defined in the Dispute Adjudication Agreement, which incorporates this Appendix. In the Dispute Adjudication Agreement, words and expressions which are not otherwise defined shall have the meanings assigned to them in the Contract.

2. General Provisions

Unless otherwise stated in the Dispute Adjudication Agreement, it shall take effect on the latest of the following dates:

- (a) the Commencement Date defined in the Contract,
- (b) when the Employer, the Contractor and the Member have each signed the Dispute Adjudication Agreement, or
- (c) when the Employer, the Contractor and each of the Other Members have respectively each signed a Dispute Adjudication Agreement.

This employment of the Member is a personal appointment. At any time, the Member may give not less than 70 Days notice of resignation to the Employer and to the Contractor, and the Dispute Agreement shall terminate upon the expiry of this period.

3. Warranties

The Member warrants and agrees that he/she is and shall be impartial and independent of the Employer, the Contractor and the Engineer. The Member shall promptly disclose, to each of them and to the Other Members, any fact or circumstance which might appear inconsistent with his/her warranty and agreement of impartiality and independence.

When appointing the Member, the Employer and the Contractor relied upon the Member’s representations that he/she is:

- (a) experienced in the work which the Contractor is to carry out under the Contract,
- (b) experienced in the interpretation of contract documentation, and
- (c) fluent in the language for communications defined in the Contract.

**4. General
Obligations of the
Member**

The Member shall:

- (a) have no interest financial or otherwise in the Employer, the Contractor or Engineer, nor any financial interest in the Contract except for payment under the Dispute Adjudication Agreement;
- (b) not previously have been employed as a consultant or otherwise by the Employer, the Contractor or the Engineer, except in such circumstances as were disclosed in writing to the Employer and the Contractor before they signed the Dispute Adjudication Agreement;
- (c) have disclosed in writing to the Employer, the Contractor and the Other Members, before entering into the Dispute Adjudication Agreement and to his/her best knowledge and recollection, any professional or personal relationships with any director, officer or employee of the Employer, the Contractor or the Engineer, and any previous involvement in the overall project of which the Contract forms part;
- (d) not, for the duration of the Dispute Adjudication Agreement, be employed as a consultant or otherwise by the Employer, the Contractor or the Engineer, except as may be agreed in writing by the Employer, the Contractor and the Other Members;
- (e) comply with the annexed procedural rules and with Sub-Clause 19.4 (Obtaining Dispute Adjudication Board's Decision) of the Conditions of Contract;
- (f) not give advice to the Employer, the Contractor, the Employer's Personnel or the Contractor's Personnel concerning the conduct of the Contract, other than in accordance with the annexed procedural rules;
- (g) not while a Member enter into discussions or make any agreement with the Employer, the Contractor or the Engineer regarding employment by any of them, whether as a consultant or otherwise, after ceasing to act under the Dispute Adjudication Agreement;
- (h) ensure his/her availability for all site visits and hearings as are necessary;
- (i) become conversant with the Contract and with the progress of the Works (and of any other parts of the project of which the Contract forms part) by studying all documents received which shall be maintained in a current working file;
- (j) treat the details of the Contract and all the DAB's activities and hearings as private and confidential, and not publish or disclose them without the prior written consent of the Employer, the Contractor and the Other Members; and
- (k) be available to give advice and opinions, on any matter relevant to the Contract when requested by both the Employer and the Contractor, subject to the agreement of the Other Members.

**5. General
Obligations of the
Employer and the
Contractor**

The Employer, the Contractor, the Employer's Personnel and the Contractor's Personnel shall not request advice from or consultation with the Member regarding the Contract, otherwise than in the normal course of the DAB's activities under the Contract and the Dispute Adjudication Agreement. The Employer and the Contractor shall be responsible for compliance with this provision, by the Employer's Personnel and the

Contractor's Personnel respectively.

The Employer and the Contractor undertake to each other and to the Member that the Member shall not, except as otherwise agreed in writing by the Employer, the Contractor, the Member and the Other Members:

- (a) be appointed as an arbitrator in any arbitration under the Contract;
- (b) be called as a witness to give evidence concerning any dispute before arbitrator(s) appointed for any arbitration under the Contract; or
- (c) be liable for any claims for anything done or omitted in the discharge or purported discharge of the Member's functions, unless the act or omission is shown to have been in bad faith.

The Employer and the Contractor hereby jointly and severally indemnify and hold the Member harmless against and from claims from which he is relieved from liability under the preceding paragraph.

Whenever the Employer or the Contractor refers a dispute to the DAB under Sub-Clause 19.4 (Obtaining Dispute Adjudication Board's Decision) of the Conditions of Contract, which will require the Member to make a site visit and attend a hearing, the Employer or the Contractor shall provide appropriate security for a sum equivalent to the reasonable expenses to be incurred by the Member. No account shall be taken of any other payments due or paid to the Member.

6. Payment

The Member shall be paid as follows:

- (a) a retainer fee per calendar month, which shall be considered as payment in full for:
 - (i) being available on 28 Days notice for all site visits and hearings;
 - (ii) becoming and remaining conversant with all project developments and maintaining relevant files;
 - (iii) all office and overhead expenses including secretarial services, photocopying and office supplies incurred in connection with his duties; and
 - (iv) all services performed hereunder except those referred to in subparagraphs (b) and (c) of this Clause.

The retainer fee shall be paid with effect from the last day of the calendar month in which the Dispute Adjudication Agreement becomes effective; until the last day of the calendar month in which the Taking-Over Certificate is issued for the whole of the Works.

With effect from the first day of the calendar month following the month in which the Taking-Over Certificate is issued for the whole of the Works, the retainer fee shall be reduced by 50%. This reduced fee shall be paid until the first day of the calendar month in which the Member resigns or the Dispute Adjudication Agreement is otherwise terminated.

- (b) a daily fee which shall be considered as payment in full for:
 - (i) each day or part of a day up to a maximum of two Days travel time in each direction for the journey between the Member's home and the site, or another location of a meeting with the Other Members;
 - (ii) each working day on Site visits, hearings or preparing decisions; and
 - (iii) each day spent reading submissions in preparation for a hearing.
- (c) all reasonable expenses including necessary travel expenses (hotel and subsistence and other direct travel expenses) incurred in connection with the Member's duties, as well as the cost of telephone calls, courier charges, and faxes: a receipt shall be required for each item in excess of five percent of the daily fee referred to in sub-paragraph (b) of this Clause.

The retainer and daily fees shall be as specified in the Dispute Adjudication Agreement. Unless it specifies otherwise, these fees shall remain fixed for the entire duration of the Contract.

The Member shall submit invoices for payment of the monthly retainer quarterly in advance. Invoices for other expenses and for daily fees shall be submitted following the conclusion of a site visit or hearing. All invoices shall be accompanied by a brief description of activities performed during the relevant period and shall be addressed to the Contractor.

The Contractor shall pay each of the Member's invoices in full within 56 calendar days after receiving each invoice and shall apply to the Employer (in the Statements under the Contract) for reimbursement of one-half of the amounts of these invoices. The Employer shall then pay the Contractor in accordance with the Contract.

If the Contractor fails to pay to the Member the amount to which he/she is entitled under the Dispute Adjudication Agreement, the Employer shall pay the amount due to the Member and any other amount which may be required to maintain the operation of the DAB; and without prejudice to the Employer's rights or remedies. In addition to all other rights arising from this default, the Employer shall be entitled to reimbursement of all sums paid in excess of one-half of these payments, plus all costs of recovering these sums and financing charges calculated at the rate specified in Sub-Clause 14.7 of the Conditions of Contract.

If the Member does not receive payment of the amount due within 70 days after submitting a valid invoice, the Member may (i) suspend his/her services (without notice) until the payment is received, and/or (ii) resign his/her appointment by giving notice under Clause 7.

7. Termination

At any time: (i) the Employer and the Contractor may jointly terminate the Dispute Adjudication Agreement by giving 42 Days notice to the Member; or (ii) the Member may resign as provided for in Clause 2.

If the Member fails to comply with the Dispute Adjudication Agreement, the Employer and the Contractor may, without prejudice to their other rights, terminate it by notice to the Member. The notice shall take effect when received by the Member.

If the Employer or the Contractor fails to comply with the Dispute Adjudication Agreement, the Member may, without prejudice to his other rights, terminate it by notice to the Employer and the Contractor. The notice shall take effect when received by them both.

Any such notice, resignation and termination shall be final and binding on the Employer, the Contractor and the Member. However, a notice by the Employer or the Contractor, but not by both, shall be of no effect.

8. Default of the Member

If the Member fails to comply with any of his obligations under Clause 4 (a) - (d) above, he shall not be entitled to any fees or expenses hereunder and shall, without prejudice to their other rights, reimburse each of the Employer and the Contractor for any fees and expenses received by the Member and the Other Members, for proceedings or decisions of the DAB which are rendered void or ineffective by the said failure to comply.

If the Member fails to comply with any of his obligations under Clause 4 (e) - (k) above, he shall not be entitled to any fees or expenses hereunder from the date and to the extent of the non-compliance and shall, without prejudice to their other rights, reimburse each of the Employer and the Contractor for any fees and expenses already received by the Member, for proceedings or decisions of the DAB which are rendered void or ineffective by the said failure to comply.

9. Disputes

Any dispute or claim arising out of or in connection with this Dispute Adjudication Agreement, or the breach, termination or invalidity thereof, shall be finally settled in accordance with Arbitration Act No 11, 1995 of Sri Lanka with a sole Arbitrator..

PROCEDURAL RULES

1. Unless otherwise agreed by the Employer and the Contractor, the DAB shall visit the site at intervals of not more than 70 days, including times of critical construction events, at the request of either the Employer or the Contractor. Unless otherwise agreed by the Employer, the Contractor and the DAB, the period between consecutive visits shall not be less than 35 days, except as required to convene a hearing as described below.
2. The timing of and agenda for each site visit shall be as agreed jointly by the DAB, the Employer and the Contractor, or in the absence of agreement, shall be decided by the DAB. The purpose of site visits is to enable the DAB to become and remain acquainted with the progress of the Works and of any actual or potential problems or claims, and, as far as reasonable, to endeavour to prevent potential problems or claims from becoming disputes.
3. Site visits shall be attended by the Employer, the Contractor and the Engineer and shall be co-ordinated by the Employer in co-operation with the Contractor. The Employer shall ensure the provision of appropriate conference facilities and secretarial and copying services. At the conclusion of each site visit and before leaving the site, the DAB shall prepare a report on its activities during the visit and shall send copies to the Employer and the Contractor.
4. The Employer and the Contractor shall furnish copy each to the members of the DAB all documents which the DAB may request, including Contract documents, progress reports, variation instructions, certificates and other documents pertinent to the performance of the Contract. All communications between the DAB and the Employer or the Contractor shall be copied to the other Party.
5. If any dispute is referred to the DAB in accordance with Sub-Clause 19.4 (Obtaining Dispute Adjudication Board's Decision) of the Conditions of Contract, the DAB shall proceed in accordance with Sub-Clause 19.4 (Obtaining Dispute Adjudication Board's Decision) and these Rules. Subject to the time allowed to give notice of a decision and other relevant factors, the DAB shall:
 - (a) act fairly and impartially as between the Employer and the Contractor, giving each of them a reasonable opportunity of putting his case and responding to the other's case, and
 - (b) adopt procedures suitable to the dispute, avoiding unnecessary delay or expense.
6. The DAB may conduct a hearing on the dispute, in which event it will decide on the date and place for the hearing and may request that written documentation and arguments from the Employer and the Contractor be presented to it prior to or at the hearing.
7. Except as otherwise agreed in writing by the Employer and the Contractor, the DAB shall have power to adopt an inquisitorial procedure, to refuse admission to hearings or audience at hearings to any persons other than representatives of the Employer, the Contractor and the Engineer, and to proceed in the absence of any party who the DAB is satisfied received notice of the hearing; but shall have discretion to decide whether and to what extent this power may be exercised.
8. The Employer and the Contractor empower the DAB, among other things, to:
 - (a) establish the procedure to be applied in deciding a dispute,
 - (b) decide upon the DAB's own jurisdiction, and as to the scope of any dispute referred to it,
 - (c) conduct any hearing as it thinks fit, not being bound by any rules or procedures other than those contained in the Contract and these Guidelines,

- (d) take the initiative in ascertaining the facts and matters required for a decision,
 - (e) make use of its own specialist knowledge, if any,
 - (f) decide upon the payment of financing charges in accordance with the Contract,
 - (g) decide upon any provisional relief such as interim or conservatory measures, and
 - (h) open up, review and revise any certificate, decision, determination, instruction, opinion or valuation of the Engineer, relevant to the dispute.
9. The DAB shall not express any opinions during any hearing concerning the merits of any arguments advanced by the Parties. Thereafter, the DAB shall make and give its decision in accordance with Sub-Clause 19.4 (Obtaining Dispute Adjudication Board's Decision), or as otherwise agreed by the Employer and the Contractor in writing. The DAB:
- (a) shall convene in private after a hearing, in order to have discussions and prepare its decision;
 - (b) shall endeavour to reach a unanimous decision: if this proves impossible the applicable decision shall be made by a majority of the Members, who may require the minority Member to prepare a written report for submission to the Employer and the Contractor; and
 - (c) Member fails to attend a meeting or hearing, or to fulfill any required function, the other two Members may nevertheless proceed to make a decision, unless:
 - (i) either the Employer or the Contractor does not agree that they do so, or
 - (ii) the absent Member is the chairman and he/she instructs the other Members to not make a decision.

DISPUTE ADJUDICATION AGREEMENT

[for each member of a three - person DAB]

Name and details of Contract
Name and address of Employer
Name and address of Contractor
Name and address of Member

Whereas the Employer and the Contractor have entered into the Contract and desire jointly to appoint the Member to act as one of the three persons who are jointly called the Dispute Adjudication Board (DAB) [and desire the Member to act as chairman of the DAB]

The Employer, Contractor and Member jointly agree as follows:

1. The conditions of this Dispute Adjudication Agreement comprise the “General Conditions of Dispute Adjudication Agreement” which is appended to the General Conditions of the “Standard Bidding Document, Procurement of Works, Major Contracts - Second Edition, January 2007” and the following provisions. In these provisions, which include amendments and additions to the General Conditions of Dispute Adjudication Agreement, words and expressions shall have the same meanings as are assigned to them in the General Conditions of Dispute Adjudication Agreement.
2. [Details of amendments to the General Conditions of Dispute Adjudication Agreement, if any

For example:

In the procedural rules annexed to the General Conditions of Dispute Adjudication Agreement, Rule _____ is deleted and replaced by: “.....”]
3. In accordance with Clause 6 of the General Conditions of Dispute Adjudication Agreement the Member shall be paid as follows:

A retainer fee of _____ per calendar month,
plus a daily fee of _____ per day.
4. In consideration of these fees and other payments to be made by the Employer and the Contractor in accordance with Clause 6 of the General Conditions of Dispute Adjudication Agreement, the Member undertakes to serve, as described in this Dispute Adjudication Agreement, as one of the three persons who are jointly to act as the DAB.
5. The Employer and the Contractor jointly and severally undertake to pay the Member, in consideration of the carrying out of these services, in accordance with Clause 6 of the General Conditions of Dispute Adjudication Agreement.
6. This Dispute Adjudication Agreement shall be governed by the law of _____

SIGNED by: _____

SIGNED by: _____

SIGNED by: _____

for and on behalf of the employer
in the presence of

for and on behalf of the Contractor
in the presence of

the Member
in the presence of

Witness: _____

Witness: _____

Witness : _____

Name: _____

Name: _____

Name : _____

Address: _____

Address: _____

Address : _____

Date: _____

Date: _____

Date: _____

APPENDIX B

Environmental, Social, Health and Safety (ESHS)

Metrics for Progress Reports

Metrics for regular reporting:

- a. *environmental incidents or non-compliances with contract requirements, including contamination, pollution or damage to ground or water supplies;*
- b. *health and safety incidents, accidents, injuries and all fatalities that require treatment;*
- c. *interactions with regulators: identify agency, dates, subjects, outcomes (report the negative if none);*
- d. *status of all permits and agreements:*
 - i. *work permits: number required, number received, actions taken for those not received;*
 - ii. *status of permits and consents:*
 - *List areas/facilities with permits required (quarries, asphalt & batch plants), dates of application, dates issued (actions to follow up if not issued), dates submitted to resident engineer (or equivalent), status of area (waiting for permits, working, abandoned without reclamation, decommissioning plan being implemented, etc.);*
 - *list areas with landowner agreements required (borrow and spoil areas, camp sites), dates of agreements, dates submitted to resident engineer (or equivalent);*
 - *identify major activities undertaken in each area in the reporting period and highlights of environmental and social protection (land clearing, boundary marking, topsoil salvage, traffic management, decommissioning planning, decommissioning implementation);*
 - *for quarries: status of relocation and compensation (completed, or details of activities and current status in the reporting period).*
- e. *health and safety supervision:*
 - i. *safety officer: number days worked, number of full inspections & partial inspections, reports to construction/project management;*
 - ii. *number of workers, work hours, metric of PPE use (percentage of workers with full personal protection equipment (PPE), partial, etc.), worker violations observed (by type of violation, PPE or otherwise), warnings given, repeat warnings given, follow-up actions taken (if any);*
- f. *worker accommodations:*
 - i. *number of expats housed in accommodations, number of locals;*

- ii. date of last inspection, and highlights of inspection including status of accommodations' compliance with national and local law and good practice, including sanitation, space, etc.;
- iii. actions taken to recommend/require improved conditions, or to improve conditions.
- g. *HIV/AIDS: provider of health services, information and/or training, location of clinic, number of non-safety disease or illness treatments and diagnoses (no names to be provided);*
- h. *gender (for expats and locals separately): number of female workers, percentage of workforce, gender issues raised and dealt with (cross-reference grievances or other sections as needed);*
- i. *training:*
 - i. number of new workers, number receiving induction training, dates of induction training;
 - ii. number and dates of toolbox talks, number of workers receiving Occupational Health and Safety (OHS), environmental and social training;
 - iii. number and dates of HIV/AIDS sensitization and/or training, no. workers receiving training (in the reporting period and in the past); same questions for gender sensitization, flag person training.
 - iv. number and date of GBV /SEA sensitization and/or training, number of workers receiving training on code of conduct (in the reporting period and in the past), etc.
- j. *environmental and social supervision:*
 - i. environmentalist: days worked, areas inspected and numbers of inspections of each (road section, work camp, accommodations, quarries, borrow areas, spoil areas, swamps, forest crossings, etc.), highlights of activities/findings (including violations of environmental and/or social best practices, actions taken), reports to environmental and/or social specialist/construction/site management;
 - ii. sociologist: days worked, number of partial and full site inspections (by area: road section, work camp, accommodations, quarries, borrow areas, spoil areas, clinic, HIV/AIDS center, community centers, etc.), highlights of activities (including violations of environmental and/or social requirements observed, actions taken), reports to environmental and/or social specialist/construction/site management; and
 - iii. Community liaison person(s): days worked (hours community center open), number of people met, highlights of activities (issues raised, etc.), reports to environmental and/or social specialist /construction/site management.
- k. *Grievances: list new grievances (e.g. allegations of GBV / SEA) received in the reporting period and unresolved past grievances by date received, complainant, how received, to whom referred to for action, resolution and date (if completed), data resolution reported to complainant, any required follow-up (Cross-reference other sections as needed):*
 - i. Worker grievances;

- ii. Community grievances
- l. *Traffic and vehicles/equipment:*
 - i. traffic accidents involving project vehicles & equipment: provide date, location, damage, cause, follow-up;
 - ii. accidents involving non-project vehicles or property (also reported under immediate metrics): provide date, location, damage, cause, follow-up;
 - iii. overall condition of vehicles/equipment (subjective judgment by environmentalist); non-routine repairs and maintenance needed to improve safety and/or environmental performance (to control smoke, etc.).
- m. *Environmental mitigations and issues (what has been done):*
 - i. dust: number of working bowsters, number of waterings/day, number of complaints, warnings given by environmentalist, actions taken to resolve; highlights of quarry dust control (covers, sprays, operational status); % of rock/spoil lorries with covers, actions taken for uncovered vehicles;
 - ii. erosion control: controls implemented by location, status of water crossings, environmentalist inspections and results, actions taken to resolve issues, emergency repairs needed to control erosion/sedimentation;
 - iii. quarries, borrow areas, spoil areas, asphalt plants, batch plants: identify major activities undertaken in the reporting period at each, and highlights of environmental and social protection: land clearing, boundary marking, topsoil salvage, traffic management, decommissioning planning, decommissioning implementation;
 - iv. blasting: number of blasts (and locations), status of implementation of blasting plan (including notices, evacuations, etc.), incidents of off-site damage or complaints (cross-reference other sections as needed);
 - v. spill cleanups, if any: material spilled, location, amount, actions taken, material disposal (report all spills that result in water or soil contamination);
 - vi. waste management: types and quantities generated and managed, including amount taken offsite (and by whom) or reused/recycled/disposed on-site;
 - vii. details of tree plantings and other mitigations required undertaken in the reporting period;
 - viii. details of water and swamp protection mitigations required undertaken in the reporting period.
- n. *compliance:*
 - i. compliance status for conditions of all relevant consents/permits, for the Work, including quarries, etc.): statement of compliance or listing of issues and actions taken (or to be taken) to reach compliance;
 - ii. compliance status of C-ESMP/ESIP requirements: statement of compliance or listing of issues and actions taken (or to be taken) to reach compliance

- iii. compliance status of GBV/SEA prevention and response action plan: statement of compliance or listing of issues and actions taken (or to be taken) to reach compliance
- iv. compliance status of Health and Safety Management Plan re: statement of compliance or listing of issues and actions taken (or to be taken) to reach compliance
- v. other unresolved issues from previous reporting periods related to environmental and social: continued violations, continued failure of equipment, continued lack of vehicle covers, spills not dealt with, continued compensation or blasting issues, etc. Cross-reference other sections as needed.

For Reference Only

Section - 5

Standard Forms (Contract)

- Letter of Acceptance
- Agreement
- Performance Security
- ESHS Performance Security
- Advance Payment Security
- Retention Money Guarantee
- ESHS Declaration

Notes on Form of Letter of Acceptance

The Letter of Acceptance will be the basis for formation of the Contract as described in Clause 34 of the Instructions to Bidders. This Form of Letter of Acceptance should be filled in and sent to the successful bidder only after evaluation of Bids and after obtaining approval from the relevant authority.

FORM OF LETTER OF ACCEPTANCE

[Letter heading paper of the procuring entity]

..... *[date]*

To: *[name and address of the Contractor]*

This is to notify you that your bid dated *[insert date]* for the construction and remedying defects of the ***Modernization and Instrumentation of channel system of Sagamam Irrigation scheme in Thambiluvil Division, Ampara range under IWWRMP. LK-MoMDE-465692-CW-RFB*** for the Contract price of *[name of currency]* *[amount in figures and words]* as corrected in accordance with Instructions to Bidders and/ or modified by a Memorandum of Understanding, is hereby accepted.

You are hereby instructed to proceed with the execution of the said Works in accordance with the Contract documents.

The Commencement Date shall be: *(fill the date as per Clause 8.1 of Conditions of Contract).*

The amount of Performance Security is : *(fill the amount as per Clause 4.2 of Conditions of Contract).*

The Performance Security shall be submitted on or before *(fill the date as per Clause 4.2 of Conditions of Contract).*

Authorized Signature :

Name and title of Signatory :

FORM OF AGREEMENT

This Agreement made the [day] of [month] 200..... [year], between [name and address of Employer] (hereinafter called and referred to as “the Employer”), of the one part, and [name and address of Contractor] (hereinafter called and referred to as “the Contractor”), of the other part:

Whereas the Employer desires that the Contractor execute the *Reconstruction of Modernization and Instrumentation of channel system of Sagamam Irrigation scheme in Thambiluvil Division, Ampara range under IWRMP. LK-MoMDE-465692-CW-RFB* (hereinafter called and referred to as “the Works”) and the Employer has accepted the Bid by the Contractor for the execution and completion of such Works and remedying of any defects therein.

The Employer and the Contractor agree as follows:

1. In this Agreement words and expressions shall have the same meanings as are respectively assigned to them in the Contract.
2. In consideration of the payments to be made by the Employer to the Contractor as indicated in this Agreement, the Contractor hereby covenants with the Employer to execute and complete the Works and remedy any defects therein in conformity in all respects with the provisions of the Contract.
3. The Employer hereby covenants to pay the Contractor in consideration of the execute and complete the Works and remedy any defects therein, the Contract Price or such other sum as may become payable under the provisions of the Contract at the times and in the manner prescribed by the Contract.

In Witness whereof the parties hereto have caused this Agreement to be executed the day and year aforementioned in accordance with laws of Sri Lanka.

.....
Authorized signature of Contractor

.....
Authorized signature of Employer

COMMON SEAL

COMMON SEAL

In the presence of
Witnesses :

1. Name and NIC No.
Signature
Address
2. Name and NIC No.
Signature
Address

**FORM OF PERFORMANCE SECURITY
(Unconditional)**

----- *[Issuing Agency's Name, and Address of Issuing Branch or Office]* -----

Beneficiary: ----- *[Name and Address of Employer]*

Date: -----

PERFORMANCE GUARANTEE No.: -----

We have been informed that ----- *[name of Contractor]* (hereinafter called "the Contractor") has entered into Contract No. **LK-MoMDE-465692-CW-RFB** dated ----- with you, for the ----- *[insert "construction"]* of the **Modernization and Instrumentation of channel system of Sagamam Irrigation scheme in Thambiluvil Division, Ampara range under IWWRMP.** (hereinafter called "the Contract").

Furthermore, we understand that, according to the Conditions of the Contract, a performance guarantee is required.

At the request of the Contractor, we ----- *[name of Agency]* hereby irrevocably undertake to pay you any sum or sums not exceeding in total an amount of ----- *[amount in figures]* (-----) *[amount in words]*, upon receipt by us of your first demand in writing accompanied by a written statement stating that the Contractor is in breach of its obligation(s) under the Contract, without your needing to prove or to show grounds for your demand or the sum specified therein.

This guarantee shall expire, no later than the day of, 20.. *[insert date, 28 days beyond the Time for Completion]* and any demand for payment under it must be received by us at this office on or before that date.

[signature(s)]

Form of Environmental, Social, Health and safety (ESHS) Performance Security

ESHS Demand Guarantee

[Guarantor letterhead or SWIFT identifier code]

Beneficiary: *[insert name and Address of Employer]*

Date: *_ [Insert date of issue]*

ESHS PERFORMANCE GUARANTEE No.: *[Insert guarantee reference number]*

Guarantor: *[Insert name and address of place of issue, unless indicated in the letterhead]*

We have been informed that _____ (hereinafter called "the Applicant") has entered into Contract No. _____ dated _____ with the Beneficiary, for the execution of _____ (hereinafter called "the Contract").

Furthermore, we understand that, according to the conditions of the Contract, a performance guarantee is required.

At the request of the Applicant, we as Guarantor, hereby irrevocably undertake to pay the Beneficiary any sum or sums not exceeding in total an amount of _____ (_____),¹ such sum being payable in the types and proportions of currencies in which the Contract Price is payable, upon receipt by us of the Beneficiary's complying demand supported by the Beneficiary's statement, whether in the demand itself or in a separate signed document accompanying or identifying the demand, stating that the Applicant is in breach of its Environmental and/or Social and/or Health and/or Safety (ESHS) obligation(s) under the Contract, without the Beneficiary needing to prove or to show grounds for your demand or the sum specified therein.

This guarantee shall expire, no later than the Day of, 2...², and any demand for payment under it must be received by us at this office indicated above on or before that date.

This guarantee is subject to the Uniform Rules for Demand Guarantees (URDG) 2010 Revision, ICC Publication No. 758, except that the supporting statement under Article 15(a) is hereby excluded.

¹ The Guarantor shall insert an amount representing the percentage of the Accepted Contract Amount specified in the Letter of Acceptance, less provisional sums, if any, and denominated either in the currency (cies) of the Contract or a freely convertible currency acceptable to the Beneficiary.

² Insert the date twenty-eight days after the expected completion date as described in GC Clause 11.9. The Employer should note that in the event of an extension of this date for completion of the Contract, the Employer would need to request an extension of this guarantee from the Guarantor. Such request must be in writing and must be made prior to the expiration date established in the guarantee. In preparing this guarantee, the Employer might consider adding the following text to the form, at the end of the penultimate paragraph: "The Guarantor agrees to a one-time extension of this guarantee for a period not to exceed [six months] [one year], in response to the Beneficiary's written request for such extension, such request to be presented to the Guarantor before the expiry of the guarantee."

[signature(s)]

Note: All italicized text (including footnotes) is for use in preparing this form and shall be deleted from the final product.

For Reference Only

FORM OF ADVANCE PAYMENT SECURITY

----- [Name and address of Agency, and Address of Issuing Branch or Office] -----

Beneficiary: ----- [Name and Address of Employer]

Date: -----

ADVANCE PAYMENT GUARANTEE No.: -----

We have been informed that ----- [name of Contractor] (hereinafter called "the Contractor") has entered into Contract No. **LK-MoMDE-465692-CW-RFB** dated ----- with you, for the ----- construction of the **Modernization and Instrumentation of channel system of Sagamam Irrigation scheme in Thambiluvil Division, Ampara range under IWWRMP**. (hereinafter called "the Contract").

Furthermore, we understand that, according to the conditions of the Contract, an advance payment in the sum ----- [amount in figures] (-----) [amount in words] is to be made against an advance payment guarantee.

At the request of the Contractor, we ----- [name of issuing agency] hereby irrevocably undertake to pay you any sum or sums not exceeding in total an amount of ----- [amount in figures] (-----) [amount in words] upon receipt by us of your first demand in writing accompanied by a written statement stating that the Contractor is in breach of its obligation in repayment of the Advance Payment under the Contract.

The maximum amount of this guarantee shall be progressively reduced by the amount of the advance payment repaid by the Contractor.

This guarantee shall expire on [Insert the date, 28 days beyond the Time of Completion]

Consequently, any demand for payment under this guarantee must be received by us at this office on or before that date.

[signature(s)]

FORM OF RETENTION MONEY GUARANTEE

----- *[Issuing Agency's Name, and Address of Issuing Branch or Office]* -----

Beneficiary: ----- *[Name and Address of Employer]* -----

Date: -----

RETENTION MONEY GUARANTEE No.: -----

We have been informed that ----- *[name of Contractor]* (hereinafter called "the Contractor") has entered into Contract No. **LK-MoMDE-465692-CW-RFB** *[reference number of the contract]* dated ----- with you, for the execution of the ***Modernization and Instrumentation of channel system of Sagamam Irrigation scheme in Thambiluvil Division, Ampara range under IWWRMP****[name of contract and brief description of Works]* (hereinafter called "the Contract").

Furthermore, we understand that, according to the conditions of the Contract, when the works have being taken over and the first half of the Retention Money has been certified for payment, payment of the second half of the Retention Money may be made against a Retention Money guarantee.

At the request of the Contractor, we ----- *[name of agency]* hereby irrevocably undertake to pay you any sum or sums not exceeding in total an amount of -----*[amount in figures]* (-----) *[amount in words]* upon receipt by us of your first demand in writing accompanied by a written statement stating that the Contractor is in breach of its obligation under the Contract because the Contractor has not attended to the defects in accordance with the Contract..

This guarantee shall expire, at the latest, ----- *[insert 28 Days after the end of the Defects Liability Period]*. Consequently, any demand for payment under this guarantee must be received by us at this office on or before that date.

[signature(s)]

Form of ESHS Declaration

Date: _____
 Bid No.: _____

To: _____

We, the undersigned, declare that civil work contracts *have/ have not been* suspended or terminated and/or performance security called by an employer for reasons related to the non-compliance of any environmental, or social, (including sexual exploitation and abuse (SEA) and gender based violence (GBV)), or health or safety requirements or safeguard in the past five years.

(Note: If suspended, terminated or Performance Security is called give details)

Year	Suspended or terminated portion of contract	Contract Identification	Total Contract Amount (current value, currency, exchange rate and US\$ equivalent)
[insert year]	[insert amount and percentage]	Contract Identification: [indicate complete contract name/ number, and any other identification] Name of Employer: [insert full name] Address of Employer: [insert street/city/country] Reason(s) for suspension or termination: [indicate main reason(s) e.g. for GBV/ SEA breaches]	[insert amount]
...	...	[list all applicable contracts]	...
Performance Security called by an employer(s) for reasons related to ESHS performance			
Year	Contract Identification		Total Contract Amount (current value, currency, exchange rate and US\$ equivalent)
[insert year]	Contract Identification: [indicate complete contract name/ number, and any other identification] Name of Employer: [insert full name] Address of Employer: [insert street/city/country] Reason(s) for calling of performance security: [indicate main reason(s) e.g. for GBV/ SEA breaches]		[insert amount]

Signed: _____

In the capacity of _____

Name: _____

Duly authorized to sign the bid for and on behalf of: _____

Dated on _____ day of _____, _____

Corporate Seal (where appropriate)

Section - 6

Specifications

For Reference Only

Specifications

Technical Specifications relevant to this contract consists of two parts.

Part 1 - General Technical Specifications

The following specifications published by the Institute for Construction, Training and Development (ICTAD) are applicable as General Specifications for this Contract.

CIDA/SP/102	Irrigation & Land Drainage — [1st Edition – January 2017]
SCA/4/I	Building Works (Vol. I) – [3rd Edition (Revised) – July 2004]
SCA/4/II	Building Works (Vol. II) – [2nd Edition (Revised) – October 2001]

These publications are not issued with this Bidding Document and the Bidder shall purchase the same from CIDA.

Part 2 - Particular Technical Specifications

Particular Technical Specifications includes project specific specifications and conditions of particular specification which includes modifications and amplifications to the Standard Specifications given in General Technical Specifications.

1. Introduction

The following Particular Technical Specifications are part of the requirements for the work related the Civil Works which are to be provided according to the stipulation of the Contract. Hence, the instructions given herein form an integral part of the, and are applicable to, all technical and Contract documents issued for Works. Addenda to these specifications may be issued as required during construction phase.

These Particular Technical Specifications shall be read in conjunction with the General Technical Specifications (ICTAD), the Conditions of Contract and the Bidding Drawings. The Contractor shall comply with all provisions contained within Contract documents.

The General Technical specifications and the Particular Technical Specifications in conjunction with the Bidding drawings define the technical standard and quality to be achieved during construction.

The Particular Technical Specifications relevant to this contract are given in following Sub Sections.

Description	Sub Section
Land Available	2
Road Access to Site	3
Contract Documents and Drawings	4
Schedules and Reports	5
Use of Construction Facilities and Works Area	6

Contractor's Equipment	7
Standards	8
Setting out Works	9
Safety Precautions	10
Temporary Works	11
Contractor's Offices, Camp and Facilities	12
Inspections and Material Testing Laboratory	13
Quality Assurance System	14
Dealing with Water	15
Tests for Borrow areas and Quarries	16
Specification toe Drain	17
Embankment Filling	18
Environmental and social Management plan	
Standard Procedure for Ensuring Occupational Health and Safety When working in Wildlife Area	19
Standard Procedure for Assessing the Requirement of Tree Removals	20
Covid 19 Safety Manual	20

2. Land Available

The land available to the Contractor free of charge for the duration of the Contract shall be as follows:

- a. The land occupied by the Permanent Works;
- b. The Contractor is responsible for find out suitable barrow area for obtaining the necessary approvals for mining and transport.
- c. The land as approved by the Engineer for Contractor's housing, plant-yards, workshops and offices, after approval has been given for the locations and layouts of such installations.

3. Road Access to the Site

3.1 Transport of Materials

Prior to moving any heavy construction traffic onto highways, roads and bridges, the Contractor shall make suitable arrangements with the appropriate Government Authorities and obtain their approval for the passage of such traffic.

3.2 Special Protection

Where Government Authorities require and specify any special protection or strengthening of highways, roads and bridges. The Contractor shall submit to the Engineer his proposals for such work after their approval by the authority concerned and shall carry-out this work as directed.

3.3 Tracked Vehicles

The Contractor shall not travel tracked vehicles or plant on any bituminous sealed road surface. Rubber-tyred vehicles conforming to applicable load restrictions will be permitted to use bituminous sealed roads.

3.4 Construction of Additional Roads

The Contractor shall design, construct and maintain all temporary access and haul roads to, in, and around his camp area, the various working sites and designated borrow and disposal areas, required for the Works. These roads shall include all associated drainage and stream crossing facilities. The location of these roads shall be in accordance with the Contractor's proposals submitted with his Tender.

During the period of the Contract, the Contractor shall allow the Employer and such other parties free and unrestricted use of all access and haul roads and shall not restrict the access of authorized persons to these roads, look-outs or viewing points as may be instructed.

4. Contract Documents and Drawings

4.1 Contract Documents

The Contractor will be provided with one set of the Contract Documents for his own use. A complete set of Contract Documents supplied by the Engineer and all further instructions issued by him shall be kept at all times by the Contractor on the Site and made available to the Engineer and his staff.

4.2 Construction Drawings

Based on Tender drawings issued, the Contractor shall prepare and submit all construction and shop drawings. All Contractor's working drawings and shop drawings required to be submitted for approval in accordance with the Specification, shall be provided in electronic format (AutoCAD computer software) and 03 printed copies, plus copies of design calculations where required, specification and parts catalogues in duplicate. All drawings and calculations submitted for approval shall be signed, checked and approved by the Contractor prior to submission. The drawings and calculations shall be signed by a qualified Engineer responsible for the design.

Within 30 days after receiving such designs, design calculations, parts catalogues, specifications and detailed drawings, the Engineer shall give his approval or request modifications. The Contractor shall modify the design and drawings as may be required by the Engineer.

The work shall be constructed in accordance with the approved drawings, and a copy of such drawings shall be kept on the Site at all times until the completion of the Contract. All drawings on which changes are made shall have the revisions clearly marked.

Construction, fabrication or manufacture of any portion of the Works shall not commence until the design and drawings have been approved in writing by the Engineer and thereafter no change shall be made to any drawings so approved without the permission of the Engineer. Permission to make such changes shall be requested by sending 01 electronic copy and 01 print of each revised drawing to the Engineer for approval.

4.3 As-built Drawings

The Contractor shall submit the 4 copies of "As-built Drawings" on a format agreed between the Contractor and Engineer.

These As-built drawings shall be prepared from the Construction drawings incorporating any authorized changes carried out during construction. Once completed these drawings shall become the property of the Employer and shall be submitted before issue of the Taking -over certificate.

5. Schedules and Reports

5.1 Construction and Contractual Program

- a. Within 01 month of the award of Contract, the Contractor shall submit a revision of the construction program attached to the Tender, for approval.

The construction program shall be prepared using the latest computer software such as MS Project or other similar software approved by the Engineer. This program in bar chart form shall outline the Contractor's activities necessary to complete the Works within the period required for completion. The program shall show the following minimum details:

- The duration, sequence and logic links between major activities and any other activities or group of activities which comprise the Works, necessary to define the critical path and logic of the program required for completion and to achieve the Time for Completion. For the purpose of this clause, major activities are those which are greater than one percent of the Contract Price;
- The planned dates for start and completion of the Works and each Section of the Works;
- The critical path(s) for the Works and each Section of the Works;
- Information on shutdown periods, vacation days and other non-working time periods;
- The estimated value of work to be done each month;
- Reasons for any changes to timing, work order, method, or resources from the program submitted at the time of tender, or if submitting an updated construction program, reasons for such changes from the previously submitted program.

The construction program submitted in accordance with the provisions of this clause shall in the opinion of the Engineer be reasonable in all respects. The Contractor's program, when approved, shall be known as the Contractual Program.

- b. Whenever the Contractor proposes to change the Contractual Program, he shall immediately advise the Engineer in writing and if the Engineer considers the change is a major one, the Contractor shall submit a revised program for approval. If such a change in the program affects the Engineer's design and the drawing approval program, the Employer will not be responsible for the consequences of the late issue of any drawings, which are attributable to that change.
- c. If the Contractor falls behind the revised Contractual Program he shall, within 14 days of the date of such default, submit for approval a revision of the program showing the proposed measures, including additional plant, labour and material resources, to complete the Permanent Works on time.

- d. When instructed, the Contractor shall promptly furnish a detailed sub-program of the Contractual Program for particular sections of the Permanent Works.
- e. The Contractor shall also attend weekly meetings with the Engineer and provide, not less than 2 days prior to each meeting as required by the Engineer, detailed programs showing separately the various activities of the Contractor anticipated over the forthcoming two week period as well as the progress achieved over the preceding week relative to the program applicable to that period.

5.2 Monthly Progress Report

Before the tenth day of each month, the Contractor shall submit three copies of a monthly progress report in a form acceptable to the Engineer detailing the progress during the preceding month. The monthly progress report shall show the amount of work completed, materials actually used, materials in storage and the cumulative results of all operations completed or in progress and shall be summarized in terms of percentage of completion referenced to the approved programme for the works.

The monthly progress report shall include at least the following:

- Total percentage of work completed and total percentage programmed to be completed by the end of the reporting period;
- Actual percentage of each main work items completed including temporary works, as well as their scheduled percentage, both total and for the reporting period together with the estimated quantities;
- List of manpower by trade and by position for the reporting period;
- List of equipment and operational days for the reporting period and materials on site at the end of the period;
- Description of weather conditions for the period including records of each rainfall duration and recorded water levels of the Tank;
- List of any accident except of minor nature and any damage that occurred;
- Any matter which affected or may affect the progress of the work, problems encountered and proposed remedial measures;
- Colour photographs with imprinted date, not smaller than 100 mm by 150 mm of the work progress during the period for all major components of the Works. The Contractor shall also provide digital versions as well as 5 sets of hard copies of these photographs in albums with titles.

6. Use of Construction Facilities and Works Area

6.1 Right of Use water in the reservoir for cultivation

The farmers will cultivate both Maha and Yala during construction period without foregoing any season. The contractor shall prepare the construction program based on the cultivation pattern and the instruction given by the engineer to Contract. Irrigators and farmers shall have the right to use, without charge, the river water for cultivation as per the cultivation meeting decisions and the access facilities of which the Employer has given possession to the Contractor or which have been constructed or acquired by the Contractor for use in constructing the Works.

7. Contractor's Equipment

The Contractor shall supply, install, operate, maintain and subsequently remove all Contractor's equipment required for the execution of the Works. In particular, the Contractor shall supply all those items listed on the Technical Proposal in the Contract at the time stated therein or at such other time as may be deemed necessary in the opinion of the Engineer.

The Contractor's equipment shall not be removed from the Site without the written approval of the Engineer. If during the execution of the Works any item of the Contractor's equipment in the opinion of

the Engineer, is unsuitable so as to fail to perform the services required in the execution of the Works, the Contractor shall replace such construction equipment with another suitable one at his own cost.

The Engineer may, if he considers it necessary for the execution of the Works in accordance with the Contract, order the Contractor to supply additional items of Contractor's equipment or extend the period for which the Contractor's equipment is required. The Contractor shall supply and stock all essential spare parts for his equipment to ensure the efficient execution of the Works.

The Contractor shall submit a Monthly Equipment Report, which lists the following information about the Contractor's equipment.

- a. List of all equipment located at the Site
- b. Daily working and operation record of each item of equipment
- c. Inspection, repair and maintenance records
- d. Quality of work
- e. Quantities of fuel, lubricant, oil and tires consumed
- f. Overhauling record
- g. Accident report
- h. List of unserviceable equipment and action being taken to put back in operation

8. Standards

Except as otherwise specified in this Specification, all materials and workmanship shall comply in all respects with the requirements of the appropriate standard of code issued by the British Standards Institution, American Society of Testing and Materials, US Corps of Engineers, Technical Methods for Highways, or such other standard as the Engineer may approve, current at the date of Invitation to Tender. If, after the date of Invitation to Tender, there is an amendment to a standard relevant to the Contract, the Engineer will direct whether the amendment is to apply.

The Contractor shall have available in his site office at all times at least one copy of every standard or code referred to in this Specification, and any additional standard or code which may be referred to therein, and shall make these available for reference by the Engineer upon request.

9. Setting out Works

9.1 Existing Survey Date

The Tender drawings included in the bidding document are prepared based on the surveys carried-out by the Engineer during design stage.

9.2 Responsibility for Setting Out

The Contractor shall be solely responsible for the correct setting-out of the Works and shall employ experienced qualified surveyors acceptable to the Engineer for this purpose.

The Contractor shall furnish all materials, labour and equipment including stakes, templates, patterns, platforms and special labour that may be required by the Contractor in setting out any part of the Works.

The Contractor shall give the Engineer not less than 24 hours notice of his intention to set out, survey or give levels for any part of the Works in order that arrangements can be made for checking the accuracy of the setting out, survey or levels. In order that the Engineer can expedite such checking the Contractor shall as soon as practical supply the Engineer with records in an approved form relating to all reference pegs and benchmarks in connection to the set out, survey or levels for any part of the Works which are required to be checked.

9.3 Contractor's Site Staff

The Contractor shall provide competent qualified survey technicians and the necessary support teams to carry-out all survey necessary to set out the Works in a neat and workmanlike manner.

9.4 Survey Operatives for the Engineer

The Contractor shall supply chainmen and labourers as required by the Engineer who are well experienced in such works. Chainmen shall be experienced in assisting Engineer in survey work.

It shall be the discretion of the Engineer to select chainmen and labourers whom he considers reliable and suitable and the Contractor shall maintain the continuity of this staff.

9.5 Permanent Survey Pillars

Using the existing temporary benchmarks shown on the Drawings the Contractor shall establish permanent survey pillars sufficient to define the control survey and as directed. The permanent survey pillars shall be linked to the national map grid and their coordinates shall be shown on the As-Built Drawings.

Establishment of these permanent survey pillars shall be undertaken before any of the existing survey point markers are destroyed by the Contractor's operations.

9.6 Detailed Survey

The Contractor shall perform all calculations, surveying and setting out necessary to establish the accurate location of the structures to be constructed.

The Contractor shall submit for the review of the Engineer the methods he intends to employ and the precision he will attain for the setting-out of the Works.

The Contractor shall, under guidance and in the presence of the Engineer, carry-out surveys and measurements for record and payment purposes in accordance with the Conditions of Contract.

In the Engineer's own surveying for checking the Contractor's survey results, the Contractor shall render the Engineer all necessary assistance and services for such check surveys.

10. Safety Precautions

10.1 General

The Contractor shall comply with any safety instruction given by the Engineer. The Contractor shall exercise every reasonable precaution to protect from injury any person or property. The Contractor shall erect and maintain all necessary temporary fencing, barricades, barriers, signs and lights and provide fire alarm, fire extinguishing and fire fighting services at strategic points on the Site. The Contractor shall provide adequate ventilation, lighting and safe working conditions for his workmen engaged in all aspects of the Works. The Contractor shall adopt and enforce such rules and regulations as may be necessary, desirable or proper, to safeguard the public, and all persons engaged in the work and its supervision. Safety measures shall include but shall not be limited to those safety measure mentioned in this Clause.

10.2 Safety Officer

The Contractor shall constantly employ, during the progress of the Works, an employee qualified in safety, and familiar with the type of work being performed, whose assignments shall include initiation of measures for the protection of health and the prevention of accidents and who shall see, by personal inspection, that all safety rules and regulations are enforced.

