#### DEMOCRATIC SOCIALIST REPUBLIC OF SRI LANKA

#### MINISTRY OF EDUCATION

# DEVELOPMENT OF INFRASTRUCTURE FACILITIES OF THE UVA WELLASSA UNIVERSITY -PHASE II ALTERNATIVE WATER SUPPLY SYSTEM

(CONTRACT NO: UWU/CW/Phase II B/NCB/Alternative Water Supply)

## **BIDDING DOCUMENT**

**CLIENT** 

Vice Chancellor, Uva Wellassa University, Badulla. **CONSULTANT** 

Central Engineering Consultancy Bureau, 415, Bauddhaloka Mawatha, Colombo 07.

February 2021

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## **INVITATION FOR BIDS**

#### **INVITATION FOR BIDS**

# UVA WELLASSA UNIVERSITY MINISTRY OF EDUCATION

# DEVELOPMENT OF INFRASTRUCTURE FACILITIES OF THE UVA WELLASSA UNIVERSITY -PHASE II

#### ALTERNATIVE WATER SUPPLY SYSTEM

- 1. The Chairman Procurement Committee on Behalf of Uva Wellassa University of Sri Lanka Invites Sealed Bids from Eligible and Qualified Bidders for Development of Infrastructure Facilities of the Uva Wellassa University Phase II Alternative Water Supply System as Described and Estimated to Cost Rs. 33.2 Million (Excluding VAT & Contingencies)
- 2. Bidding will be conducted through National Competitive Bidding Procedures.
- 3. To be eligible for contract award, the successful bidder shall not have been blacklisted and shall meet the following requirements. ICTAD Registration C4 & C5 only
- 4. Bidder should register under the public contract Act No.03 of 1987 for works that have a civil work value of Rs. 5 million and above and the certificate of registration should be submitted with the bid. Bids without the certificate of registration will be rejected.
- 5. Requirements to qualify for contract award include
  - 5.1 Successful Completion of similar work amounting 30 Million in last 3 years
  - 5.2 Key Technical Personnel at site
    - (a) Technical Officer I Civil (Full time at site) NCT or equivalent with minimum 5-year experience.
  - 5.3 Financial
- (a) Annual turnover not less than Rs. 50 Million
- 5.4 Other requirements
- (a) As specified in the Tender document.
- 6. Interested bidders may obtain further information from the Engineer Projects of the Uva Wellassa University and inspect the bidding documents at the address given below.

"Senior Assistant Registrar Capital Works Division Uva Wellassa University Badulla"

**Tel:** 055-3050847 **Fax:** 055-2226633

email: capitalworks@uwu.ac.lk

- 7. A complete set of Bidding Documents in English language may be purchased by interested bidders on the submission of a written application to the Senior Assistant Registrar, Capital Works Division, Uva Wellassa University, Badulla **from 1**<sup>st</sup> **of February 2021 until 22**<sup>nd</sup> **of February 2021** from **09.00 hrs to 15.00** hrs upon payment of a nonrefundable fee of Rupees Three Thousand (Rs 8,700/=) to the shroff of this University by cash or directly deposit cash to the Bank of Ceylon A/C No 3114820. The Bidder can download the bidding document from the University website <a href="http://www.uwu.ac.lk/procurement/">http://www.uwu.ac.lk/procurement/</a>. Those who obtaining the bidding document from the University website should submit the complete documents along with the original of the cash receipt.
- 8. Bids shall be delivered to the Chairman, Procurement Committee, Uva Wellassa University, Badulla at **14.00 hrs. on 23**<sup>rd</sup> **February 2021** or before. Late bids will be rejected. Bids will be opened soon after closing in the presence of the bidders' representatives who choose to attend.
- 9. Bid validity shall be 91 days from the date for closing of Bids. (25th May 2021)
- 10. All bids shall be accompanied by a "Bid security" (as per the format given in the Bidding Document) of **Rupees Three Hundred Thirty-Two Thousand Six Hundred Only (Rs. 332,600.00).** Bid Security shall be valid up to **22**<sup>nd</sup> **June 2021**. Any bid not accompanied by a valid bid Security will