The Contractor shall hold regular scheduled safety meetings at least once each month with his engineers, supervisors and foreman and, when instructed, with the Engineer. The Contractor shall keep the Engineer advised as to when these meetings are to be held and shall provide the Engineer with a copy of the proposed agenda.

10.3 Temporary Fencing

If required the Contractor shall erect, maintain and remove suitable and approved temporary fencing to enclose such areas of the Permanent Works and areas of land occupied by the Contractor within the Site as may be necessary to implement his obligation under the Contract, in an approved manner. Safety fences shall be erected around electrical and mechanical equipment before that equipment is connected to any electrical supply.

Where any temporary fence has to be erected alongside a road, footpath, or other public thoroughfare, it shall be of the type required by and shall be erected to the satisfaction of the Government authority concerned.

10.4 Lighting

Safety measures shall include but shall not be limited to the following:

Without limiting the generality of Clause 4.8 of the Conditions of Contract, the Contractor shall provide sufficient lighting to ensure that, in all places where work is in progress;

10.5 Signs

The Contractor shall provide all necessary signs for the Works. These shall include, but not be limited to;

- Standard road signs
- Warning signs
- Danger signs
- Safety signs
- Control signs; and
- Direction signs

Wording on all signs shall be in the English, Tamil and Sinhalese languages. The size, colour, lettering and location of all signs will be subject to approval of the Engineer and international sign convention shall, where applicable, be followed.

The Contractor shall maintain all signs placed by himself as well as those placed by the Employer.

If the Engineer considers that the system of signs provided by the Contractor is inadequate to ensure safety, or is unsatisfactory in other respects, the Contractor shall add to, amend, or otherwise change the system to the satisfaction of the Engineer.

10.6 Accident Reports

The Contractor shall promptly report to the Engineer in the form to be prescribed, all accidents involving death or serious injury to staff or workmen, and furnish monthly reports of all accidents to staff or workmen involving loss of time, giving such information as may be instructed by the Engineer.

10.7 First Aid Officer

The Contractor shall constantly employ for the duration of the Contract a First Aid Officer and shall provide first aid and ambulance facilities in accordance with the General Conditions of Contract.

10.8 Other Safety Measures

Safety instruction – the Contractor shall at his own cost supply and issue to his employees, those of his sub-contractors and the Engineer, printed booklets of pocket size, on the scale of one per person, in Sinhalese and Tamil and in other languages used by his employees at Site, instructions based on good practice. Within 60 days of the Engineer's written order to commence the Works, proof copies of the booklet shall be submitted to the Engineer for approval before printing and amendments shall be made to the booklet to his entire satisfaction. The Contractor shall issue the booklet immediately after printing as required by this Clause and ensure that all employees are fully conversant with the instructions. Safety instructions shall deal with all safety including;

- a. Protective clothing, headgear and footwear
- b. Use of lifting equipment
- c. Use of drilling equipment
- d. Use and storage explosives
- e. Earthmoving
- f. Formwork erection
- g. Concreting
- h. Structural steel work
- i. Compressed air
- j. Welding and painting
- k. Routine for accidents or fires; and
- l. Watchmen, warning notices and barriers

The Contractor shall allow for ten (10) booklets for the use of the Engineer.

10.9 Provision of Personal Protective Equipment (PPE)

No construction work shall be carried on the Site before appropriate Personal Protective Equipment (PPE) is available for the operations planned. The Contractor shall, within 28 days of the Commencement Date, prepare for the consent of the Engineer a schedule of Personal Protective Equipment (PPE) for free issue, including replacement, to all persons employed on the Works, including employees of the Engineer and Employer. Provision shall also be made for supplying PPE to site visitors.

The schedule shall address the need to provide such clothing and equipment suitable for the climatic conditions on the Site.

The Contractor shall immediately implement the issue of such PPE once he has obtained the Engineer's consent to the schedule. During the course of the Contract, he shall ensure that at no time do the stocks of PPE in his Site stores fall below the level consented to by the Engineer in that schedule. As proof of this, he shall submit to the Engineer each month during the Contract an inventory of PPE showing records of issue and demonstrating the levels of such PPE being retained in his Sites stores. Furthermore, all persons employed by his on the Works shall be made aware of the need to wear such clothing and to use such equipment, and to maintain the same in good working order.

The Engineer will monitor the effectiveness of the implementation of the use of the PPE during the course of the Works, and may certify the reduction of the value of some of all of the relevant Bill of Quantities items in the Monthly Statements in the event of non-usage of PPE on the Site.

Pursuant to Clause 6.9 of the Conditions of Contract the Contractor shall remove from the Works any person who fails to wear PPE, or to use equipment as intended, or who has otherwise failed to comply with the Site Safety Regulations, and any supervisor who fails to enforce those regulations. The Contractor shall make this a condition of employment of every employee engaged in construction work.

11 Temporary Works

11.1 General

The Contractor shall execute, erect, maintain and remove upon completion of the Works, all Temporary Works in accordance with the proposals submitted with the Tender or with such modifications as approved by the Engineer from time to time.

11.2 Approval of Temporary Works

The Contractor shall submit to the Engineer for approval drawings and full particulars of all Temporary Works which he intends to construct at least 30 days before he desire to commence constructing such works.

The submission to, or approval by, the Engineer of any such proposals by the Contractor shall not relieve the Contractor of any of his responsibility for the sufficiency of the Temporary Works for their intended purpose.

The Contractor shall also obtain any necessary approval from local statutory or other Government authorities before commencing construction. Such work shall not be started without prior approval.

11.3 Removal of Temporary Works

On completion of the Works, all Temporary Works constructed by the Contractor or handed-over to the Contractor by the Engineer, unless otherwise specified or instructed by the Engineer, shall be removed from the Site, as approved by the Engineer.

The Contractor shall make safe all areas affected by Temporary Works and reinstate natural drainage. The Contractor shall finish, reinstate, clean up and relinquish parts of the Site at the end of the Defects Liability Period or such earlier times as instructed by the Engineer.

Buildings and facilities removed from the Site will become the Contractor's property. Foundations of buildings and structures shall be broken up and removed from the Site.

12 Contractor's Offices, Camp and Facilities

12.1 General

The Contractor shall provide a main office and site offices for his staff. The main office shall be located in the vicinity of the dam site. Site offices may be mobile field offices so that, when work at one site is complete, the office may be moved to another site. The Engineer will allocate a portion of the Works area at the dam site where the Contractor shall provide and maintain such offices, stores, workshops, housing and adequately fenced store and delivery compounds as are necessary for the execution of the Works, including all necessary services for water supply, drainage, lighting, roads, paths, parking places, sewerage and garbage disposal.

12.2 Construction Camp

- a. The Contractor shall set up his camp as proposed in his Tender and approved in the Letter of Acceptance, for housing, camps and for other required facilities and amenities for his employees and for the employees of his sub-contractors.

- b. The Contractor shall be deemed to have inspected these sites and made his own evaluation as to their adequacy and suitability for the development of the required camp facilities.
- c. The Contractor shall appoint a Camp Manager who shall be responsible for the administration and maintenance, and for all matters relating to the allocation of space, discipline and use of buildings and facilities.
- d. All buildings shall at all times be open to inspection by the Engineer. Any instruction given by the Engineer for the proper cleaning, disinfection and general maintenance in a sanitary and hygienic condition of any building must be forthwith carried-out by the Contractor. Before any buildings are occupied the Contractor shall draw up a code of rules and regulations for their control which shall be approved by the Engineer.

12.3 Removal of Buildings and Facilities

- a. On the completion of the Works, all buildings and facilities provided by the Contractor in accordance with the provisions of this Clause shall be removed from the Site by the Contractor unless otherwise instructed by the Engineer.
- b. Foundations of all buildings and structures shall be broken up and removed from the site. All areas shall be restored and left in a clean and tidy condition to the satisfaction of the Engineer.

13 Inspections and Material Testing Laboratory

13.1 Inspections

The Contractor shall carry-out the inspections and tests stipulated in the respective sections of these Specifications in the presence of the Engineer or any person authorized by him.

No work shall be covered up or put out of view without the approval of the Engineer and the Contractor shall afford full opportunity for the Engineer to examine and measure any work which is about to be covered up or put out of view and to examine foundations before the Permanent Works is placed thereon.

The Contractor shall give due notice to the Engineer whenever any such work or foundation is or are ready or about to be ready for examination and the Engineer will without unreasonable delay, unless he considers it unnecessary and advises the Contractor accordingly examine and measure such work or examine such foundations.

Should it be impossible for the Engineer to witness such inspections and tests, the Contractor shall record the results of such inspections and tests using the form specified by the Engineer, and submit to the Engineer the report by attaching the record photographs of the said inspections and tests as the record and report. These records and reports shall be subject to the approval of the Engineer.

These records and reports shall be prepared and submitted to the Engineer for approval irrespective of whether or not the Engineer has witnessed such inspection and tests.

In the case where the Engineer has approved and qualified the results of such inspections and tests, the Contractor may proceed to the next stage of the Works.

The inspections and tests specified herein shall include the following:

- a. Inspection of volume of work executed
- b. Inspection and test of construction materials
- c. Inspection of excavation (including bed surface)
- d. Inspection of reinforcement bar assembly
- e. Inspection of formwork

- f. Inspection of the dimensions of the structures
- g. Inspection of disposal of excavated materials
- h. Identification test of quality of concrete at site (cast-in-place concrete)
- i. Inspection of backfilling
- j. Other tests and inspections the Engineer deems necessary
- k. Other tests and inspections required according to pertinent regulations, codes and standards

The following tests and inspections shall be executed in the presence of the Engineer;

- a. Witnessing at concrete placing
- b. Compression test of concrete
- c. Other tests and inspections the Engineer deems necessary

13.2 Material Testing Laboratory

The Contractor shall provide and maintain until completion of the Works a materials testing laboratory complete with furnishing, fixtures and equipment and carry-out all routine tests including preliminary tests for the concrete works as required by the Technical Specifications.

13.3 Equipment

The Contractor shall provide and maintain furnishings and equipment of approved manufacture to carry-out testing.

The laboratory shall at all times be provided with a sufficient stock of consumable equipment, to allow for usage, breakage and deterioration. In the event of any item of equipment becoming unserviceable through any cause the Contractor shall, if required to do so by the Engineer, order replacement to be air-freighted from the country of origin.

The Contractor shall supply all equipment, supplies and copies of the relevant standards for the laboratory necessary to perform the tests stipulated in the Technical Specifications. These tests shall include but not be limited to the following:

- a. In concrete – temperature, slump, density, flow, air content
- b. In aggregate – grading, water absorption, specific gravity, soundness, flakiness, elongation, friable practices.
- c. In soil – grading, specific gravity, density (loose and compacted), moisture content, hydrometer, plasticity

The Contractor shall also provide any additional equipment as may be required by the nature of work or by the Engineer.

13.4 Costs

The tests required by the Technical Specifications or by the Engineer will be carried out by the Contractor in the Material Testing Laboratory or in other Laboratories proposed by the Contractor and approved by the Engineer. The cost of such tests including the preparation and transportation of the samples shall be borne by the contractor if not stated otherwise.

13.5 Facilities for Engineer to Take Samples

The Contractor shall provide facilities for the Engineer to take samples for testing of any of the fill, concrete or other materials to be incorporated in the Works. Such samples may be taken before or after incorporation into the Works or at any stage during construction at the discretion of the Engineer.

14 Quality Assurance System

As per Clause 4.17 General Conditions of Contract, the Contractor shall institute a quality assurance system to demonstrate that the Works are being carried out in compliance with the requirements of the Contract. The Contractor shall within 28 days from the receipt of Letter of Acceptance, submit the quality assurance system he is proposing to adopt in the Contract.

The Contractor shall build the quality assurance system for all his activities from the commencement to completion of the Contract. The system shall include but not limited to the following.

- Contractors site management
- Topographic surveys and setting out
- Construction Drawings
- Safety measures adopted
- Environmental Management
- Traffic Management
- Maintenance of Roads
- Construction Methods adopted
- Quality Control
- Progress monitoring
- Monthly Bills
- Monthly Bills

The quality assurance system instituted by the Contractor is a requirement under the Contract and no payment will be made to the Contractor for this work.

15 Dealing with Water

15.1 General

Where it is required that construction shall proceed with flow of water in streams and/or issue of irrigation water to canals, it shall be necessary to isolate the site of the structure to be constructed from the flow of water by the construction of suitable cofferdams, canals, flumes, drains, swamps and/or other temporary diversion and protective works without interruption or interference with the flow of water in the streams and/or issue in the canal. The contractor shall construct sufficient temporary works as described above to deal adequately with surface and ground water sources to enable the construction of the permanent works to the satisfaction of the Engineer.

The Contractor shall submit for the approval of the Engineer the location, size and other relevant details including the materials proposed for the construction of the temporary works described above. The contractor shall protect the works during the entire construction period from damage due to rains, surface run-off, floods, etc. and from failure of the temporary protective works constructed by him. Any damage to the works or delay to his operations from such events, whether due to his failure to adequately take such factors into consideration or not shall be corrected by the contractor, and will not constitute a basis for claims for additional payment or extension of time. The Contractor shall furnish, maintain and operate all necessary pumps and other equipment for removal of water from the various parts of the works free from water as required for construction. After having served their purpose, all temporary protective works, unless otherwise directed, shall be removed or levelled to give a sightly appearance, so as not to interfere with the operation of the other related works.

Unless specifically provided for in the Bill of Quantities, no separate payment will be made for dealing with water. The cost of all operations required for dealing with water shall be included in the respective items of works for which dealing with water is required.

15.2 Approval of Proposals for Dealing with Water

Prior to commencement of any works, the Contractor shall submit a Plan for Dealing with Water with full details of the construction, operation, maintenance and removal of the temporary protective works.

15.3 Removal of Water from Foundations

The Contractor's method of removal of water from foundation excavations shall be subject to the approval of the Engineer. Where the excavation for foundations extends below the water table in common material, the portion below the water table shall be de-watered in advance of excavation. The de-watering shall be accomplished in a manner that will maintain the stability of the excavated slopes and the bottom of the excavation, and will result in all construction operations being performed in the dry.

The Contractor shall be required to ensure that the bottom of the excavation is free of water prior to placement of concrete or fill material. Such control may required supplementing approved de-watering methods by the use of perforated pipe under-drains leading to sumps from which the water shall be pumped. The pipe drains shall be of uniform diameter for each run and provided with grout connections and returns at about 15 meter intervals and shall be embedded in reasonable well graded gravel or similar filter material.

During the placing and compacting of fill material in an excavated cut off trench, the water level at every point in the cut off trench shall be maintained below the bottom of the cut off trench until the compacted fill in the cut off trench at the point has reached a height of 3 metres. Therefore the water level shall be maintained at 1.5 metres below the top of the compaction fill. When the fill has reached an elevation which will permit the de-watering systems to maintain the water level at or below the designated elevations as determined to the Engineer, the pipe drains, if any, and surrounding filter material shall be filled with approved grout composed of water and cement or clay.

16 Tests for Borrow Areas and Quarries

16.1 General

All borrow areas and quarries where materials are to be used for permanent construction works shall be subjected to approval of the Engineer. The Engineer may cause any or all of the under-mentioned tests to be done in the Contractor's Field Laboratory at site and/or in the Employers Laboratory of the Irrigation Department.

16.2 Tests on Soils

From areas approved out for exploitation the following tests shall be conducted on a sample from the quantum that would be required for exploitation from such areas for placement in different parts of the embankment regularly as determined by the Engineer.

- (i) In-situ Moisture Content
- (ii) Atterberg Limits
- (iii) Mechanical Analysis, and
- (iv) Proctor Compaction.

The particle size grading for the fill materials are generally specified by limiting the range of the grading results obtained for each sieve. Material outside the limits, will be accepted or rejected at the Engineer's discretion according to the location on the embankment where the material is to be placed, volume required and the nature of the circumstances for the use of such material.

The tabulation below is a guide for the selection of materials for an embankment.

Table 16.2.1 - Grading and Plasticity Limits for Earth Embankments

Zone	Characteristics	Absolute Minimum (%)	Absolute Maximum (%)
Low Permeability	Passing 75 micron sieve	30	70
	Liquid Limit	20	50
	Plasticity Index	8	30
Medium or High Permeability	Passing 75 micron sieve	-	70
	0.355 mm sieve	8	-
	2.36 mm sieve	50	-
	25.0 mm sieve	100	100
	Liquid Limit	0	50
	Plasticity Index	0	30

16.3 Tests on Gravel

Materials from approved gravel quarries shall be tested periodically for the following characteristics:

- (i) Mechanical Analysis, and
- (ii) Atterberg Limits.

16.4 Tests on Sand

Materials from approved sand quarries shall be tested periodically for the following characteristics:

- (i) Gradation
- (ii) Specific Gravity, and
- (iii) Organic Content

16.5 Tests on Rock

Rock samples from approved quarries shall be tested periodically for the following characteristics:

- (i) Gradation
- (ii) Specific Gravity
- (iii) Los Angeles Abrasion Test, and
- (iv) Sodium or Magnesium Sulphate Soundness Test

17. Embankment Filling

17.1 General

The embankment shall be constructed to the dimensions shown on the drawings with approved materials obtained from designated borrow areas and approved excavations. The distributing and gradation of the material throughout the embankment shall be of such homogeneous texture such that the fill will be free from lenses, pockets, streaks or layers of material differing substantially in gradation from the surrounding material. Relatively higher plastic material available from borrow areas shall be used in the central portion and previous material from approved excavations on the downstream slope of the embankment respectively.

The Engineer will give guidance in the selection of material for placement in different parts of the embankment on the basis of investigations done and/or tests carried out. Materials used in the embankment fill shall be continuously subject to the approval of the Engineer.

The combined excavation and placing operations shall be such that the material when compacted in the fill will be blended sufficiently to obtain the required degree of compaction. Successive loads of material shall be placed in layers so as to produce the best practicable distribution of the material subject to the approval of the Engineer for which purpose he may designate the locations in the fill where the individual loads shall be deposited.

Cobbles and rock fragments in material of homogeneous texture, of dimension larger than 75 mm shall not be placed in the fill. Such cobbles and rock fragments found in otherwise approved fill material shall be removed by the Contractor either at the site of excavation or after being transported to fill but before the materials are placed and compacted and shall be disposed as directed by the Engineer.

17.2 Placement

Embankment material shall be placed in continuous rows/lanes approximately parallel to the axis of the embankment and in approximately horizontal layers of thickness between 200 and 300 mm before compaction by machinery. If hand tools are used for compaction the thickness of layer shall be between 100 to 150 mm. the embankment may be constructed in separate reaches provided that the slopes of the bonding surfaces parallel to the dam axis between the completed portion of the embankment and material to be newly placed shall not be steeper than 6 horizontal to 1 vertical. The difference in elevation during construction between any adjacent lanes shall not exceed 500 mm.

17.3 Moisture Content

From a practical standpoint a moisture range of 1% less than the optimum and 1% more than the optimum may be regarded as satisfactory during compaction. Water required for conditioning the fill may be conveyed by pipeline or bowser and applied by sprinkler arrangement and throttle to control quantity. Jets may be used in confined areas provided that the nozzle is of an approved size and delivery rate.

The required water may added to the previously rolled layer before placing of the material for the next layer, or added to the top of the next layer, or a combination of both which will give the best results for obtaining a uniform moisture distribution throughout the layer. Harrowing will be required to work the moisture into the layer. Water may be added to the borrow areas by any of the methods described above on the day prior to exploitation, particularly where the ground is too hard and dry. This shall not preclude the addition of a further quantity of water to meet any deficiency in the placement moisture content just

before spreading and compaction on the embankment. The methods described above adopted by the Contractor shall be subject to the approval of the Engineer.

If the moisture content of the previously rolled embankment or the material placed for compaction on fill is found to be above the specified limit before compaction then the material shall be dried out to the specified moisture content limit assisted by discing and/or harrowing. In such instances all hauling and other equipment except those required for discing or harrowing shall be kept off the surface to prevent rutting.

In case of stoppage in placing and compacting arising from approved construction or from holiday period exceeding one week or from unforeseen circumstances etc., the top layer placed and compacted before the stoppage shall be graded and rolled with a smooth wheel roller to facilitate surface run-off during the stoppage. Prior to resumption of work the top layer shall be scarified and moistened or allowed to dry as found necessary and approval of the Engineer obtained for continuing the operations.

17.4 Compaction

When each layer has been conditioned to 100% +/- 1% of the optimum moisture content, it shall be compacted by a towed tamping roller, self-propelled vibratory roller, pneumatic tire roller or any other suitable compacting equipment. Compaction with sheep-foot rollers shall be continued until the dry unit weight of the compacted material is not less than 98% of the standard "A" Proctor dry unit weight, which is the dry unit weight at optimum moisture content. The number of passes of the compacting equipment required to produce the above unit weight shall be determined from trial embankment tests conducted by the Contractor and witnessed by the Engineer. The layer shall be compacted in a direction parallel to the dam axis. The compacting equipment shall travel with adequate overlap to ensure thorough and complete compaction.

The embankment shall be brought up in approximately horizontal lifts. Proper compaction shall be ensured throughout the entire embankment. The outer edges of the embankment shall be processed to true slopes which shall be maintained until final completion and acceptance. To ensure proper compaction of true slope the other edges shall be made sufficiently wide and trimmed to true slopes.

17.5 Tests for Embankment

When an area of the embankment has been rolled, the bulk unit weight, moisture content and dry unit weight shall be obtained from the following conditions:

- (i) For every 750 cubic metres of material placed in each layer,
- (ii) Where embankment operations are concentrated, namely when two or more layers are placed over each other on the same day the frequency of tests shall be more than (i) above as determined by the Engineer,
- (iii) At every location where the degree of compaction is considered doubtful by the engineer,
- (iv) At locations of embedded installations at the discretion of the Engineer.

Compacted samples from every 7,500 cu metres shall be tested for the following.

- (i) Atterberg Limits,
- (ii) Mechanical Analysis, and
- (iii) Proctor Compaction

18.0 ENVIRONMENT AND SOCIAL MANAGEMENT PLAN (ESMP)

The Contractor shall comply with the provisions in the **Environment And Social Management Plan (ESMP)** annexed in this section without any cost to Employer.

18.1 Environmental Control

The Contractor shall:-

- Comply with the provisions of this Section and other environmental protection provisions in the Contract and with the requirements of any statute, by-law, standard and the like related to environmental protection.
- Arrange all work to cause the least possible disturbance to the environment.
- Submit proposals for traffic movement, temporary structures, cleaning up, storage of materials, demolition and the like. Observe the agreed proposals.
- Dispose of all spoil and unsuitable material in accordance with the provisions given in EMP.

18.2 Monitoring

The Contractor shall monitor the environmental aspects of the construction and the control measures implemented to minimize any adverse environmental impact. Should the control measures put in place be found to be unsatisfactory as a result of the monitoring then the Contractor shall amend the control measures to provide a satisfactory result.

18.3 Environmental Complaints

The Contractor shall maintain a register of all environmental complaints received and shall notify the Engineer of each complaint. Complaints received by the Engineer and referred to the Contractor shall also be recorded in the register.

The Contractor shall investigate all environmental complaints received and where necessary, undertake measures to address the complaint. All measures undertaken to address complaints shall be detailed in the register.

18.4 Environmental Incidents

Should an environmental incident (being environmental nuisance, medium environmental harm, or serious environmental harm) occur during any construction phase, the Contractor shall immediately take the appropriate action to minimize any impact and inform the Engineer. The Contractor shall carry out any instructions received from the Engineer.

The Contractor shall be responsible for the cleanup of any contamination caused by the construction works and no additional payment will be made in this regard.

18.5 Environmental Training

The Contractor shall be responsible for ensuring that all employees (including subcontractors) have received training in relation to the Contractor's environmental operating guidelines.

The Contractor shall ensure that any machinery on site is operated within the appropriate guidelines so as to minimize environmental impact in relation to noise, air and water quality, waste control and contamination. All construction materials used on site shall be utilised in a manner to similarly limit environmental impact.

No additional payment shall be paid to the Contractor and the cost of environmental control measures shall be deemed to have been included in the rates tendered for the Works.

19.0 Standard Procedure for Ensuring Occupational Health and Safety When working in Wildlife Area

The Contractor shall comply with the provisions in the Standard Procedure for Ensuring **Occupational Health and Safety When working in Wildlife Area** annexed in this section without any cost to Employer.

20.0 Standard Procedure for Assessing the Requirement of Tree Removals

The Contractor shall comply with the provisions in the **Standard Procedure for Assessing the Requirement of Tree Removals** annexed in this section without any cost to Employer. Also, contract has to take the approval from proper Authority before removing the tree. All the removed trees should be destroyed or Store at Chadayanthalawa unit office based on the instruction given by the Engineer to Contract.

21.0 Covid 19 Safety Manual

The Contractor shall comply with the provisions in the **Covid 19 Safety Manual** annexed in this section without any cost to Employer.

22.0 Labor Management Plan (Including site management and camp management measures)

The Contractor shall comply with the provisions in the **Labor Management Plan (Including site management and camp management measures)** annexed in this section without any cost to Employer.

For Reference Only



Environmental Social Screening Report (ESSR) and Environmental and Social Management Plan (ESMP)

Strengthening of Tank Bund of Sagamam Tank Including Rip-Rap Protection and Improvements to Sillikody Anicut in Sagamam Irrigation scheme, Reconstruction of Panichchayady Anicut in Sagamam Irrigation scheme, Construction of Uruhudamoolai Branch Anicut in Sagamam Irrigation Scheme and Modernization & Instrumentation to Channel System of Sagamam Irrigation Scheme

**Integrated Watershed & Water Resources Management
Project (IWWRMP)**

Ministry of Agriculture, Livestock, Lands and Irrigation



December 2024

Environmental Social Screening Report (ESSR) and Environmental and Social Management Plan (ESMP)

Strengthening of Tank Bund of Sagamam Tank Including Rip-Rap Protection and Improvements to Sillikody Anicut in Sagamam Irrigation scheme, Reconstruction of Panichchayady Anicut in Sagamam Irrigation scheme, Construction of Uruhudamoolai Branch Anicut in Sagamam Irrigation Scheme and Modernization & Instrumentation to Channel System of Sagamam Irrigation Schem

7. Environmental and Social Screening Checklist (Table 12)

	Screening question	Yes	No	Significance of the effect	Remarks
Project Design					
a. General					
1	Will the sub project include any physical construction work?	√		Moderate	Mostly rehabilitation work including, improvements tank bund, providing rip-rap, rehabilitation of anicuts and regulators and gates and reconstruction of anicuts.
2	Does the project include upgrading or rehabilitation of existing physical facilities?	√		Moderate	-DO-
b. Rehabilitation of dam head works and rip rap associated irrigation infrastructure					
3	Will improvements to tank bund including the headworks and rip rap structures require the water level in the reservoir to be artificially drawn down?		√		The construction is planned to be done particularly during Yala season where water level is low. Lowering of water level is not thus necessary for the proposed interventions, hence no impact.
4(i)	If yes, can this lead to any alteration of water flows in surface as well as groundwater sources, especially in the dry season?		N/A		The water tables are always low during the proposed construction periods of the dry Yala months.
4(ii)	Will the water draw down affect the ecology of the tank and other important wetlands that depend on the main lake and canal system to maintain water level?		N/A		
5	Will repairs to irrigation canals/ structures require temporary suspension of water issuance in order to facilitate civil works? Can this lead to diminishing of other downstream water uses that can result in social		√		The identified repair works (structures) can be performed in parallel to bund rehabilitation work during dry season. Normally, there are no any settlements close to the sites that planned to rehabilitate.

	Screening question	Yes	No	Significance of the effect	Remarks
	issues such as community bathing, drinking water supplies, irrigation of home gardens etc.				
6	Will civil works lead to diminishing of other downstream water uses as a result of water quality impairment?	√		Low	Due to the rehabilitation of anicuts water quality issues can be happened to the downstream. But there are no any water intakes and at downstream.
7	Will there be changes to original design levels of the head works that will result in inundation of new land in the catchment		√		No
8	Will the rehabilitated scheme serve new areas of paddy under its command?		√		No, the extent of paddy cultivation in the command area will remain the same. But facilitates to cultivate two seasons.
c. Additional supplementary facilities					
9	Will there be construction of new irrigation or drainage canals or widening of existing canals?		√		No canal widening under the planned interventions.
9(i)	If yes, will new/modified canal trace/alignments interfere with existing land uses (habitats, home gardens) in a negative way?		N/A		
9(ii)	If yes, will the trace interfere with other sensitive infrastructure such as roads, pedestrian paths, schools and temples?		√		No
Project Construction					
10	Will construction and operation of the Project involve actions which will cause physical changes in the locality (topography, land use, changes in waterbodies, etc.)	√		Low	The existing structures will be rehabilitated, and one new structure will be constructed. This rehabilitation including the installation of regulators (under modernization and instrumentation) and new anicut (Uruhdamoolai) will have a significant beneficial impact on the irrigation system and improve the overall efficiency.
11	Will construction of the project cause soil erosion within the site due to steep grade or soil content?	√		Moderate	Exposed areas of the bund and slopes are susceptible to erosion during construction. Stripping top soil up to 50 mm thickness on bund slope will increase the chances of soil erosion due to wind and rain. However, the

	Screening question	Yes	No	Significance of the effect	Remarks
					<p>general terrain is flat and since the construction work is under taken during the dry season soil erosion is expected to be controlled.</p> <p>Earth requirement planned to fulfil from the suitable sites at tank bed. Other construction materials will obtain from registered suppliers. Burrow pits need to be properly sloped and once over properly closed to avoid loss of topsoil, vegetation and habitat.</p> <p>Borrow material once brought to the site has to be unloaded and stockpiled. This might contribute to erosion onsite and block existing run – on and off paths which may create erosion problems elsewhere.</p> <p>Removal of trees within the areas to be rehabilitated will also lead to soil erosion. However, these impacts are expected to be temporary and mitigatable with proper construction planning and management.</p>
12	Will the Project involve dredging and disposal of dredge material as well as other solid wastes during construction?	√		High	Excavation works and earth preparation works and ground clearing works will generate dredging material. Most of the suitable materials can use for backfilling.
13	Will the Project release pollutants or any hazardous, toxic or noxious substances to air?		√		Construction activities that would produce airborne dust are temporary and limited to short durations and will be restricted to a small area. Also, Fuel, lubricant can be released from the vehicles and concrete works will support to release cement to the environment and
14	Will the Project cause noise and vibration or release of light, heat energy or electromagnetic radiation?	√		Low	Noise and vibration are expected to be very low due to the small-scale nature of construction activities. There can be insignificant levels of noise produced during material transportation, structure demolishing and other construction work, but due to heavy machinery there may be temporary disturbances to the animals (especially birds) inhabiting the tank area.
15	Will the Project lead to risks of contamination of land or water from releases of pollutants onto	√		Low	Other than pollutants such as petroleum, oil and grease that can be released from construction vehicles and machinery, no other sources of

	Screening question	Yes	No	Significance of the effect	Remarks
	the ground or into surface waters, groundwater?				pollution with the potential to cause land and water pollution are envisaged.
16	Will the project cause localized flooding and poor drainage during construction?		√		Flood is a common feature of the area and end of every year (November or December) the proposed area get flood. But the construction works planned for the dry season of the year. During construction obstruction of natural drainage path may lead to temporary flooding unless managed but this is highly unlikely to be an issue.
17	Are there any areas or features of high landscape or scenic value on or around the location which could be affected by construction activity?		√		No such location has been identified in the project area.
18	Are there any other areas on or around the location which are important or sensitive for reasons of their ecology e.g. wetlands, watercourses or other waterbodies, the coastal zone, mountains, forests which could be affected by the project?	√		Low	All drainages finally connect to the natural lagoon. The lagoon is comparatively large and provides environmental, social and economic benefits for the area and the community. But, no any interventions close to the lagoon and contaminated water can be released to the lagoon.
19	Are there any areas on or around the location which are used by protected, important or sensitive species of fauna or flora e.g. for breeding, nesting, foraging, resting, migration, which could be affected by the project?		√		Mainly, the lagoon area provides habitats for aquatic birds including migrants.
20	Will any part of the project's construction activities be located in a previously undeveloped area where there will be loss of greenfield land?		√		No. This is a rehabilitation project, hence no new areas will be opened up.
d. Land related impacts					
21	Will the sub-project require acquisition of land and or other assets?			√	

	Screening question	Yes	No	Significance of the effect	Remarks
22	Is land for material mobilization or transport for the civil work available within the identified work site / Right of way?	√			Sufficient lands available for the material mobilization.
23	Is the site chosen for this work free from any encumbrances (e.g. squatters, encroachments)?	√			
24	If the land parcel is to be acquired, is the actual plot size and ownership status known? If so, how much?		√		
25	Is the project likely to cause partially or fully damage to, or loss of housing, shops, or other resource use?		√		The project does not require any land acquisition that would lead to damages or loss of properties
26	Are there any routes or facilities on or around the location which are used by the public for access to recreation or other facilities, which could be affected by the project?	√		Low	Only the tank bund rehabilitation will create some access issues. But the utilization of tank bund is significantly low of the area.
e. Livelihoods Related Impacts					
27	Are there any non-titled people (squatters) who are living/ or doing business who may be partially or fully affected because of the civil works?		√		
28	Will there be damage to agricultural lands, standing crops, trees, etc.?	√		Moderate	According to the proposed sites, 10 nos of trees tentatively identified to remove with strong engineering justification. No damage to the agriculture crops.
29	Will there be any permanent or temporary loss of income and livelihoods as a result of the civil works? If so, for what period?		√	Moderate	Normally in the dry season, the water level of the tank and Panalgama oya are reduced significantly. So, no effect to the fisheries.
29(i)	Have these people/ businesses who may suffer temporary loss of incomes or livelihoods been surveyed and identified for payment of any financial assistance?		√		

	Screening question	Yes	No	Significance of the effect	Remarks
29(ii)	Are there any vulnerable households affected?		√		
29(iii)	Will people permanently or temporarily lose access to facilities, services, or natural resources?		√		Rip-rap laying and bund repairing will create a temporal access issue. But, the utilization of tank bund is significantly low and there are alternative ways.
f. Impacts on community resources, public services, cultural/historical sites, etc					
30	Are there any areas on or around the location which are densely populated or built-up, which could be affected by the project?		√		Particular DSD is a populated area. But no effect from the proposed interventions.
31	Are there any areas or features of historic or cultural importance on or around the location which could be affected by the project?		√		
32	Are there any areas on or around the location which are occupied by sensitive land uses e.g. hospitals, schools, places of worship, community facilities, which could be affected by the project?		√		
33	Are there any areas on or around the location which are already subject to pollution or environmental damage e.g. where existing legal environmental standards are exceeded, which could be affected by the project?		√		Not as per the information available and site observations.
34	Will the project cause the removal of trees in the locality?	√		Moderate	A total of 10 trees (tentative) belonging to different species are located in the proposed construction sites.
35	Are there existing land uses or socio-economic activities on or around the location which could be affected by the project?		√		
35(i)	Are there bathing spots that will be unusable during the construction period?		√		Community of the area not using the tank and canal for bathing.
35(ii)	Is there subsistence fishing taking that will get disturbed due to tank bund and structure rehabilitation		√		Construction works (for tank) planned to take place during the dry period where the water level has naturally dropdown.

	Screening question	Yes	No	Significance of the effect	Remarks
35(iii)	Are there any home gardening and other industrial, agricultural activities that will get disturbed due to construction activity		√		
35(iv)	Are there drinking water supply sources located in the project area that may be rendered unusable during construction period?	√		Low	There is a water intake for NAQDA from the tank. Normally, in the driest periods of the year the tank water gets naturally polluted and algal blooms and bad smell can be experienced. Soil erosion will badly affect to the quality of tank water.
35(v)	Are there tourism activities taking place in the project area that will get disturbed by construction activity?		√		
g. Construction related impacts (labor influx, community health and safety, etc.)					
36	Will there be any risks and vulnerabilities to public safety due to physical hazards during construction of the Project?	√		Low	There will be to some extent with operation of heavy machinery in the project area and with material haulage along transport routes. However, this is not a major issue and can be avoided by adopting safety regulations at construction sites.
37	Are there local village roads that will become unsafe due to contractor's usage	√		Low	There are no settlements within the 100 m distance from the identified borrow sites and hence, no impact due to burrowing activities. In addition, the bund road will be either fully or partially closed during rehabilitation work and that is likely to affect local people.
38	Are there any transport routes on or around the location which are susceptible to congestion or which cause social and environmental problems, which could be affected due to construction work?	√		Low	Material transport, stockpiling especially for graveling the bund road, rip rap construction, correcting the slopes of the bund etc. will impact the neighboring communities and accesses temporarily.
39	Will the project require significant number of workers (skilled and unskilled)	√		Moderate	Contractor needs to hire local labour for the construction works (mainly for unskilled labour). This will support to livelihood of the community of the area. During the contractor trainings all parties can agree on it.
39(i)	Will the project attract significant number of migrant workers to the area?		√		Large influx of labours are not expected to be fielded for rehabilitation work at a given time. Also, the general practice is for most of the unskilled labour to be sourced from the local area.

	Screening question	Yes	No	Significance of the effect	Remarks
40	Will construction activity lead to burrowing of earth, gravel and sand? And/or quarrying for rock?	√		High	Burrow sites (for earth) are identified from the tank bed.
41	Will the project increase the risk of introduction of alien invasive species to the locality	√		Low	The dam area is already invaded by several common terrestrial invasive alien species (IAS). Aquatic IAS are common in the water bodies
Operational Impacts					
42	Will the project lead to stagnant water and drainage problems causing increased mosquito breeding	√		Moderate	Anicut rehabilitation works will create some water stagnation and support to mosquito breeding.
43	Will the project involve removal and disposal of aquatic invasive species?		√		This will be minimal if at all.
44	Will the project involve regular maintenance dredging of the canal network		√		
45	Will the scheme after rehabilitation serve a larger command area?	√			Command area will be increase after the rehabilitation.

Significance of impact = Low, Moderate, High

9. Environmental and Social Management Plan (ESMP) (Table 13)

	Activities and Associated Impacted	Protection and preventive measures	Mitigation cost	Responsibility	
				Implementation	Monitoring
Design Stage					
1	Incorporation of Environmental Design Recommendations	<ul style="list-style-type: none">■ The following will be maintained at minimum for flow structures:<ul style="list-style-type: none">○ For culverts designs will be considered to allow overland flow and sheet flow from paved areas, cross drainage without any blocking○ For bridges designs will be considered to allow overland flow and cross waterways without any blockage○ For leader ways, designs will be considered for smooth flow without any obstruction to the flow○ For silt traps designs will be considered for trapping of silt in proper manner with facilities for easy removal of silt, if any.○ For catch pits appropriate designs will be considered in order to drain out rain water without blocking / flooding○ Designed drainage facilities will be made capable of disposing of the runoff generated in a given water catchment without inundating the surrounding land for a selected rainfall event.	Design Cost	IA the Site in collaboration with the IA/PMU	IA/PMU
2	Design Considerations for conservation of habitats	<ul style="list-style-type: none">■ Design rehabilitation work to minimize the removal of large trees. As much as possible, large trees will be incorporated into the rehab design,	Design Cost	IA the Site in collaboration with the IA/PMU	IA/PMU

	Activities and Associated Impacted	Protection and preventive measures	Mitigation cost	Responsibility	
				Implementation	Monitoring
3	Incorporation of Green Design	<ul style="list-style-type: none"> Green infrastructure guidelines will be followed in designing and construction whenever possible. The use of natural material sourced from sustainable sources, such as natural rocks, choir, soil strengthening grasses etc. may be used for design of bank protection infrastructure and will be used where suitable. No material will be sourced from within any protected area. Structures built will incorporate earthy and natural colors that will mingle in with the natural scape and not hinder the aesthetic value of the area. Where possible the use of alternate energy sources will be explored. 	Design Cost	IA the Site in collaboration with the IA/PMU	IA/PMU
Pre-Construction/Site preparation phase					
1	Site Access Closure	<ul style="list-style-type: none"> All public access to the site will be prohibited or controlled via (especially the bund road) adequate fencing and signage (including night signals) in order to avoid risk to the public. The site entrance will include adequate signage indicating the details of the proposed subproject, implementing agencies etc as well as safety signage to keep public away. A fence shall be erected to cover the working area, where possible, using cost effective fence materials consisting of chain link fence fabric, concrete post, etc. in order to ensure, animals and public are unable to freely access the site. <ul style="list-style-type: none"> To avoid land disturbance and movement, the fence shall generally follow the contour of the ground. Grading shall be performed where necessary to provide a neat appearance. 	Engineering Cost	IA the Site in collaboration with the IA/PMU	IA/PMU

	Activities and Associated Impacted	Protection and preventive measures	Mitigation cost	Responsibility	
				Implementation	Monitoring
2	Material Sourcing	<ul style="list-style-type: none"> ■ The contractor is required to ensure that all construction materials, including gravel, and earth is sourced from the identified sites. Any change to these sites and the identification of new sites will require prior safeguards approval via the engineer. ■ Quarry material and sand shall be purchased from licensed operators, if the contractor will operate his own quarry site he will be required to obtain all licenses. ■ The contractor is required to maintain the necessary licenses and environmental clearances for all burrow and quarry material they are using –including soil, fine aggregate and coarse aggregate. ■ Sourcing of any material from protected areas and/or designated natural areas, including tank beds, are strictly prohibited. ■ If the contractor uses a non-commercial burrow/quarry site, the sites will be developed and remediated per the guidance provided in this ESMP. ■ The contractor is required to submit in writing all the relevant copies, numbers and relevant details of all pre-requisite licenses etc. and report of their status to the engineer on a quarterly basis. 	Engineering Cost	Contractor	IA/PMU
3	Coffer Dams	<ul style="list-style-type: none"> ■ The contractor will prepare the method statement for coffer damming (for anicut repairs) where relevant and have it approved by the engineer prior to commencement or work or use the method statement provided by the project proponent with designs. 	Engineering Cost	Contractor	IA/PMU
4	Work Site Management	<ul style="list-style-type: none"> ■ The contractor will identify an area onsite to store construction materials and equipment which will be approved by the engineer and demarcated for material 	Engineering Cost	Contractor	IA/PMU

	Activities and Associated Impacted	Protection and preventive measures	Mitigation cost	Responsibility	
				Implementation	Monitoring
		<p>storage as per the site plan. Minimum safeguards protection such as covering, fencing of material storage areas would be required.</p> <ul style="list-style-type: none"> ■ Parking, repairing vehicles, machinery and equipment shall be done stationed only at the work site and/or in any other designated areas by the engineer. ■ The contractor will provide instruction and advice will be given to drivers and operators (both company-owned and hired) to park vehicles and store equipment at this designated area. 			
5	Labor Camps	<ul style="list-style-type: none"> ■ The location, layout and basic facility provision of labor camps, site offices and resting facilities to be set up will be submitted to the Engineer prior to establishment. ■ The establishment of labor camps will commence only upon the written approval of the Engineer. ■ Resting and sanitary facilities will be provided separately for both men and women laborers. ■ The contractor will maintain necessary living accommodation and ancillary facilities in functional and hygienic manner and as approved by the Engineer. ■ All temporary accommodation will be established and maintained in such a fashion that uncontaminated water is available for drinking, cooking and washing. ■ The sewage system for the camp, if not available, will be planned & implemented with concurrence from the Local Public Health Officer (PHI) 	Engineering Cost	Contractor	IA/PMU
6	Labor Training and Code of Conduct	<ul style="list-style-type: none"> ■ The contractor will be required to develop a labor code of conduct and translated it in to local languages upon clearance from the Engineer. The code of conduct must be 	Engineering Cost	Contractor	IA/PMU

	Activities and Associated Impacted	Protection and preventive measures	Mitigation cost	Responsibility	
				Implementation	Monitoring
		<p>made available to all staff and displayed in the work site in local languages.</p> <ul style="list-style-type: none"> ■ Labor awareness programs to educate the laborers about the code of conduct, general conduct, the Environmental and Social Management Plan, Occupational Health and Safety etc. will be conducted throughout the contract period as agreed in the contracts Environmental and Social Management Plan. ■ No labor under the age of 18 will be hired for work under this contract. 			
7	Tree Removal	<ul style="list-style-type: none"> ■ Only trees required to be removed along the dam and close to the anicut structures were deemed necessary and justified via the technical design will be removed. ■ Contractor will adhere to the guidelines and recommendations made by the safeguards staff of the project and the CEA/Divisional Secretariat, if any, with regard to felling of trees and removal of vegetation. ■ The following will be conducted at minimum: <ul style="list-style-type: none"> ○ Contractor will make every effort to avoid removal and/or destruction of trees of religious, cultural and aesthetic significance. ○ If such action is unavoidable, the Engineer will be informed in advance and carry out public consultation and report on the same will be submitted to the Engineer. ○ Trees will be removed from the construction sites before commencement of construction with prior permission from Divisional Secretariat of Thirukkivil / Alayadivembu followed by respective Grama Niladhari depending on the location. 	Engineering Cost	Contractor	IA/ Divisional Secretariat of Thirukkivil/ Alayadivembu /PMU

	Activities and Associated Impacted	Protection and preventive measures	Mitigation cost	Responsibility	
				Implementation	Monitoring
		<ul style="list-style-type: none"> ○ During removing, attention will be paid to maintaining minimum disturbances to soil cover and also care will be taken not to damage adjoining trees. ○ Masonry tree guards, Low level RCC tree guards, Circular Iron Tree Guard with Bars, use of plate compactors near trees may also be considered where necessary ○ The following procedure will be followed: Remove the logs, branches of trees; Stack them properly until removal; Remove roots and rehabilitate the bund and toe areas where tree were uprooted. ○ The easily decomposable vegetation could either be utilized as a soil conditioner after drying or be composted in a proper manner. Large vegetation parts could be sold or else be used as firewood. ○ Removed trees of economic value will be handed over to the Timber Corporation. ■ Compensatory Planting <ul style="list-style-type: none"> ○ Compensatory plantation by way of Re-plantation of at least twice the number of trees cut will be carried out in the project area. The location of replanting sites will be worked out in close collaboration with the safeguards team of the PMU. ○ All planted trees will be native species to match removed ones where possible. ○ Growth and survival of trees planted shall be ensured and monitoring done at least for a period of 3 years. ○ Survival status shall be reported on monthly basis to Engineer in charge. ■ Additional Tree Removal 			

	Activities and Associated Impacted	Protection and preventive measures	Mitigation cost	Responsibility	
				Implementation	Monitoring
		<ul style="list-style-type: none"> ○ Additional trees and vegetation will be felled/removed only if that impinges directly on the permanent works or necessary temporary works. In all such cases contractor shall take prior approval from the Engineer and the PMU safeguards team by providing strong engineering justifications. ○ If any trimming/pruning of roots of existing trees anticipated during construction, it will be consulted with the Engineer and the safeguards team of the PMU, prior to undertaking the identified trimming of roots. ○ This will be to ensure that the health and stability of the tree will not be impacted from trimming. 			
8	Removal of Utilities	<ul style="list-style-type: none"> ■ The common utilities to be affected by project activities such as: telephone cables, electric cables, electric poles, water pipelines, public water taps, etc (if any). will be identified prior. ■ Affected utilities shall be relocated with prior approval of the concerned agencies before construction starts in collaboration with the agencies ■ All efforts will be made to ensure that there will be no/or minimal disruption to services during this process. ■ Ensure community consensus and minimum impact to common utilities like telephone cable, electric cables, electric poles, water taps and etc., ■ The contractor will take all measures to inform the effected public of the process prior to commencing work. ■ Proper clearance will have obtained from the concerned authorities and sent to the PMU before commencement of works. 	Engineering Cost	Contractor	IA/PMU/CEB/ Water Board/Sri Lanka Tele com.

	Activities and Associated Impacted	Protection and preventive measures	Mitigation cost	Responsibility	
				Implementation	Monitoring
9	Information Disclosure among Stakeholders	<ul style="list-style-type: none"> ■ Discussions will be conducted with the residents who reside along the vicinity of the project site <ul style="list-style-type: none"> ○ Residents will be briefed of the project, purpose and design and outcomes via a documented community consultation session ○ This will be done immediately once the contractor is mobilized. ○ The contractor will take note of all impacts, especially safety hazards that will be of concern to the residents and take necessary measures as stipulated in the ESMP to mitigate them. ■ The contractor will maintain a log of any grievances/complaints and actions taken to resolve them. ■ A copy of the ESMP will be available always at the project supervision office on site. 	Engineering Cost	Contractor/IA/IA/PMU	IA/PMU
Construction/Intervention Phase					
1	Site Clearance and Land Development	<ul style="list-style-type: none"> ■ Prevention of removal of trees will be maintained as far as possible. ■ During removing, attention will be paid to maintaining minimum disturbances to soil cover and also care will be taken not to damage adjoining trees. ■ Trees removed will need to be compensated at the minimum of a 1:2 at basis. Planting locations could be either onsite or in the tank catchment, as practical and suitable. ■ Water spraying will be done at a regular interval to avoid dust generation due to site clearance 	Engineering Cost	Contractor	IA/PMU
2	Disposal of Debris and Spoil	<ul style="list-style-type: none"> ■ All debris and residual spoil material including any left earth shall be disposed only at locations approved by the 	Engineering Cost	Contractor	IA/PMU

	Activities and Associated Impacted	Protection and preventive measures	Mitigation cost	Responsibility	
				Implementation	Monitoring
		<p>engineer for such purpose and subjected to the following clauses:</p> <ul style="list-style-type: none"> ■ The contractor shall obtain the approval from the relevant Local Authority for disposal of spoil at the specified location, as directed by the Engineer ■ Private land that will be selected for disposal will also require written consent from the land owner ■ The debris and spoil shall be disposed in such a manner that; <ul style="list-style-type: none"> ○ waterways and drainage paths are not blocked ○ the disposed material will not be washed away by runoff and ○ will not be a nuisance to the public ■ All material that is reusable or recyclable shall be used for such purposes either by the contractor or through dealers. ■ The debris and residual spoil material including any left earth shall be used, to refill the burrow areas as directed by the engineer, subjected to laying of topsoil as per recommendations for conservation and reuse of top soil provided below. ■ Excavated earth materials and all debris materials shall be disposed immediately without allowing to stockpile at identified locations for debris disposal, recommended by the engineer. During transportation, dispose materials will be covered with tarpaulin. ■ If approved by the engineer, contractor can dispose the debris and spoil as a filling material provided that the contractor can ensure that such material is used for legally acceptable purposes with disposed in an environmentally acceptable manner. 			

	Activities and Associated Impacted	Protection and preventive measures	Mitigation cost	Responsibility	
				Implementation	Monitoring
3	Conservation and Reuse of Topsoil	<ul style="list-style-type: none"> Top soil of productive areas where it must be removed for the purpose of this project shall be stripped to a specified depth of 50mm and stored in stockpiles of height not exceeding 2 m, if directed by the engineer. If the contractor is in any doubt on whether to conserve the topsoil or not for any given area he/she shall obtain the direction from the engineer in writing Removed top soil could be used as a productive soil when replanting/establishing vegetation Stockpiled topsoil must be returned to cover the areas where the topsoil has been removed due to project activities. Residual topsoil must be distributed on adjoining/proximate barren areas as identified by the engineer in a layer of thickness of 75 mm – 150 mm. Topsoil thus stockpiled for reuse shall not be surcharged or overburdened. As far as possible multiple handling of topsoil stockpiles will be kept to a minimum. 	Engineering Cost	Contractor	IA/PMU
4	Transport and Storage of construction materials	<ul style="list-style-type: none"> The contractor will avoid over loading trucks that transport material to construction sites. During transportation, materials will be covered with tarpaulin. Peak hours in roads with moderate to high traffic will be avoided. The contractor shall minimize possible public nuisance due to dust, traffic congestion, air pollution, etc., due to such haulage; If local roads are used, routes are to be selected based on the truck load; loads will be divided to prevent damages to local roads and bridges. 	Engineering Cost	Contractor	IA/PMU

	Activities and Associated Impacted	Protection and preventive measures	Mitigation cost	Responsibility	
				Implementation	Monitoring
		<ul style="list-style-type: none"> Speed limits as nationality stipulated for haulage must be maintained. The contractor should deploy flagmen and traffic control measures as necessary depending on the route taken for transport of material. All vehicles used for haulage will be in good condition. If there are damages to local roads and other utilities due to hauling in roads caused by the contractor. The contractor shall attend to repair all damaged infrastructure/ roads, if needed through relevant authorities 			
5	Emission of Dust during cover application and construction.	<ul style="list-style-type: none"> All construction materials such as sand, soil, metal, etc. will be transported under cover to the site and stored under cover at the sight. Plastic sheeting (of about 6 mm minimum thickness) can be used and held in place with weights, such as cinder blocks, with the edges of the sheeting buried, or by the use of other anchoring systems, in order to minimize the levels of airborne dust. Mud patches caused by material transporting vehicles in the access road will be cleaned immediately. Continual water sprinkling will be carried out in the work and fill areas and the access road if dust stir is observed. Water sprinkling will be done more frequently on days that are dry and windy (at least four time's day) as the levels of dust can be elevated during dry periods. Dust masks will be provided to all laborers for the use at required times 	Engineering Cost	Contractor	IA/PMU
6	Prevention of soil erosion during site preparation	<ul style="list-style-type: none"> Debris material shall be disposed in such a manner that waterways, drainage paths would not get blocked. 	Engineering Cost	Contractor	IA/PMU

	Activities and Associated Impacted	Protection and preventive measures	Mitigation cost	Responsibility	
				Implementation	Monitoring
		<ul style="list-style-type: none"> ■ Drainage paths associated with the infrastructure will be improved / erected to drain rain water properly. ■ Silt traps will be constructed to avoid siltation into water ways where necessary. ■ To avoid siltation, drainage paths will not be directed to any waterway directly and they will be separated. ■ Barricades such as humps will be erected at excavated areas for culverts, silt traps, toe walls, filling and lifting with proper sign boards, (all work will be carried out during the dry season). To prevent soil erosion in these excavated areas, proper earth drain system will be introduced. ■ Night time signaling system need to be established at the necessary places. ■ Embankment slopes, slopes of cuts, etc. shall not be unduly exposed to erosive forces. These exposed slopes shall be graded and covered by grass or other suitable materials per the specifications. ■ All fills, back fills and slopes will be compacted immediately to reach the specified degree of compaction and establishment of proper mulch. ■ All work will be carried out during the dry season. If such activities need to be continued during rainy season prior approval must be obtained from the Engineer by submitting a proposal on actions that will be undertaken by the contractor to prevent erosion. ■ The work, permanent or temporary shall consist of measures as per design or as directed by the engineer to control soil erosion, sedimentation and water pollution to the satisfaction of the engineer. Typical measures include the use of berms, dikes sediment basins, fiber mats, 			

	Activities and Associated Impacted	Protection and preventive measures	Mitigation cost	Responsibility	
				Implementation	Monitoring
		mulches, grasses, slope drains and other devices. All sedimentation and pollution control works and maintenance thereof are deemed, as incidental to the earthwork or other items of work and no separate payment will be made for their implementation.			
7	Burrowing of Earth and Management of Self Operated Burrow Sites	<ul style="list-style-type: none"> In the event the contractor will use a self-operated burrow site: Approval from the Geological Survey and Mines Bureau will have to be sought for extraction and transport. Burrow areas shall not be opened without having a valid mining license from the GSMB¹. Burrow sites and gravel pits have been identified for this project, any change in the sites will have to be informed to the project Engineer and identification of new areas will need to be reviewed by the safeguards staff. A site operational plan for opening and closing the burrow site, for any burrow site, will be prepared and submitted to the engineer for clearance. Refer guidelines for burrow site provided in the ESMF or in the attached at the bottom of table 7. The contractor shall comply with the environmental requirements/guidelines issued by the Central Environmental Authority (CEA) and the respective local authorities with respect to locating new burrow areas (in addition to what has been identified) and with regard to all operations related to excavation and transportation of earth from such sites. 	Engineering Cost	Contractor	IA/PMU

¹ GSMB- Geological Survey and Mines Bureau

	Activities and Associated Impacted	Protection and preventive measures	Mitigation cost	Responsibility	
				Implementation	Monitoring
		<ul style="list-style-type: none"> ■ No burrow-sites be used (current approved) or newly established within areas protected under FFPO² and FO³ ■ The location, depth of excavation and the extent of the pit or open cut area shall be as approved by the engineer. ■ All burrow pits/areas will be rehabilitated at the end of their use by the contractor in accordance with the requirements/guidelines issued by the CEA and the respective local authority and guidelines presented in the ESMF. ■ Establishment of burrow pits/areas and its operational activities shall not cause any adverse impact to the near-by properties and people. ■ Contractor shall take all steps necessary to ensure the stability of slopes including those related to temporary works and burrow pits. ■ The burrow sites will be temporarily fenced off using an inexpensive material to ensure that wild animals will not stray in and fall. 			
8	Quarry Operations and Management of Self Operated Quarry Sites	<ul style="list-style-type: none"> ■ In the event the contractor manages a self-owned existing quarry sites available in the project area the following will be followed: <ul style="list-style-type: none"> ○ A site operational plan for opening and closing the quarry site, for any new quarry site, will be prepared and submitted to the engineer for clearance. ○ This will be approved by GSMB with valid Environmental Protection License (EPL) and Industrial Mining Licenses; 	Engineering Cost	Contractor	IA/PMU

² FFPO- Fauna and Flora Protection Ordinance

³ FO-Forest Ordinance

	Activities and Associated Impacted	Protection and preventive measures	Mitigation cost	Responsibility	
				Implementation	Monitoring
		<ul style="list-style-type: none"> ○ Prior approval will be obtained from GSMB, CEA and local authorities such as Pradeshiya Sabha. ■ Selected quarry sites will have proper safety measures such as warnings, safety nets etc., and third-party insurance cover to protect external parties that may be affected due to blasting. ■ Quarry sites will not be established within protected sites identified under the FFPO and FO. ■ It is recommended not to seek material from quarries that have ongoing disputes with community. ■ The maintenance and rehabilitation of the access roads in the event of damage by the contractor's operations shall be a responsibility of the contractor. ■ Copies of all relevant licenses will be maintained by the contractor for review and documentation by the engineer 			
9	Machinery Operation	<ul style="list-style-type: none"> ■ Only experienced and well-trained workers will be used for the handling of machinery, equipment and material processing plants. 	Engineering Cost	Contractor	IA/PMU
10	Noise from vehicles, machinery, equipment and construction activities.	<ul style="list-style-type: none"> ■ Noise generating work will be limited to day time (6:00AM to 6:00PM). No work that generates excessive noise will be carried out during night hours (from 6:00PM to 6:00AM on the following day). ■ All equipment and machinery will be operated at noise levels that do not exceed the permissible level of 75 dB⁴ (during construction) for the day time. ■ For all construction activities undertaken during the night time, the noise level will be maintained at below 50 dB as per the CEA noise control regulations 	Engineering Cost	Contractor	IA/PMU

⁴ dB-Decibels

	Activities and Associated Impacted	Protection and preventive measures	Mitigation cost	Responsibility	
				Implementation	Monitoring
		<ul style="list-style-type: none"> ■ All equipment will be in good serviced condition. Regular maintenance of all construction vehicles and machinery to meet noise control regulations stipulated by the CEA in 1996 (Gazette Extra Ordinary, No 924/12) must be conducted for vehicles/machinery that will be used in construction on site and for transport. ■ Ideally noise generating work will not be carried out during public holidays and religious days. ■ Laborers will be advised to work with minimum noise. Strict labor supervision will be undertaken in this respect. ■ No night time residency of laborers on site will be encouraged, post work hours. ■ Idling of temporary trucks or other equipment will not be permitted during periods of loading / unloading or when they are not in active use. This practice will be ensured especially near residential and sensitive areas. ■ Stationary construction equipment will be kept at least 100m from the site periphery, which has proximity to households. All possible and practical measures to control noise emissions during drilling shall be employed. ■ Contractor will submit the list of high noise/vibration generating machinery & equipment to the engineer for approval. ■ Servicing of all construction vehicles and machinery must be done regularly and during routine servicing operations, the effectiveness of exhaust silencers will be checked and if found defective will be replaced. ■ Maintenance of vehicles, equipment and machinery will be regular and up to the satisfaction of the Engineer to keep noise levels at the minimum. 			

	Activities and Associated Impacted	Protection and preventive measures	Mitigation cost	Responsibility	
				Implementation	Monitoring
11	Pollution of Soil and Water via Fuel and Lubricants	<ul style="list-style-type: none"> ■ The contractor will ensure that all construction vehicle parking locations, fuel/lubricants storage sites, vehicle, machinery and equipment maintenance and refueling site shall be located away from the canal that is adjacent to the site by least 200m away. ■ Contractor will ensure that all vehicle/machinery and equipment operation, maintenance and refueling will be carried out in such a fashion that spillage of fuels and lubricants does not further contaminate the ground. ■ Contractor will arrange for collection, storing and disposal of oily wastes to the pre-identified disposal sites (list to be submitted to Engineer) and approved by the Engineer. ■ All spills and collected petroleum products will be disposed of in accordance with standards set by the CEA/MMDE⁵. ■ Engineer will certify that all arrangements comply with the guidelines of CEA/MMDE or any other relevant laws. 	Engineering Cost	Contractor	IA/PMU
12	Preventing loss of minor water sources and disruption to water users	<ul style="list-style-type: none"> ■ The Contractor will make employees aware on water conservation and waste minimization in the construction process by: <ul style="list-style-type: none"> ○ Arrange adequate supply of water for the project purpose throughout the construction period. ○ Not obtain water for project purposes, including for labor camps, from public or community water supply schemes without a prior approval from the relevant authority. ○ Not extract water from ground water or surface water bodies without the permission from engineer & relevant authority. 	Engineering Cost	Contractor	IA/PMU

⁵ MMDE-Ministry of Mahaweli Development and Environment

	Activities and Associated Impacted	Protection and preventive measures	Mitigation cost	Responsibility	
				Implementation	Monitoring
		<ul style="list-style-type: none"> ○ Obtain the permission for extracting water prior to the commencing of the project, from the relevant authority. ○ Apply best management practices to control contamination of run-off water during maintenance & operation of equipment. ○ Maintain adequate distance between stockpiles & water bodies to control effects to natural drainage paths. ■ Contractor will protect sources of water (potable or otherwise) such as water sources used by the community so that continued use of these water sources will not be disrupted by the work. In case closure of such sources is required on temporary basis, the contractor will provide alternative arrangement for supply (this may be necessary during the rehabilitation of the bathing steps). Alternative sources such as wells thus provided will be within acceptable distance to the original sources and accessible to the affected community. ■ In case the contractor's activities adversely affect the quantity or quality of water, the contractor will serve notice to the relevant authorities and downstream users of water sufficiently in advance. 			
13	Preventing siltation into water bodies	<ul style="list-style-type: none"> ■ Contractor will take measures to prevent siltation of water bodies because of construction work including, construction of temporary / permanent devices to prevent water pollution due to siltation and increase of turbidity. These shall include the measures against erosion highlighted in this ESMP ■ Construction materials containing small / fine particles will be stored in places not subjected to flooding and in such a 	Engineering Cost	Contractor	IA/PMU

	Activities and Associated Impacted	Protection and preventive measures	Mitigation cost	Responsibility	
				Implementation	Monitoring
		<p>manner that these materials will not be washed away by runoff.</p> <ul style="list-style-type: none"> ■ Temporary soil dumps will be placed at least 200m away from all water bodies ■ If temporary soil piles are left at the site for a long time those piles will be covered with thick polythene sheets ■ All fills, back fills and slopes will be compacted immediately to reach the specified degree of compaction and establishment of proper mulch 			
14	Preventing contamination of water from construction wastes	<ul style="list-style-type: none"> ■ Measures as stipulated in this ESMP shall be taken to prevent the wastewater produced in construction from entering the water bodies or the irrigation systems directly. ■ The discharge standards promulgated under the National Environmental Act shall be strictly adhered to. 	Engineering Cost	Contractor	IA/PMU
15	Managing alteration of drainage paths	<ul style="list-style-type: none"> ■ Contractor shall not close or block existing canals and streams permanently. If diversion or closure or blocking of canals and streams is required for the execution of work (e.g. for construction of bypass), contractor must first obtain the Engineers approval in writing. ■ Contractor shall carry out an investigation and report to the Engineer, if an investigation is requested by the Engineer. ■ Contractor shall also obtain the approval from the relevant agencies such as EPC-ID/Divisional Secretary prior to such action is taken. ■ Contractors shall restore the drainage path back to its original status once the need for such diversion or closure or blockage is no longer required. ■ All work will only be undertaken during the dry season. 	Engineering Cost	Contractor	IA/PMU

	Activities and Associated Impacted	Protection and preventive measures	Mitigation cost	Responsibility	
				Implementation	Monitoring
16	Public Safety	<ul style="list-style-type: none"> At all times the site will restrict the entry of public on to the site. Safety signboards and signboards prohibiting entrance and risks, will be displayed including night signals at all necessary locations. The contractor will obtain a Third-party insurance to compensate any damages, injuries caused to the public or laborers during the construction period. All construction vehicles will be operated by experienced and trained operators under supervision. Material loading and unloading will be done only within the project site. 	Engineering Cost	Contractor	IA/PMU
17	Safety of Workers	<ul style="list-style-type: none"> Contractor will comply with the requirements for safety of the workers as per the ILO Convention No. 62 and Safety & Health Regulations of the Factory Ordinance of Sri Lanka to the extent that those are applicable to this contract. <u>The contractor will supply all necessary safety measures at site- including provision of first aid kits and fire extinguishers.</u> Signage providing instructions on first aid management, emergency contact and emergency operational procedures in local languages will be displayed at the site office. Basic onsite safety training will be conducted for all laborers during the ESMP training prior to the start of the construction activities. The training to laborers will also include a brief on the risks of working on a dam rehabilitation site. 	Engineering Cost	Contractor	IA/PMU

	Activities and Associated Impacted	Protection and preventive measures	Mitigation cost	Responsibility	
				Implementation	Monitoring
		<ul style="list-style-type: none"> ■ <u>The contractor will obtain a Third-party insurance to compensate any damages, injuries caused to laborers during the construction period.</u> ■ <u>Protective footwear and protective goggles will be provided to all workers employed on mixing of materials like cement, concrete etc.</u> ■ Welder's protective eye-shields will be provided to workers who are engaged in welding works. ■ Earplugs will be provided to workers exposed to loud noise, and workers working in crushing, compaction, or concrete mixing operation. ■ The contractor shall supply all necessary safety equipment such as safety goggles, helmets, safety belts, ear plugs, mask etc. to workers and staff. ■ <u>In addition, the contractor shall maintain in stock at the site office, gloves, ear muffs, goggles, dust masks, safety harness and any other equipment considered necessary.</u> ■ A safety inspection checklist will be prepared taking into consideration what the workers are supposed to be wearing and monitored monthly and recorded. 			
18	Prevention of accidents	<ul style="list-style-type: none"> ■ <u>Prevention of accidents involving human beings or vehicles or accidents during construction period will be done via adequate training and guidance to all workers.</u> ■ A readily available first aid unit including an adequate supply of sterilized dressing materials and first aid supplies will always be available at the site office. ■ Availability of suitable transport always to take injured or sick person(s) to the nearest hospital will also be insured. ■ <u>Names and contact information for emergency services such as Ambulance services, hospitals, police and the fire</u> 	Engineering Cost	Contractor	IA/PMU

	Activities and Associated Impacted	Protection and preventive measures	Mitigation cost	Responsibility	
				Implementation	Monitoring
		<u>brigade will be prepared as a sign board and displayed at the work site.</u>			
19	Operation of labor camps	<ul style="list-style-type: none"> ■ A supply of sufficient quantity of potable water will be provisioned for in every workplace/labor camp site at suitable and easily accessible places, and regular maintenance of such provisions will be carried out. ■ The sewage system for the offsite labor camp, if newly established, will be designed, built and operated in such a fashion that no health hazards occurs and no pollution to the air, ground water or adjacent water courses take place. ■ Adequate water supply will be provided in all toilets and urinals. ■ Contractor will provide garbage bins in the camps and ensure that these are regularly emptied and disposed of in a hygienic manner. 	Engineering Cost	Contractor	IA/PMU
20	Handling of environmental and social issues during construction	<ul style="list-style-type: none"> ■ The Contractor will appoint a suitably qualified Environmental officer and Social and Safety Officer following the award of the contract. The proposed officers will be the primary point of contact for assistance with all environmental issues during the pre-construction and construction phases. Environmental officer and Social and Safety Officer will be responsible for ensuring the implementation of ESMP. ■ The Contractor will appoint a person responsible for community liaison and to handle public complaints regarding environmental/ social related matters. All public complaints will be entered into the Complaints Register. The Environmental Officer will promptly investigate and review environmental complaints and implement the appropriate corrective actions to arrest or mitigate the 	Engineering Cost	Contractor	IA/PMU

	Activities and Associated Impacted	Protection and preventive measures	Mitigation cost	Responsibility	
				Implementation	Monitoring
		<p>cause of the complaints. A register of all complaints is to be passed to the Engineer within 24 hrs. They are received, with the action taken by the Environmental Officer on complains thereof.</p> <ul style="list-style-type: none"> ■ Contractor shall prepare detailed Environmental Method Statement (EMS) clearly stating the approach, actions and way the ESMP is implemented. The EMS shall be updated regularly and submit for Engineers review. ■ Contractor shall provide alternative access to the community without any disturbance to their livelihood and day today activities with the approval of IA. ■ All necessary sign boards needs to display at necessary places and maintain well. 			
21	Management of chance find of Archaeological Property	<ul style="list-style-type: none"> ■ All fossils, coins, articles of value of antiquity and structures and other remains or things of geological or archaeological interest etc. discovered on the site and/or during construction work shall be the property of the Government of Sri Lanka, and shall be dealt with as per provisions of Antiquities Ordinance of 1940 (Revised in 1956 & 1998) ■ The contractor shall take reasonable precaution to prevent his workmen or any other persons from removing and damaging any such article or thing and shall, immediately upon discovery thereof and before removal acquaint the Engineer of such discovery and carry out the Engineer's instructions for dealing with the same, awaiting which all work shall be stopped within 100m in all directions from the site of discovery. ■ If directed by the Engineers, the Contractor will obtain advice and assistance from the Department of 	Engineering Cost	Contractor	IA/PMU

	Activities and Associated Impacted	Protection and preventive measures	Mitigation cost	Responsibility	
				Implementation	Monitoring
		Archaeological of Sri Lanka on conservation measures to be taken with regard to the artifacts prior to recommencement of work in the area.			
22	Chance find of important Flora/Fauna	<ul style="list-style-type: none"> ■ Flora <ul style="list-style-type: none"> ○ While any rare/threatened/endangered flora species will be identified and removed prior to construction, during construction if by chance such species are found, it shall be immediately informed to the PMU by the contractor. ○ All activities that could destroy such flora and/or its habitat shall be stopped with immediate effect. Such activities shall be started only after obtaining the Engineer's approval. Contractor shall carry out all activities and plans that the Engineer instructed him to undertake to conserve such flora and/or its habitat. ■ Fauna <ul style="list-style-type: none"> ○ All works shall be carried out in such a manner that the destruction or disruption to the fauna and their habitats is minimum. ○ Construction workers shall be instructed to protect fauna including birds and aquatic life as well as their habitats. ○ Chance found important Fauna ○ During construction, if any faunal species is found, it shall be immediately informed to the PMU by the contractor. All activities that could destroy such fauna and/or its habitat shall be stopped with immediate 	Engineering Cost	Contractor	IA/PMU

	Activities and Associated Impacted	Protection and preventive measures	Mitigation cost	Responsibility	
				Implementation	Monitoring
		effect. Such activities shall be started only after obtaining the Engineer's approval. Contractor shall carry out all activities and plans that the Engineer instructed him to undertake to conserve such fauna and/or its habitat.			
23	Preventive measures for unexpected construction delays	<ul style="list-style-type: none"> ■ Contractor shall take all necessary prior arrangements to obtain borrow materials without any delay. ■ Make sure the availability of machinery/vehicle for construction works without any delay to mobilize at the site. ■ Establish an additional fuel storage (with safety measures) ■ Identify the alternative sources of workers/ machineries/ vehicles and borrow sites at adjacent to the project site. ■ Contractor needs to discuss with IA on water issuing periods or any other disturbances to the construction works and plan the construction works accordingly. ■ Contractor must obtain all necessary approvals/clearances before commencement of works. 	Engineering Cost	Contractor	IA/PMU
24	Site Closure and Demobilization	<ul style="list-style-type: none"> ■ The contractor will remove all excess material, equipment, vehicles from the project site prior to completing demobilization from the site. ■ Cofferdams, if erected need to be completely removed and associated debris has to be cleared from the. ■ All temporary site offices will be dismantled and removed from the site. ■ If the parking site has been dilapidated in any way as per the evaluation of the engineer, the contractor will reinstate it to the original condition prior to demobilization. 	Engineering Cost	Contractor	IA/PMU

	Activities and Associated Impacted	Protection and preventive measures	Mitigation cost	Responsibility	
				Implementation	Monitoring
25	Prevention of issues (e.g. GBV) related to labour influx	<ul style="list-style-type: none"> ■ Avoid or reduce labour influx where possible ■ Contractors to implement robust measures to prevent sexual harassment, gender-based violence (GBV) ■ training of workforce – on unacceptable conduct ■ informing workers about national laws ■ Worker Code of Conduct as part of the employment contract ■ introduce sanctions for non-compliance (e.g., termination) ■ cooperation with law enforcement agencies 	Engineering Cost	Contractor	IA/PMU
Post Construction/Operation and Maintenance Phase					
1	Greening and maintenance of earthen embankment	<ul style="list-style-type: none"> ■ Only native species of plants may be used for the planting process-Vetiver grass is recommended as a suitable species that grows well on sandy loam soils and toxic conditions and has good potential to control soil erosion. ■ Attempts will be made to also identify suitable “living filter” plant species that are known to minimize the amounts of toxins in a given environment. ■ A supply of water will be available for the routine maintenance of the vegetation until it succeeds naturally. ■ Routine maintenance of planted species will be conducted to identify issues with establishment on site. ■ Replacement planting will be conducted as appropriate. 	Operational Cost	Facility Operator	IA, CEA
2	Flood management infrastructure	<ul style="list-style-type: none"> ■ Routine desilting and clearing of sediment traps, waste traps and silt traps will be included in the operations and maintenance plan for the sites and conducted as per the guidelines of the Central Environmental Authority. 	Operational Cost	Facility Operator	IA, CEA
3	Income generation for beneficiaries	<ul style="list-style-type: none"> ■ Providing labor and other services for construction units can be allocated to local communities after providing required training to ensure enough income for local communities. 	Operational cost	Contractor	IA, PMU

	Activities and Associated Impacted	Protection and preventive measures	Mitigation cost	Responsibility	
				Implementation	Monitoring
	during construction periods				
4	Provide adequate support for social organizations of the community	<ul style="list-style-type: none"> To maintain the goodwill of the community and to pursue undisturbed operations during construction, it is recommended to provide some beneficiary services to community organizations through cooperate social responsibility budgets 	Operational cost	Contractor	IA,PMU

For Reference Only

10. Special Information

a. Required Officers for the Work Site for Maintain Environmental and Social Safeguard

No.	Officer's Designation	Service arrangement
1	Environmental, and Safety Officer	Full time
2	Social Officer	Full time

The Environmental Officer, Social and Safety Officers have responsibility of maintain environmental and social safety of the work site and maintain grievances and maintain and update record books. Also, he/she responsible to conduct environmental and social monthly monitoring and timely report to the PMU (Monthly monitoring format will be provided by the PMU).

The Environmental, Social and Safety Officers should maintain Occupational Health and Safety (OHS) throughout the project period and ensure the safety of workers/officers/visitors and the community who are living adjacent project sites.

b. Important Documents Should Maintain at the Work Site

- Environment and Social Management Plan (ESMP)
- Relevant guidelines
- Tree Removal Guideline
- Labour Camp Guideline
- Guideline on Occupational Health and Safety and Working in Wildlife Area
- Covid 19 Health Guideline
- Signed Code of Conducts
- Log Book
- Complain / Grievances Record Book
- Accident Record Book
- Borrow Material Licenses

c. Special Approvals

Contractor/IA should obtain necessary approvals from Central Environmental Authority.

d. Budget

Most of the mitigation measures described in the ESMP are deemed as incidental to construction work and included in the contract. However, the costs provided in the ESMP need to be considered as specific mitigation costs.

Description	Cost (Rs.)
Environment and Safety Officer for 12 months (Rs. 100,000.00 x 12)	1,200,000.00
Social Officer for 12 months (Rs. 100,000.00 x 12)	1,200,000.00
General mitigation works (including safety measures, signage, trainings etc.)	1,000,000.00
Total	3,400,000.00

11. Public Consultation and Disclosure

A public consultation was carried out with the farmer community representatives on 24.11.2024 at the DIE (EPC-ID) at Thambiluvil office. Meeting was attended by 15 people representing the farmer organization of the area. The main points raised at this meeting are provided below. The list of participants and detailed notes are provided in Annex 02.

11.1. Summary of Farmer Meetings on Sagamam Irrigation Scheme Projects

Farmers' meetings discussed the proposed enhancements to the Sagamam Irrigation Scheme to address key irrigation challenges, improve water management, and strengthen infrastructure for sustainable agriculture. The following projects were highlighted:

1. Strengthening of Tank Bund of Sagamam Tank

- Objective: Enhance the durability and safety of the tank bund to ensure effective water storage and minimize breaches.
- Key Features:
 - Rip-rap protection to reduce erosion and ensure long-term structural stability.
 - Address weak sections of the tank bund to withstand seasonal flooding and heavy rains.

2. Improvements to Sillikody Anicut

- Objective: Upgrade the Sillikody Anicut to improve water diversion and supply for agricultural purposes.
- Key Features:
 - Enhanced water flow control.
 - Strengthened structures to ensure year-round functionality and reliability.

3. Reconstruction of Panichchayady Anicut

- Objective: Rebuild the Panichchayady Anicut to restore its capacity and performance.
- Key Features:
 - Modernized design for improved water distribution.
 - Increased resilience to environmental stresses.

4. Construction of Uruhudamoolai Branch Anicut

- Objective: Establish a new branch anicut to expand irrigation coverage to additional agricultural lands.
- Key Features:
 - Improved water accessibility for farmers in previously underserved areas.
 - Enhanced irrigation efficiency for crop cultivation.

5. Modernization and Instrumentation of the Channel System

- Objective: Upgrade the existing channel system with modern technology to improve water management.
- Key Features:
 - Installation of instrumentation for real-time monitoring and control.
 - Increased water-use efficiency and equitable distribution among farmers.
- Feedback from Farmers
 - Support for Projects: Farmers expressed strong support for the proposed improvements, acknowledging the potential benefits for increased agricultural productivity and water security.
 - Requests for Timely Implementation: Emphasis on timely execution to minimize disruptions during critical farming seasons.
 - Maintenance Concerns: Farmers highlighted the importance of regular maintenance to sustain long-term benefits.

These projects collectively aim to modernize the Sagamam Irrigation Scheme, ensuring sustainable agricultural development and improved livelihoods for local farmers.

11.2. Grievance Redress Mechanism (GRM)

Large-scale development projects can significantly impact local communities. These impacts may include social and environmental challenges, as well as issues related to entitlement to resettlement benefits. Concerns may also arise from construction activities such as site clearing, excavation, compaction, and blasting. While good planning, project implementation, and effective community consultation can address many of these issues, some grievances may remain unresolved at the local level. To handle such cases effectively and avoid reliance on time-consuming and costly legal processes, establishing a formal Grievance Redress Mechanism (GRM) is recommended.

a. Objectives of the GRM

The primary goal of the GRM is to minimize, mitigate, or compensate for adverse project impacts on the environment and affected communities. It aims to:

- Resolve grievances through mutual understanding and consensus among relevant stakeholders.
- Ensure compliance with the Safeguard Policy of the World Bank.
- Provide a structured process for addressing grievances related to the project.

b. Proposed Grievance Redress Mechanism

- The GRM is structured as a three-tier system operating at the following levels:

- Local Level (Grama Niladhari Level)
- Divisional Level (Divisional Secretary Level)
- National Level (Ministry Level)

Each level has a Grievance Redress Committee (GRC) composed of relevant stakeholders to address grievances at the appropriate scale.

- **Grama Niladhari (GN) Level GRC**

This is the first level of grievance resolution, focused on resolving issues at the site level. The committee is composed of both government and community representatives to address grievances amicably.

Position	Role
Grama Niladhari of the area	Chairman
Representative from the PMU Site Office	Secretary
Technical officer (EPC-ID) from each project area	Member
Representative of the Contractor	Member
Representative of a local NGO/CBO	Member
Community or religious leader	Member

- **Divisional Secretary (DS) Level GRC**

This committee handles grievances unresolved at the GN level. It provides administrative support and reviews appeals from the GN-level committee.

Position	Role
Divisional Secretary or representative	Chairman
Representative from the PMU Head Office	Secretary
Irrigation Engineer (EPC-ID) from each project area	Member
Grama Niladhari of the area	Member
Representative from a local NGO/CBO	Member
Respected religious leader or community leader	Member

- **National Level GRC**

The national-level GRC is located within the Ministry of Irrigation and addresses appeals from lower-level committees. It also provides overall guidance and supervision of the GRM.

Position	Role
Additional Secretary, Ministry of Irrigation	Chairman
Project Director of the PMU	Secretary
Representative of the EPC-ID	Member
Representative of the Construction Firm (if necessary)	Member
District Secretary or nominee	Member
Divisional Secretary or nominee	Member
Representative from a national NGO/CBO	Member

- **Issues Addressed by the GRM**

The GRM will address a range of issues, including:

- Eligibility for resettlement or livelihood support benefits.
- Construction-related grievances such as dust, noise, and vibration.
- Loss of access or damage to public and private property.
- Disruption caused by storage of construction materials.

- **Awareness and Communication**

To ensure the effectiveness of the GRM, its procedures must be clearly communicated to all stakeholders. Awareness efforts should include:

- Explaining the scope and phases of the project.
- Outlining GRM procedures and eligibility criteria.
- Providing contact details and submission methods (phone, email, postal).
- Displaying information in public spaces like government offices and community centers.

- **GRM Implementation Steps**

The following steps outline the GRM process:

- Assign focal points.
- Receive and register complaints.
- Screen and refer complaints to appropriate bodies.
- Coordinate with other GRMs/agencies as needed.
- Assess the complaint.
- Formulate a response.
- Select a resolution approach.
- Implement the resolution.
- Track, document, and evaluate the outcomes.

- **Coordination with Other Agencies**

Effective GRM implementation requires coordination with various stakeholders, including affected parties, implementing agencies, and funding bodies. A central body should be designated to:

- Facilitate case referrals.
- Track and monitor grievance resolutions.
- Maintain a centralized database.
- Provide feedback and progress reports.

- Conduct capacity-building programs for GRM members.
- Liaise with media to ensure transparency.

By following these structured procedures and ensuring stakeholder awareness, the GRM can effectively resolve grievances and foster trust among affected communities and project implementer.

For Reference Only



Integrated Watershed and Water Resources Management Project (IWWRMP)

**Standard Procedure for Ensuring Occupational
Health and Safety When working in Wildlife
Area**



February, 2025

Content

1. Purpose
2. Common hazards may occur when working in Wildlife areas
3. Planning for Occupational Health and Safety (OHS).
4. Safe Operating Procedure
 - 4.1 General procedures
 - 4.2 Common preparedness
5. Common actions to be followed
6. Precautional actions
 - 6.1 Precautions against bees/ wasp stings/bites
 - 6.2 Precautions against large mammals
 - 6.3 Precautions against snake bites
 - 6.4 Precautions against crocodiles attacks
7. General conditions of workers
8. Personal Protective Equipment needed

1. Purpose

Workers who are working in wildlife or forest areas can be exposed to wildlife threats. Therefore, persons working in these areas need to strictly follow the guidelines and regulations given by the relevant authority. To fulfill this requirement, contractors and workers will have to follow the occupational health and safety guideline covered in this document during their working period in the wildlife/ forest areas.

2. Common hazards that may occur when working in Wildlife areas

1. Infectious diseases transmission from mosquito or small animal bites.
2. Swelling, mild or severe allergic reactions from stinging insects.
3. Swelling, mild or severe allergic reactions or death from snake bites.
4. Serious injury or death from contact with large mammals or reptiles.

3. Planning for Occupational Health and Safety (OHS).

1. Review identified area, its nature, jurisdiction, conservation status and relevant authority.
2. Plan to get relevant authorization and get clear idea about given conditions and required OHS measures.
3. Purchasing of relevant safety equipment. (Example – Personal Protective Equipment)
4. Provide necessary trainings to staff. (Example – First Aid, emergency protocols)
5. Appoint a person to supervise OHS.

4. Safe Operating Procedure

4.1 General procedures

- 4.1.1 Obtain conditional approval from authorized agency (Example – Department of Wildlife Conservation / Forest Department).
- 4.1.2 Understand the given conditions and take action to aware all workers (including drivers and supporting staff) on the given conditions.
- 4.1.3 Obtain the service of 01 or 02 officers from relevant authorized agency and always accompany them to relevant sites and work under their supervision and guidance.
- 4.1.4 If any risks or danger is anticipated , felt or identified in the area of work, immediately take action to inform authorized persons and get their direction.

4.2 Common preparedness

- 4.2.1 Be aware of working area and current conditions and history. (Example –elephant attacks / crocodile attacks)
- 4.2.2 Always carry a mobile phone or some communication system. (In some protected areas of Sri Lanka, there is no mobile phone coverage).
- 4.2.3 Select suitable vehicles, at least two vehicles should be mobilized (good condition, 4-wheel, toolbox, tire ropes and winch, etc.). Persons will not engage in any activities alone.
- 4.2.4 Always bring a first aid box/ stretcher.
- 4.2.5 Be aware of nearest hospital and nearest route.
- 4.2.6 Be equipped with enough clean drinking water for workers.

5. Common protocol to follow

- 1. Be aware of your surroundings, and note any wild or suspicious acting animals in your working area.
- 2. Identify and be aware about wild animal active times and try to avoid those times.
- 3. Avoid reaching or stepping into or over hidden areas that may contain wildlife.
- 4. Be aware of signs that indicate above or below ground animal nests. Also take appropriate action to prevent contaminations of these areas.
- 5. Avoid direct contact with birds, bats, or other animal droppings.
- 6. Avoid direct contact with animal blood. If contact cannot be prevented, wear rubber gloves and dispose properly.
- 7. Do not feed any wild animal.
- 8. Do not capture / harm wild life or plant species and do not collect any thing from protected area. (Example fallen animal horns, bones, tusks (ivory), etc).
- 9. Set fire under (if necessary) should do under supervision of wildlife officers and after use take action to completely extinguish it.
- 10. Allocate one person to be on guard/vigilance while other workers are at work

6. Precautional actions

6.1 Precautions against bees/ wasp stings/bites

- 6.1.1 Awareness about working areas and presence of bee hives or wasp nests .
- 6.1.2 Do not wear perfumes, colognes, scented soaps or powders.
- 6.1.3 Tuck pants into your socks or working boots.
- 6.1.4 Wear safety hats with face protecting net.
- 6.1.5 Do not make more noise than necessary when working.
- 6.1.6 Establish safety cage with enough space. (If possible)
- 6.1.7 Provide safety kit for workers
- 6.1.8 If you decided to remove bee/ wasp nest from working site, the authorized agency (example Department of Wildlife Conservation -DWLC) should be informed and their concurrence and assistance should be sought prior to implementation.
- 6.1.9 Always consult and take a service from qualified pest-removal expert. (Example – Bee conservation Society of Sri Lanka)

6.2 Precautions against large mammal attacks

- 6.2.1 Be aware of working site, access routes etc.
- 6.2.2 Be aware on animal movement routes, times, nature of the animals etc.
- 6.2.3 Try to avoid contact with wild animals. (Example – use an alternative route)
- 6.2.4 Request wildlife officers to bring/provide safety equipment (Example - Thunder-flashes).

6.3 Precautions for prevention of snake bites

- 6.3.1 Be vigilant and aware of working area.
- 6.3.2 Always wear safety boots.
- 6.3.3 Do not put hands or legs into hidden holes, anthills or any hidden spots.
- 6.3.4 Do not touch dead or live snakes.

6.4 Precautions for prevention of crocodile attacks

- 6.4.1 Be vigilant and aware of working area on crocodile signs (Example – foot prints, scats, hiding holes etc) and if those signs are available immediately inform to authorized officials and get their advises.
- 6.4.2 Do not put your hands or legs in to crocodile hiding holes / do not enter into crocodile hiding holes.
- 6.4.3 Do not enter into unsafe water.
- 6.4.4 If you need to work in open waters, establish protective cages.
- 6.4.5 Observe the working area thoroughly before entering in to open waters or protective cages.

7. General Conditions of workers

- 1. Workers should be in good health condition.
- 2. Should agree to follow given conditions and safety measures given from time to time and unexpected conditions.
- 3. Do not consume alcohol while working.
- 4. Always pay attention to surroundings.
- 5. Always stay as a group.
- 6. Do not litter.
- 7. Aware of all Do's and Don'ts. (contractor and supervision officers are responsible for this).
- 8. Establish temporary signboards on Do's and Don'ts at working sites.

8. Personal Protective Equipment need to used

- 1. Insect repellant
- 2. Long-sleeved shirts and pants (Jungle green/ dark colour)
- 3. Safety boots
- 4. Insect spray designed for bees/wasps/hornets
- 5. Safety hats with face protector (specially protect from bees and wasps)
- 6. Life jackets/ raincoats.
- 7. Life saving equipment for working in water.
- 8. Re-chargeable torches / lighting equipment.

For Reference Only



Integrated Watershed and Water Resources Management Project (IWWRMP)

Standard Procedure for Assessing the Requirement of Tree Removals



February, 2025

Standard Procedure for Assessing the Requirement of Tree Removals

1. Planning Stage

- 1.1 Consultancy teams should be appraised by the PMU to pay attention and document the requirement of tree removals at each site.
- 1.2 Consultancy team should discuss with officials of relevant implementing agency on proposed tree removals to identify exact requirement and alternatives explored.
- 1.3 Ground verification on tree removals should be done by team of IA and PMU. Officials from implementing agency and representatives from community organizations shall also participate and records with attendance list be taken. All trees identified for removal should be measured for their Diameter at Breast Height (DBH).
- 1.4 Special attention shall be given if any of the selected trees are considered rare, endemic, religiously, historically or culturally important, or are in roosting/ nesting sites etc. The removal of these trees should be avoided and alternatives sought. Unavoidable removals shall be supported with sufficient justification.
- 1.5 Proposed unavoidable tree removal identified and confirmed at ground verification should be declared and requirement explained to the public at community consultative meetings. The removal should be comprehensive justified with scientific/ engineering support. Sufficient time for community public feedback shall be provided. All suggestions provided shall be given due consideration.
- 1.6 If public raise key concerns/questions/ protests/ alternatives, the proposed list of tree removal shall be revisited with the relevant implement agency.
- 1.7 Include finalized tree list in to draft ESMP (scientific justification need for each tree which has identified to be removed). All mitigations and compensatory tree planting activities shall be presented explicitly in the ESMP.
- 1.8 Submit draft ESMP to PMU with all required information and photos on proposed tree removals.

2. Reviewing Stage

- 2.1 ESMPs shall be reviewed by PMU and further discussion with consultancy team will be conducted if necessary.

- 2.2 Field visit will be conducted by the PMU further verify of the requirement of proposed tree removals with officials of relevant implementing agency and representatives of community organizations.
- 2.3 The proposed tree removal list in the ESMP will be revisited post field visit and any necessary amendments will be made if necessary in concurrence with the implementing agency.
- 2.4 The final stage shall be to obtain the recommendations of DSRP (SPELL OUT) on tree removals and further amend list according to the recommendations of DSRP

3. Obtaining Clearance / approvals (responsibility of Implement Agency)

- 3.1 The finalized tree removal list shall be shared with relevant approving officers/ agencies like Grama Niladhari, Divisional Secretariat, District Secretariat, Forest Department, State Timber Corporation, Central Environment Authority/ Provincial Environmental Authority etc. The obtaining of the clearances, where required, will be the responsibility of the implementing agency will be done prior to any removal of trees.
- 3.2 All clearances shall be shared with the PMU and endorsed before the tree removal activities are commenced. If any conflicts arise, the PMU will bring it to the notice of the World Bank E&S team immediately.

4. Awareness program (Implementation Agency / PMU)

- 4.1 Awareness programs for selected contractors shall be conducted on environmental and social impact mitigation measures with special attention on tree protection/removal guidelines.
- 4.2 Contractors shall be strictly advised not to remove trees unless essential. They shall be instructed to follow the ESMP strictly and any deviations shall be notified to the implementing agency and the PMU in advance for necessary action.
- 4.3 The removal of trees will be presented at the project introductory meeting and any other community level meetings.
- 4.4 Continuous field inspection and monitoring shall be conducted with a more concerted focus during land preparation and tree removal period.
- 4.5 Public complaints shall be attended to without delay adopting the protocols in place for GRM

5. Ecosystem restoration (Contractor)

5.1 Contractor shall carry out recommendations provided in the ESMP on remedial mitigation involving planting and maintenance of suitable tree species (as identified in the ESMP).

6. Monitoring and Evaluation (PMU/ Implementing agency)

6.1 Field inspection and monitoring will be carried out at regular intervals by the implementing agency and the PMU. Photographic evidence will be recorded for all tree removal activities.

6.2 Upon completion of required tree removal activities, site shall be evaluated to ensure that no further destruction has occurred. If satisfied, final clearance to proceed will be granted by the PMU.

6.2 If not satisfied, the contractor will be directed to utilize retention fund to carry out ecosystem restoration to the satisfaction of the implementing agency and the PMU. The WB E&S team shall also be notified under such circumstances.

For Reference Only

Integrated Watershed and Water Resources Management Project (IWWRMP)

Checklist for Tree Removals.

Name of the Site

Date

No	Item/ Activity	YES	NO	Remarks										
1	Tree removal has been identified in ESMP													
2	List of tree removals with justification has been included in to ESMP (approved by WB													
3	Ground verification done by PMU													
4	Ground verification done by DSRP													
5	According to no 3 &4, Amendments included in to final tree removal list													
6	Conduct final community consultancy and briefing on tree removals by IA/PMU													
7	According to no 6, Any disagree / not at													
8	If disagree, did any change in the list													
9	Obtained necessary clearance													
	GN		Di.S		DS		FD		CEA		P.EA		A.Dep.	
10	Written inform to authorized officers/institutes													
	GN		Di.S		DS		FD		CEA		P.EA		A.Dep.	
11	IA agreed to closely monitor of tree removals (in written)													
12	Awareness on tree removals carried out for contractor to the satisfaction of PMU.													

GN- Grama Niladhari, Di.S – Divisional Secretary, DS – District Secretary, FD – Forest Department, CEA- Central Environment Authority, P.EA- Provincial Environment Authority, A.Dep. – Archeology Department, IA- Implementing Agency, PMU – Project management Unit. (Use “√” mark in relevant box)

.....

According to the checklist, proposed tree removal is in order.

Signature / Date

Environment Specialist (IWWRMP)

.....

Signature /Date

Project Director (IWWRMP)

Declaration of Implementing Agency

I hereby certify that, proposed tree removal will be done under my direct supervision and responsible to maintain and follow required condition given by authorized / approving agencies.

.....

Signature /Date

Officer In-charge/ IA



Integrated Watershed and Water Resources Management Project (IWWRMP)

Ministry of Irrigation

Labor Management Plan
(Including site management and camp
management measures)



February, 2025

Abbreviations

IA	-	Implementing Agency
IWWRMP	-	Integrated Watershed and Water Resources Management Project
LMP	-	Labor Management Plan
PMU	-	Project Management Unit
PHI	-	Public Health Inspector
GBV	-	Gender Based Violence

For Reference Only

Introduction

Labor Management Plan (LMP) of the Integrated Watershed and Water Resources Management Project (IWWRMP) provides basic guidance to contractors to smoothly operate project activities without creating harm to workers and communities. Selected contractors shall follow this plan including relevant national labor management laws, regulations and practices. The labor management plan consists of site management measures and camp management measures which outlines a range of mitigation measures designed to avoid or reduce undesired labor management, site management and camp management impacts during construction.

The plan has been prepared by structuring relevant major subject areas that need to be paid attention to and providing mitigation measures including details of responsible entities for implementation and frequency of monitoring to the identified risks and potential impacts.

Objectives of the plan

The objectives of the labor management Plan are:

- Avoid or reduce negative impacts on environment due to establishment of project sites.
- Establish standards on worker welfare and living conditions at the camps that provide a healthy, safe and comfortable environment.
- Avoid or reduce negative impact on community and maintain constructive relationships between local communities and workers' camps.

Roles and responsibilities

- Contractor shall ensure sufficient resources are allocated on an ongoing basis to meet the requirements of this Plan.
- Contractor shall strictly adhere to national labor acts, rules and regulations pertaining to terms and conditions of employment and labor management.
- The Contractor shall pay attention to implement labor management plan monitor the progress.
- Contractor shall facilitate to PMU or IA to monitor the progress of LMP.
- Contractor shall comply to make necessary amendments to the LMP after the site inspections of PMU, IA or authorized entity.
- Contractor shall comply to ensure that all workers sign the GBV Code of Conduct (CoC), provide necessary awareness and trainings to laborers about rules and regulations, guidelines and general information time to time.

No	Major field	Sub field	Mitigation and management measures	Responsibility	Monitoring frequency
1	Plan basic arrangements of worksite management	Site identification and demarcation	Contractor should identify the exact area of work site before start project activities.	Site engineer & Contractor	-
			Contractor should plan the work site to identify appropriate places for site office, labor camps, yards, stores, parking areas etc.	Site engineer & Contractor	-
			Contractor should obtain relevant approvals from IA and site engineer.	Contractor	-
			Fence or protective measure should be placed around the work site.	Contractor	-
		Control public access to work site	All public access to the work site should be prohibited or controlled to avoid risk to the public.	Contractor	Monthly
			Signboards should be displayed at all entry points which indicating “Authorized entries only” or “prohibited to public entrance”.	Contractor	Monthly
			Contractor shall take action to establish a temporary security point at the entrance and assigned a person to duty for 24 hrs. for security of the site and monitor vehicle and monitoring transfer of goods into and out of camps.	Contractor	Weekly
			A register shall be maintained at the security point to register all labors/ officers/vehicles which enter / departure to/from the work site.	Contractor	Weekly
		Disclose of basic information to workers and interest groups	Contractor should established signboards at the main entry point to display detailed information of the proposed project.	Contractor	Monthly
			Safety signs should be displayed at the entrance and other necessary places at the work site.	Contractor	Monthly
			Contractor should established a notice boards at the work site and necessary information should be displayed in time to time.	Contractor	Monthly
			Contractor should establish a notice board on COVID 19 health guideline at the entrance.	Contractor	Monthly
		Establishment of site office	Contractor should established a site office according to the site plan and should maintain appropriate working condition.	Contractor/ Site engineer	-

No	Major field	Sub field	Mitigation and management measures	Responsibility	Monitoring frequency
			Necessary documents (guidelines, ESMP, copy of approvals etc.) should be placed at the site office.	Contractor	Monthly
			First aid box with essential drugs should be placed at the site office.	Contractor	weekly
			Fire protection equipment should be placed at the site office.	Contractor	Monthly
			Contractor should maintain an extra stock of safety equipment at site office to issue when necessary.	Contractor	Monthly
			Hazards, explosives or any harmful chemicals should not stock in the site office.	Contractor	weekly
2	Plan work site arrangement	Readiness for emergency response	Contractor shall develop an emergency response plan that meets requirements of emergency situation.	Contractor	-
		Ensure the safety of workers	Contractor should be placed temporary fences/ barricade tapes or protective measures to identify working areas, heavy machinery operating areas and areas where having deep excavations and activities of hazardous nature for the workers.	Contractor	Every 2 weeks
			Specific area in the site should be reserved to store construction materials.	Contractor	Monthly
			Specific area /place/ rooms should be reserved for store Hazards, explosives or harmful materials or chemicals.	Contractor	Weekly
			Materials should stock piled without exceeding approved height.	Contractor	Monthly
			Areas should be demarcated to park vehicles/ heavy machines or vehicle repairing and relevant sign boards should be displaced.	Contractor	Monthly
			All vehicles used by any contractor for the purpose of the project will have valid registration, insurance and road worthiness.	Contractor	Daily
			Fire protection equipment should be established in the work site at most essential places.	Contractor	Every 2 weeks
			The contractor shall take action to strictly follow the COVID 19 operational guideline declared by the Ministry of Health at work site.	Contractor	Once a week

No	Major field	Sub field	Mitigation and management measures	Responsibility	Monitoring frequency
			Workshops, Stores, should establish according to the approved site plan.	Contactor	-
			Equipment (including power tools) should store properly, listed and assigned a person to issuing and receiving.	Contractor	Weekly
3	Establishment of Pollution Control measures	Control of Dust and emission,	Stock piled materials should be covered with appropriate cover or sprinkling water to control dust emission.	Contractor / Site engineer	Daily
			Dust emission form earth works (when operating) should controlled by sprinkling water.	Contractor / Site engineer	Daily
			Contractor should take action to transport excavated debris to approved dumping sites and should not store at work site.	Contractor / Site engineer	Daily
		Control of noise and vibration	Contractor shall adhere to strictly follow given condition for noise limits and vibration limits. (far day and night)	Contractor / Site engineer	Daily
		Control of water pollution	Silt traps should be established in relevant places.	Contractor / Site engineer	Monthly
			Proper solid waste management mechanism should be established in the work site.	Contractor / Site engineer	Daily
			Precautions should be established to avoid oil, fuel or lubricant contamination.	Contractor / Site engineer	Daily
		Final clearance and restoration of worksite	After the completion of project activities contractor shall carefully remove all temporary buildings, huts, stocked piled materials, temporary blocks of streams etc. form the work site and follow up the approved site restoration actions.	Contractor / Site engineer/PMU	-
4C	Labor management measures	Adhere to laws and regulations	No labor under the age of 18 will be hired for work under this contract.	Contractor	Daily
			Contractor shall strictly follow relevant national labor laws and acts related to terms and conditions of employment (i.e. related to salary payments, working hours, leave etc.) and issue employment letters/contracts to workers with details of the employment terms/conditions.	Contractor	-
			Contractor shall obtain necessary approval when increased the number of workers in labor camps	Contractor	-

No	Major field	Sub field	Mitigation and management measures	Responsibility	Monitoring frequency
			Contractor shall maintain a log of any grievances/complaints and actions taken to resolve them.	Contractor	Weekly
			Any complaints related to sexual harassment / gender based violence should be immediately reported to the PMU who in turn will report to World Bank for necessary guidance on the actions to be taken.	Contractor	
			Workers shall abide by camp rules which includes a disciplinary process.	Contractor	Daily
			Contractor shall limit workers interaction with community when outside the camp.	Contractor	Daily
			Contractor's personnel shall not engage in any discrimination or harassing behavior.	Contractor	Daily
		Arrangement for conduct basic awareness for workers	Contractor shall take action to develop a labor code of conduct and translated it in to local languages upon clearance from the Engineer. The code of conduct must be made available to all staff and displayed in the work site in local languages. All workers will required to sign the Code of Conduct.	Contractor	Monthly
			Contractor shall give necessary advices and instructions to all labors and drivers of the site to follow code of conducts.	Contractor/Site engineer/IA/PMU	When necessary
			Contractor shall take action to conduct labor awareness programs to educate the laborers about the code of conduct, general conduct, the Environmental and Social Management Plan, Occupational Health and Safety etc.	Contractor/Site engineer/IA/PMU	When necessary
		Labor safety and welfare facilities	Contractor shall provide sufficient safety gears to labors and need to monitor the utilization.	Contractor/ Site engineer	Daily
			Contractor shall take action to follow safety measures specially in handling of explosives, hazard chemicals, electricity etc.	Contractor/ Site engineer	Daily
			Contractor shall provide equal facilities / standards for all labor camps in the site and do not make any differences on worker's race, gender or nationality.	Contractor/ Site engineer	Daily
			Contractor, as appropriate, shall provide adequate recreation facilities for workers to reduce incentive for leaving camps during leisure time.	Contractor/ Site engineer	Monthly

No	Major field	Sub field	Mitigation and management measures	Responsibility	Monitoring frequency
			Contractor shall pay more attention and provide better quality safety equipment to the workers who are engaging with danger/ risk activities.	Contractor	Daily
		Recognition of cultural, nationality, religion rights.	Contractor may provide prayer rooms and other facilities, as necessary and to the extent practicable, to satisfy the religious needs and customs of its workforce. (if necessary)	Contractor	Monthly
5	Labor Camp management	Planning of Labor camps	Labor camps shall be established according to the approved site plan.	Contractor/ Site engineer	-
		Address community grievances	PMU or IA may request that camp related activities/operations be amended to address community grievances. Contractor shall comply with these requests.	Contractor	-
			Establishment of labor camps shall be commenced only upon the written approval of the Engineer.	contractor	-
			IA/ PMU may request that camp related activities/operations be amended to address community grievances. Contractor shall comply with these requests.	Contractor	-
		Maintain health condition	Contractor shall comply with the minimum health requirements for project execution and the community Health and Safety Management Plan which set out requirements and management measures on controlling communicable diseases within camps and to outside communities.	Contractor	Daily
			Contractor shall routinely monitor the quality and supply of water and other health related facilities.	contractor	Monthly
		Maintain Living and hygienic conditions	Contractor shall be maintained necessary living accommodation and ancillary facilities in functional and hygienic manner and as approved by the Engineer.	Contractor	Monthly
			Contractor should provide separate resting and sanitary facilities for both men and women laborers.	Contractor	Monthly
			All temporary accommodation should be established and maintained in such a fashion that uncontaminated water is available for drinking, cooking and washing.	Contractor	Monthly
			Washrooms should have sufficient and proper water supply.	Contractor	Weekly

No	Major field	Sub field	Mitigation and management measures	Responsibility	Monitoring frequency
			Drinking water facility should be provided to labor camps.	Contractor	Daily
			COVID-19 health guideline shall be applied at the labor camps and throughout the work site.	Contractor	Daily
			Adequate Personal protective equipment (PPE) will be provided to workers, including: Facemasks, gloves, etc., if possible, to prevent COVID-19 spread	Contractor	Daily
		Application of Waste management measures	The sewage system for the camp, if not available, shall be planned & implemented with concurrence from the Local Public Health Officer (PHI).	Contractor/ Site engineer	-
			Proper solid waste management system (waste collection method/ separation method and final disposal method) should be established at labor camps.	Contractor	Weekly
			Waste water (from kitchen, washrooms, canteen etc.) should not release into open water bodies or streams.	Contractor	Weekly
		Final clearance and camp demolishing	After the completion of project activities contractor shall carefully remove all temporary buildings, huts, labor camps, toilets form the work site. Temporary toilet pits should treat and demolish accordance to approved health guidelines. Approved site restoration actions should implement.	Contractor/IA/ PMU	-

For Reference Only

Sample Code of Conduct

Individual Code of Conduct

Implementing ESHS and OHS Standards

Preventing Gender Based Violence

I, _____, acknowledge that adhering to environmental, social, health and safety (ESHS) standards, following the project's occupational health and safety (OHS) requirements, and preventing Gender Based Violence (GBV) is important. The Company considers that failure to follow ESHS and OHS standards, or to partake in activities constituting GBV—be it on the work site, the work site surroundings, at workers' camps, or the surrounding communities—constitute acts of gross misconduct and are therefore grounds for sanctions, penalties or potential termination of employment. Prosecution by the Police of those who commit GBV may be pursued if appropriate.

I agree that while working on the project I will:

1. Consent to Police background check.
2. Attend and actively partake in training courses related to ESHS, OHS, and GBV as requested by my employer.
3. Will wear my personal protective equipment (PPE) at all times when at the work site or engaged in project related activities.
4. Take all practical steps to implement the contractor's environmental and social management plan (C-ESMP).
5. Implement the OHS Management Plan.
6. Adhere to a zero-alcohol policy during work activities, and refrain from the use of narcotics or other substances which can impair faculties at all times.
7. Treat women, children (persons under the age of 18), and men with respect regardless of race, color, language, religion, political or other opinion, national, ethnic or social origin, property, disability, birth or other status.
8. Not use language or behavior towards women, children or men that is inappropriate, harassing, abusive, sexually provocative, demeaning or culturally inappropriate.
9. Not sexually exploit or abuse project beneficiaries and members of the surrounding communities.

10. Not engage in sexual harassment of work personnel and staff—for instance, making unwelcome sexual advances, requests for sexual favors, and other verbal or physical conduct of a sexual nature is prohibited. E.g. looking somebody up and down; kissing, howling or smacking sounds; hanging around somebody; whistling and catcalls; in some instances, giving personal gifts.
11. Not engage in sexual favors—for instance, making promises of favorable treatment (e.g. promotion), threats of unfavorable treatment (e.g. loss of job) or payments in kind or in cash, dependent on sexual acts—or other forms of humiliating, degrading or exploitative behavior.
12. Not use prostitution in any form at any time.
13. Not participate in sexual contact or activity with children under the age of 18—including grooming, or contact through digital media. Mistaken belief regarding the age of a child is not a defense. Consent from the child is also not a defense or excuse.
14. Unless there is the full consent¹ by all parties involved, I will not have sexual interactions with members of the surrounding communities. This includes relationships involving the withholding or promise of actual provision of benefit (monetary or non-monetary) to community members in exchange for sex (including prostitution). Such sexual activity is considered “non-consensual” within the scope of this Code.
15. Consider reporting through the GRM or to my manager any suspected or actual GBV by a fellow worker, whether employed by my company or not, or any breaches of this Code of Conduct.

With regard to children under the age of 18:

16. Bring to the attention of my manager the presence of any children on the construction site or engaged in hazardous activities.
17. Wherever possible, ensure that another adult is present when working in the proximity of children.
18. Not invite unaccompanied children unrelated to my family into my home, unless they are at immediate risk of injury or in physical danger.
19. Not use any computers, mobile phones, video and digital cameras or any other medium to exploit or harass children or to access child pornography (see also “Use of children's images for work related purposes” below).
20. Refrain from physical punishment or discipline of children.
21. Refrain from hiring children for domestic or other labor below the minimum age of 14 unless national law specifies a higher age, or which places them at significant risk of injury.

¹ **Consent** is defined as the informed choice underlying an individual’s free and voluntary intention, acceptance or agreement to do something. No consent can be found when such acceptance or agreement is obtained using threats, force or other forms of coercion, abduction, fraud, deception, or misrepresentation. In accordance with the United Nations Convention on the Rights of the Child, the World Bank considers that consent cannot be given by children under the age of 18, even if national legislation of the country into which the Code of Conduct is introduced has a lower age. Mistaken belief regarding the age of the child and consent from the child is not a defense.

22. Comply with all relevant local legislation, including labor laws in relation to child labor and World Bank's safeguard policies on child labor and minimum age.

Use of children's images for work related purposes

When photographing or filming a child for work related purposes, I must:

23. Before photographing or filming a child, assess and endeavor to comply with local traditions or restrictions for reproducing personal images.
24. Before photographing or filming a child, obtain informed consent from the child and a parent or guardian of the child. As part of this I must explain how the photograph or film will be used.
25. Ensure photographs, films, videos and DVDs present children in a dignified and respectful manner and not in a vulnerable or submissive manner. Children should be adequately clothed and not in poses that could be seen as sexually suggestive.
26. Ensure images are honest representations of the context and the facts.
27. Ensure file labels do not reveal identifying information about a child when sending images electronically.

Sanctions

I understand that if I breach this Individual Code of Conduct, my employer will take disciplinary action which could include:

1. Informal warning.
2. Formal warning.
3. Additional Training.
4. Loss of up to one week's salary.
5. Suspension of employment (without payment of salary), for a minimum period of 1 month up to a maximum of 6 months.
6. Termination of employment.
7. Report to the Police if warranted.

I understand that it is my responsibility to ensure that the environmental, social, health and safety standards are met. That I will adhere to the occupational health and safety management plan. That I will avoid actions or behaviors that could be construed as GBV. Any such actions

will be a breach this Individual Code of Conduct. I do hereby acknowledge that I have read the foregoing Individual Code of Conduct, do agree to comply with the standards contained therein and understand my roles and responsibilities to prevent and respond to ESHS, OHS, GBV issues. I understand that any action inconsistent with this Individual Code of Conduct or failure to act mandated by this Individual Code of Conduct may result in disciplinary action and may affect my ongoing employment.

Signature: _____

Printed Name: _____

Title: _____

Date: _____

For Reference Only

For Reference Only

Section - 7

Form of Bid

Section 7 - FORM OF BID

Name of Contract: ***Modernization and Instrumentation of channel system of Sagamam Irrigation scheme in Thambiluvil Division, Ampara range under IWWRMP***

Contract No.: ***LK-MoMDE-465692-CW-RFB***

To: Project Director, Integrated Watershed & Water Resources Management Project

Gentlemen:

1. Having examined the Standard Bidding Document - Procurement of Works – Major Contracts [ICTAD/SBD/02 - Second Edition, January 2007], Specifications, Drawings and Bills of Quantities and Addenda for the execution of the above-named Works, we the undersigned, offer to execute and complete such Works and remedy any defect therein in conformity with the aforesaid Conditions of Contract, Specifications, Drawings, Bills of Quantities and addenda for the sum of Sri Lankan Rupees (LKR) or such other sums as may be ascertained in accordance with the said Conditions.
2. We acknowledge that the Contract Data forms part of our Bid.
3. We undertake, if our Bid is accepted, to commence the Works as soon as is reasonably possible after the receipt of the Engineer's notice to commence, and to complete the whole of the Works comprised in the Contract within the time stated in the Contract Data.
4. We agree to abide by this Bid until the date specified in ITB Clause 16 [insert date], and it shall remain binding upon us and may be accepted at any time before that date.
5. Unless and until a formal Agreement is prepared and executed this Bid, together with your written acceptance thereof, shall constitute a binding Contract between us.
6. We understand that you are not bound to accept the lowest or any bid you may receive.
7. We declare that civil work contracts *have/ have not been* suspended or terminated and/or performance security called by an employer for reasons related to the non-compliance of any environmental, or social, (including sexual exploitation and abuse (SEA) and gender-based violence (GBV)), or health or safety requirements or safeguard in the past five years.
(**Note: If suspended, terminated or Performance Security is called give details**)

Year	Suspended or terminated portion of contract	Contract Identification	Total Contract Amount (current value, currency, exchange rate and US\$ equivalent)
[insert year]	[insert amount and percentage]	Contract Identification: [indicate complete contract name/ number, and any other identification] Name of Employer: [insert full name] Address of Employer: [insert street/city/country]	[insert amount]

		Reason(s) for suspension or termination: <i>[indicate main reason(s) e.g. for GBV/ SEA breaches]</i>	
...	...	<i>[list all applicable contracts]</i>	...
Performance Security called by an employer(s) for reasons related to ESHS performance			
Year	Contract Identification		Total Contract Amount (current value, currency, exchange rate and US\$ equivalent)
<i>[insert year]</i>	Contract Identification: <i>[indicate complete contract name/ number, and any other identification]</i> Name of Employer: <i>[insert full name]</i> Address of Employer: <i>[insert street/city/country]</i> Reason(s) for calling of performance security: <i>[indicate main reason(s) e.g. for GBV/ SEA breaches]</i>		<i>[insert amount]</i>

8. We certify/confirm that we comply with the eligibility requirements as per ITB Clause 3 of the bidding documents.

Dated this day of 20.....

Signature in the capacity of

duly authorized to sign bids for and on behalf of
[in block capitals or typed]

Address:

Witness:

Section – 8
Bill of Quantities

For Reference Only

Schedules

Preamble to the Bill of Quantities
Description of Items and Measurement Methods
Bill of Quantities

Preamble to the Bill of Quantities

- 1.1 The Bill of Quantities shall be read in conjunction with all parts of this entire Bidding Document; the Instructions to Bidders, General and Particular Conditions of Contract, Technical Specifications, Drawings, and supplementary information.
- 1.2 The Bill of Quantities includes lump sum items, unit price items, and provisional sum items. The lump sum price quoted will be deemed to be full compensation for the completion of work items and paid in full when the work is completed. The quantities given in the Bill of Quantities for the unit price items are estimated and provisional sum are given to provide a common basis for bidding. They are not intended to be the maximum or minimum quantities for payment. The unit prices will be considered full compensation for those work items. The basis of payment will be the actual quantities of work carried out under the provisions of the Contract, measured and valued at the applicable rates and prices in the priced Bill of Quantities.
- 1.3 The rates and prices bid in the priced Bill of Quantities shall, except as otherwise provided under the Contract, include all construction plant, equipment, labour, supervision, materials, transport, erection, maintenance, testing, insurance, overheads, profit, taxes, and duties, together with all general risks, liabilities, and obligations set out or implied in the Contract.
- 1.4 A rate or price shall be entered against each item in the priced Bill of Quantities, whether quantities are stated or not. The cost of items against which the Contractor has failed to enter a rate or price shall be deemed to be covered by other rates and prices entered in the Bill of Quantities.
- 1.5 The rates and prices entered in the Bill of Quantities shall be full compensation for completed work and shall have taken full account of all requirements and obligations, covered by all parts of the contract, including but not limited to, the following, unless expressly stated otherwise:
 - a. All setting out and survey works including Pre and Post Construction Surveys.
 - b. All additional site surveys and investigations, preparation of field amendment drawings, shop drawings and As-Built drawings.
 - c. Mobilization and Demobilization of labour, all construction plant and equipment.
 - d. Establishment, Maintenance and Removal of all temporary facilities (Contractor's and Engineer's) including offices, workshops, houses, labour camps construction and storage yards, Laboratory facilities and Equipment, Transport for staff and labour etc.
 - e. Labour and all costs in connection therewith, including but not limited to social charges or fringe benefits.
 - f. The supply of material and goods, storage and costs in connection therewith including delivery to site and handling material within the site/sites.
 - g. Taking delivery of materials and goods supplied by others, unloading, storage, handling materials within site, and costs in connection therewith.
 - h. Construction Plant & Equipment and all costs in connection therewith.
 - i. Fixing, erecting and installing or placing of materials and goods in position, including usual auxiliary material etc.

- j. Temporary Works.
 - k. Complying with any limitations and constraints on the use of the site/sites including coordinating with other Contractor's, with regard to site access, security etc., maintenance of access to households and other users, maintenance of existing roads, waterways etc.
 - l. Dealing with the existing flow of water from any source including irrigation flow requirement, rainfall and surface runoff, groundwater, wave action and the like. This includes all and any dewatering operations necessary for the execution of the Works as well as coffer damming if required.
 - m. General obligations, liabilities and risks involved in the execution of the Works set forth or reasonably implied in the documents on which the tender is based.
 - n. Overheads and profit.
 - o. Waste of material.
 - p. Attendance and transport for surveys including provision of boats and survey instruments, sampling and testing carried out by the Engineer.
 - q. Performing all sampling and testing which are required to be carried out by the Contractor, and supplying results of such tests.
 - r. Providing required material delivery certificates.
 - s. Coordination with Regulatory Institutes & all stake holders.
 - t. Disposal of all waste material.
 - u. Complying with all requirements in Specifications and Conditions of Contract where separate items have not been provided.
- 1.6 Where Bill of Quantities items describe the replacement of existing equipment or components, including mechanical and electrical equipment, the equipment removed remains the property of the Employer, unless stated otherwise in the contract documents. The rates entered shall include for delivery of such equipment to the Employer or for disposal if so, directed by the Employer.
- 1.7 The whole cost of complying with the provisions of the Contract (excluding VAT) shall be included in the Items provided in the priced Bill of Quantities, and where no Items are provided, the cost shall be deemed to be distributed among the rates and prices entered for the related Items of Work.**
- 1.8 General directions and descriptions of work and materials are not necessarily repeated nor summarized in the Bill of Quantities. References to the relevant sections of the Contract documentation shall be made before entering prices against each item in the priced Bill of Quantities.
- 1.9 Provisional Sums included and so designated in the Bill of Quantities shall be expended in whole or in part or not at all at the direction and discretion of the Engineer and in accordance with the Conditions of Contract. Where the expenditure against a Provisional Sum is made in the form of a Variation, the payment for the work will be made in accordance with Clause 13 of the Conditions of Contract.
- 1.10 The method and unit of measurement of completed work for payment shall be in accordance with the method described in the specifications for each item or in the Bill of Quantities. For Lump Sum items, measurements for Interim Payment Certificates

shall be based on percentage completion of such item of work or milestone as per the Contractor's proposed schedule of monthly payments, as approved by the Engineer.

For Reference Only

DESCRIPTIONS OF ITEMS AND MEASUREMENT METHODS

1 INTRODUCTION

The descriptions of the different items in the Bills of Quantities and the method adopted for measurements are indicated in the following paragraphs.

The quantities shall be computed using dimensions from the drawings based on the pre-construction surveys or as varied by the Engineer, except where clearly stated otherwise under the following individual items. No allowance shall be made for settlement, bulking, shrinkage, or waste.

1 BILL NO 1 - PRELIMINARIES

1.1 Insurance and Securities

Sub Item 1.1.1– Performance Security

The item provides for the provision of Performance Security as specified in Clause 4.2 of the Conditions of Contract.

Payments for the item will be certified when the Performance Security in the specified format has been provided and accepted by the Employer.

Sub Item 1.1.2– Providing Security bond, Advance bond and guarantees etc.

The item provides for the provision of Security bond, Advance payment Security as required in the Contract as a Provisional Sum item.

Payments for each item will be certified when the respective Advance payment security in the specified format has been provided and accepted by the Employer.

Sub Item 1.1.3, 1.1.4 - Insurances of property materials and works at site, third party insurance and Insurance against accidents, and injury to workmen

The sub items provide for the provision of the different types of insurances as specified in Clause 18 of the Conditions of Contract.

Payment for each type of insurance will be certified when the respective insurance policies from acceptable insurance companies together with full payment of the premium has been submitted to and accepted by the Employer.

1.2 Engineer's facilities for Implementing Agency

Sub Item 1.2.1 – Allow Provisional sum for constructing, maintaining, dismantling and removal on completion of the works, a temporary building of 10m x 4m for Engineer's office in conformity with the plans provided for Engineer's requirements including necessary furniture and fittings, furnishing, sanitary facilities and other facilities

The sub item provides for the provision for Construction of Engineer's 's site office, sanitary facilities, installation and supplying of electricity & water facilities of

Engineer's offices for the duration of the Contract as a Provisional sum item. The Project Manager shall order the supply of items or the work items to be carried out under this provisional sum item. All items procured or established under this sub item shall remain the property of the Employer and shall be handed over to the Employer at the end of the Contract.

50 % of this item will be certified on establishment of all planned facilities balance of 25% for maintenance and the balance of 25% for when they have completed of the work.

Sub Item 1.2.2 – Allow Provisional sum for Provisional sum for suppling of compute with Core i7 10th Gen. Processor; 512GB SSD Disk, 500GB Hard Disk; 16 GB RAM or more; 3840 x 2160 (4K) or greater True Color Video Display Adapter; 8 GB VRAM or greater; 21” Monitor; 325W or more & 650 VA Capacity Desktop Mounted UPS, Canon imageCLASS MF3010 (Print,Scan,Copy) Printer including other required items

Before process employer has to approved. Payment for the items will be made upon delivery to the Engineer as per the contract, and subject to their satisfaction with the supplied goods.

Sub Item 1.2.3 – Hiring of Double cab with fuel and driver for inspection works of Thambiluvil scheme and attend meeting in other Districts.(Engine Capacity 2500cc ,4WD, mileage less than 300,000 km , should be Brand new or registered after 01.01.2015)running shall be 3000km per month usage shall be 26 days per month, 06 days per week and 12 hours per day. air conditioner with rear AC vent minimum seating including driver shall be five.(Wet Lease basis with driver)

This sub-item covers the provision of a transport vehicle for the Employer's quality control staff, including transportation for quality assurance testing within the district and attending the meeting and official work out of the district. The vehicle must be a double-cap with dual air conditioning, and the scope includes the cost of the driver, fuel, maintenance, and up to 3,000 km of monthly usage, with the vehicle being used for 26 days per month (6 days per week).

Payment under this item will be made on a percentage of actual progress basis, subject to certification upon submission of relevant documents. The vehicle shall be provided upon the Engineer's request.

1.3 Contractor's Requirements

Sub item 1.3.1 – Allow Lump sum for constructing, maintaining, dismantling and removal on completion of the works, a temporary site office (10m x 5m) of adequate size including staff rest room and toilets and other facilities for the contractor's site managements staff in accordance with the plans prepared by the contractor and concurred by the Engineer.

The sub item provides for the establishment, maintenance and removal on completion of all the facilities required by the Contractor for execution of the works under the contract offices etc (details with layout to be supplied with the Tender). The Contractor shall submit with the Tender a breakdown of this Provisional sum item.

50 % of the lump sum under this item will be certified on establishment of all planned facilities balance of 25% for maintenance and the balance of 25% for when they have been removed and site cleaned on completion of the work. All items established under this item will remain the property of the Contractor.

Payments for maintenance under this item shall be included in the monthly payment certificates from the time the facilities have been established until completion.

Sub item 1.3.2 – Allow for constructing, maintaining, dismantling and removal on completion of the works, building to be used as workshop and stores for perishable materials and building shall be (8.0m x 5.0m) constructed in accordance with the drawings prepared by the contractor and concurred by the Engineer, the lump sum shall be also included for altering, modifying or dismantling and re-erecting within the site all temporary building / structures if required.

The sub item provides for the establishment, maintenance and removal on completion of all the facilities required by the Contractor for execution of the works under the contract including offices, stores, workshops, housing etc (details with layout to be supplied with the Tender). The Contractor shall submit with the Tender a breakdown of this Provisional sum item.

50 % of the lump sum under this item will be certified on establishment of all planned facilities balance of 25% for maintenance and the balance of 25% for when they have been removed and site cleaned on completion of the work. All items established under this item will remain the property of the Contractor.

Payments for maintenance under this item shall be included in the monthly payment certificates from the time the facilities have been established until completion.

1.4 Other requirements

Sub Item 1.4.1 - Provisional sum for all cost in connection with preparing samples for testing, making arrangements for testing of materials, goods etc., as stipulated in the specification, obtaining test reports and submitting the same to the Engineer

The sub item is provided as a provisional sum item for the reimbursement of preparing samples for testing, making arrangements for testing of materials, goods etc, accepted by Engineer

Payments under this item will be certified on production of the relevant documents of proof of payment.

Sub Item 1.4.2– Allow lump sum for maintaining the site by removal of all rubbish and debris in a clean and orderly manner on completion time and during the entire contract period.

The sub item is provided as a Provisional sum for removal of all rubbish and debris and disposal as approved and clearing site on completion.

Payment for this item will be certified on completion and leaving all in good order before handing over.

Sub Item 1.4.3 – Allow lump sum for provision of progress report including photo graphics records and other schedule included in the ICTAD publication Guideline for effective construction management (ICTAD/CM/01), relevant to contract administration as directed by the Engineer.

The sub item is provided as a Provisional sum for the submission of Monthly Progress Reports and photographs, schedules etc.

Payments will be certified on a monthly basis on submission of the required documentation, accepted by the Engineer.

Sub Item 1.4.4 – Allow lump sum for provision of 2 set of (hard copies and soft copies) As-built drawing of all services, for engineer's approval

The sub item is provided on a Lum sum basis for the submission of As-Built Drawings, Quality Assurance reports and O & M Manual etc. as specified in the Contract and requested by the Engineer.

Payments will be certified on submission and acceptance of the required drawings and documents.

Sub Item 1.4.5– Lump sum for Compliance with environmental regulations and Project environment management plan

The sub item is provided on a Lum sum for the compliance with environmental regulations and project management plan

Payments will be certified on acceptance of the engineer.

Sub Item 1.4.6– Employers share of Adjudicator's fees and expenses

This sub item is provided as a provisional sum for the reimbursement of the Employer's part of fees and expenses, paid by the Contractor to the Adjudicator.

Payments will be certified on submission of the required documentation, accepted by the Engineer.

Sub Item 1.4.7 . Submission of Monthly progress report on compliance with the regulation of "ESMP", "Tree removal guidelines", "OH&S guidelines, labour management plan.

The sub item is provided as a Provisional sum for the submission of Monthly Progress Reports on compliance with the regulation of "ESMP", "Tree removal guidelines", "OH&S guidelines, labour management plan.

Payments will be made on percentage of actual progress basis on submission of the required documentation, accepted by the Engineer.

Sub Item 1.4.8 Conducting Social awareness Programme with the coordination of implementing agency.

The sub item is provided on a provisional sum basis for the conducting social awareness programme. The contractor has to take all arrangement for this programme based on the instruction given by the implementing agency

Payments will be certified on submission of the required documentation, accepted by the Engineer.

Sub Item 1.4.9 Furnishing, Making and fixing of Cutthroat flumes with flow measuring gauges, the dimension shown in the drawing or Approved and directed by the engineer.

The sub-item provides for furnishing, supplying and fixing of cutthroat flume inside the concrete lining channel. The rate includes the concreting charges for the filling the gaps between cutthroat flume and the existing concrete lining channel and also rate include the calibration of flume. The material of the flume Aluminium or Fiberglass or Galvanized steel or Stainless steel. The measurement of cutthroat flume is shown in the drawing or approved and directed by the Engineer.

Sub Item 2.1, 3.1, 3.15.1, 4.1, 4.8.1, 5.1, 5.15.1, 6.1, 7.1, 8.1, 9.1, 10.1, 11.1, 12.4, 13.1, 14.1, 15.1, 16.1

Site clearing before construction

The sub-item covers clearing the site prior to construction, including the removal of debris from existing abutments/structures.

Measurement for payment will be based on the actual number of labourers employed for the work, with the total number of labour days to be approved by the Engineer.

Sub Item 3.4, 5.4, 8.2, 12.2

Demolishing 1:3:6(40mm) cement concrete work including removing debris etc.

The sub-item covers breaking the existing concrete surface of the anicut cushion or damaged cutoff wall (using machinery), and finally obtaining the shape as shown in the drawings. All necessary precautionary measures must be taken to prevent damage to other parts of the spill structure. The work also includes benching, cleaning, and soaking the surface with water to receive new concrete, as well as the disposal of demolished concrete, as directed by the Engineer.

The measurement for payment will be based on the volume of concrete demolished. Measurements will be taken before and after demolition, with the work subject to approval by the Engineer.

Sub Item 7.2, 9.2, 10.2, 11.2, 13.2, 15.2, 16.2

Demolishing 1:2:4 (20mm) cement concrete work including removing debris etc.

The sub-item covers breaking the existing concrete surface of the anicut cushion or damaged cutoff wall (using machinery), and finally obtaining the shape as shown in the drawings. All necessary precautionary measures must be taken to prevent damage to other parts of the spill structure. The work also includes benching, cleaning, and soaking the surface with water to receive new concrete, as well as the disposal of demolished concrete, as directed by the Engineer.

The measurement for payment will be based on the volume of concrete demolished. Measurements will be taken before and after demolition, with the work subject to approval by the Engineer.

Sub Item 12.1

Demolishing rubble masonry work including removing debris etc.

The sub-item covers breaking the existing rubble masonry works of the anicut cushion or damaged cutoff wall or anicut abutments (using machinery), and finally obtaining the shape as shown in the drawings. All necessary precautionary measures must be taken to prevent damage to other parts of the spill structure. The work also includes benching, cleaning, and soaking the surface with water to receive new concrete, as well as the disposal of demolished concrete, as directed by the Engineer.

The measurement for payment will be based on the volume of concrete demolished. Measurements will be taken before and after demolition, with the work subject to approval by the Engineer.

Sub Item 3.2, 4.2, 5.2, 6.2

Forming coffer dam in up stream of anicut by borrow earth including watering and compaction, after completion of the work removing properly cut 0-1.5m lift up to 1.5m haul 2km

The sub item provides for earth fill in coffer dam slopes and top, using earth from selected borrow areas, including excavation from borrow areas, transporting, spreading, watering, compacting (98 % Proctor Density). The rate includes stripping and removing top soil from borrow areas and reinstatement of the same as directed by the Engineer. Rate shall also include for all charges, levies license fees etc. involved in borrow and transport of fill material and also removal of roots and other unwanted materials in borrowed soil.

The measurement for payment shall be the total compacted volume of earth fill in place, based on the preconstruction levels surveyed after clearing of slopes and the final design slope profile as directed by Engineer.

Sub Item 12.8, 14.5

Forming coffer dam with sand bags including CIC pohara bags, filling sand and removing the coffer dam properly after compaction of work etc as directed in both side (U/S & D/S).

The sub-item provides for the placement of sand filled pohora bags as shown in the drawing or as directed by the engineer to safeguard the structure from damaged by water waves of rain water. The rate includes the cost for supplying of pohora bags to site the size approved by the engineer and tying with yarn or other material properly.

The measurement for payment shall be the numbers of pohora bags laid for the coffer dam construction drawings

Sub Item 2.2, 4.8.2, 5.15.2, 17.2

Common Earth excavation in channel bed & spoil to waste. Lift 0 - 1.5m

The sub-item provides for Earth excavation and spoils to waste or fill Material including Transport haul -0.4 Km (0m-1.5 m). The rate includes the cost for excavation in any material except hard and soft rock areas, and the excavated material off site or stockpiling for reuse as directed by the Engineer.

The measurement for payment shall be the volume of excavation measured from the levels established by the pre-construction surveys and construction drawings. The working space will not consider for payment.

Sub Item 3.5, 5.5, 6.4

Common Earth excavation in channel bed & spoil to waste. Lift 1.5m -3m (by manual)

The sub-item provides for Earth excavation and spoils to waste or fill Material including Transport haul -0.4 Km (1.5m-3.0 m). The rate includes the cost for excavation in any material except hard and soft rock areas, and the excavated material off site or stockpiling for reuse as directed by the Engineer.

The measurement for payment shall be the volume of excavation measured from the levels established by the pre-construction surveys and construction drawings. The working space will not consider for payment.

Sub Item 18.1, 12.26.1

Earth excavation in foundation. Lift 0-1.5m (manual)

The sub-item provides for Earth excavation and spoils to waste or fill Material including Transport haul -0.4 Km (0m-1.5 m). The rate includes the cost for excavation in any material except hard and soft rock areas, and the excavated material off site or stockpiling for reuse as directed by the Engineer.

The measurement for payment shall be the volume of excavation measured from the levels established by the pre-construction surveys and construction drawings. The working space will not consider for payment.

Sub Item 12.5, 14.2

Earth Excavation for diversion channel & spoil to waste or fill material lift 1.5-3m

The sub-item provides for Earth excavation for the diversion of river and store the Material including Transport haul -0.4 Km (1.5m-3.0m) and refill again the diversion channel after completion of work or any time instructed by the engineer. The rate includes the cost for excavation in any material except hard and soft rock areas, and the excavated material stockpiling for reuse as directed by the Engineer.

The measurement for payment shall be the volume of excavation measured from the levels established by the pre-construction surveys and construction drawings.

Sub Item 12.9, 14.6

Earth excavation in foundation & part refill. Lift 0-3.0m (by machinery)

The sub-item provides for Earth excavation and spoils to waste or fill Material including Transport haul -0.4 Km (0m-3.0 m). The rate includes the cost for excavation in any material except hard and soft rock areas, and the excavated material off site or stockpiling for reuse as directed by the Engineer.

The measurement for payment shall be the volume of excavation measured from the levels established by the pre-construction surveys and construction drawings. The working space will not consider for payment.

Sub Item 12.10, 14.7

Shoring with 3mm thick mild steel plate with 100mm X 50mm H iron upright up to 2.5m depth for each 3 uses including fixing & removing same once.

The sub-item provides for making shoring arrangement by using 3mm thick mild steel plate with 100mm X 50mm H iron.

The measurement for payment will be based on the area of the shoring arrangement provided for the excavation trench. The shoring arrangement must be approved by the Engineer

Sub Item 12.6, 14.3

Filling diversion channel after completion work using preserved earth.

Filling of diversion channel by machinery to existing condition and compaction by machinery and the degree of compaction is more than 95%.

The rate including borrow the earth from already excavated and piled earth or borrow pit and transporting to the site.

Sub Item 2.4, 4.8.4

Hiring 50mm Dia. Sludge water pump for dealing with water (8 hrs/day) as directed.

The sub-item provides for Allow for dealing with water during the construction using 50mm dia sub merge pumps as directed by the Engineer. The rate includes all costs related to this operation.

The payment shall be the operating hours of sub-merge Pumps approved by the Engineer.

Sub Item 12.7, 14.4, 17.1

Hiring 75mm Dia. Sludge water pump for dealing with water (8 hrs/day) as directed.

The sub-item provides for Allow for dealing with water during the construction using 75mm dia sub merge pumps as directed by the Engineer. The rate includes all costs related to this operation.

The payment shall be the operating hours of sub-merge Pumps approved by the Engineer.

Sub Item 2.3, 3.6, 4.8.3, 5.6, 5.15.3, 6.5

Supplying & laying 1000-gauge polythene on earth surface before concreting.

The sub-item provides for furnishing and placing of 1000-gauge polythene under concrete base to separate the earth and concrete as directed.

The measurement for payment will be based on the base concrete area of the structure where polyethylene is used for the concrete, as directed by the Engineer

Sub Item 12.11, 12.26.2, 14.8, 18.2

Supplying & laying 1000-gauge polythene on earth surface before concreting.

The sub-item provides for furnishing and placing of 1000-gauge polythene under concrete base to separate the earth and concrete as directed.

The measurement for payment will be based on the base concrete area of the structure where polyethylene is used for the concrete, as directed by the Engineer

Sub Item 3.3, 5.3, 6.3, 7.3, 7.11.1, 8.3, 8.11.1, 9.3, 10.3, 10.11.1, 11.3, 13.3, 15.3, 16.3
Supplying and fixing of 12mm dia. 0.45m long mild steel dowels including drilling and grouting to rising the existing pier

The sub-item provides for furnishing and placing 0.45m long 12 mm dia Tor Steel dowel bars (if required) using chemical adhesive including boreholes for 0.25m as directed. Detail Drawing annexed.

The measurement for payment shall be No of dowels placed as directed by the Engineer

Sub Item 2.5, 3.9, 3.15.4, 4.8.5, 5.9, 5.15.4, 6.8, 7.6, 7.11.4, 8.6, 8.11.4, 9.6, 10.6, 10.11.4, 11.6, 12.17, 12.26.7, 13.6, 14.14, 15.6, 16.6, 17.5, 18.7

Furnishing cutting bending and laying of tor steel reinforcement.

The sub-item provides for Furnishing Cutting, bending, fabricating, placing and binding by winding wire of tor steel reinforcement in passion as per drawings including cover blocks. (rate should include the lab lengths)

The measurement for payment shall be the weight of QT rib bars measured from the construction drawings.

Sub Item 2.6, 3.8, 3.15.3, 4.8.6, 5.8, 5.15.5, 6.7, 7.5, 7.11.3, 8.5, 8.11.3, 9.5, 10.5, 10.11.3, 11.5, 12.14, 12.18, 12.26.4, 13.5, 14.11, 14.15, 15.5, 16.5, 17.4, 18.4

Furnishing, Making, Fixing and removing of form works using film face plywood sheet (thickness 15mm) lift 0-1.5m (50x50mm battens & struts)

The sub-item provides for Furnishing and making formwork with 16mm thick in plywood and necessary props for each of three uses including fixing and removing same once. supplying all necessary formwork, erecting, framing, cutting angles, cleaning wetting and treatment before placing concrete and removal.

The measurement for payment shall be the formwork area of concrete measured from the construction drawings.

Sub Item 2.7, 3.15.2, 4.8.7, 5.15.6, 7.4, 7.11.2, 8.4, 8.11.2, 9.4, 10.4, 10.11.2, 11.4, 12.13, 12.15, 12.16, 12.26.3, 13.4, 14.10, 14.12, 14.13, 15.4, 16.4, 17.3, 18.3

1:2:4(20mm) CT. Concrete work in using concrete mixer and compacting with porker vibrator including curing, excluding formwork.

The sub-item provides for 1:2:4 (20mm) concrete (Grade 20) in structure including placing, compacting with a porker vibrator and necessary curing arrangement as directed (mixing by machinery) Formwork paid separately.

The payment measurement shall be the concrete volume measured from the construction drawings approved by the Engineer.

Sub Item 3.7, 5.7, 6.6

1:2:4(20mm) cement concrete work mixing manually, laying compacting and curing, excluding form work. Lift 0-1.5m

The sub-item provides for 1:2:4 (20mm) concrete (Grade 20) in structure including placing, compacting with a poker vibrator and necessary curing arrangement as directed (mixing by manual) Formwork paid separately.

The payment measurement shall be the concrete volume measured from the construction drawings approved by the Engineer.

Sub Item 2.8, 3.11, 4.4, 4.8.8, 5.11, 6.10, 7.8, 8.8, 9.8, 10.8, 11.8, 12.21, 13.8, 14.18, 15.8, 16.8

Supplying and embedding 75mm X 75mm X 6mm angle iron with anchoring arrangement to grooves as directed.

The sub-item provides for supplying and fixing 75mm x75mm x6mm 'L' iron to the groove and the rate including for the anchor of L iron in to the pier concrete by welding of 225 mm long L iron at 600 mm intervals.

The measurement for payment shall be length of the L iron fixed on pier measured from the construction drawings.

Sub Item 3.10, 4.3, 5.10, 6.9

Allow for cutting and making the 80mm x 80mm x 80mm groove for existing anicut

Cutting of grooves as the size mentioned in the drawing or as directed by the engineer in existing concrete structure or rubble stone structure.

The rate shall include supply and transport the proper cutting machinery site & remobilise after completion of work and smoothing the cut surface as directed by the engineer if necessary.

Sub Item 3.14, 4.7, 4.8.9, 5.14, 6.13

Supplying and fixing 100mm x 100mm x 6mm angle iron with anchoring arrangement to Gate beam as directed

The sub-item provides for supplying and fixing 100 mm x 100 mm x 6 mm 'C' iron to the top of the pier of the Anicut

The measurement for payment shall be length of the C iron fixed on pier measured from the construction drawings

Sub Item 7.7, 8.7, 9.7, 10.7, 11.7, 12.20, 13.7, 14.17, 15.7, 16.7

Supplying & fixing of 250mm x 125mm x 6mm "H" iron to the top of the pier for gate lifting arrangement with the necessary anchoring arrangements including 2 coats of anticorrosive painting.

The sub-item provides for supplying and fixing 250 mm x 125 mm x 6 mm 'H' iron to the top of the pier of the Anicut

The measurement for payment shall be the length of the H iron fixed on the pier measured from the construction drawings

Sub Item 12.12, 14.9

Furnishing & fixing of 300mmØ RCC pipe including excavation and backfilling.

The sub-item provides for Supplying, Laying and fixing 300 mm Dia. RCC pipe including transport as directed. Also, the rate including earth excavation up to the level shown in the drawing and backfilling the earth around the RCC pipe with proper machinery approved by the engineer

The measurement for payment shall be the actual length of the RCC pipe measured from the construction drawings

Sub Item 12.19, 14.16, 17.6

Providing 50 x 100 weep holes in the abutment of Anicut with filter arrangement as per type plan No.C-470-3-6D

The sub-item provides for Supplying and Placing of 50mm Dia and a maximum 1200mm long (1000type) PVC pipe weep holes to drain out water.

The measurement for payment shall be the number of weep holes approved by the engineer.

Sub Item 12.26.5, 18.5

Furnishing, laying and joining of 450mm dia RCC pipes including excavation and backfilling

The sub-item provides for Supplying, Laying and fixing 450 mm Dia. RCC pipe including transport as directed. Also, the rate including earth excavation up to the level shown in the drawing and backfilling the earth around the RCC pipe with proper machinery approved by the engineer

The measurement for payment shall be the actual length of the RCC pipe measured from the construction drawings

Sub Item 12.26.6, 18.6

Furnishing and installation of 450mm dia. Cast iron gates including all necessary components including lifting arrangements

The sub-item provides for supplying and fixing 450mm dia. cast iron sluice gate with frame, 37mm dia required length of spindle shown in the drawing or site condition with 750mm long thread cutting, housing, base plate, brass nut including hoist complete all necessary fitting components etc. as directed.

The measurement for payment shall be the number of cast iron sluice gates fixed and measured from the construction drawings.

Sub Item 17.7

Supplying and laying 600mm dia RCC pipes and Collar as directed

The sub-item provides for Supplying, Laying and fixing 600 mm Dia. RCC pipe including transport as directed. Also, the rate including earth excavation up to the level shown in the drawing and backfilling the earth around the RCC pipe with proper machinery approved by the engineer

The measurement for payment shall be the actual length of RCC pipe measured from the construction drawings

Sub Item 17.8

Supplying and fixing 600mm dia CI sluice gate with frame and all necessary fitting components etc. as directed

The sub-item provides for supplying and fixing 600mm dia. cast iron sluice gate with the frame, 50mm dia required length of spindle shown in the drawing or site condition with 750mm long thread cutting, housing, base plate, brass nut including hoist complete all necessary fitting components etc. as directed.

The measurement for payment shall be the number of cast iron sluice gates fixed and measured from the construction drawings.

Sub Item 2.9, 3.12, 4.5, 4.8.10, 5.12, 6.11, 7.9, 8.9, 9.9, 10.9, 11.9, 12.22, 13.9, 14.19, 15.9, 16.9

Supplying and fixing of steel gates as per type plan (No.527-2-6D) excluding lifting arrangements with two coats of anticorrosive points.

The sub-item includes the fabrication, supply and installation of a steel gate to the anicut, as per the details provided in the drawing.

Payment measurements will be based on the area of the gate installed. Additionally, the proper operation of the gate within the groove of the anicut pier must be ensured and approved by the engineer

Sub Item 2.10, 4.6, 4.8.11, 5.13, 6.12

Supplying and fixing of lifting arrangements to the above gates (37mmØ Size of spindle, Brass nut, Housing, base plate, Operating wheel, Rag bolts & etc) with two coats of anticorrosive paints.

Supplying and fixing of lifting arrangements to the above gates (37 mmØ Size of spindle, Brass nut, Housing, base plate, Operating wheel, Rag bolts & etc) with two coats of anticorrosive paints as per detailed drawings as directed by Engineer.

The measurement for payment shall be the number of hoisting Gear fixed and approved by the Engineer.

Sub Item 3.13, 7.10, 8.10, 9.10, 10.10, 11.10, 12.23, 13.10, 14.20, 15.10, 16.10

Supplying and fixing of lifting arrangements to the above gates (50 mmØ Size of spindle, Brass nut, Housing, base plate, Operating wheel, Rag bolts & etc) with two coats of anticorrosive paints.

Supplying and fixing of lifting arrangements to the above gates (50 mmØ Size of spindle, Brass nut, Housing, base plate, Operating wheel, Rag bolts & etc) with two coats of anticorrosive paints as per detailed drawings as directed by the Engineer.

The measurement for payment shall be the number of hoisting Gear fixed and approved by the Engineer.

Sub Item 2.11, 4.8.12, 5.15.7, 12.26.8, 17.9, 18.8

Earth excavation from borrow and filling in bund including compaction haul - 2.0km Lift 0 - 1.5m

The sub-item provides for earth fill around the, using earth from selected borrow areas, including excavation from borrow areas, transporting, spreading, watering, compacting (98 % Proctor Density) and specified or directed material testing.

The rate includes stripping and removing top soil from borrow areas and reinstatement of the same as directed by the Engineer. Rate shall also include for all charges, levies license fees etc. involved in borrow and transport of fill material and also removal of roots and other unwanted materials in borrowed soil

Sub Item 12.3

Earth excavation from borrow & filling in bund including compaction haul 1 k m. Lift 0-1.5m

The sub item provides for earth fill around the, using earth from selected borrow areas, including excavation from borrow areas, transporting, spreading, watering, compacting (98 % Proctor Density) and specified or directed material testing.

The rate includes stripping and removing top soil from borrow areas and reinstatement of the same as directed by the Engineer. Rate shall also include for all charges, levies license fees etc. involved in borrow and transport of fill material and also removal of roots and other unwanted materials in borrowed soil

The measurement for payment will be based on the volume of concrete demolished. Measurements will be taken before and after demolition, with the work subject to approval by the Engineer.

Sub Item 12.24, 14.21

Furnishing approved Soil spread and compacting around the structures using by 0.5 ton to 1 ton vibrating roller including waterings

The sub-item provides for supplying and placing and spreading approved earth from selected borrow areas, including excavation from borrow areas, transporting, spreading, watering, compacting as directed by the Engineer.

The measurement for payment shall be the volume of sand filled and the measurement taken from the levels established by the pre-construction surveys and construction drawings.

Sub Item 2.12, 3.16, 4.9, 5.16, 6.14, 7.12, 8.12, 9.11, 10.12, 11.11, 12.25, 12.27, 13.11, 14.22, 15.11, 16.11, 17.10, 18.9

Tidying Up site

The sub item is provided as a lump sum for removal of all rubbish and debris and disposal as approved and clearing site on completion.

Payment for this item will be certified on completion and leaving all in good order before handing over

2 DAYWORKS PAYMENTS

Labour

Payment in respect of labour employed on a day work basis shall be made at the average daily wage rates (inclusive of contractor's overheads and profits) in construction as entered by the Bidder in the relevant BOQ. Payment shall be made on the basis of the actual time worked excluding travelling time.

The rates shall be deemed to include the costs of the Contractor's Site Supervisory and Administrative Staff (including supervising Foremen) and all other costs in respect to the employment of labour on a day work basis. Rates for types of labour not listed will be determined by the Engineer by reference to the listed rates.

Materials

Payment in respect of materials used in the execution of work on day work basis shall be the cost of the materials delivered to store or stockpile on the site, including all overheads and profit. Rates should be entered by the Bidder in the relevant BOQ.

Rates shall be deemed to cover the costs of taking delivery and putting into store or stockpile, storage, overheads, profit and all other charges and costs in respect of the procurement and handing of such materials. Rates for other materials will be determined by the Engineer with reference to the listed rates entered in the BOQ.

Construction Plant and Equipment

Payment in respect of constructional plant deployed on a day work basis shall be made at the rates entered by the Bidder in the relevant BOQ. These rates shall be deemed to include all cost in respect of fuel and consumable stores, maintenance, operators and attendants, contractor's site supervisory and administrative staff, overheads, profit and all other charges and costs in respect of the deployment of constructional plant and equipment on a day work basis.

Payment shall be made on the basis of the actual time worked including such reasonable travelling time as the Engineer may allow, but excluding idle time (except under the orders of the Engineer.) and time during which such constructional plant/equipment is broken down or undergoing maintenance. Rates for other plant/equipment will be determined by the Engineer with reference to the listed rates entered in the BOQ.

For Reference Only

Bill of Quantities

SUMMARY		
Bill No.	Description	Amount (LKR)
1	Preliminaries	
2	Construction of control structure at Poochchiyadi Anicut RB channel at Sagamam main channel.	
3	Improvements to Soriyanaru Anicut and replacing of Gates and fixing of lifting arrangements at Sagamam main channel	
4	Improvements to Athampodi Anicut RB channel regulator with gate control arrangements at Sagamam main channel	
5	Improvements to Salampan Anicut with fixing of gates at Sagamam main channel	
6	Improvements to 7th Anicut with fixing of gates at Sagamam main channel	
7	Improvements to Panankandiyadi Anicut with fixing of gates and lifting arrangements	
8	Improvements to Panankandiyadi RB Regulator-1 with fixing of gates and lifting arrangements in Paddimedu Central kadam	
9	Improvements to Panankandiyadi RB Regulator -2 with fixing of gates and lifting arrangements in Paddimedu Central kadam	
10	Improvements to Panankandiyadi RB Regulator -3 with fixing of gates and lifting arrangements in Paddimedu Central kadam	
11	Improvement to Panankandiyadi channel end regulator with gate arrangement in Paddimedu Central kadam	
12	Reconstruction of 2nd regulator in Vanniyankandam channel in Paddimedu south kadam	
13	Improvements to 1st regulator in Vanniyankandam channel in Paddimedu south kadam	
14	Construction of 4bay Kayaveli Anicut in Sillikodi LB channel in Urakkai Kadam	
15	Construction of regulator in vedduvakkal in sillikodi RB channel in Urakkai kadam	
16	Construction of regulator with retaining wall in savaththu channel in Urakkai kadam	
17	Construction of Nediymaruthaiyadi Anicut LB Turnout structure	
18	Construction of 0.45m dia x 7.32 m long Turnout in Main Channel in Paavankai & LB Turnout of Moddayakal Kadam 1st Regulator	
A	Sub Total - 1 Summary of Bills 1 to 18	

B	Deduct Provisional Sum	
C	Sub Total – 2 (A-B)	
D	Discount (if any)	
E	Sub Total – 3 (C-D+B)	
F	Physical Contingencies - 10% of E (10% x E)	
G	Sub Total – 4 (E+F)	
H	Price Contingencies - 5% of E (5% x E)	
I	TOTAL BID PRICE, CARRIED TO LETTER OF BID (G+H)	
Total Bid Price (Amount in words)		
J	VAT- 18% of Bid Price	
	GRAND TOTAL INCLUDING VAT (I+J)	
K	Provisional sum- Total Day works	
Sub total -5 (Bid price with day works) I+K (will be considered only for evaluation purposes)		

Signature of Bidder: -.....

Bill of Quantities

Item No	Description	Unit	Qty	Rate (LKR)	Amount (LKR)	Amount in Words
1.0	Preliminaries					
	The attention of the bidder is drawn to the use of Bill of Quantities, Drawings. Conditions of Contract, Specifications and any other particulars related to this bid. It is the bidder's responsibility to see that his price includes for complying with all the requirements of the conditions of contract and other documents specifically required.		Note			
	The bidder is advised to visit the site of the proposed work, as it is his responsibility to ascertain the Conditions, governing access to the site, the external working space, storage area, etc.,		Note			
	Existing roads & culverts cannot take the passage of heavy vehicle or such in adequate areas to be strengthen by the successful bidder, before make use		Note			
	Any existing services, roads, culverts and approaches damaged during the construction to be reinstated without any charge to the employer.		Note			
	All temporary works shall be dismantled and cleared away from the site on completion of the work.		Note			
	Any other preliminary items not listed below but deemed to be included in the bid rates, as no extras would be made.		Note			
	No work in any trade shall be carried out in such a manner as to cause any nuisance to adjacent owners or the public		Note			
	Mechanical plant and equipment which emits obnoxious liquids, gases etc., will not be allowed to be used on the site, without the prior approval from the Employer and the Engineer.		Note			

Item No	Description	Unit	Qty	Rate (LKR)	Amount (LKR)	Amount in Words
	The Engineer has the final decision as and when he deems it necessary for the Contractor to take precautions, maintain or repair such plant and equipment or order their removal from the site.		Note			
	The contractor shall be responsible for any loss or damage to the works, existing structures, adjoining structures and unfixed materials.		Note			
	The Contractor shall be responsible for necessary lighting, watchman and other suitable measures during construction until handing over.		Note			
	Contractor shall be responsible for erection, shifting and maintaining of necessary protective netting, fencing, hording, screens at site and other precautions to the required standard and satisfaction of the Engineer.		Note			

Item No	Description	Unit	Qty	Rate (LKR)	Amount (LKR)	Amount in Words
1.0	Item - A, Preliminaries					
1.1	Insurance and Securities					
1.1.1	Provisional sum for providing a Performance Security (amount to be included by the Employer/Consultant)	Item	Allow	P. Sum	210,000.00	
1.1.2	Provisional Sum for providing an Advance Payment Security (amount to be included by the Employer/ Consultant)	Item	Allow	P. Sum	200,000.00	
1.1.3	Provisional Sum for insurance of works, Machinery & Equipment, Plant, Materials, third party persons & property and Employer's personnel & property at site as per the contract (amount to be included by the Employer/ Consultant)	Item	Allow	P. Sum	180,000.00	
1.1.4	Provisional Sum for Insurance against accidents and injury to contractor's personnel as per the contract. (amount to be included by the Employer/ Consultant)	Item	Allow	P. Sum	100,000.00	
1.2	Engineer's facilities for Implementing Agency					
1.2.1	Provisional sum for constructing, maintaining, dismantling and removing on completion of the works, a temporary building of 10m x 4m for the Engineer's office in conformity with the plans provided for the Engineer's requirements including necessary furniture and fittings, furnishing, sanitary facilities and other facilities.	Item	Allow	P. Sum	400,000.00	
1.2.2	Provisional sum for computer with Core i7 10th Gen. Processor; 512GB, SSD Disk, 500GB Hard Disk; 16 GB RAM or more; 3840 x 2160 (4K) or greater True Colour Video Display Adapter; 8 GB VRAM or greater; 21" Monitor; 325W or more & 650 VA Capacity Desktop Mounted UPS, Canon image CLASS MF3010 (Print, Scan, Copy) Printer including other required items.	Item	Allow	P. Sum	400,000.00	

Item No	Description	Unit	Qty	Rate (LKR)	Amount (LKR)	Amount in Words
1.2.3	Hiring of Double cab with fuel and driver for inspection works of Thambiluvil scheme and attending meetings in other Districts. (Engine Capacity 2500cc,4WD, mileage less than 300,000 km, should be Brand new or registered after 01.01.2015) running shall be 3000km per month usage shall be 26 days per month, 06 days per week and 12 hours per day. an air conditioner with rear AC vent minimum seating including driver shall be five. (Wet Lease basis with driver)	06	Months			
1.3	Contractor's Facilities					
1.3.1	Allow Lump sum for constructing, maintaining, dismantling and removing on completion of the works, a temporary site office (10m x 5m) of adequate size including staff rest room and toilets and other facilities for the contractor's site management staff in accordance with the plans prepared by the contractor and concurred by the Engineer.	Item	Allow	L. Sum		
1.3.2	Allow for constructing, maintaining, dismantling and removal on completion of the works, the building is to be used as a workshop and stores for perishable materials and the building shall be (8.0m x 5.0m) constructed in accordance with the drawings prepared by the contractor and concurred by the Engineer, the lump sum shall be also included for altering, modifying or dismantling and re-erecting within the site all temporary building/structures if required.	Item	Allow	L. Sum		
1.4	Other Requirements					
1.4.1	Allow Provisional sum for all cost connection with preparing samples for testing, making, arrangements for testing of materials, goods etc. as stipulated in the specification, obtaining test reports and submitting the same to the Engineer.	Item	Allow	P. Sum	120,000.00	

Item No	Description	Unit	Qty	Rate (LKR)	Amount (LKR)	Amount in Words
1.4.2	Allow lump sum for maintaining the site by removal of all rubbish and debris in a clean and orderly manner on completion time and during the entire contract period.	Item	Allow	L. Sum		
1.4.3	Allow lump sum for provision of progress reports including photographic records and other schedules included in the ICTAD publication - Guidelines for Effective Construction Management. (ICTAD/CM/01), relevant to contract administration as directed by the Engineer.	Months	12.00			
1.4.4	Allow lump sum for provision of 2 sets (hard copies and soft copies) As-built drawings of all services, for engineer's approval	Item	Allow	L. Sum		
1.4.5	Compliance with environmental regulation and project environment management plan, PMU Covid-19 guidelines, tree removal guidelines and labour camp management	Item	Allow	L. Sum		
1.4.6	Employers share of Adjudicator's fees and expenses	Item	Allow	P. Sum	300,000.00	
1.4.7	Submission of Monthly progress report on compliance with the regulation of "ESMP", "Tree removal guidelines", "OH&S guidelines, labour management plan, and Covid 19 Safety Manual.	Item	Allow	L. Sum		
1.4.8	Conducting a Social awareness Programme with the coordination of implementing agency	Item	Allow	P. Sum	100,000.00	
1.4.9	Furnishing, Making and fixing of Cutthroat flumes with flow measuring gauges, the dimension shown in the drawing or Approved and directed by the engineer.	Nos	10.00			
Total for Bill No. 1 (Carried to Summary of Bill)						

2.0	Construction of control structure at Poochchiyadi Anicut RB channel at Sagamam main channel					
2.1	Site clearing before construction	L/day	4.00			
2.2	Common Earth excavation in channel bed & spoil to waste. Lift 0 - 1.5m	Cu.m	61.74			
2.3	Supplying & laying 1000-gauge polythene on earth surface before concreting.	Sq.m	64.00			
2.4	Hiring 50mm Dia. Sludge water pump for dealing with water (8 hrs/day) as directed	Hrs	128.00			
2.5	Furnishing, cutting, bending, laying and fabricating of tor steel reinforcement. (rate includes cover block and lapping)	Kg	1,205.50			
2.6	Furnishing, Making, Fixing and removing of form works using film face Plywood sheet (thickness 16mm) lift 0-1.5m (50x50mm battens & struts)	Sq.m	235.13			
2.7	1:2:4(20mm) cement concrete work using concrete mixer and compacting with a porker vibrator, including curing, excluding formwork. Lift 0 -1.5m.	Cu.m	34.28			
2.8	Supplying and embedding 75mm x 75mm x 6mm angle iron with anchoring arrangement to grooves as directed	Lm	13.80			
2.9	Supplying and fixing of steel gates as per type plan (No.527-2-6D) excluding lifting arrangements with two coats of anticorrosive paints.	Sq.m	3.11			
2.10	Supplying and fixing of lifting arrangements to the above gate (37mm Ø Size of spindle, Brass nut, Housing, base plate, Operating wheel, Rag bolts & etc) with two coats of anticorrosive paints.	Nos	3.00			
2.11	Earth excavation from borrow and filling in bund including compaction (Lift 0 - 1.5m)	Cu.m	50.20			
2.12	Tiding upside after construction	Item	Allow	sum		
Total for Bill No 2 (Carried to Summary of Bill)						

3.0	Improvements to Soriyanaru Anicut and replacing of Gates and fixing of lifting arrangements at Sagamam main channel					
3.1	Site clearing before construction	L/day	2.00			
3.2	Forming coffer dam in upstream of anicut by borrowing earth including watering and compaction, after completion of the work removing properly cut 0-1.5m lift up to 1.5m	Cu.m	105.00			
3.3	Supplying and fixing of 12mm dia. 0.45m long mild steel dowels including drilling and grouting to raise the existing pier	Nos	20.00			
3.4	Demolishing existing sill of right to left 1st bay 1:3:6 (40mm) cement concrete work including debris	Cu.m	0.74			
3.5	Common Earth excavation in channel bed & spoil to waste. Lift 1.5m -3m (by manual)	Cu.m	0.74			
3.6	Supplying & laying 1000-gauge polythene on earth surface before concreting.	Sq.m	3.30			
3.7	1:2:4(20mm) cement concrete work mixing manually, laying compacting and curing, excluding formwork. Lift 0-1.5m	Cu.m	1.37			
3.8	Furnishing, Making, Fixing and removing of form works using film face plywood sheet (thickness 16mm) lift 0-1.5m (50x50mm battens & struts)	Sq.m	7.20			
3.9	Furnishing, cutting, bending, laying and fabricating of tor steel reinforcement. (rate includes cover block and lapping)	Kg	23.00			
3.10	Allow for cutting and making the 80mm x 80mm x 80mm groove for existing anicut	Item	Allow	sum		
3.11	Supplying and fixing 75mm x 75mm x 6mm angle iron with anchoring arrangement to grooves as directed	Lm	3.60			
3.12	Supplying and fixing of steel gates as per type plan (No.527-2-6D) excluding lifting arrangements with two coats of anticorrosive paints.	Sq.m	4.68			

3.13	Supplying and fixing of lifting arrangements to the above gates (50mm Ø Size of the spindle, Brass nut, Housing, base plate, Operating wheel, Rag bolts & etc) with two coats of anticorrosive paints.	Nos	2.00			
3.14	Supplying and fixing 100mm x 100mm x 6mm angle iron with anchoring arrangement to Gate beam as directed	Lm	7.80			
3.15	Strengthening of Soriyanaru Bridge					
3.15.1	Site clearing before construction	L/day	1.00			
3.15.2	1:2:4(20mm) cement concrete work using concrete mixer and compacting with porker vibrator, including curing, excluding formwork. Lift 0 - 1.5m.	Cu.m	2.25			
3.15.3	Furnishing, Making, Fixing and removing of form works using film face Plywood sheet (thickness 15mm) lift 0-1.5m (50x50mm battens & struts)	Sq.m	8.55			
3.15.4	Furnishing cutting bending and laying of tor steel reinforcement.	Kg	108.00			
3.16	Tiding upside after construction	Item	Allow	sum		
Total for Bill No 3 (Carried to Summary of Bill)						
4.0	Improvements to Athampodi Anicut RB channel regulator with gate control arrangements at Sagamam main channel					
4.1	Site clearing before construction	L/day	2.00			
4.2	Forming a coffer dam in upstream of anicut by borrowing earth including watering and compaction, after completion of the work removing properly cut 0-1.5m lift up to 1.5m	Cu.m	20.00			
4.3	Allow for cutting and making the 80mm x 80mm x 80mm groove for existing anicut	Item	Allow	sum		

4.4	Supplying and fixing 75mm x 75mm x 6mm angle iron with anchoring arrangement to grooves as directed	Lm	3.60			
4.5	Supplying and fixing of steel gates as per type plan (No.527-2-6D) excluding lifting arrangements with two coats of anticorrosive paints.	Sq.m	0.88			
4.6	Supplying and fixing of lifting arrangements to the above gates (37mm Ø Size of a spindle, Brass nut, Housing, base plate, Operating wheel, Rag bolts & etc) with two coats of anticorrosive paints.	Nos	1.00			
4.7	Supplying and fixing 100mm x 100mm x 6mm angle iron with anchoring arrangement to Gate beam as directed	Lm	2.40			
4.8	Const.of control structure at Athampodi anicut RB channel					
4.8.1	Site clearing before construction	L/day	2.00			
4.8.2	Common Earth excavation in channel bed & spoil to waste. Lift 0 - 1.5m	Cu.m	23.63			
4.8.3	Supplying & laying 1000-gauge polythene on earth surface before concreting.	Sq.m	41.83			
4.8.4	Hiring 50mm Dia. Sludge water pump for dealing with water (8 hrs/day) as directed	Hrs	56.00			
4.8.5	Furnishing cutting bending and laying of tor steel reinforcement.	Kg	882.77			
4.8.6	Furnishing, Making, Fixing and removing of form works using film face plywood sheet (thickness 15mm) lift 0-1.5m (50x50mm battens & struts)	Sq.m	152.15			
4.8.7	1:2:4(20mm) cement concrete work using concrete mixer and compacting with the porker vibrator, including curing, excluding formwork. Lift 0 -1.5m.	Cu.m	21.19			

4.8.8	Supplying and embedding 75mm x 75mm x 6mm angle iron with anchoring arrangement to grooves as directed	Lm	4.60			
4.8.9	Supplying and fixing 100mm x 100mm x 6mm angle iron with anchoring arrangement to Gate beam as directed	Lm	2.60			
4.8.10	Supplying and fixing of steel gates as per type plan (No.527-2-6D) excluding lifting arrangements with two coats of anticorrosive paints.	Sq.m	1.04			
4.8.11	Supplying and fixing of lifting arrangements to the above gates (37mm Ø Size of spindle, Brass nut, Housing, base plate, Operating wheel, Rag bolts & etc) with two coats of anticorrosive paints.	Nos	1.00			
4.8.12	Earth excavation from borrow and filling in bund including compaction haul - 2.0km Lift 0 - 1.5m	Cu.m	39.73			
4.9	Tiding upside after construction	Item	Allow sum			
Total for Bill No 4 (Carried to Summary of Bill)						
5.0	Improvements to Salampan Anicut with fixing of gates at Sagamam main channel					
5.1	Site clearing before construction	L/day	2.00			
5.2	Forming coffer dam in upstream of anicut by borrowing earth including watering and compaction, after completion of the work removing properly cut 0-1.5m lift up to 1.5m	Cu.m	78.75			
5.3	Supplying and fixing of 12mm dia. 0.45m long mild steel dowels including drilling and grouting to raise the existing pier	Nos	15.00			
5.4	Demolishing existing sill of right to left 1st bay 1:3:6(40mm) cement concrete work including debris	Cu.m	0.68			
5.5	Common Earth excavation in channel bed & spoil to waste. Lift 1.5m -3m (by manual)	Cu.m	3.38			

5.6	Supplying & laying 1000-gauge polythene on earth surface before concreting.	Sq.m	15.00			
5.7	1:2:4(20mm) cement concrete work mixing manually, laying compacting and curing, excluding formwork. Lift 0-1.5m	Cu.m	4.42			
5.8	Furnishing, Making, Fixing and removing of form works using film face plywood sheet (thickness 15mm) lift 0-1.5m (50x50mm battens & struts)	Sq.m	12.60			
5.9	Furnishing cutting bending and laying of tor steel reinforcement.	Kg	34.00			
5.10	Allow for cutting and making the 80mm x 80mm x 80mm groove for existing anicut	Item	Allow	Sum		
5.11	Supplying and fixing 75mm x 75mm x 6mm angle iron with anchoring arrangement to grooves as directed	Lm	8.40			
5.12	Supplying and fixing of steel gates as per type plan (No.527-2-6D) excluding lifting arrangements with two coats of anticorrosive paints.	Sq.m	1.78			
5.13	Supplying and fixing of lifting arrangements to the above gates (30mm Ø Size of the spindle, Brass nut, Housing, base plate, Operating wheel, Rag bolts & etc) with two coats of anticorrosive paints.	Nos	2.00			
5.14	Supplying and fixing 100mm x 100mm x 6mm angle iron with anchoring arrangement to Gate beam as directed	Lm	4.80			
5.15	Construction of lining Channel at Salaman anicut RB turn out 14 m long					
5.15.1	Site clearing before construction	L/day	2.00			
5.15.2	Common Earth excavation in channel bed & spoil to waste. Lift 0 - 1.5m	Cu.m	4.43			
5.15.3	Supplying & laying 1000-gauge polythene on earth surface before concreting.	Sqm	18.90			

5.15.4	Furnishing cutting bending and laying of tor steel reinforcement.	Kg	302.50			
5.15.5	Furnishing, Making, Fixing and removing of form works using film face plywood sheet (thickness 15mm) lift 0-1.5m (50x50mm battens & struts)	Sq.m	63.51			
5.15.6	1:2:4(20mm) cement concrete work using concrete mixer and compacting with a porker vibrator, including curing, excluding formwork. Lift 0 - 1.5m.	Cu.m	7.84			
5.15.7	Earth excavation from borrow and filling in bund including compaction Lift 0 - 1.5m	Cu.m	18.20			
5.16	Tiding up site after construction	Item	Allow	sum		
Total for Bill No 5 (Carried to Summary of Bill)						
6.0	Improvements to 7th Anicut with fixing of gates at Sagamam main channel					
6.1	Site clearing before construction	L/day	2.00			
6.2	Forming coffer dam in upstream of anicut by borrowing earth including watering and compaction, after completion of the work removing properly cut 0-1.5m lift up to 1.5m	Cu.m	57.75			
6.3	Supplying and fixing of 12mm dia. 0.45m long mild steel dowels including drilling and grouting to raise the existing pier	Nos	15.00			
6.4	Common Earth excavation in channel bed & spoil to waste. Lift 1.5m -3m (by manual)	Cu.m	7.35			
6.5	Supplying & laying 1000 gauge polythene on earth surface before concreting.	Sq.m	14.60			

Section 8 – Bill of Quantities

6.6	1:2:4(20mm) cement concrete work mixing manually, laying compacting and curing, excluding formwork. Lift 0-1.5m	Cu.m	5.82			
6.7	Furnishing, Making, Fixing and removing of form works using film face plywood sheet (thickness 15mm) lift 0-1.5m (50x50mm battens & struts)	Sq.m	27.22			
6.8	Furnishing cutting bending and laying of tor steel reinforcement.	Kg	176.00			
6.9	Allow for cutting and making the 80mm x 80mm x 80mm groove for existing anicut	Item	Allow	sum		
6.10	Supplying and fixing 75mm x 75mm x 6mm angle iron with anchoring arrangement to grooves as directed	Lm	7.20			
6.11	Supplying and fixing of steel gates as per type plan (No.527-2-6D) excluding lifting arrangements with two coats of anticorrosive paints.	Sq.m	1.95			
6.12	Supplying and fixing of lifting arrangements to the above gates (37mmØ Size of spindle, Brass nut, Housing, base plate, Operating wheel, Rag bolts & etc) with two coats of anticorrosive paints.	Nos	2.00			
6.13	Supplying and fixing 100mm x 100mm x 6mm angle iron with anchoring arrangement to Gate beam as directed	Lm	4.80			
6.14	Tiding upsite after construction	Item	Allow	sum		
Total for Bill No 6 (Carried to Summary of Bill)						
7.0	Improvements to Panankandiyadi Anicut with fixing of gates and lifting arrangements					
7.1	Site Clearing before construction.	L/day	5.00			

Section 8 – Bill of Quantities

7.2	Demolishing 1:2:4 (20mm) cement concrete work including removing debris etc.	m ³	0.03			
7.3	Supplying and fixing of 12mm dia. 0.45 m long mild steel dowels including drilling and grouting.	Nos.	36.00			
7.4	1:2:4(20mm) ct. concrete work in using concrete mixer and compacting with poker vibrator including curing, excluding formwork.	m ³	0.60			
7.5	Furnishing, Making, fixing and Removing formwork using film face plywood sheet (thickness 15 mm) lift 0 - 1.5m (50x 50 mm battens & struts)	m ²	7.44			
7.6	Furnishing cutting bending and laying of tor steel reinforcement as directed	Kg	33.72			
7.7	Supplying & fixing of 250mm x 125mm x 6mm "H" iron to the top of the pier for gate lifting arrangement with the necessary anchoring arrangements including 2 coats of anticorrosive painting.	Lm	6.37			
7.8	Supplying & fixing of 75mmx75x6mm mild steel angle iron with anchoring arrangement to grooves as directed.	Lm	18.60			
7.9	Supplying & fixing of steel gate as per type plan (No.527 - 2 - 6D) excluding lifting arrangements with two coats of anticorrosive paints.	m ²	7.63			
7.10	Supplying & fixing of lifting arrangements to the above gate (50mmØ size of Spindle, Brass nut, Housing, Base plate, Operating handle, Rag bolts & etc.) with two coats of anticorrosive paints.	Nos.	3.00			
7.11	Construction of supporting structure for passarel and column.					
7.11.1	Supplying and fixing of 12mm dia. 0.45 m long mild steel dowels including drilling and grouting.	Nos.	30.00			

7.11.2	1:2:4(20mm) ct. concrete work in using concrete mixer and compacting with a porker vibrator including curing, excluding formwork.	m ³	0.63			
7.11.3	Furnishing, Making, fixing and Removing formwork using film face plywood sheet (thickness 15 mm) lift 0 - 1.5m (50x 50 mm battens & struts)	m ²	6.72			
7.11.4	Furnishing cutting bending and laying of tor steel reinforcement as directed	Kg	40.11			
7.12	Tidying up site completion work	Item	Allow	sum		
Total for Bill No 7 (Carried to Summary of Bill)						
8.0	Improvements to Panankandiyadi RB Regulator -1 with fixing of gates and lifting arrangements in Paddimedu Central kadam					
8.1	Site Clearing before construction.	L/day	5.00			
8.2	Demolishing 1:3:6 (40mm) cement concrete work including removing debris etc	m ³	0.40			
8.3	Supplying and fixing of 12mm dia. 0.45 m long mild steel dowels including drilling and grouting.	Nos.	40.00			
8.4	1:2:4(20mm) ct. concrete work in using concrete mixer and compacting with porker vibrator including curing, excluding formwork.	m ³	2.95			
8.5	Furnishing, Making, fixing and Removing formwork using film face plywood sheet (thickness 15 mm) lift 0 - 1.5m (50x 50 mm battens & struts)	m ²	9.08			
8.6	Furnishing cutting bending and laying of tor steel reinforcement as directed	Kg	36.44			
8.7	Supplying & fixing of 250mm x 125mm x 6mm “H” iron to the top of the pier for gate lifting arrangement with the necessary anchoring arrangements including 2 coats of anticorrosive painting.	Lm	4.66			

8.8	Supplying & fixing of 75mmx75x6mm mild steel angle iron with anchoring arrangement to grooves as directed.	Lm	9.52			
8.9	Supplying & fixing of steel gate as per type plan (No.527 - 2 - 6D) excluding lifting arrangements with two coats of anticorrosive paints.	m ²	3.60			
8.10	Supplying & fixing of lifting arrangements to the above gate (50mmØ size of Spindle, Brass nut, Housing, Base plate, Operating handle, Rag bolts & etc.) with two coats of anticorrosive paints.	Nos.	2.00			
8.11	Construction of supporting structure for passerel and column.					
8.11.1	Supplying and fixing of 12mm dia. 0.45 m long mild steel dowels including drilling and grouting.	Nos.	20.00			
8.11.2	1:2:4(20mm) ct. concrete work in using concrete mixer and compacting with a poker vibrator including curing, excluding formwork.	m ³	0.24			
8.11.3	Furnishing, Making, fixing and Removing formwork using film face plywood sheet (thickness 15 mm) lift 0 - 1.5m (50x 50 mm battens & struts)	m ²	2.37			
8.11.4	Furnishing cutting bending and laying of tor steel reinforcement as directed	Kg	14.23			
8.12	Tidying up site completion work	Item	Allow	sum		
Total for Bill No 8 (Carried to Summary of Bill)						
9.0	Improvements to Panankandiyadi RB Regulator -2 with fixing of gates and lifting arrangements in Paddimedu Central kadam					
9.1	Site Clearing before construction.	L/day	5.00			

Section 8 – Bill of Quantities

9.2	Demolishing 1:2:4 (20mm) cement concrete work including removing debris etc.	m ³	0.04			
9.3	Supplying and fixing of 12mm dia. 0.45 m long mild steel dowels including drilling and grouting.	Nos.	160.00			
9.4	1:2:4(20mm) ct. concrete work in using concrete mixer and compacting with poker vibrator including curing, excluding formwork.	m ³	0.93			
9.5	Furnishing, Making, fixing and Removing formwork using film face plywood sheet (thickness 15 mm) lift 0 - 1.5m (50x 50 mm battens & struts)	m ²	9.24			
9.6	Furnishing cutting bending and laying of tor steel reinforcement as directed	Kg	55.68			
9.7	Supplying & fixing of 250mm x 125mm x 6mm “H” iron to the top of the pier for gate lifting arrangement with the necessary anchoring arrangements including 2 coats of anticorrosive painting.	Lm	2.63			
9.8	Supplying & fixing of 75mmx75x6mm mild steel angle iron with anchoring arrangement to grooves as directed.	Lm	3.58			
9.9	Supplying & fixing of steel gate as per type plan (No.527 - 2 - 6D) excluding lifting arrangements with two coats of anticorrosive paints.	m ²	1.49			
9.10	Supplying & fixing of lifting arrangements to the above gate (50mmØ size of Spindle, Brassnut, Housing, Base plate, Operating handle, Rag bolts & etc.) with two coats of anticorrosive paints.	Nos.	1.00			
9.11	Tidying up site completion work	Item	Allow	sum		
Total for Bill No 9 (Carried to Summary of Bill)						

10	Improvements to Panankandiyadi RB Regulator -3 with fixing of gates and lifting arrangements in Paddimedu Central kadam					
10.1	Site Clearing before construction.	L/day	5.00			
10.2	Demolishing 1:2:4 (20mm) cement concrete work including removing debris etc	m ³	0.04			
10.3	Supplying and fixing of 12mm dia. 0.45 m long mild steel dowels including drilling and grouting.	Nos.	78.00			
10.4	1:2:4(20mm) ct. concrete work in using concrete mixer and compacting with poker vibrator including curing, excluding formwork.	m ³	0.39			
10.5	Furnishing, Making, fixing and Removing formwork using film face plywood sheet (thickness 15 mm) lift 0 - 1.5m (50x 50 mm battens & struts)	m ²	5.49			
10.6	Furnishing cutting bending and laying of tor steel reinforcement as directed	Kg	38.22			
10.7	Supplying & fixing of 250mm x 125mm x 6mm "H" iron to the top of the pier for gate lifting arrangement with the necessary anchoring arrangements including 2 coats of anticorrosive painting.	Lm	4.84			
10.8	Supplying & fixing of 75mmx75x6mm mild steel angle iron with anchoring arrangement to grooves as directed.	Lm	9.80			
10.9	Supplying & fixing of steel gate as per type plan (No.527 - 2 - 6D) excluding lifting arrangements with two coats of anticorrosive paints.	m ²	2.90			
10.10	Supplying & fixing of lifting arrangements to the above gate (50mmØ size of Spindle, Brass nut, Housing, Base plate, Operating handle, Rag bolts & etc.) with two coats of anticorrosive paints.	Nos.	2.00			

10.11	Construction of supporting structure for passerel and column.					
10.11.1	Supplying and fixing of 12mm dia. 0.45 m long mild steel dowels including drilling and grouting.	Nos.	20.00			
10.11.2	1:2:4(20mm) ct. concrete work in using concrete mixer and compacting with porker vibrator including curing, excluding formwork.	m ³	0.26			
10.11.3	Furnishing, Making, fixing and Removing formwork using film face plywood sheet (thickness 15 mm) lift 0 - 1.5m (50x 50 mm battens & struts)	m ²	2.49			
10.11.4	Furnishing cutting bending and laying of tor steel reinforcement as directed	Kg	40.11			
10.12	Tidying up site completion work	Item	Allow sum			
Total for Bill No 10 (Carried to Summary of Bill)						
11.0	Improvement to Panankandiyadi channel end regulator with gate arrangement in Paddimedu Central kandan					
11.1	Site Clearing before construction.	L/day	5.00			
11.2	Demolishing 1:2:4 (20mm) cement concrete work including removing debris etc.	m ³	0.05			
11.3	Supplying and fixing of 12mm dia. 0.45 m long mild steel dowels including drilling and grouting.	Nos.	166.00			
11.4	1:2:4(20mm) ct. concrete work in using concrete mixer and compacting with porker vibrator including curing, excluding formwork.	m ³	0.77			
11.5	Furnishing, Making, fixing and Removing formwork using film face plywood sheet (thickness 15 mm) lift 0 - 1.5m (50x 50 mm battens & struts)	m ²	8.76			

11.6	Furnishing cutting bending and laying of tor steel reinforcement as directed	Kg	56.01			
11.7	Supplying & fixing of 250mm x 125mm x 6mm “H” iron to the top of the pier for gate lifting arrangement with the necessary anchoring arrangements including 2 coats of anticorrosive painting.	Lm	2.51			
11.8	Supplying & fixing of 75mmx75x6mm mild steel angle iron with anchoring arrangement to grooves as directed.	Lm	4.50			
11.9	Supplying & fixing of steel gate as per type plan (No.527 - 2 - 6D) excluding lifting arrangements with two coats of anticorrosive paints.	m ²	1.61			
11.10	Supplying & fixing of lifting arrangements to the above gate (50mmØ size of Spindle, Brass nut, Housing, Base plate, Operating handle, Rag bolts & etc.) with two coats of anticorrosive paints.	Nos.	1.00			
11.11	Tidying up site completion work	Item	Allow	sum		
Total for Bill No 11 (Carried to Summary of Bill)						
12	Reconstruction of 2nd regulator in Vanniyankandam channel in Paddimedu south kandam					
12.1	Demolishing rubble masonry work including removing debris etc.	m ³	9.61			
12.2	Demolishing 1:3:6 (40mm) cement concrete work including removing debris etc	m ³	2.20			
12.3	Earth excavation from borrow & filling in bund including compaction. Lift 0-1.5m	m ³	5.79			
12.4	Site Clearing before construction.	L/day	7.00			

12.5	Earth Excavation for diversion channel & spoilt to waste or fill material lift 1.5-3m	m ³	180.00			
12.6	Filling diversion channel after completion work using preserved earth.	m ³	180.00			
12.7	Hiring 75mmØ water pump for dealing with water as directed.(8 hrs/day)	hrs.	96.00			
12.8	Forming coffer dam with sandbags including CIC pohara bags, filling sand and removing the coffer dam properly after compaction of work etc as directed in both sides (U/S & D/S).	Bags	900.00			
12.9	Earth excavation in foundation & part refill. Lift 0-3.0m (by machinery)	m ³	51.96			
12.10	Shoring with 3mm thick mild steel plate with 100mm X 50mm H iron upright up to 2.5m depth for each 3 uses including fixing & removing same once.	m ²	36.88			
12.11	Supplying & placing of 1000-gauge polythene under concrete base.	m ²	30.51			
12.12	Furnishing & fixing of 300mmØ RCC pipe including excavation and backfilling.	Lm	3.60			
12.13	1:2:4(20mm) ct. concrete work in using concrete mixer and compacting with porker vibrator including curing, excluding formwork.	m ³	0.61			
12.14	Furnishing, Making, fixing and Removing formwork using film face plywood sheet (thickness 15 mm) lift 0 - 1.5m (50x 50 mm battens & struts)	m ²	1.85			
12.15	1:2:4(20mm) ct. concrete work in using concrete mixer and compacting with porker vibrator including curing, excluding formwork.	m ³	18.20			
12.16	1:2:4(20mm) ct. concrete work in using concrete mixer and compacting with porker vibrator including curing, excluding formwork.	m ³	15.263			

12.17	Furnishing cutting bending and laying of tor steel reinforcement as directed	Kg	380.01			
12.18	Furnishing, Making, fixing and Removing formwork using film face plywood sheet (thickness 15 mm) lift 0 - 1.5m (50x 50 mm battens & struts)	m²	104.34			
12.19	Providing of 50x100 weep holes as per type plan No. C - 470 - 3 - 6D.	Nos.	16.00			
12.20	Supplying & fixing of 250mm x 125mm x 6mm "H" iron to the top of the pier for gate lifting arrangement with the necessary anchoring arrangements including 2 coats of anticorrosive painting.	Lm	4.68			
12.21	Supplying & fixing of 75mmx75x6mm mild steel angle iron with anchoring arrangement to grooves as directed.	Lm	8.40			
12.22	Supplying & fixing of steel gate as per type plan (No.527 - 2 - 6D) excluding lifting arrangements with two coats of anticorrosive paints.	m²	3.38			
12.23	Supplying & fixing of lifting arrangements to the above gate (50mmØ size of Spindle, Brass nut, Housing, Base plate, Operating handle, Rag bolts & etc.) with two coats of anticorrosive paints.	Nos.	2.00			
12.24	Furnishing approved Soil spread and compacting around the structures using 0.5 to 1-ton vibrating roller including watering	m³	40.23			
12.25	Tidying up site completion work	Item	Allow	sum		
12.26	Construction of 0.45m dia x4.88m long Turnout					
12.26.1	Earth excavation in the foundation. Lift 0-1.5m (manually)	m3	2.20			
12.26.2	Supplying and placing of 1000-gauge polythene used under the channel bed concrete as directed by engineer.	m2	5.67			

12.26.3	1:2:4 (20mm) cement concrete work using concrete mixer and compacting with porker vibrator including curing, excluding formwork lift 0 - 1.5m	m3	5.28			
12.23.4	Furnishing, making, fixing and removing of formwork using film face plywood sheet (thickness 15mm) lift 0-1.5m (50x50 mm battens & struts)	m2	34.01			
12.26.5	Furnishing, laying and joining of 450mm dia RCC pipes including excavation and backfilling	Lm	4.88			
12.26.6	Furnishing and installation of 450mm dia. Cast iron gates including all necessary components including lifting arrangements	No	1.00			
12.26.7	Furnishing cutting bending and laying of Tor steel reinforcement. Lift 0 - 1.5m	Kg	3.29			
12.26.8	Earth excavation from borrow area and filling in road including watering and compaction by machinery. (haul-2.0Km)	m3	3.93			
12.27	Tidying up site for after completion of work	Item	Allow	sum		
Total for Bill No 12 (Carried to Summary of Bill)						
13.0	Improvements to 1st regulator in Vanniyankandam channel in Paddimedu south kandam					
13.1	Site Clearing before construction.	L/day	5.00			
13.2	Demolishing 1:2:4 (20mm) cement concrete work including removing debris etc.	m ³	0.04			
13.3	Supplying and fixing of 12mm dia. 0.45 m long mild steel dowels including drilling and grouting.	Nos.	160.00			
13.4	1:2:4(20mm) ct. concrete work in using concrete mixer and compacting with porker vibrator including curing, excluding formwork.	m ³	0.90			

Section 8 – Bill of Quantities

13.5	Furnishing, Making, fixing and Removing formwork using film face plywood sheet (thickness 15 mm) lift 0 - 1.5m (50x 50 mm battens & struts)	m ²	8.74			
13.6	Furnishing cutting bending and laying of tor steel reinforcement as directed	Kg	52.42			
13.7	Supplying & fixing of 250mm x 125mm x 6mm “H” iron to the top of the pier for gate lifting arrangement with the necessary anchoring arrangements including 2 coats of anticorrosive painting.	Lm	2.74			
13.8	Supplying & fixing of 75mmx75x6mm mild steel angle iron with anchoring arrangement to grooves as directed.	Lm	4.08			
13.9	Supplying & fixing of steel gate as per type plan (No.527 - 2 - 6D) excluding lifting arrangements with two coats of anticorrosive paints.	m ²	1.73			
13.10	Supplying & fixing of lifting arrangements to the above gate (50mmØ size of Spindle, Brass nut, Housing, Base plate, Operating handle, Rag bolts & etc.) with two coats of anticorrosive paints.	Nos.	1.00			
13.11	Tidying up site completion work	Item	Allow	sum		
Total for Bill No 13 (Carried to Summary of Bill)						
14	Construction of 4bay Kayaveli Anicut in Sillikodi LB channel in Urakkai Kadam					
14.1	Site Clearing before construction.	L/day	7.00			
14.2	Earth Excavation for diversion channel & spoilt to waste or fill material lift 1.5-3m	m ³	247.50			
14.3	Filling diversion channel after completion work using preserved earth.	m ³	247.50			
14.4	Hiring 75mmØ water pump for dealing with water as directed (8 hrs/day)	hrs.	128.00			

14.5	Forming coffer dam with sandbags including CIC pohara bags, filling sand and removing the coffer dam properly after compaction of work etc as directed in both side (U/S & D/S).	Bags	900.00			
14.6	Earth excavation in foundation & part refill. Lift 0-3.0m (by machinery)	m ³	299.10			
14.7	Shoring with 3mm thick mild steel plate with 100mm X 50mm H iron upright up to 2.5m depth for each 3 uses including fixing & removing same once.	m ²	123.36			
14.8	Supplying & placing of 1000 gauge polythene under concrete base.	m ²	125.63			
14.9	Furnishing & fixing of 300mmØ RCC pipe including excavation and backfilling.	Lm	12.00			
14.10	1:2:4(20mm) ct. concrete work in using concrete mixer and compacting with porker vibrator including curing, excluding formwork.	m ³	21.17			
14.11	Furnishing, Making, fixing and Removing formwork using film face plywood sheet (thickness 15 mm) lift 0 - 1.5m (50x 50 mm battens & struts)	m ²	88.10			
14.12	1:2:4(20mm) ct. concrete work in using concrete mixer and compacting with porker vibrator including curing, excluding formwork.	m ³	107.90			
14.13	1:2:4(20mm) ct. concrete work in using concrete mixer and compacting with porker vibrator including curing, excluding formwork.	m ³	36.00			
14.14	Furnishing cutting bending and laying of tor steel reinforcement as directed	Kg	1035.84			
14.15	Furnishing, Making, fixing and Removing formwork using film face plywood sheet (thickness 15 mm) lift 0 - 1.5m (50x 50 mm battens & struts)	m ²	355.10			

14.16	Providing of 50x100 weep holes as per type plan No. C - 470 - 3 - 6D.	Nos.	40.00			
14.17	Supplying & fixing of 250mm x 125mm x 6mm "H" iron to the top of the pier for gate lifting arrangement with the necessary anchoring arrangements including 2 coats of anticorrosive painting.	Lm	7.86			
14.18	Supplying & fixing of 75mmx75x6mm mild steel angle iron with anchoring arrangement to grooves as directed.	Lm	20.40			
14.19	Supplying & fixing of steel gate as per type plan (No.527 - 2 - 6D) excluding lifting arrangements with two coats of anticorrosive paints.	m ²	7.92			
14.20	Supplying & fixing of lifting arrangements to the above gate (50mmØ size of Spindle, Brass nut, Housing, Base plate, Operating handle, Rag bolts & etc.) with two coats of anticorrosive paints.	Nos.	4.00			
14.21	Furnishing approved Soil spread and compacting around the structures using by 0.5 ton to 1 ton vibrating roller including waterings	m ³	40.23			
14.22	Tidying up site completion work	Item	Allow	sum		
Total for Bill No 14 (Carried to Summary of Bill)						
15.0	Construction of regulator in vedduvakkal in sillikodi RB channel in Urakkai kadam					
15.1	Site Clearing before construction.	L/day	5.00			
15.2	Demolishing 1:2:4 (20mm) cement concrete work including removing debris etc.	m ³	0.04			
15.3	Supplying and fixing of 12mm dia. 0.45 m long mild steel dowels including drilling and grouting.	Nos.	276.00			

15.4	1:2:4(20mm) ct. concrete work in using concrete mixer and compacting with porker vibrator including curing, excluding formwork.	m ³	1.13			
15.5	Furnishing, Making, fixing and Removing formwork using film face plywood sheet (thickness 15 mm) lift 0 - 1.5m (50x 50 mm battens & struts)	m ²	11.72			
15.6	Furnishing cutting bending and laying of tor steel reinforcement as directed	Kg	72.08			
15.7	Supplying & fixing of 250mm x 125mm x 6mm “H” iron to the top of the pier for gate lifting arrangement with the necessary anchoring arrangements including 2 coats of anticorrosive painting.	Lm	1.84			
15.8	Supplying & fixing of 75mmx75x6mm mild steel angle iron with anchoring arrangement to grooves as directed.	Lm	5.30			
15.9	Supplying & fixing of steel gate as per type plan (No.527 - 2 - 6D) excluding lifting arrangements with two coats of anticorrosive paints.	m ²	1.44			
15.10	Supplying & fixing of lifting arrangements to the above gate (50mmØ size of Spindle, Brass nut, Housing, Base plate, Operating handle, Rag bolts & etc.) with two coats of anticorrosive paints.	Nos.	1.00			
15.11	Tidying up site completion work	Item	Allow	sum		
Total for Bill No 15 (Carried to Summary of Bill)						
16.0	Construction of regulator with retaining wall in savaththu channel in Urakkai kandam					
16.1	Site Clearing before construction.	L/day	5.00			
16.2	Demolishing 1:2:4 (20mm) cement concrete work including removing debris etc.	m ³	0.04			

16.3	Supplying and fixing of 12mm dia. 0.45 m long mild steel dowels including drilling and grouting.	Nos.	276.00			
16.4	1:2:4(20mm) ct. concrete work in using concrete mixer and compacting with poker vibrator including curing, excluding formwork.	m ³	1.13			
16.5	Furnishing, Making, fixing and Removing formwork using film face plywood sheet (thickness 15 mm) lift 0 - 1.5m (50x 50 mm battens & struts)	m ²	11.72			
16.6	Furnishing cutting bending and laying of tor steel reinforcement as directed	Kg	72.08			
16.7	Supplying & fixing of 250mm x 125mm x 6mm "H" iron to the top of the pier for gate lifting arrangement with the necessary anchoring arrangements including 2 coats of anticorrosive painting.	Lm	1.84			
16.8	Supplying & fixing of 75mmx75x6mm mild steel angle iron with anchoring arrangement to grooves as directed.	Lm	5.30			
16.9	Supplying & fixing of steel gate as per type plan (No.527 - 2 - 6D) excluding lifting arrangements with two coats of anticorrosive paints.	m ²	1.44			
16.10	Supplying & fixing of lifting arrangements to the above gate (50mmØ size of Spindle, Brass nut, Housing, Base plate, Operating handle, Rag bolts & etc.) with two coats of anticorrosive paints.	Nos.	1.00			
16.11	Tidying up site completion work	Item	Allow	sum		
Total for Bill No 16 (Carried to Summary of Bill)						
17.0	Construction of Nediymaruthaiyadi Anicut LB Turnout structure					
17.1	Allow for dealing with water during the construction (3.0" Pump and 8.0 h/days)	Hrs	40.00			

Section 8 – Bill of Quantities

17.2	Common earth excavation in the foundation and spoil to waste as directed by machinery. Up to 1.5m	m3	17.17			
17.3	1:2:4 (20mm) mass concrete in structure including placing, compacting and necessary curing arrangement. Form work paid separately.	m3	18.79			
17.4	Furnishing, making, fixing and removing of formwork using film face plywood sheet (thickness 15mm) lift 0-1.5m (50x50 mm battens & struts)	m2	56.45			
17.5	Furnishing. Cutting. bending and placing 10mm dia tor steel reinforcement in position. (as directed by Engineer)	Kg	968.42			
17.6	Providing of 50 x 100 weep holes in abutment of Anicut with filter arrangement as per type plan No.C-470-3-6D (as directed by the Engineer)	No	6.00			
17.7	Supplying and laying 600mm dia RCC pipes and Collar as directed	Lm	7.20			
17.8	Supplying and fixing 600mm dia CI sluice gate with frame and all necessary fitting components etc. as directed	No.	1.00			
17.9	Earth excavation from borrow and forming, including spreading, watering and compaction (98%) by machinery.	m3	126.70			
17.10	Tyding upsite	Item	Allow	sum		
Total for Bill No 17 (Carried to Summary of Bill)						
18.0	Construction of 0.45m dia x 7.32 m long Turnout in Main Channel in Paavankai & LB Turnout of Moddayakal Kandan 1st Regulator					
18.1	Earth excavation in foundation. Lift 0-1.5m (manual)	m3	5.00			
18.2	Supplying and placing of 1000 gauge polythene used under the channel bed concrete as directed by engineer.	m2	6.95			

18.3	1:2:4 (20mm) concrete in structure including placing, compacting and necessary curing arrangement. Form work paid separately.	m3	6.79			
18.4	Furnishing, making, fixing and removing of formwork using film face plywood sheet (thickness 15mm) lift 0-1.5m (50x50 mm battens & struts)	m2	36.80			
18.5	Furnishing, laying and joining of 450mm dia RCC pipes including excavation and backfilling	Lm	7.32			
18.6	Furnishing and installation of 450mm dia. Cast iron gates including all necessary components including lifting arrangements	No	1.00			
18.7	Furnishing cutting bending and laying of Tor steel reinforcement. Lift 0 - 1.5m	Kg	3.30			
18.8	Earth excavation from borrow area and filling in bund including watering and compaction by machinery.	m3	3.93			
18.9	Tidying up site for after completion of work	Item	Allow	sum		
Total for Bill No 18 (Carried to Summary of Bill)						

19.0 DAYWORKS SCHEDULE

	Description	Unit	Qty	Rate (LKR)	Amount (LKR)	Amount in Words
	Labour					
1	Skilled labour	hr	50.00			
2	Unskilled labour	hr	60.00			
3	Mason	hr	20.00			
4	Carpenter	hr	10.00			
5	Plumber, Electrician	hr	15.00			
6	Mechanic	hr	15.00			
7	Welder, Fitter	hr	15.00			
8	Steel fixer	hr	15.00			
9	Driver	hr	50.00			
	Total for Labour					
	Material					
1	Cement (50 Kg bags)	Nos	100.00			
2	Sand	m ³	30.00			
3	Mild steel reinforcement	t	0.30			
4	Tor steel reinforcement	t	0.30			
5	Mild Steel Plate	t	0.15			
6	Stainless Steel Plate	t	0.15			
7	Fabricated Steelwork	t	0.15			
8	Timber Ply Sheet 12mm	m ²	30.00			
9	Gravel	m ³	50.00			
	Total for Material					
	Equipment					
1	Backhoe/Loader 100 HP	hr	20.00			
2	Mobile crane 30T	hr	10.00			
3	Dump truck / Tipper 20T	hr	10.00			
4	Tractor/Trailer 100HP	hr	10.00			
5	Concrete Mixer 1 m ³	hr	10.00			
6	Air Compressor 3-Tool	hr	5.00			
7	Welding Set 10KVA	hr	10.00			
8	Sandblasting Equipment	hr	15.00			
9	Diesel Generator 20KVA	hr	15.00			
10	Water Pumps 50mm	hr	25.00			
11	Excavator	hr	25.00			
	Total for Equipment					
Total for Bill No 19						

Technical Proposal

Forms for personnel

Forms for equipment

Site organisation

Method statements

Mobilisation and construction schedule

Forms for Personnel

Form PER – 1: Proposed Personnel

Bidders should provide the names of suitably qualified personnel to meet the specified requirements for each of the positions listed in Section III (Evaluation and Qualification Criteria). The data on their experience should be supplied using the form below for each candidate.

1.	Title of position Name
2.	Title of position Name
3.	Title of position Name
4.	Title of position Name
5.	Title of position Name
6.	Title of position Name
etc.	Title of position Name

Forms for Equipment

The Bidder shall provide adequate information to demonstrate clearly that it has the capability to meet the requirements for the key equipment listed in Section III (Evaluation and Qualification Criteria). A separate Form shall be prepared for each item of equipment listed, or for alternative equipment proposed by the Bidder. The Bidder shall provide all the information requested below, to the extent possible. Fields with asterisk (*) shall be used for evaluation.

Type of Equipment*		
Equipment Information	Name of manufacturer	Model and power rating
	Capacity*	Year of manufacture*
Current Status	Current location	
	Details of current commitments	
Source	Indicate source of the equipment <input type="checkbox"/> Owned <input type="checkbox"/> Rented <input type="checkbox"/> Leased <input type="checkbox"/> Specially manufactured	

The following information shall be provided only for equipment not owned by the Bidder.

Owner	Name of owner	
	Address of owner	
	Telephone	Contact name and title
	Fax	Telex
Agreements	Details of rental / lease / manufacture agreements specific to the project	

Site Organisation

The Bidder shall provide a personnel chart for the proposed site organization, indicating the key positions as given in Section III (Evaluation and Qualification Criteria) and other positions, with names of personnel proposed and a description of the tasks assigned for such positions.

For Reference Only

Method Statements

The Bidder shall provide a method statement describing the methodology proposed to be adopted in the execution of the contract.

For Reference Only

Mobilisation and Construction Schedule

The Bidder shall provide a detailed mobilization and construction schedule indicating the sequence of all main operations and identifying critical activities.

For Reference Only

Section 9 - Schedules

Schedule 1 – General Information			
<p>(i) If pre-qualification is done the bidders are required to include information subsequent to that submitted with the pre-qualification application.</p> <p>(ii) For joint ventures, each joint venture partner shall furnish information separately.</p>			
ITB Clause reference	Description	Information (to be filled by the Bidder)	Remarks
4.1 (a)	Legal Status		<i>Provide certified copies of Registration</i>
	Written power of attorney of the signatory to the Bid	<i>Provide original or certified copy of the power of Attorney attested by a Notary and label as attachment to Clause 4.1(a)</i>	
	If a Joint Venture, names and addresses of Joint Venture Partners	1. 2. 3.	<i>Provide a draft copy of the Joint Venture Agreement or alternatively the memorandum of understanding</i>
	If a Joint Venture, name of Lead Partner		
	<i>For joint ventures, each joint venture partner shall furnish Legal Status separately</i>		
	Name (Lead partner)		<i>Provide certified copies and label as attachment to Clause 4.1(a)</i>
	Legal status		
	Place of registration		
	Principle place of business		
	Written power of attorney of the signatory to the Bid	<i>Provide original or certified copy of the power of attorney attested by a Notary and label as attachment to Clause 5.1</i>	
	VAT Registration Number		
	Name (Partner 2)		<i>Provide certified copies and label as attachment to Clause 4.1 (a)</i>
	Legal status		
	Place of registration		
	Principle place of business		

	Written power of attorney of the signatory to the Bid	<i>Provide original or certified copy of the power of attorney attested by a Notary and label as attachment to Clause 4.1 (a)</i>	
	VAT Registration Number		
	Name (Partner 3)		<i>Provide certified copies and label as attachment to Clause 4.1 (a)</i>
	Legal status		
	Place of registration		
	Principle place of business		
	Written power of attorney of the signatory to the Bid	<i>Provide original or certified copy of the power of attorney attested by a Notary and label as attachment to Clause 4.1 (a)</i>	
	VAT Registration Number		
4.2 (a)	ICTAD Registration		<i>Provide certified copies and label as attachment to Clause 4.2(a)</i>
	Registration number		
	Grade		
	Specialty		
	Expiry Date		

**Schedule 2 – Annual Turn-over Information
(Construction only – Last five years)**

- (i) *If pre-qualification is done the bidders are required to include information subsequent to that submitted with the pre-qualification application.*
- (ii) *For joint ventures, each joint venture partner shall furnish information separately.*

Year	Turn-over	Remarks
1		<i>Attach audited reports and label as attachment to Clause 4.2</i>
2		
3		
4		
5		

Schedule 3 – Adequacy of Working Capital

If pre-qualification is done the bidders are required to include information subsequent to that submitted with the pre-qualification application

Source of credit line	Amount	Remarks
		<i>Provide documentary evidence and label as attachment to Clause 4.2</i>
Total		

Schedule 4 – Construction Experience in last five years

- (i) *If pre-qualification is done the bidders are required to include information subsequent to that submitted with the pre-qualification application.*
- (ii) *For joint ventures, each joint venture partner shall furnish information separately.*

Year	Employer	Description of Works	Amount	Contractor's Responsibility (%)
		Total		

- *Provide documentary evidence and label as attachment to Clause 4.2*

Schedule 5 – Major Items of Construction Equipment Proposed	
Type	Capacity

For Reference Only

Schedule 6 – Construction Management Staff		
A. Key Professionals		
Name	Position	Task
B. Support Staff		
Name	Position	Task

Schedule 7 – Time Schedule for Key Staff	
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[illegible]Full-time:

Part-time:.....

[illegible]

Schedule 9 – Input percentages for Price Adjustment Formula		
Input Name <i>(Include major materials below the list, together with percentages for all inputs)</i>	ICTAD Reference for Indices	Percentage <i>(percentages listed should added to 90.0)</i>
Total		90.0

Nonadjustable element shall be:
All Psum & Lsum items

Schedule 10: ESHS Management Strategies and Implementation Plans

(ESHS-MSIP)

The Bidder shall submit comprehensive and concise Environmental, Social, Health and Safety Management Strategies and Implementation Plans (ESHS-MSIP) as required by ITB 13.1 A (j) and 13.1 B (d). These strategies and plans shall describe in detail the actions, materials, equipment, management processes etc. that will be implemented by the Contractor, and its subcontractors.

Code of Conduct: Environmental, Social, Health and Safety (ESHS)

The Bidder shall submit the Code of Conduct that will apply to the Contract Manager and other key personnel as required by ITB 13.1 A (j) and 13.1 B (d) and subcontractors. The Code of Conduct shall ensure compliance with the ESHS provisions of the Contract. In addition, the Bidder shall submit an outline of how this Code of Conduct will be implemented. This will include: how it will be introduced into conditions of employment/engagement, what training will be provided, how it will be monitored and how the Contractor proposes to deal with any breaches.

Environmental, social, health and safety requirements

The Employer should use the services of a suitably qualified environmental, social, health and safety specialist/s to prepare the specifications for ESHS working with a procurement specialist/s.

The Employer should attach or refer to the Employer's environmental, social, health and safety policies that will apply to the project. If these are not available, the Employer should use the following guidance in drafting an appropriate policy for the Works.

SUGGESTED CONTENT FOR AN ENVIRONMENTAL AND SOCIAL POLICY (STATEMENT)

The Works' policy goal, as a minimum, should be stated to integrate environmental protection, occupational and community health and safety, gender, equality, child protection, vulnerable people (including those with disabilities), sexual harassment, gender-based violence (GBV), sexual exploitation and abuse (SEA), HIV/AIDS awareness and prevention and wide stakeholder engagement in the planning processes, programs, and activities of the parties involved in the execution of the Works. The Employer is advised to consult with the World Bank to agree the issues to be included which may also address: climate adaptation, land acquisition and resettlement, indigenous people, etc. The policy should set the frame for monitoring, continuously improving processes and activities and for reporting on the compliance with the policy.

The policy shall include a statement that, for the purpose of the policy and/or code of conduct, the term "child" / "children" means any person(s) under the age of 18 years.

The policy should, as far as possible, be brief but specific and explicit, and measurable, to enable reporting of compliance with the policy in accordance with the Particular Conditions of the Contract Sub-Clause 4.21 and Appendix C to the General Conditions of Contract.

As a minimum, the policy is set out to the commitments to:

- 1. apply good international industry practice to protect and conserve the natural environment and to minimize unavoidable impacts;*
- 2. provide and maintain a healthy and safe work environment and safe systems of work;*
- 3. protect the health and safety of local communities and users, with particular concern for those who are disabled, elderly, or otherwise vulnerable;*
- 4. ensure that terms of employment and working conditions of all workers engaged in the Works meet the requirements of the ILO labour conventions to which the host country is a signatory;*
- 5. be intolerant of, and enforce disciplinary measures for illegal activities. To be intolerant of, and enforce disciplinary measures for GBV, inhumane treatment, sexual activity with children, and sexual harassment;*
- 6. incorporate a gender perspective and provide an enabling environment where women and men have equal opportunity to participate in, and benefit from, planning and development of the Works;*
- 7. work co-operatively, including with end users of the Works, relevant authorities, contractors and local communities;*
- 8. engage with and listen to affected persons and organizations and be responsive to their concerns, with special regard for vulnerable, disabled, and elderly people;*
- 9. provide an environment that fosters the exchange of information, views, and ideas that is free of any fear of retaliation, and protects whistleblowers;*
- 10. minimize the risk of HIV transmission and to mitigate the effects of HIV/AIDS associated with the execution of the Works;*

The policy should be signed by the senior manager of the Employer. This is to signal the intent that it will be applied rigorously.

MINIMUM CONTENT OF ESHS REQUIREMENTS

In preparing detailed specifications for ESHS requirements, the specialists should refer to and consider:

- project reports e.g. ESIA/ESMP*
- consent/permit conditions*
- required standards including World Bank Group EHS Guidelines*
- relevant international conventions or treaties etc., national legal and/or regulatory requirements and standards (where these represent higher standards than the WBG EHS Guidelines)*
- relevant international standards e.g. WHO Guidelines for Safe Use of Pesticides*
- relevant sector standards e.g. EU Council Directive 91/271/EEC Concerning Urban Waste Water Treatment*

- *Grievance redress mechanism including types of grievances to be recorded and how to protect confidentiality e.g. of those reporting allegations of GBV/SEA.*
- *GBV/SEA prevention and management.*
- *The detail specification for ESHS should, to the extent possible, describe the intended outcome rather than the method of working*

The ESHS requirements should be prepared in manner that does not conflict with the relevant General Conditions of Contract and Particular Conditions of Contract, and in particular:

General Conditions of Contract

Sub-clause 1.13 Compliance with Laws

Sub-clause 2.2 Permits, Licenses and Approvals

Sub-clause 4.1 Contractor's General Obligations

Sub-clause 4.4 Subcontractors

Sub-clause 4.8 Safety Procedures

Sub-clause 4.14 Avoidance of Interference

Sub-clause 4.18 Protection of the Environment

Sub-clause 4.23 Contractor's Operations on the Site

Sub-clause 4.24 Fossils

Section 6 Staff and Labour (includes health and safety)

Sub-clause 7.1 Manner of Execution

Sub-clause 11.11 Clearance of Site

Sub-clause 12.3 Evaluation (reference ITB 14.2 "Items against which no rate or price is entered by the Bidder shall be deemed to be covered by the rates for other items in the Bill of Quantities and will not be paid separately by the Employer.")

MINIMUM REQUIREMENTS FOR THE BIDDER'S CODE OF CONDUCT

[A minimum requirement for the Code of Conduct should be set out by the Employer, taking into consideration the issues, impacts, and mitigation measures identified, for example, in:

- *project reports e.g. ESIA/ESMP*
- *any particular GBV/SEA requirements*
- *consent/permit conditions (regulatory authority conditions attached to any permits or approvals for the project)*
- *required standards including World Bank Group EHS Guidelines*
- *relevant international conventions, standards or treaties, etc., national legal and/or regulatory requirements and standards (where these represent higher standards than the WBG EHS Guidelines)*
- *relevant standards e.g. Workers' Accommodation: Process and Standards (IFC and EBRD)*

- *relevant sector standards e.g. workers' accommodation*
- *Grievance redress mechanisms.*

The types of issues identified could include. Risks associated with: labor influx, spread of communicable diseases, sexual harassment, gender based violence, illicit behavior and crime, and maintaining a safe environment etc.

[Amend the following instructions to the Bidder taking into account the above considerations.]

A satisfactory code of conduct will contain obligations on all Contractor's Personnel project staff (including sub-contractors and day workers) that are suitable to address the following issues, as a minimum. Additional obligations may be added to respond to particular concerns of the region, the location and the project sector or to specific project requirements. The code of conduct shall contain a statement that the term "child" / "children" means any person(s) under the age of 18 years.

The issues to be addressed include:

1. Compliance with applicable laws, rules, and regulations
2. Compliance with applicable health and safety requirements to protect the local community (including vulnerable and disadvantaged groups), the Employer's Personnel, and the Contractor's Personnel (including wearing prescribed personal protective equipment, preventing avoidable accidents and a duty to report conditions or practices that pose a safety hazard or threaten the environment)
3. The use of illegal substances
4. Non-Discrimination in dealing with the local community (including vulnerable and disadvantaged groups), the Employer's Personnel, and the Contractor's Personnel (for example on the basis of family status, ethnicity, race, gender, religion, language, marital status, age, disability (physical and mental), sexual orientation, gender identity, political conviction or social, civic, or health status)
5. Interactions with the local community(ies), members of the local community (ies), and any affected person(s) (for example to convey an attitude of respect, including to their culture and traditions)
6. Sexual harassment (for example to prohibit use of language or behavior, in particular towards women and/or children, that is inappropriate, harassing, abusive, sexually provocative, demeaning or culturally inappropriate)
7. Violence, including sexual and/or gender based violence (for example acts that inflict physical, mental or sexual harm or suffering, threats of such acts, coercion, and deprivation of liberty)
8. Exploitation including sexual exploitation and abuse (for example the prohibition of the exchange of money, employment, goods, or services for sex, including sexual favors or other forms of humiliating, degrading behavior, exploitative behavior or abuse of power)
9. Protection of children (including prohibitions against sexual activity or abuse, or otherwise unacceptable behavior towards children, limiting interactions with children, and ensuring their safety in project areas)
10. Sanitation requirements (for example, to ensure workers use specified sanitary facilities provided by their employer and not open areas)

11. Avoidance of conflicts of interest (such that benefits, contracts, or employment, or any sort of preferential treatment or favors, are not provided to any person with whom there is a financial, family, or personal connection)
12. Respecting reasonable work instructions (including regarding environmental and social norms)
13. Protection and proper use of property (for example, to prohibit theft, carelessness or waste)
14. Duty to report violations of this Code
15. Non retaliation against workers who report violations of the Code, if that report is made in good faith.

The Code of Conduct should be written in plain language and signed by each worker to indicate that they have:

- received a copy of the code;
- had the code explained to them;
- acknowledged that adherence to this Code of Conduct is a condition of employment; and
- Understood that violations of the Code can result in serious consequences, up to and including dismissal, or referral to legal authorities.

A copy of the code shall be displayed in a location easily accessible to the community and project affected people. It shall be provided in languages comprehensible to the local community, Contractor's Personnel, Employer's Personnel, and affected persons.

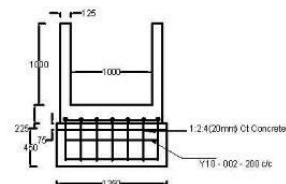
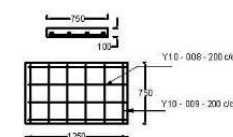
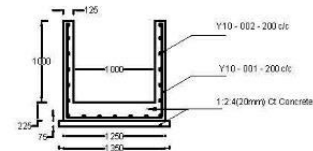
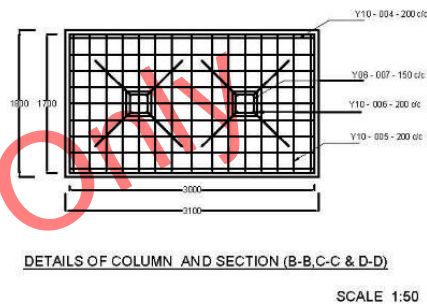
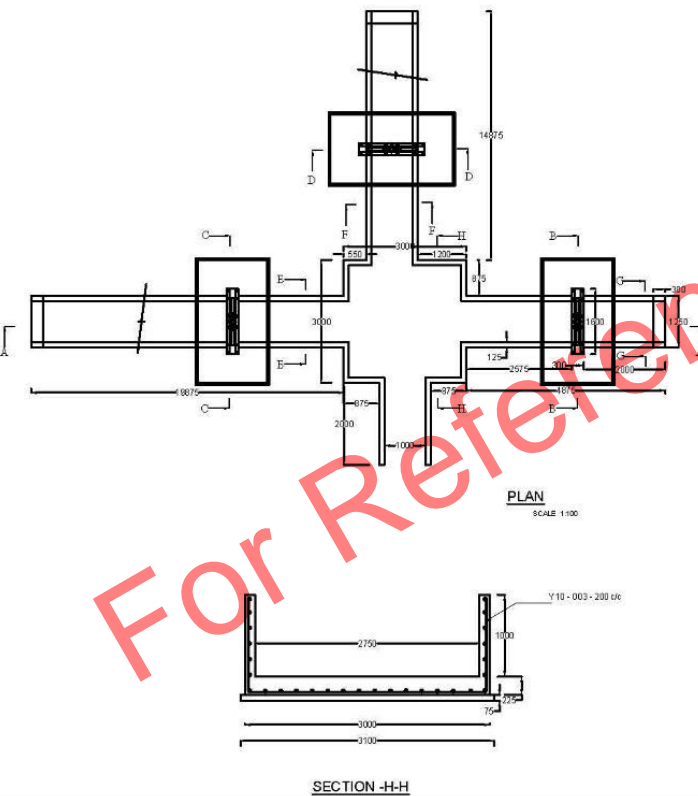
PAYMENT FOR ESHS REQUIREMENTS

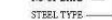
The Employer's ESHS and procurement specialists should consider how the Contractor will cost the delivery of the ESHS requirements. In the majority of cases, the payment for the delivery of ESHS requirements shall be a subsidiary obligation of the Contractor covered under the prices quoted for other Bill of Quantity items. For example, normally the cost of implementing work place safe systems of work, including the majors necessary for ensuring traffic safety, shall be covered by the Bidder's rates for the relevant works. Alternatively, provisional sums could be set aside for discrete activities for example for HIV counselling service, and, GBV/SEA awareness and sensitization or to encourage the contractor to deliver additional ESHS outcomes beyond the requirement of the Contract.

Section - 10

Drawings

S.N O.	DESCRIPTION	DRAWING NO	NO OF SHEETS
01.	Construction of control structure at Poochchiyadi Anicut RB channel at Sagamam main channel	IWWRMP/THA/SAG-CH/02	01
02.	Improvements to Athampodi Anicut RB channel regulator with gate control arrangements at Sagamam main channel	IWWRMP/THA/SAG-CH/04	01
03.	Improvements to Panankandiyadi Anicut with fixing of gates and lifting arrangements	IWWRMP/THA/SAG-CH/07	02
04.	Improvements to Panankandiyadi RB Regulator-1 with fixing of gates and lifting arrangements in Paddimedu Central kadam	IWWRMP/THA/SAG-CH/08	02
05.	Improvements to Panankandiyadi RB Regulator -2 with fixing of gates and lifting arrangements in Paddimedu Central kadam	IWWRMP/THA/SAG-CH/09	01
06.	Improvements to Panankandiyadi RB Regulator -3 with fixing of gates and lifting arrangements in Paddimedu Central kadam	IWWRMP/THA/SAG-CH/10	02
07.	Improvement to Panankandiyadi channel end regulator with gate arrangement in Paddimedu Central kadam	IWWRMP/THA/SAG-CH/11	01
08.	Reconstruction of 2nd regulator in Vanniyankadam channel in Paddimedu south kadam	IWWRMP/THA/SAG-CH/12	01
09.	Existing 2 bay Regulator ,Turnout.	IWWRMP/THA/SAG-CH/12 02	01
10.	Improvements to 1st regulator in Vanniyankadam channel in Paddimedu south kadam	IWWRMP/THA/SAG-CH/13	01
11.	Construction of 4bay Kayaveli Anicut in Sillikodi LB channel in Urakkai Kadam	IWWRMP/THA/SAG-CH/14	02
12.	Construction of regulator in vedduvakkal in sillikodi RB channel in Urakkai kadam	IWWRMP/THA/SAG-CH/15	01
13.	Construction of regulator with retaining wall in savaththu channel in Urakkai kadam	IWWRMP/THA/SAG-CH/16	01
14.	Construction of Nediymaruthaiyadi Anicut LB Turnout structure	IWWRMP/THA/SAG-CH/17	01
15.	Construction of 0.45m dia x 7.32 m long Turnout in Main Channel in Paavankai & LB Turnout of Moddayakal Kadam 1st Regulator	IWWRMP/THA/SAG-CH/18	01

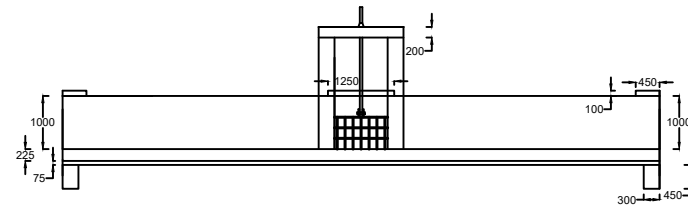


- NOTE**
1. ALL DIMENSIONS ARE IN MILLIMETERS
 2. BAR NOTATION


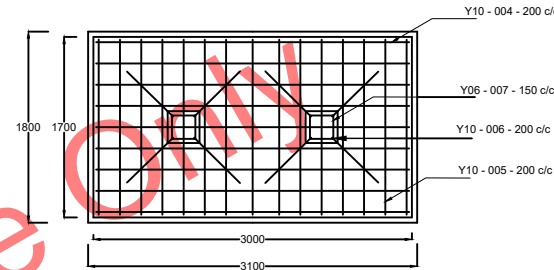
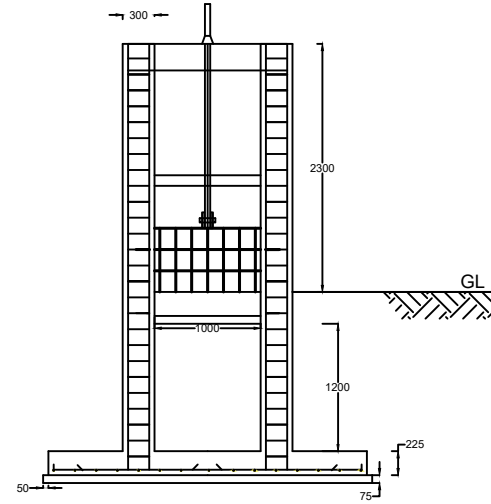
20 Y 20 - 10 - 250T

NO OF BARS
STEEL TYPE
BAR SIZE
BAR LOCATION
BAR SPACING
BAR MARK
 3. MATERIAL PROPERTIES
CONCRETE - GRADE 20
REINFORCEMENT - 460 N/mm² TOR STEEL
MINIMUM CLEAR COVER SHOULD BE 30 mm.
LAP LENGTH SHOULD BE 50 x BAR DIAMETER & LAPS SHOULD BE STAGGERED

[illegible]

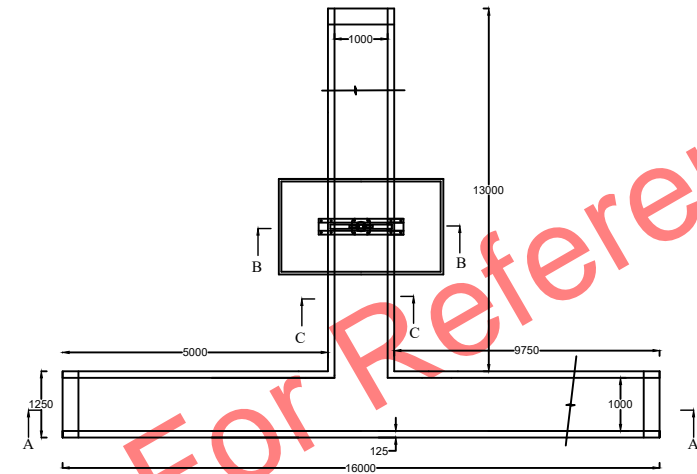


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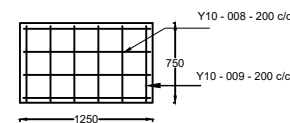
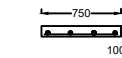


DETAILS OF COLUMN AND SECTION (B-B)

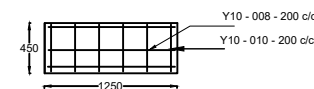
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PLAN
SCALE 1:100



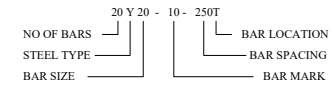
DETAILS OF PASSERAL



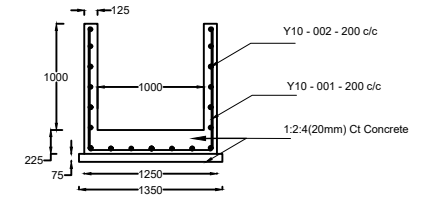
DETAILS OF PASSERAL

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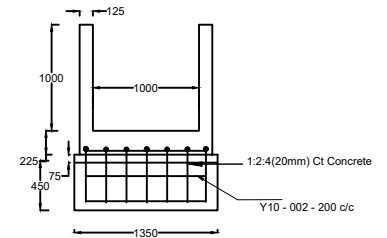
- ALL DIMENSIONS ARE IN MILLIMETERS
- BAR NOTATION



- MATERIAL PROPERTIES
CONCRETE - GRADE 20
REINFORCEMENT - 460 N/mm² TOR STEEL
- MINIMUM CLEAR COVER SHOULD BE 50 mm.
- LAP LENGTH SHOULD BE 50 x BAR DIAMETER & LAPS SHOULD BE STAGGERED



SECTION -(C-C)

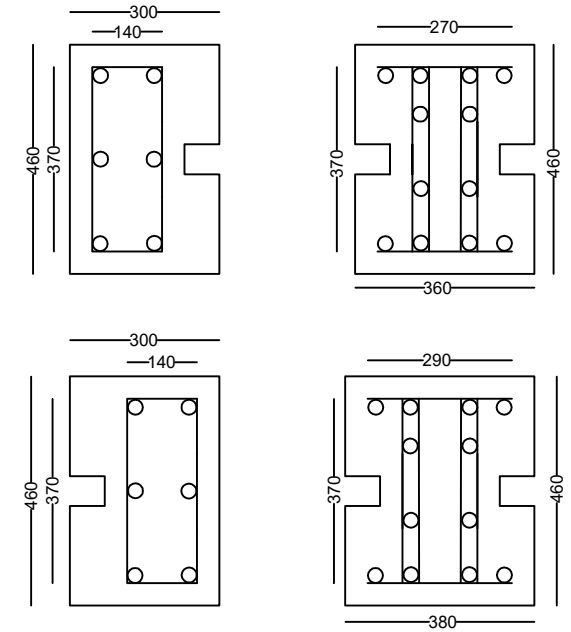
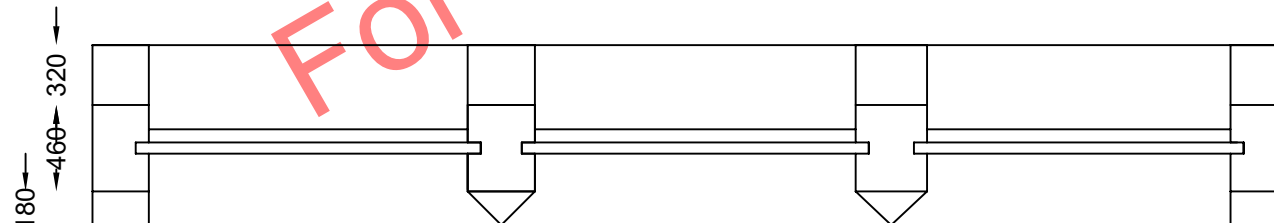
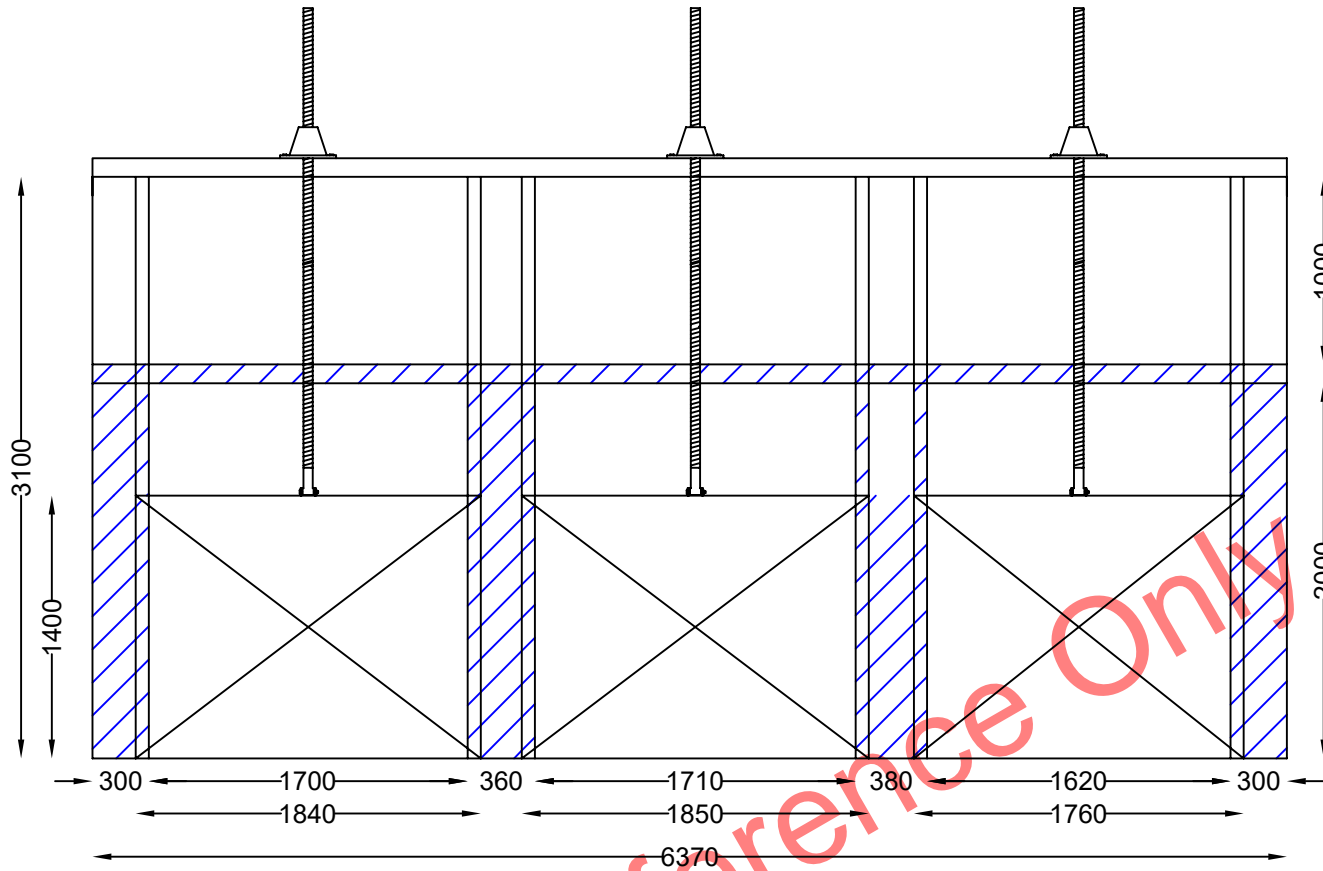


DETAILS OF CUTOFF WALL

DESIGNED & DRAWN BY:- S. SATHISHKANTHAN (DESIGNER)	DESIGNED & SUBMITTED BY:- ENG. A. RAJESKANNAN (THAMBIKULVIL DIVISION)
DRAWING CHECKED BY:- MR. V. SHANMUGAN (OPERATION) MR. L. MOHANARAJAH (D.O.A)	DESIGN CHECKED BY:- ENG. GUPTHARAN (IRRIGATION ENGINEER, AMPARA RANGE)
DRAWING CHECKED BY:- (OPERATION)	DESIGN CHECKED BY:- ENG. GUPTHARAN (IRRIGATION ENGINEER, AMPARA RANGE)
DESIGN CHECKED BY:- ENG. V. RAJAGOPALASINGAM (D.O.A)	APPROVED BY:- ENG. V. RAJAGOPALASINGAM (DIRECTOR OF IRRIGATION, E.P.)
IRRIGATION DEPARTMENT (E.P.) THAMBIKULVIL DIVISION, AMPARA RANGE, EASTERN PROVINCE	
IMPROVEMENTS TO ATHAMPUDI ANICUT RB CHANNEL REGULATOR WITH GATE CONTROL ARRANGEMENT AT SAGAMAM MAIN CHANNEL IN SAGAMAM SCHEME- UNDER IWRMP	
DATE:-	SHEET: 01 of 01 IWRMP/THA/SAG-CH/04

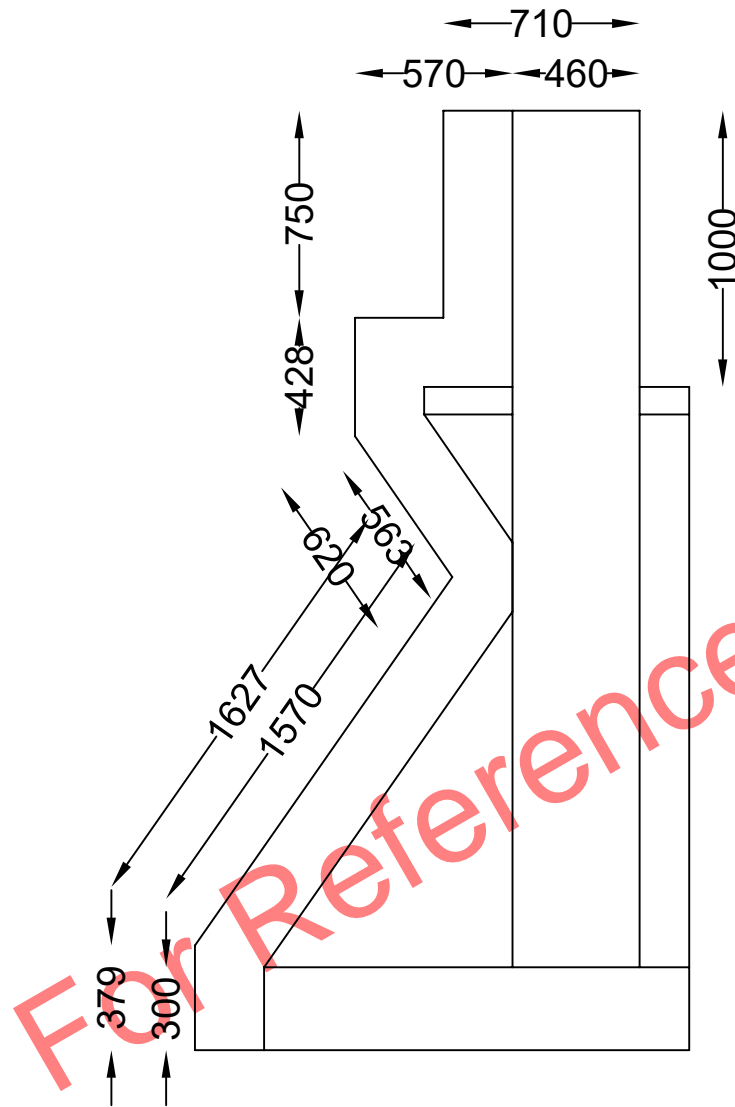


Existing structure



R/F Details

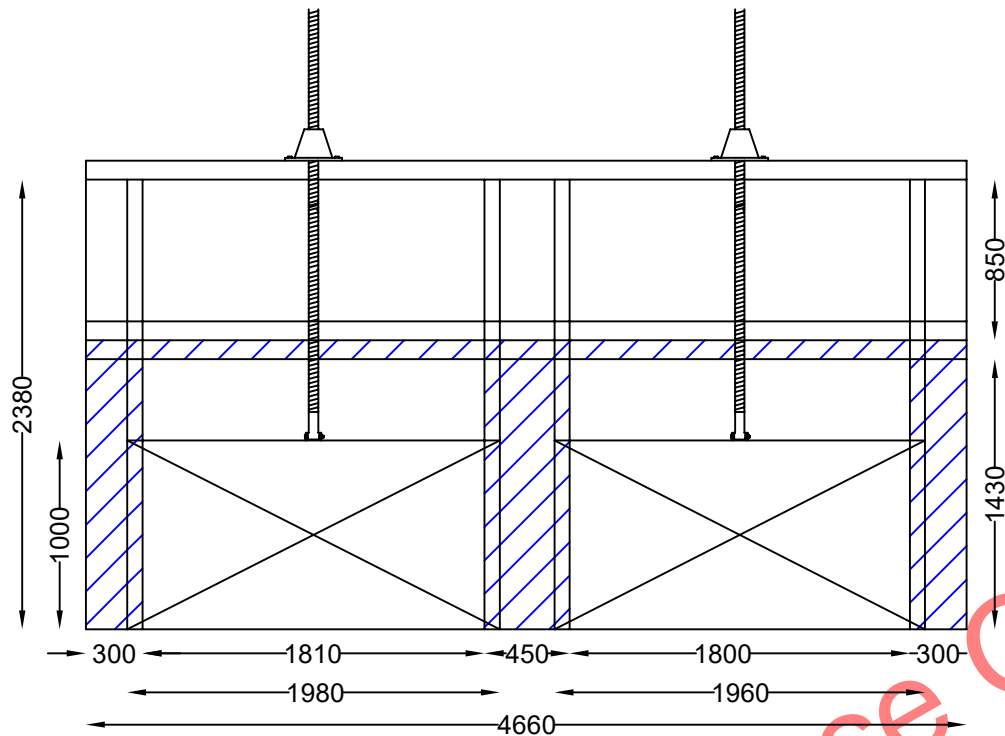
D.D.'s OFFICE	LEVELED & DRAWN BY:- T.SHANGEETHAN (T.O) DRAWING CHECKED BY:- MRS.K.SATHEESKANTHAN (D'PERSON)	DESIGNED BY:- ENG. A.RAJESKANNA. P/DIVISIONAL I.E	SUBMITTED BY:- ENG. A.RAJESKANNA. P/DIVISIONAL I.E
	DRAWING CHECKED BY:- MRS.L.MOHANARAJAH,MR.Y.SHANJEEVAN (D.O.A) (D'PERSON)	RE CHEKED BY:- IRRIGATION ENGINEER	RECOMMENDED BY:- ENG.G.SUJITHARAN P/D.D.I.
P/D's OFFICE	RE CHEKED BY:- (D'PERSON)	RE CHEKED BY:- IRRIGATION ENGINEER	RE CHEKED BY:- IRRIGATION ENGINEER
	RE CHEKED BY:- P/DEPUTY DIRECTOR OF IRRIGATION	RECOMMENDED BY:- ENG. V.RAJAGOPALASINGAM P/D.I, EASTERN PROVINCE	RECOMMENDED BY:- ENG. V.RAJAGOPALASINGAM P/D.I, EASTERN PROVINCE
P/IRRIGATION DEPARTMENT THAMBILUVIL DIVISION, AMPARA RANGE,EASTERN PROVINCE			
INTEGRATED WATERSHED & WATER RESOURCES MANAGEMENT PROJECT MODERNIZATION OF CHANNEL SYSTEM IN SAGAMAM SCHEME Improvements to Panankandiyadi Anicut with fixing of gates and lifting arrangements			
		SHEET : 01 of 02	DRW. NO : IWWRMP/THA/SAG-CH/07



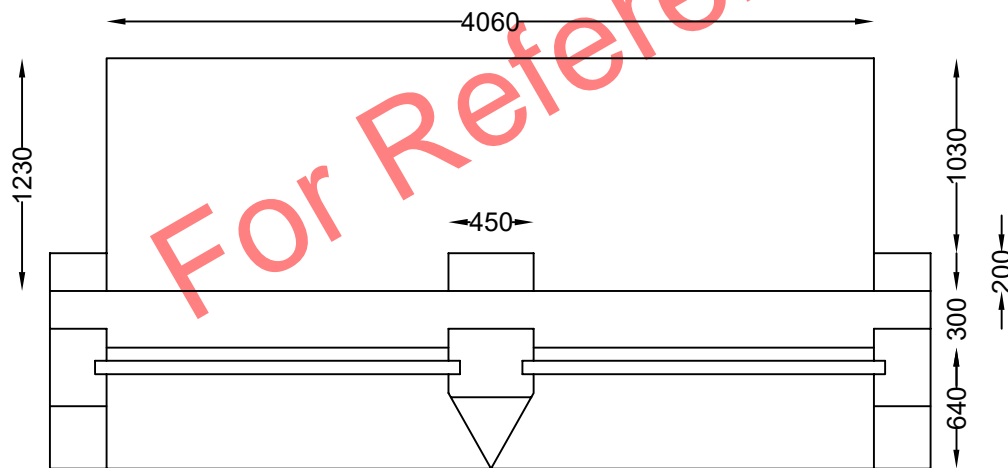
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D.D.'s OFFICE	DRAWING CHECKED BY:- MRS.L.MOHANARAJAH,MR.Y.SHANJEEVAN (D.O.A) (D'PERSON)	RE CHEKED BY:- IRRIGATION ENGINEER	RECOMMENDED BY:- ENG.G.SUJITHARAN P/D.D.I.
	RE CHEKED BY:- (D'PERSON) RE CHEKED BY:- P/DEPUTY DIRECTOR OF IRRIGATION	RE CHEKED BY:- IRRIGATION ENGINEER RECOMMENDED BY:- ENG. V.RAJAGOPALASINGAM P/D.I, EASTERN PROVINCE	
P/IRRIGATION DEPARTMENT THAMBILUVIL DIVISION, AMPARA RANGE,EASTERN PROVINCE			
INTEGRATED WATERSHED & WATER RESOURCES MANAGEMENT PROJECT MODERNIZATION OF CHANNEL SYSTEM IN SAGAMAM SCHEME Improvements to Panankandiyadi Anicut with fixing of gates and lifting arrangements			
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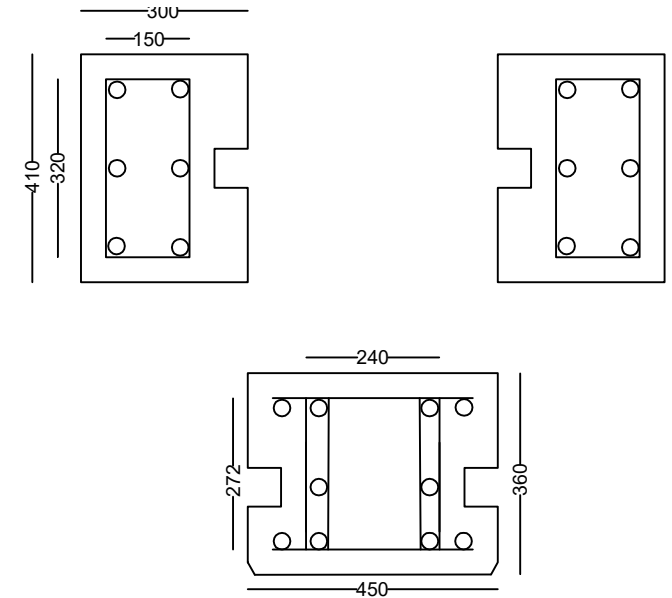
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SECTIONAL FRONT ELEVATION



PLAN

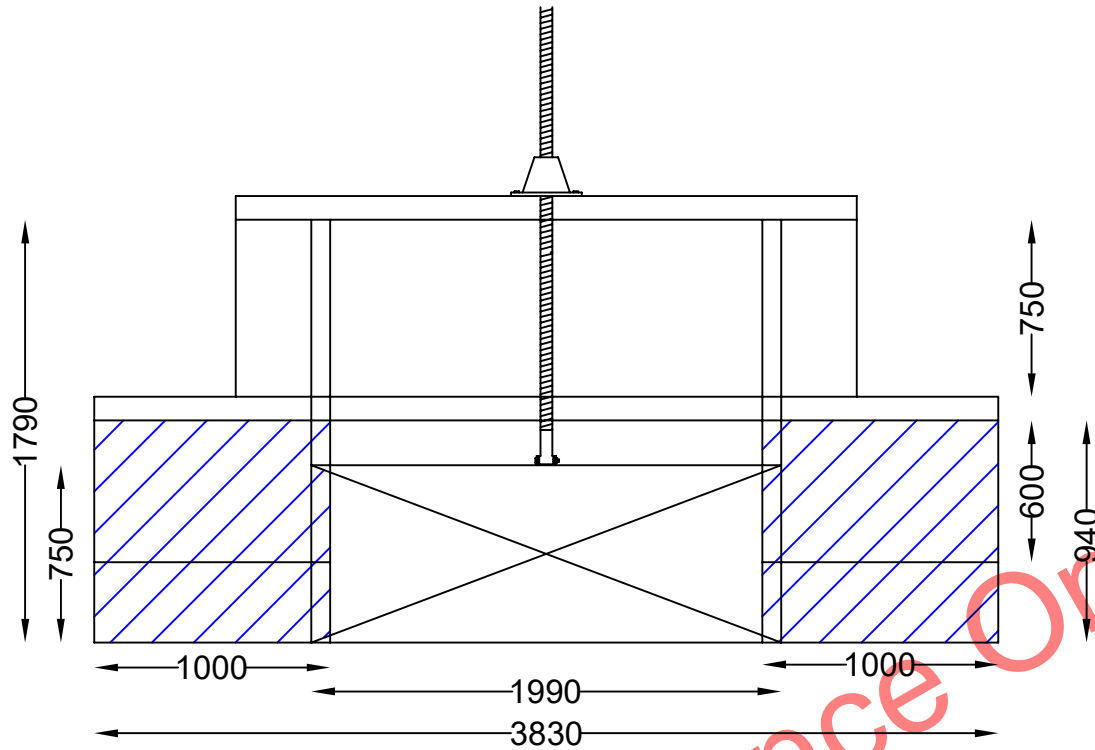


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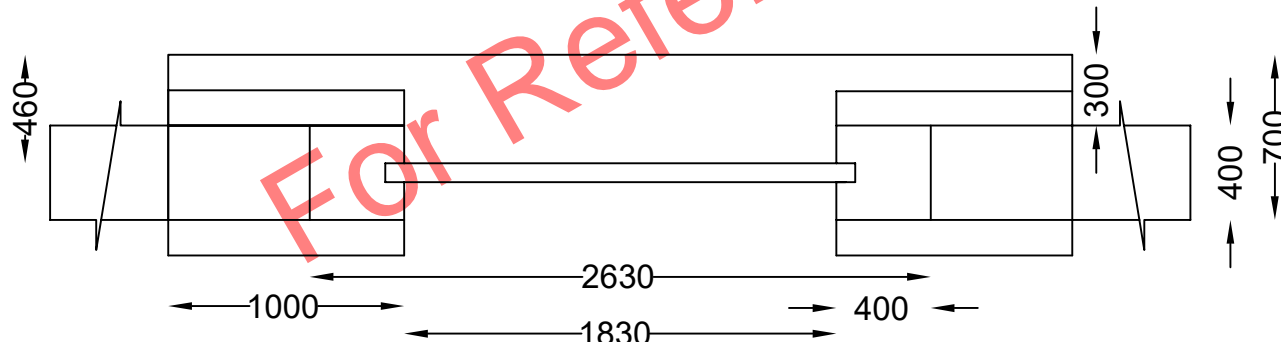
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	DRAWING CHECKED BY:- MRS.K.SATHEESKANTHAN (D'PERSON)	RE CHEKED BY:- IRRIGATION ENGINEER	RECOMMENDED BY:- ENG.G.SUJITHARAN P/D.D.I.
P.D.'s OFFICE	RE CHEKED BY:- (D'PERSON)	RE CHEKED BY:- IRRIGATION ENGINEER	RECOMMENDED BY:- ENG. V.RAJAGOPALASINGAM P/D.I, EASTERN PROVINCE
	RE CHEKED BY:- P/DEPUTY DIRECTOR OF IRRIGATION	RECOMMENDED BY:- ENG. V.RAJAGOPALASINGAM P/D.I, EASTERN PROVINCE	
P/IRRIGATION DEPARTMENT THAMBILUVIL DIVISION, AMPARA RANGE,EASTERN PROVINCE			
INTEGRATED WATERSHED & WATER RESOURCES MANAGEMENT PROJECT MODERNIZATION OF CHANNEL SYSTEM IN SAGAMAM SCHEME Improvements to Panankandiyadi RB Regulator 1 with fixing of gates and lifting arrangements in Paddimedu Central kandam			
SHEET : 01 of 02 DRW. NO : IWWRMP/THA/SAG-CH/08			



Existing structure




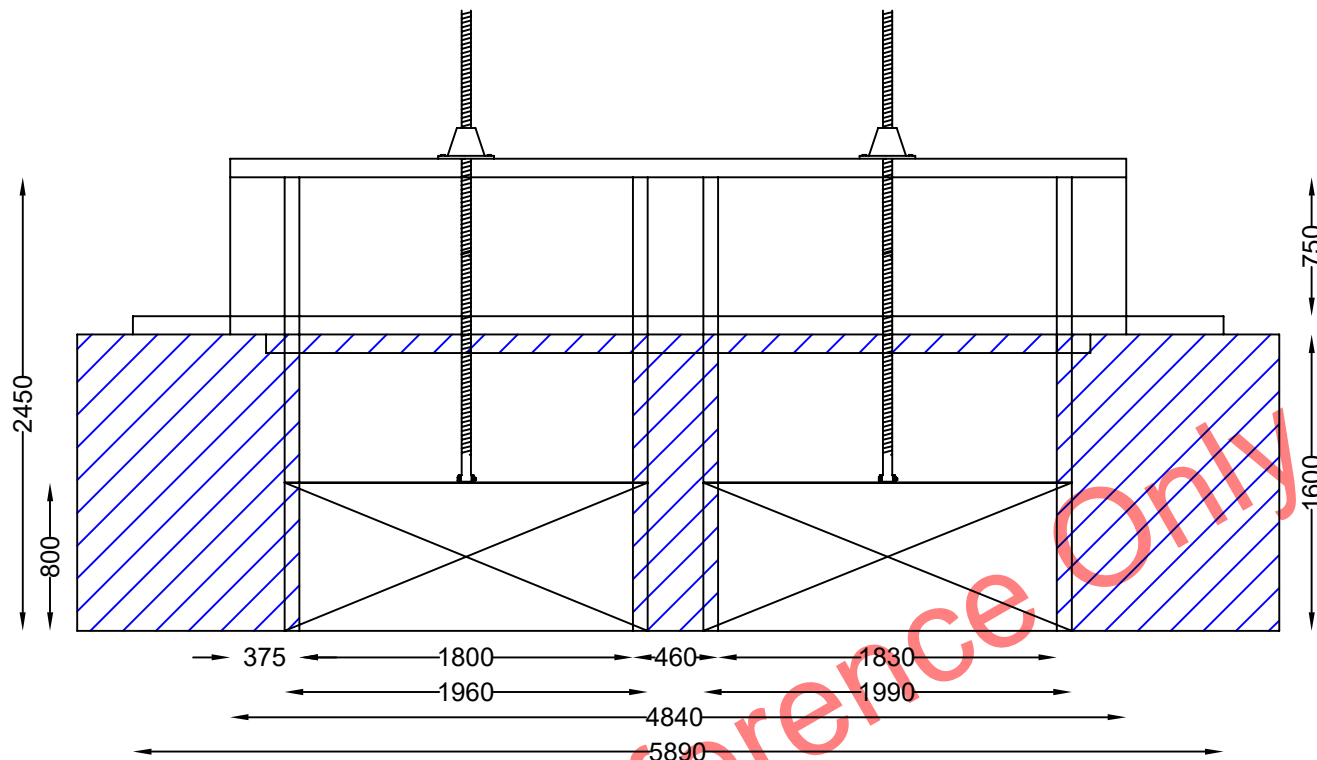
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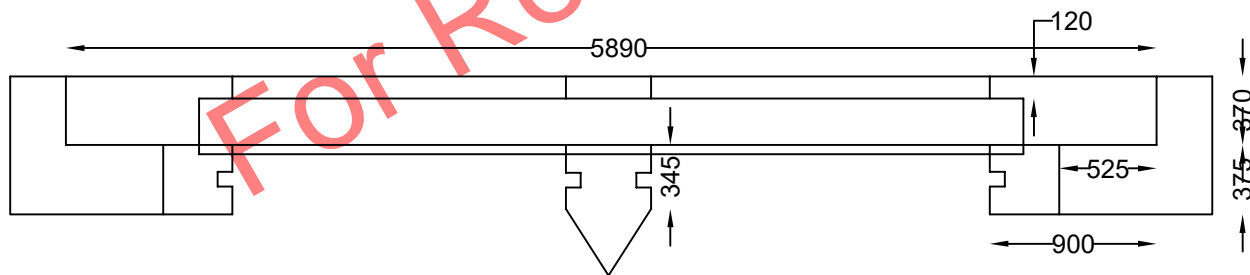
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	DRAWING CHECKED BY:- MRS.K.SATHEESKANTHAN (D'PERSON)		
D.D.'s OFFICE	DRAWING CHECKED BY:- MRS.L.MOHANARAJAH,MR.Y.SHANJEEVAN (D.O.A) (D'PERSON)	RE CHEKED BY:- IRRIGATION ENGINEER	RECOMMENDED BY:- ENG.G.SUJITHARAN P/D.D.I.
P/D's OFFICE	RE CHEKED BY:- (D'PERSON)	RE CHEKED BY:- IRRIGATION ENGINEER	
	RE CHEKED BY:- P/DEPUTY DIRECTOR OF IRRIGATION	RECOMMENDED BY:- ENG. V.RAJAGOPALASINGAM P/D.I, EASTERN PROVINCE	
P/IRRIGATION DEPARTMENT THAMBILUVIL DIVISION, AMPARA RANGE,EASTERN PROVINCE			
INTEGRATED WATERSHED & WATER RESOURCES MANAGEMENT PROJECT MODERNIZATION OF CHANNEL SYSTEM IN SAGAMAM SCHEME <i>Improvements to Panankandiyadi RB Regulator -2</i>			
	SHEET : 01 of 01	DRW. NO : IWWRMP/THA/SAG-CH/09	

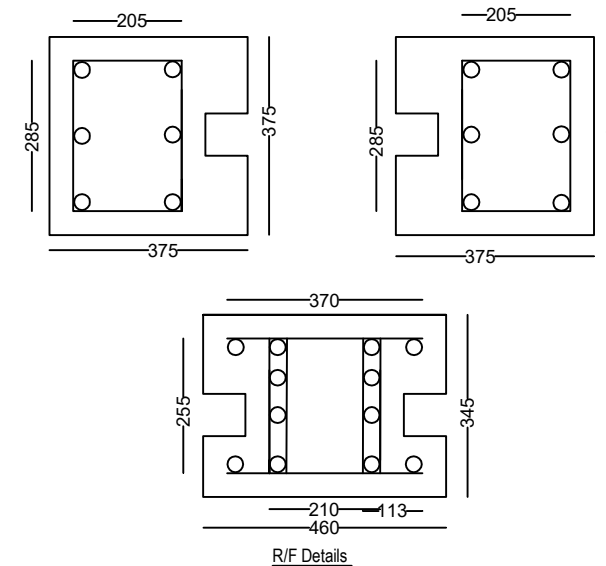
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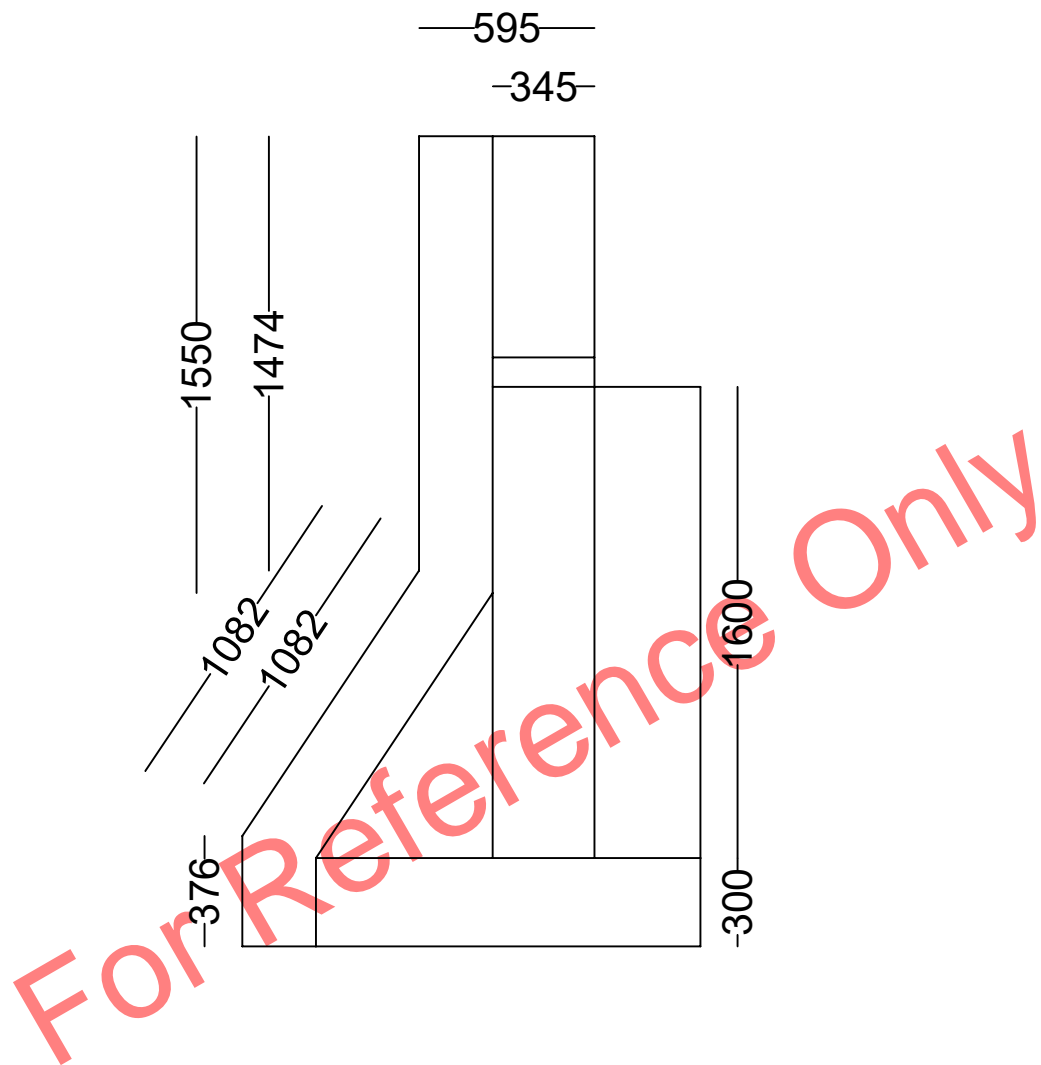
SECTIONAL FRONT ELEVATION



PLAN



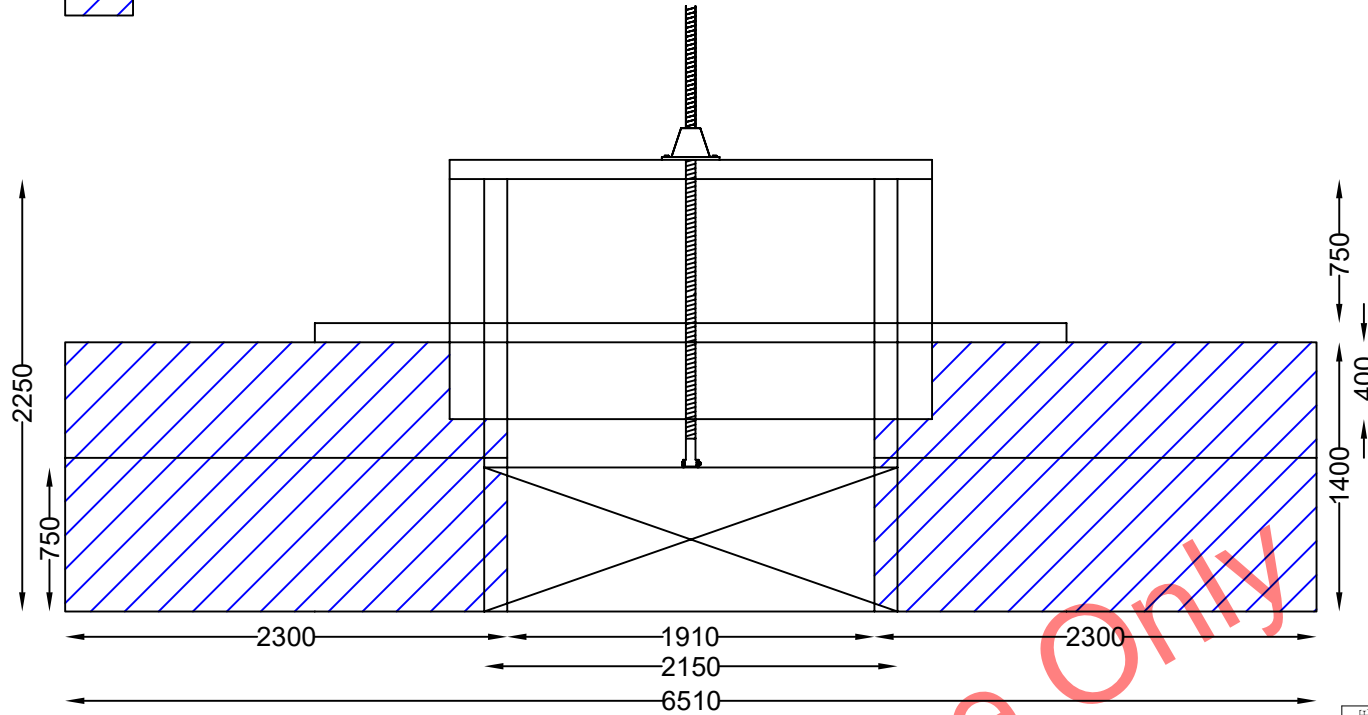
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	DRAWING CHECKED BY:- MRS.L.MOHANARAJAH,MR.Y.SHANJEEVAN (D.O.A) (D'PERSON)	RE CHEKED BY:- IRRIGATION ENGINEER	RECOMMENDED BY:- ENG.G.SUJITHARAN P/D.D.I.
P/D's OFFICE	RE CHEKED BY:- (D'PERSON)	RE CHEKED BY:- IRRIGATION ENGINEER	RECOMMENDED BY:- ENG. V.RAJAGOPALASINGAM P/D.I, EASTERN PROVINCE
	RE CHEKED BY:- P/DEPUTY DIRECTOR OF IRRIGATION	RECOMMENDED BY:- ENG. V.RAJAGOPALASINGAM P/D.I, EASTERN PROVINCE	
P/IRRIGATION DEPARTMENT THAMBILUVIL DIVISION, AMPARA RANGE,EASTERN PROVINCE			
INTEGRATED WATERSHED & WATER RESOURCES MANAGEMENT PROJECT MODERNIZATION OF CHANNEL SYSTEM IN SAGAMAM SCHEME Improvements to Panankandiyadi RB Regulator -3 with fixing of gates and lifting arrangements in Paddimedu Central kandam			
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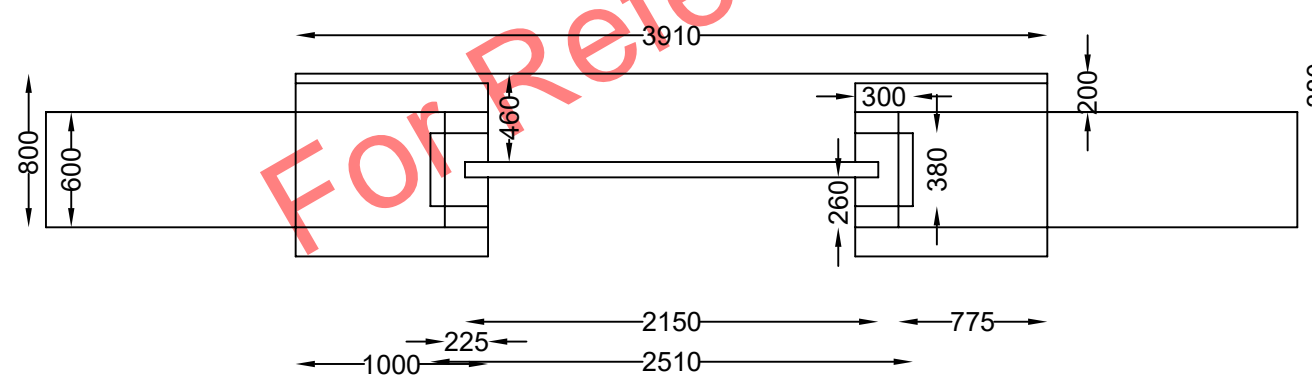
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D.D.'s OFFICE	DRAWING CHECKED BY:- MRS.L.MOHANARAJAH,MR.Y.SHANJEEVAN (D.O.A) (D'PERSON)	RE CHEKED BY:- IRRIGATION ENGINEER	RECOMMENDED BY:- ENG.G.SUJITHARAN P/D.D.I.
P/D.'s OFFICE	RE CHEKED BY:- (D'PERSON)	RE CHEKED BY:- IRRIGATION ENGINEER	
	RE CHEKED BY:- P/DEPUTY DIRECTOR OF IRRIGATION	RECOMMENDED BY:- ENG. V.RAJAGOPALASINGAM P/D.I, EASTERN PROVINCE	
P/IRRIGATION DEPARTMENT THAMBILUVIL DIVISION, AMPARA RANGE,EASTERN PROVINCE			
INTEGRATED WATERSHED & WATER RESOURCES MANAGEMENT PROJECT MODERNIZATION OF CHANNEL SYSTEM IN SAGAMAM SCHEME Improvements to Panankandiyadi RB Regulator -3 with fixing of gates and lifting arrangements in Paddimedu Central kandam			
		SHEET : 02 of 02 DRW. NO : IWWRMP/THA/SAG-CH/10	



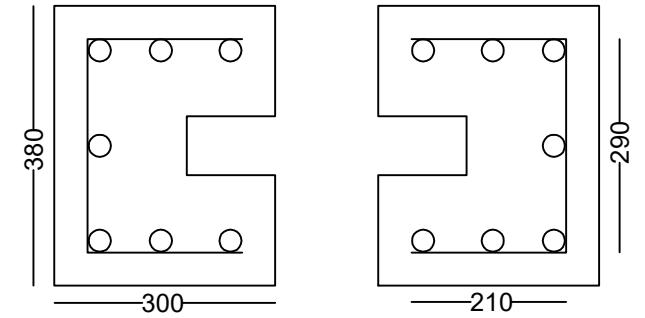
Existing structure



SECTIONAL FRONT ELEVATION

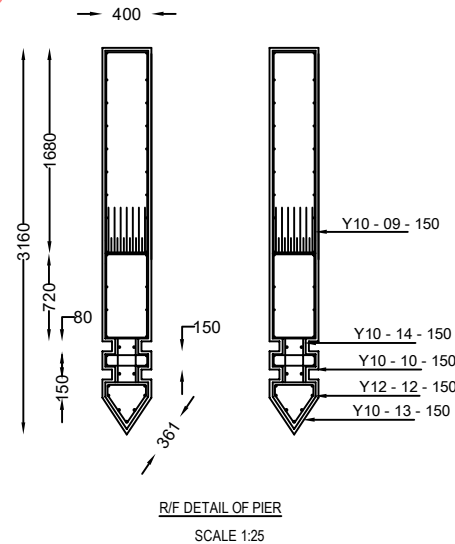
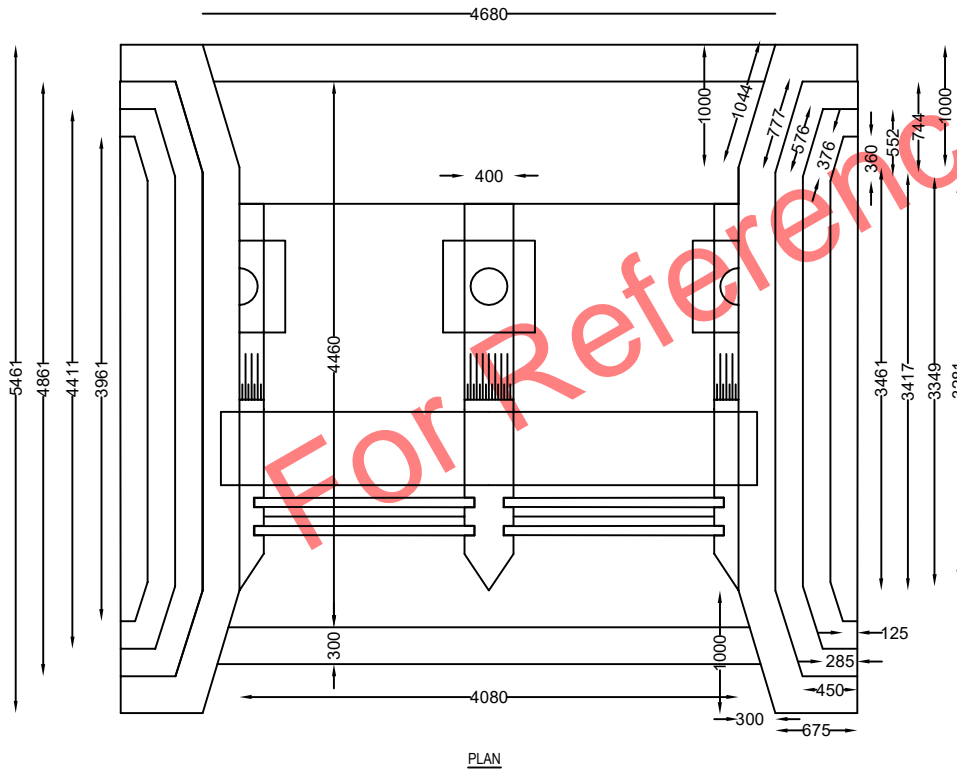
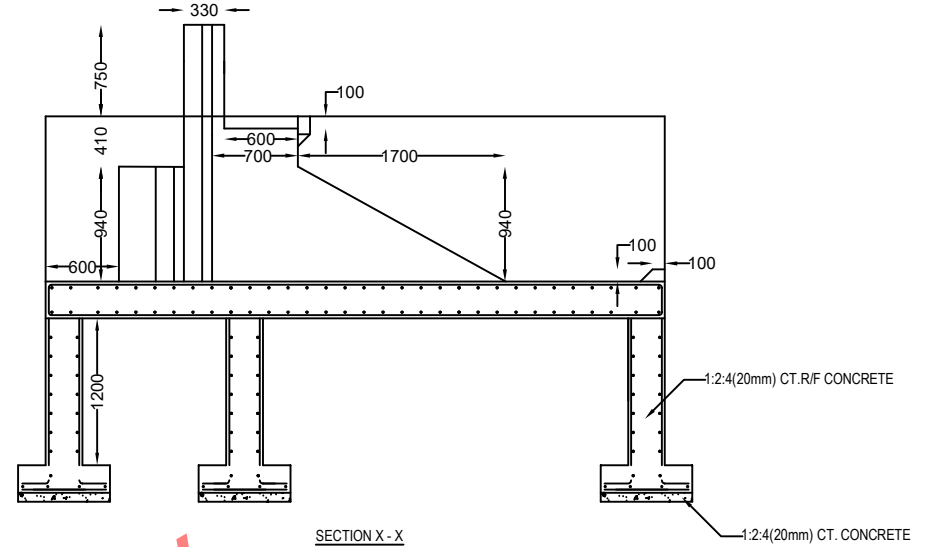
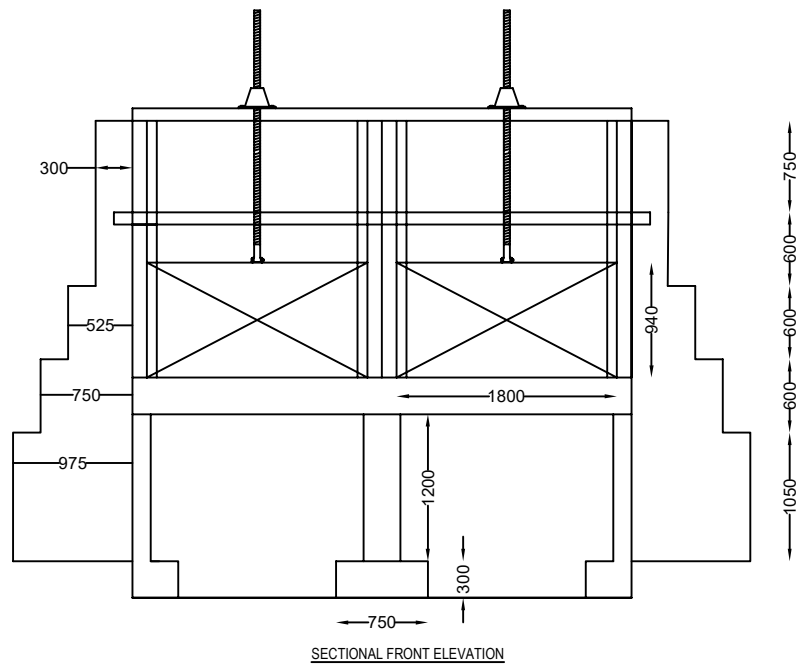


PLAN

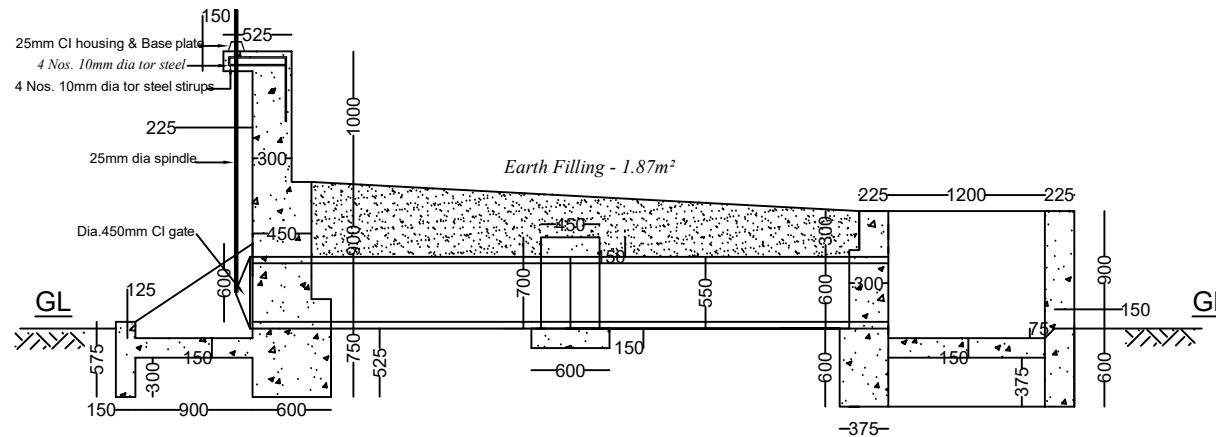


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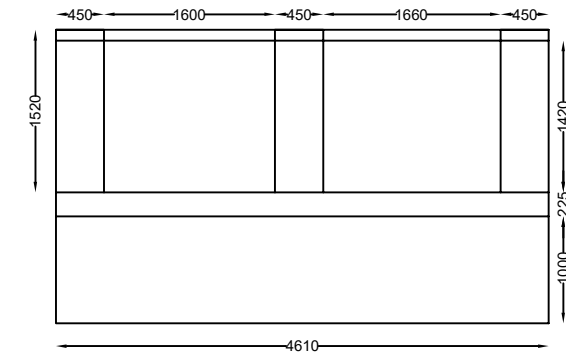
D.I.E's OFFICE	LEVELED & DRAWN BY:- T.SHANGEETHAN (T.O)	DESIGNED BY:- ENG. A.RAJESKANNA. P/DIVISIONAL I.E	SUBMITTED BY:- ENG. A.RAJESKANNA. P/DIVISIONAL I.E
	DRAWING CHECKED BY:- MRS.K.SATHEESKANTHAN (D'PERSON)		
D.D.I's OFFICE	DRAWING CHECKED BY:- MRS.L.MOHANARAJAH,MR.Y.SHANJEEVAN (D.O.A) (D'PERSON)	RE CHEKED BY:- IRRIGATION ENGINEER	RECOMMENDED BY:- ENG.G.SUJITHARAN P/D.D.I.
	RE CHEKED BY:- (D'PERSON)	RE CHEKED BY:- IRRIGATION ENGINEER	
P/D.I's OFFICE	RE CHEKED BY:- P/DEPUTY DIRECTOR OF IRRIGATION	RECOMMENDED BY:- ENG. V.RAJAGOPALASINGAM P/D.I, EASTERN PROVINCE	
P/IRRIGATION DEPARTMENT			
THAMBILUVIL DIVISION, AMPARA RANGE,EASTERN PROVINCE			
INTEGRATED WATERSHED & WATER RESOURCES MANAGEMENT PROJECT			
MODERNIZATION OF CHANNEL SYSTEM IN SAGAMAM SCHEME			
<i>Improvement to Panankandiyadi channel end regulator with gate arrangement in Paddimedu Central kadam</i>			
	SHEET : 01 of 01 DRW. NO : IWWRMP/THA/SAG-CH/11		



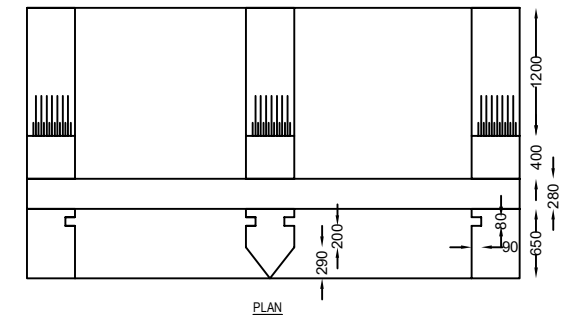
D/E D/L/E OFFICE	VELED & DRAWN BY:- T.SHANGEETHAN (T.O)	DESIGNED BY:- ENG. A. RAJESKANNA. P/DIVISIONAL I.E	SUBMITTED BY:- ENG. A. RAJESKANNA. P/DIVISIONAL I.E
	DRAWING CHECKED BY:- MRS.K.SATHEESKANTHAN (D'PERSON)	RE CHEKED BY:- IRRIGATION ENGINEER	RECOMMENDED BY:- ENG.G.SUJITHARAN P/D.D.I.
	DRAWING CHECKED BY:- MRS.L.MOHANARAJAH,MR.Y.SHANJEEVAN (D.O.A) (D'PERSON)		
P/D/I's OFFICE	RE CHEKED BY:- (D'PERSON)	RE CHEKED BY:- IRRIGATION ENGINEER	
	RE CHEKED BY:- P/DEPUTY DIRECTOR OF IRRIGATION	RECOMMENDED BY:- ENG. V.RAJAGOPALASINGAM P/D.I, EASTERN PROVINCE	
<p>P/IRRIGATION DEPARTMENT</p> <p>THAMBILUVIL DIVISION, AMPARA RANGE,EASTERN PROVINCE</p>			
<p>INTEGRATED WATERSHED & WATER RESOURCES MANAGEMEN</p> <p>PROJECT</p> <p>MODERNIZATION OF CHANNEL SYSTEM IN SAGAMAM SCHEME</p> <p>Reconstruction of 2nd regulator in Vanniyankandam channel</p>			
	SHEET : 01 of 02	DRW. NO : IWWRMP/THA/SAG-CH/12	



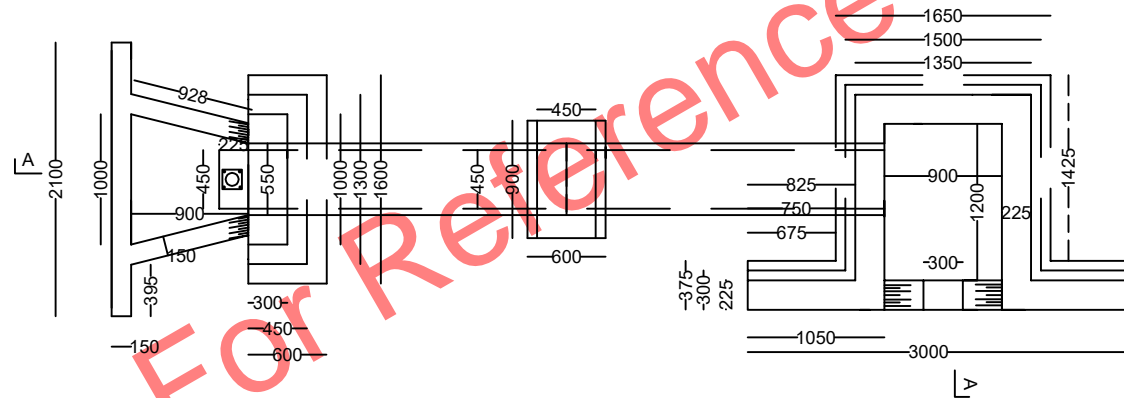
SECTIONAL ELEVATION A-A



SECTIONAL FRONT ELEVATION



PLAN

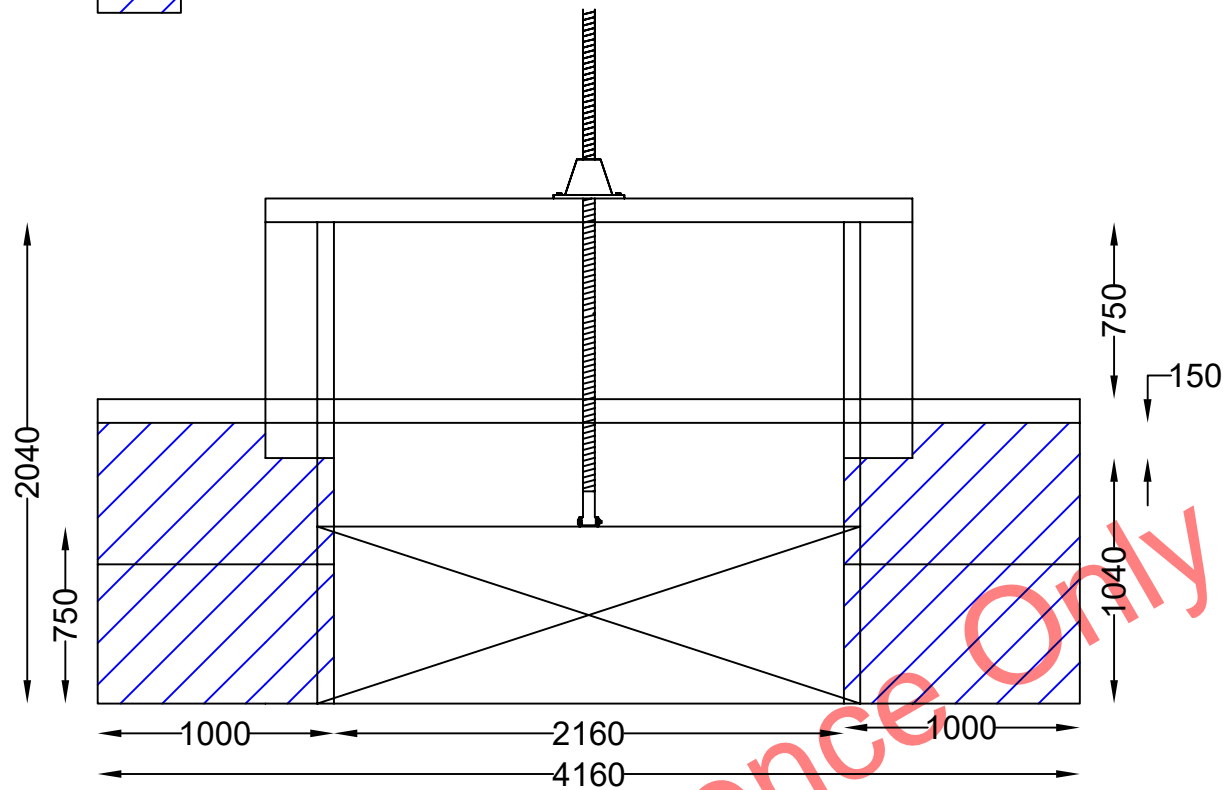


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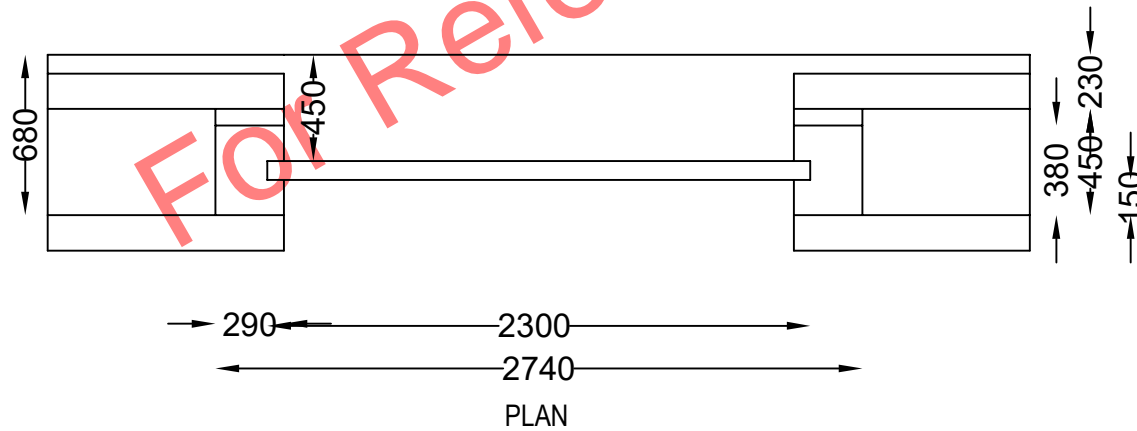
E/VEILED & DRAWN BY:- T.SHANGEETHAN (T.O.)	DESIGNED BY:-	SUBMITTED BY:-
	ENG. A. RAJESKANNA. P/DIVISIONAL LE	ENG. A. RAJESKANNA. P/DIVISIONAL LE
DRAWING CHECKED BY:- MRS.K.SATHEESKANTHAN (D/PERSON)	RE CHEKED BY:-	RECOMMENDED BY:-
MRS.L.MOHANARAJAH,MRS.Y.SHANJEEVAN (D.O.A)	IRRIGATION ENGINEER	ENG.G.SUITTHARAN P/D.D.I.
RE CHEKED BY:-	RE CHEKED BY:-	
(D/PERSON)	IRRIGATION ENGINEER	
RE CHEKED BY:-	RECOMMENDED BY:-	
P/DEPUTY DIRECTOR OF IRRIGATION	ENG. V. RAJAGOPALASINGAM P/D.I, EASTERN PROVINCE	
P/IRRIGATION DEPARTMENT		
THAMBILUVIL DIVISION, AMPARA RANGE,EASTERN PROVINCE		
INTEGRATED WATERSHED & WATER RESOURCES MANAGEMEN PROJECT		
MODERNIZATION OF CHANNEL SYSTEM IN SAGAMAM SCHEME		
Existing 2 bay Regulator & 0.45m dia x4.88m long Turnout		
SHEET : 02 of 02	DRW. NO : IWW/RMP/THA/SAG-CH/12	



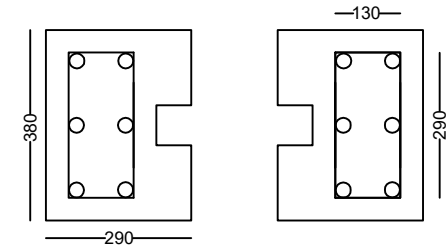
Existing structure



SECTIONAL FRONT ELEVATION

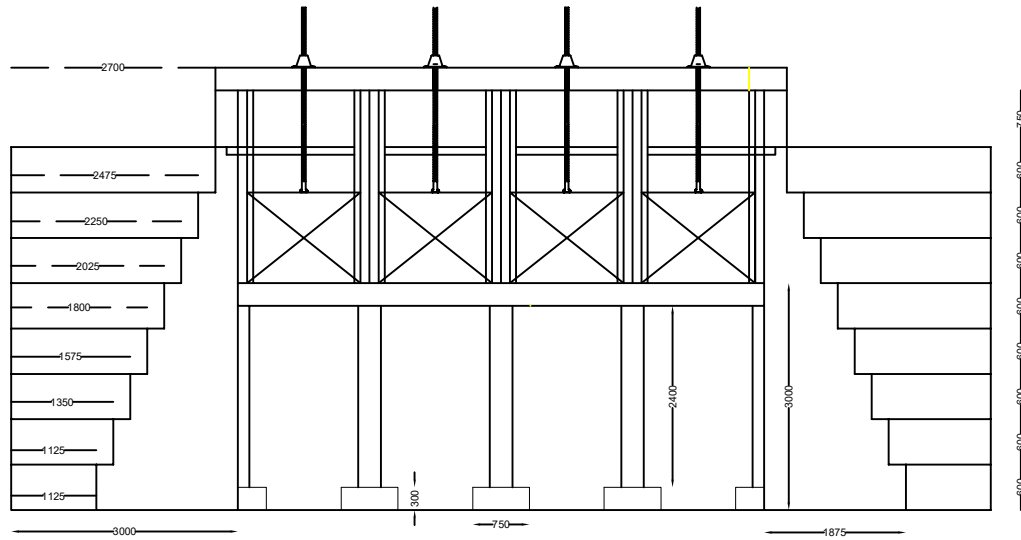


PLAN

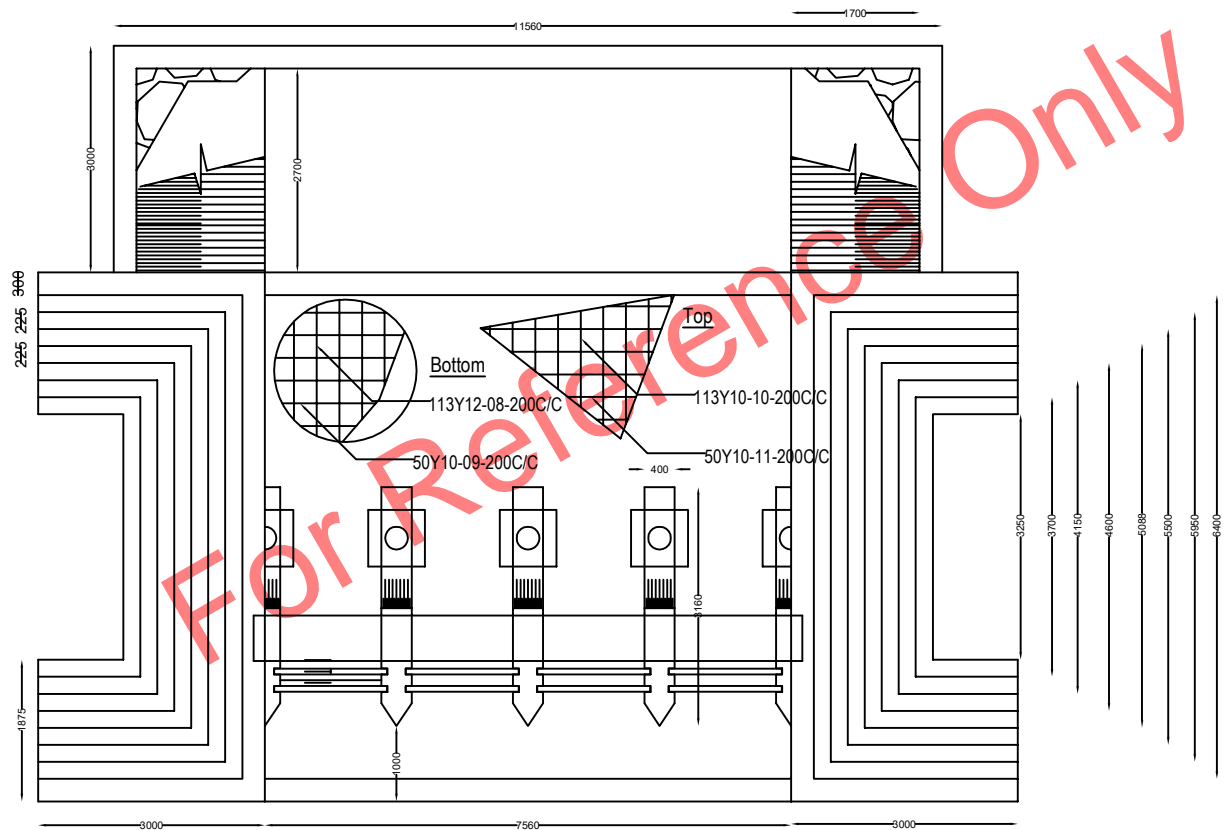


R/F Details

D.D.'s OFFICE	LEVELED & DRAWN BY:- T.SHANGEETHAN (T.O)	DESIGNED BY:- ENG. A.RAJESKANNA. P/DIVISIONAL I.E	SUBMITTED BY:- ENG. A.RAJESKANNA. P/DIVISIONAL I.E
	DRAWING CHECKED BY:- MRS.K.SATHEESKANTHAN (D'PERSON)	RE CHEKED BY:- IRRIGATION ENGINEER	RECOMMENDED BY:- ENG.G.SUJITHARAN P/D.D.I.
P.D.'s OFFICE	RE CHEKED BY:- (D'PERSON)	RE CHEKED BY:- IRRIGATION ENGINEER	RECOMMENDED BY:- ENG. V.RAJAGOPALASINGAM P/D.I, EASTERN PROVINCE
	RE CHEKED BY:- P/DEPUTY DIRECTOR OF IRRIGATION	RECOMMENDED BY:- ENG. V.RAJAGOPALASINGAM P/D.I, EASTERN PROVINCE	
P/IRRIGATION DEPARTMENT THAMBILUVIL DIVISION, AMPARA RANGE,EASTERN PROVINCE			
INTEGRATED WATERSHED & WATER RESOURCES MANAGEMENT PROJECT MODERNIZATION OF CHANNEL SYSTEM IN SAGAMAM SCHEME Improvements to 1st regulator in Vanniyankandam channel in Paddimedu south kandam			
SHEET : 01 of 01 DRW. NO : IWWRMP/THA/SAG-CH/13			

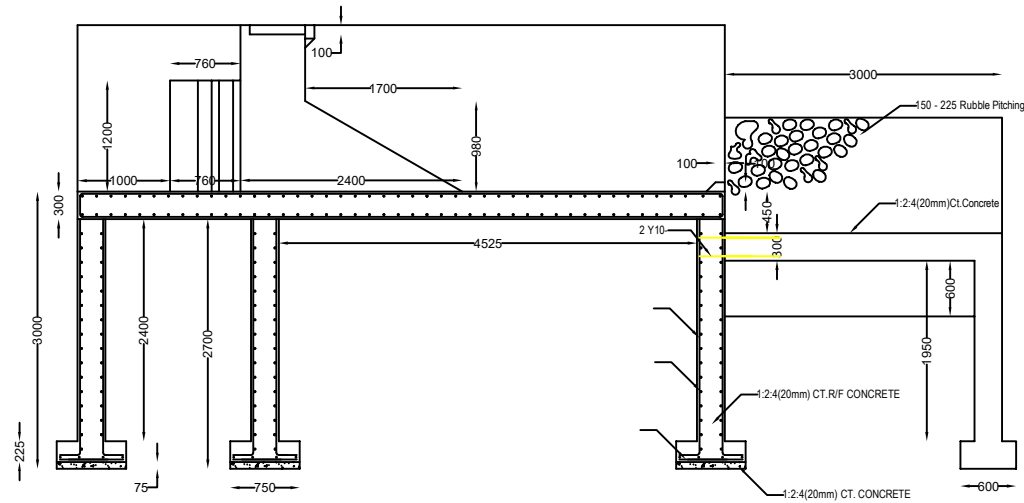


SECTIONAL FRONT ELEVATION

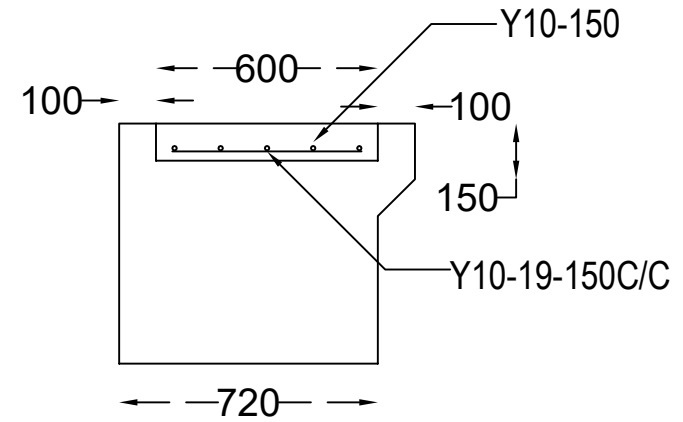


PLAN

D.D.'s OFFICE	LEVELLED & DRAWN BY:- A.MUHUNTHAN (T.O)	DESIGNED BY:- ENG. A. RAJESKANNA. P/DIVISIONAL I.E	SUBMITTED BY:- ENG. A. RAJESKANNA. P/DIVISIONAL I.E
	DRAWING CHECKED BY:- MRS.K.SATHEESKANTHAN (D'PERSON)	RE CHEKED BY:- IRRIGATION ENGINEER	RECOMMENDED BY:- ENG.G.SUJITHARAN P/D.D.I.
P/D.'s OFFICE	RE CHEKED BY:- (D'PERSON)	RE CHEKED BY:- IRRIGATION ENGINEER	
	RE CHEKED BY:- P/DEPUTY DIRECTOR OF IRRIGATION	RECOMMENDED BY:- ENG. V.RAJAGOPALASINGAM P/D.I, EASTERN PROVINCE	
<p>P/IRRIGATION DEPARTMENT</p> <p>THAMBILUVIL DIVISION, AMPARA RANGE,EASTERN PROVINCE</p>			
<p>INTEGRATED WATERSHED & WATER RESOURCES MANAGEMEN PROJECT</p> <p>MODERNIZATION OF CHANNEL SYSTEM IN SAGAMAM SCHEME</p> <p>Construction of 4bay Kayaveli Anicut</p>			
SHEET : 01 of 02		DRW. NO : IWWRMP/THA/SAG-CH/14	



SECTION X - X




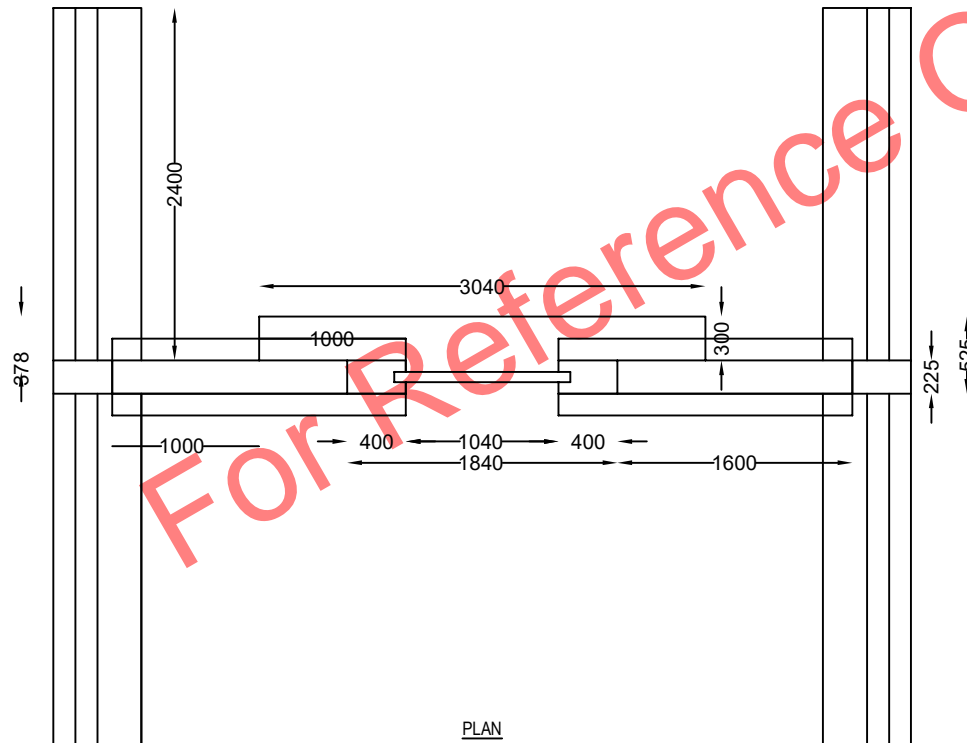
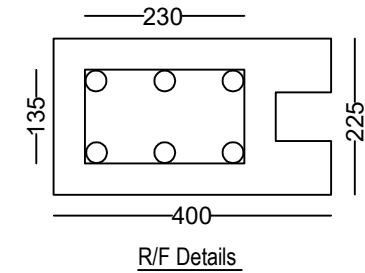
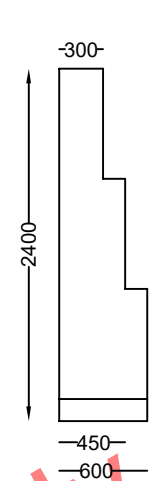
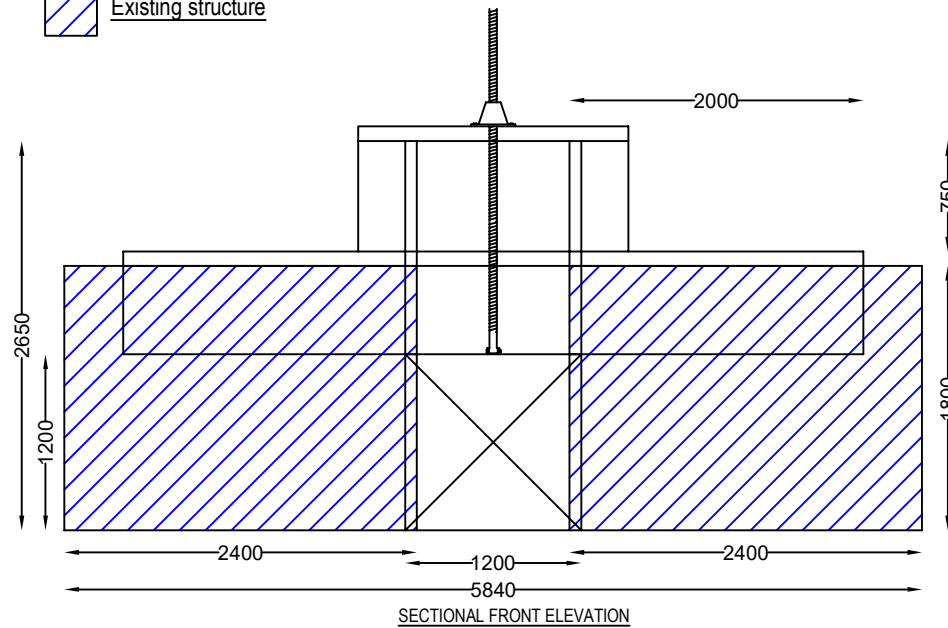
R/F DETAIL OF PASSERLE




SECTION Y - Y

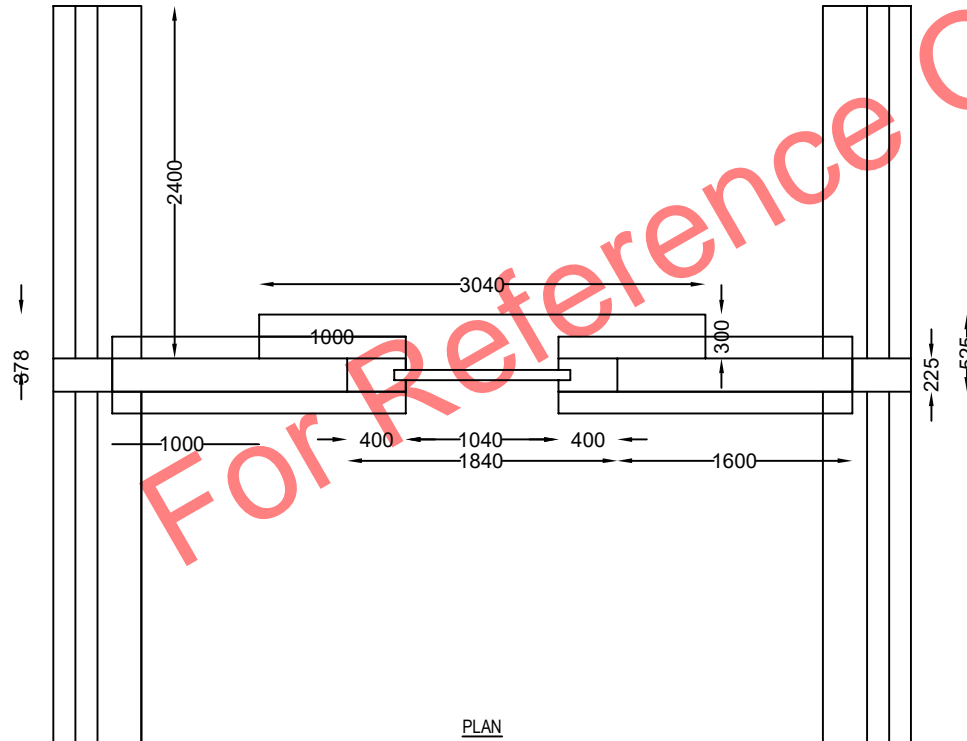
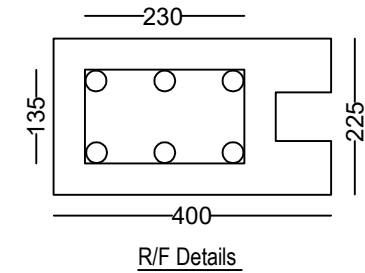
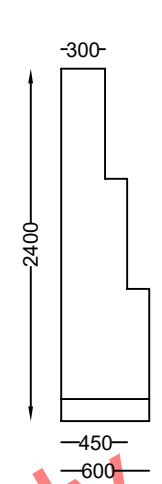
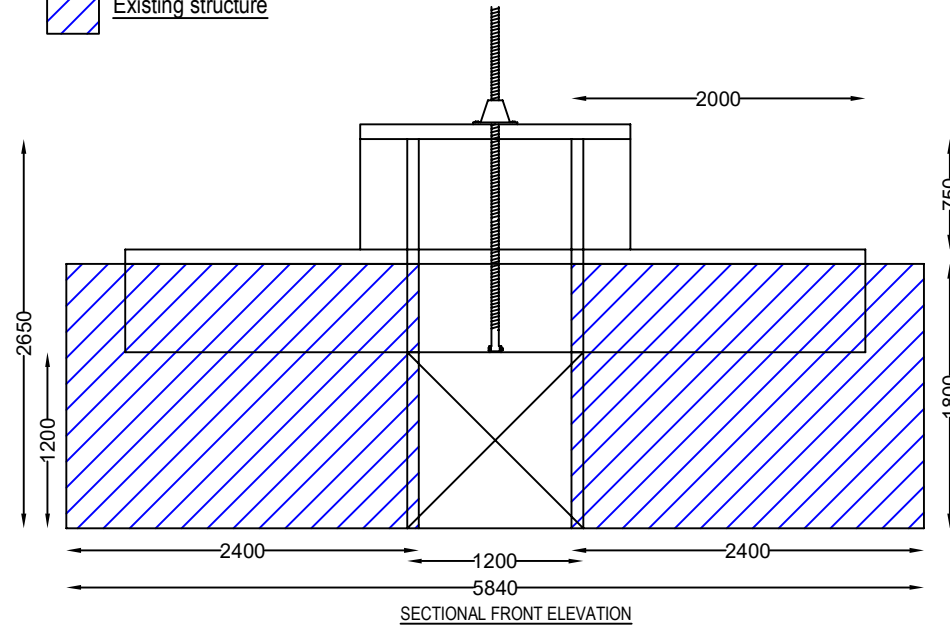
D.D.'s OFFICE	LEVELED & DRAWN BY:- A.MUHUNTHAN (T.O) DRAWING CHECKED BY:- MRS.K.SATHEESKANTHAN (D'PERSON)	DESIGNED BY:- ENG. A.RAJESKANNA. P/DIVISIONAL I.E	SUBMITTED BY:- ENG. A.RAJESKANNA. P/DIVISIONAL I.E
	DRAWING CHECKED BY:- MRS.L.MOHANARAJAH,MR.Y.SHANJEEVAN (D.O.A) (D'PERSON)	RE CHEKED BY:- IRRIGATION ENGINEER	RECOMMENDED BY:- ENG.G.SUIITHARAN P/D.D.I.
P/D.'s OFFICE	RE CHEKED BY:- (D'PERSON)	RE CHEKED BY:- IRRIGATION ENGINEER	
	RE CHEKED BY:- P/DEPUTY DIRECTOR OF IRRIGATION	RECOMMENDED BY:- ENG. V.RAJAGOPALASINGAM P/D.I, EASTERN PROVINCE	
<p style="text-align: center;">P/IRRIGATION DEPARTMENT THAMBILUVIL DIVISION, AMPARA RANGE,EASTERN PROVINCE</p>			
<p style="text-align: center;">INTEGRATED WATERSHED & WATER RESOURCES MANAGEMEN PROJECT MODERNIZATION OF CHANNEL SYSTEM IN SAGAMAM SCHEME Construction of 4bay Kayaveli Anicut</p>			
SHEET : 02 of 02		DRW. NO : IWWRMP/THA/SAG-CH/14	

 Existing structure

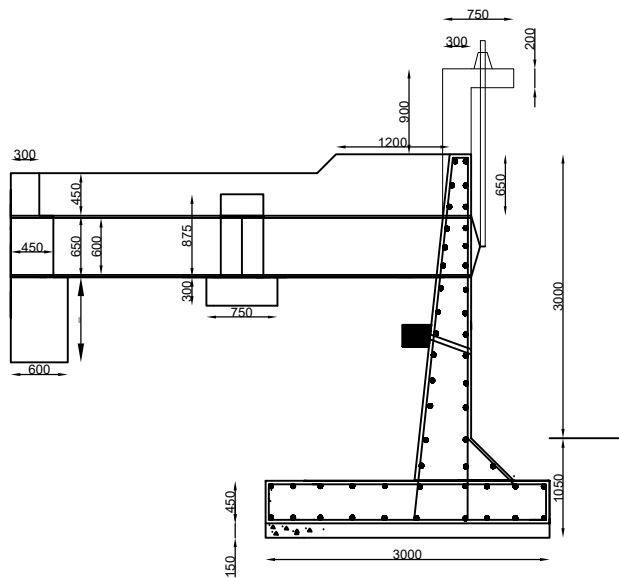


D.D.'s OFFICE	LEVELED & DRAWN BY:- A.MUHUNTHAN (T.O)	DESIGNED BY:-	SUBMITTED BY:-
	DRAWING CHECKED BY:- MRS.K.SATHEESKANTHAN (D'PERSON)	ENG. A.RAJESKANNA. P/DIVISIONAL I.E	ENG. A.RAJESKANNA. P/DIVISIONAL I.E
D.D.'s OFFICE	DRAWING CHECKED BY:-	RE CHEKED BY:-	RECOMMENDED BY:-
	MRS.L.MOHANARAJAH,MR.Y.SHANJEEVAN (D.O.A) (D'PERSON)	IRRIGATION ENGINEER	ENG.G.SUJITHARAN P/D.D.I.
P/D's OFFICE	RE CHEKED BY:-	RE CHEKED BY:-	IRRIGATION ENGINEER
	(D'PERSON) RE CHEKED BY:-	RECOMMENDED BY:-	ENG. V.RAJAGOPALASINGAM P/D.I, EASTERN PROVINCE
P/DEPUTY DIRECTOR OF IRRIGATION			
P/IRRIGATION DEPARTMENT THAMBILUVIL DIVISION, AMPARA RANGE,EASTERN PROVINCE			
INTEGRATED WATERSHED & WATER RESOURCES MANAGEMENT PROJECT MODERNIZATION OF CHANNEL SYSTEM IN SAGAMAM SCHEME Construction of regulator in vedduvakkal in sillikodi RB channel in Urakkai kadam			
SHEET : 01 of 01 DRW. NO : IWWRMP/THA/SAG-CH/15			

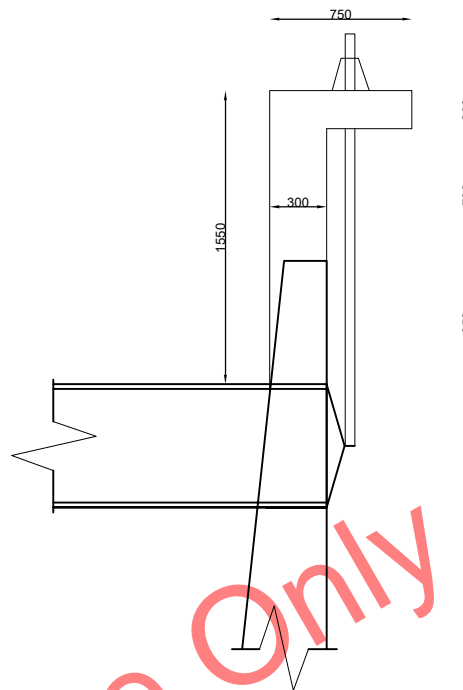
 Existing structure



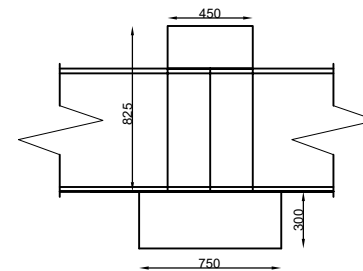
D.D.'s OFFICE	LEVELED & DRAWN BY:- A.MUHUNTHAN (T.O)	DESIGNED BY:-	SUBMITTED BY:-
	DRAWING CHECKED BY:- MRS.K.SATHEESKANTHAN (D'PERSON)	ENG. A.RAJESKANNA. P/DIVISIONAL I.E	ENG. A.RAJESKANNA. P/DIVISIONAL I.E
D.D.'s OFFICE	DRAWING CHECKED BY:-	RE CHEKED BY:-	RECOMMENDED BY:-
	MRS.L.MOHANARAJAH,MR.Y.SHANJEEVAN (D.O.A) (D'PERSON)	IRRIGATION ENGINEER	ENG.G.SUJITHARAN P/D.D.I.
P/D's OFFICE	RE CHEKED BY:-	RE CHEKED BY:-
	(D'PERSON)	IRRIGATION ENGINEER
P/D's OFFICE	RE CHEKED BY:-	RECOMMENDED BY:-
	P/DEPUTY DIRECTOR OF IRRIGATION	ENG. V.RAJAGOPALASINGAM P/D.I, EASTERN PROVINCE
P/IRRIGATION DEPARTMENT THAMBILUVIL DIVISION, AMPARA RANGE,EASTERN PROVINCE			
INTEGRATED WATERSHED & WATER RESOURCES MANAGEMENT PROJECT MODERNIZATION OF CHANNEL SYSTEM IN SAGAMAM SCHEME Construction of regulator with retaining wall in savaththu channel in Urakkai kandam			
SHEET : 01 of 01 DRW. NO : IWWRMP/THA/SAG-CH/16			



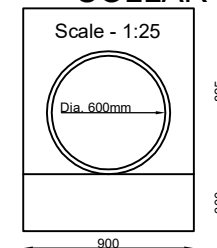
SECTION X - X



GATE ARRANGEMENT



COLLAR JOINT



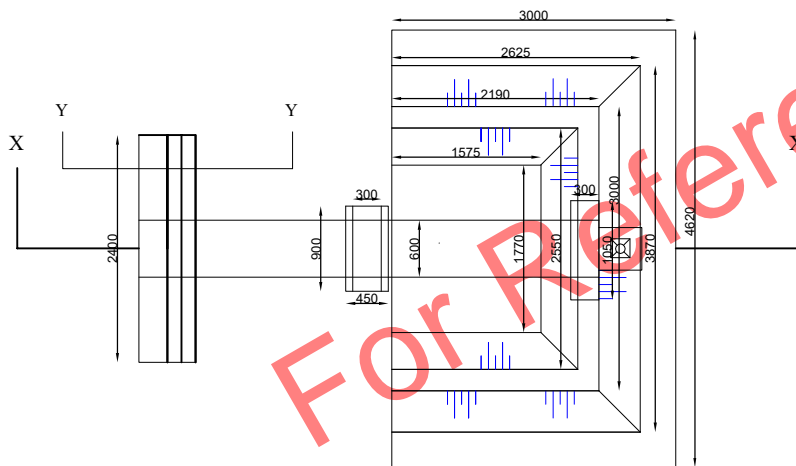
NOTE

- ALL DIMENSIONS ARE IN MILLIMETRES
- ALL LEVELS ARE IN METERS ABOVE MSL
- ALL DIMENSIONS ARE TO BE CHECKED AT THE SITE BEFORE COMMENCING WORK
- BAR NOTATION

No OF BARS	20 Y 20 - 10 - 225T	BAR LOCATION
STEEL TYPE		BAR SPACING
BAR SIZE		BAR MARK
- ABBREVIATION

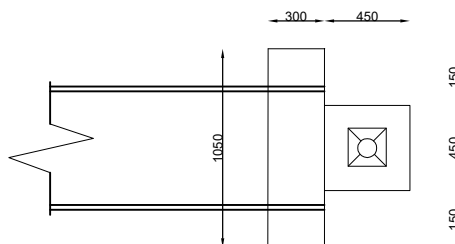
T - TOP	FF - FAR FACE	BF - BOTH FACE
B - BOTTOM	NF - NEAR FACE	
- MATERIAL PROPERTIES

CONCRETE - GRADE 20
REINFORCEMENT - 460 N/mm ² TOR STEEL
- MINIMUM CLEAR COVER SHOULD BE 25 mm.
- LAP LENGTH SHOULD BE 50 x BAR DIAMETER & LAPS SHOULD BE STAGGERED



LEFT SIDE UP STREAM

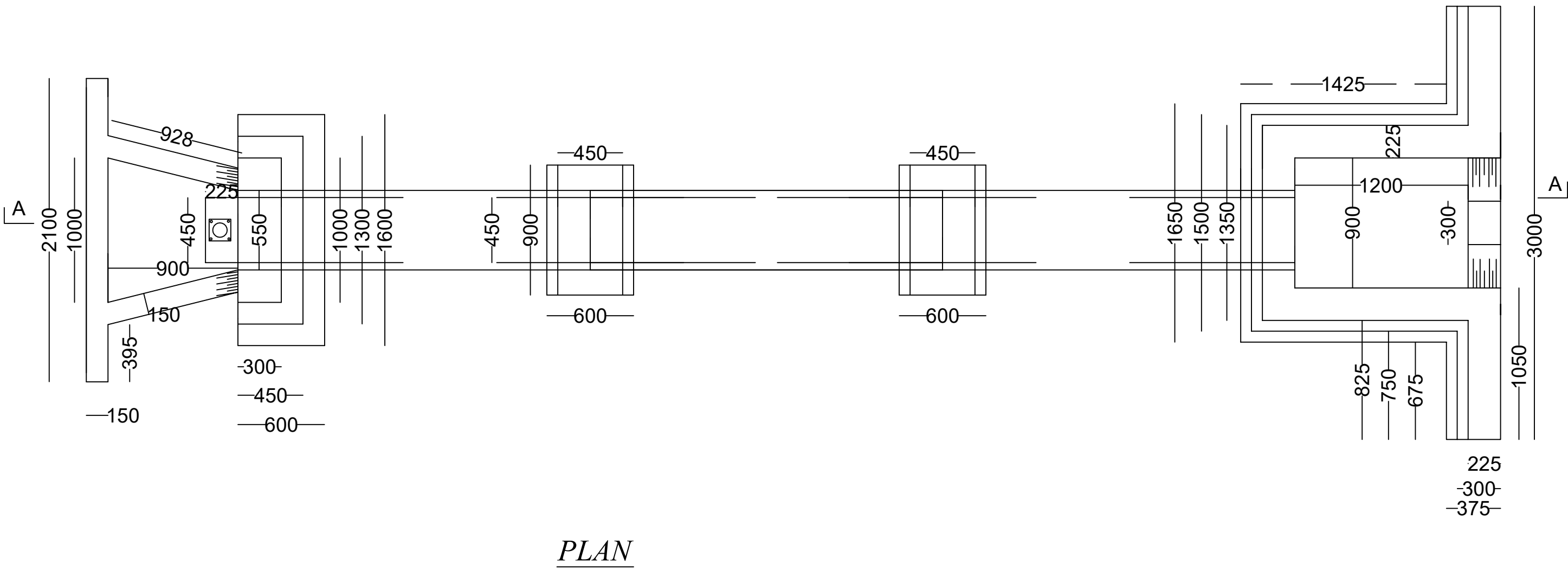
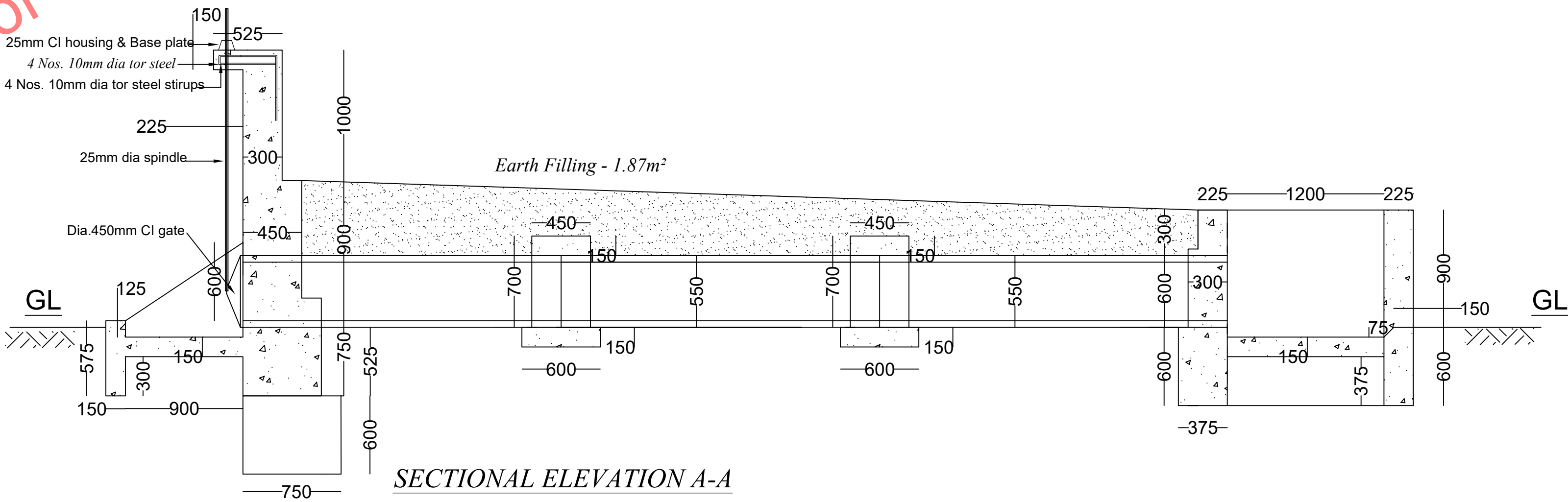
Scale - 1:25



Scale - 1:25

D.D.'s OFFICE	LEVELED & DRAWN BY:- A.MUHUNTHAN (T.O) DRAWING CHECKED BY:- MRS.K.SATHEESKANTHAN (D'PERSON)	DESIGNED BY:- ENG. A.RAJESKANNA. P/DIVISIONAL I.E	SUBMITTED BY:- ENG. A.RAJESKANNA. P/DIVISIONAL I.E
	DRAWING CHECKED BY:- MRS.L.MOHANARAJAH,MR.Y.SHANJEEVAN (D.O.A) (D'PERSON)	RE CHEKED BY:- IRRIGATION ENGINEER	RECOMMENDED BY:- ENG.G.SUJITHARAN P/D.D.I.
P/D's OFFICE	RE CHEKED BY:- (D'PERSON) RE CHEKED BY:- P/DEPUTY DIRECTOR OF IRRIGATION	RE CHEKED BY:- IRRIGATION ENGINEER RECOMMENDED BY:- ENG. V.RAJAGOPALASINGAM P/D.I, EASTERN PROVINCE	
	P/IRRIGATION DEPARTMENT THAMBILUVIL DIVISION, AMPARA RANGE,EASTERN PROVINCE INTEGRATED WATERSHED & WATER RESOURCES MANAGEMENT PROJECT MODERNIZATION OF CHANNEL SYSTEM IN SAGAMAM SCHEME Construction of Nediymaruthaiyadi Anicut LB Turnout structure		
		SHEET : 01 of 01 DRW. NO : IWWRMP/THA/SAG-CH/17	

For Reference Only



D.D.'s OFFICE	LEVELED & DRAWN BY:- K.PIRABAHARAN (T.O)	DESIGNED BY:- ENG. A.RAJESKANNA. P/DIVISIONAL I.E	SUBMITTED BY:- ENG. A.RAJESKANNA. P/DIVISIONAL I.E
	DRAWING CHECKED BY:- MRS.K.SATHEESKANTHAN (D'PERSON)	RE CHEKED BY:- MRS.L.MOHANARAJAH,MR.Y.SHANJEEVAN (D.O.A) (D'PERSON)	RECOMMENDED BY:- ENG.G.SUJITHARAN P/D.D.I.
P/D.'s OFFICE	RE CHEKED BY:- (D'PERSON)	RE CHEKED BY:- IRRIGATION ENGINEER	RECOMMENDED BY:- ENG. V.RAJAGOPALASINGAM P/D.I, EASTERN PROVINCE
	RE CHEKED BY:- P/DEPUTY DIRECTOR OF IRRIGATION	RECOMMENDED BY:- ENG. V.RAJAGOPALASINGAM P/D.I, EASTERN PROVINCE	RECOMMENDED BY:- ENG. V.RAJAGOPALASINGAM P/D.I, EASTERN PROVINCE
P/IRRIGATION DEPARTMENT THAMBILUVIL DIVISION, AMPARA RANGE,EASTERN PROVINCE			
INTEGRATED WATERSHED & WATER RESOURCES MANAGEMENT PROJECT MODERNIZATION OF CHANNEL SYSTEM IN SAGAMAM SCHEME Construction of 0.45m dia x 7.32 m long Turnout in Main Channel in Paavankai & LB Turnout of Moddayakal Kandam 1st Regulator			
SHEET : 01 of 01		DRW. NO : IWWRMP/THA/SAG-CH/18	

Section - 11

STANDARD FORMS (BID)

For Reference Only

FORM OF BID SECURITY

[this Guarantee form shall be filled in accordance with the instructions indicated in brackets]

----- [insert issuing agency's name, and address of issuing branch or office]

Beneficiary: *Project Director
Integrated Watershed & Water resources Management Project,
2nd Floor, Mahaweli Centre Building,
No. 96, Ananda Coomaraswamy Mawatha
Colombo 07.*

Date: ----- [insert (by issuing agency) date]

BID GUARANTEE No.: ----- [insert (by issuing agency) number]

We have been informed that ----- [insert (by issuing agency) name of the Bidder] (hereinafter called "the Bidder") has submitted to you its bid dated ----- [insert (by issuing agency) date] (hereinafter called "the Bid") for the execution of '**Modernization and Instrumentation of channel system of Sagamam Irrigation scheme in Thambiluvil Division, Ampara range under IWWRMP in Thambiluvil Division, Ampara Range**' under Invitation for Bids No. **LK-MoMDE-465692-CW-RFB** ("the IFB").

Furthermore, we understand that, according to your conditions, Bids must be supported by a Bid Guarantee.

At the request of the Bidder, we ----- [insert name of issuing agency] hereby irrevocably undertake to pay you any sum or sums not exceeding in total an amount of ----- [insert amount in figures] ----- [insert amount in words] upon receipt by us of your first demand in writing accompanied by a written statement stating that the Bidder is in breach of its obligation(s) under the bid conditions, because the Bidder:

- (a) has withdrawn its Bid during the period of bid validity specified; or
- (b) does not accept the correction of errors in accordance with the Instructions to Bidders (hereinafter "the ITB") of the IFB; or
- (c) having been notified of the acceptance of its Bid by the Employer/Purchaser during the period of bid validity, (i) fails or refuses to execute the Contract Form, if required, or (ii) fails or refuses to furnish the Performance Security, in accordance with the ITB.

This Guarantee shall expire: (a) if the Bidder is the successful bidder, upon our receipt of copies of the Contract signed by the Bidder and of the Performance Security issued to you by the Bidder; or (b) if the Bidder is not the successful bidder, upon the earlier of (i) the successful bidder furnishing the performance security, otherwise it will remain in force up to ----- (insert date)

Consequently, any demand for payment under this Guarantee must be received by us at the office on or before that date -----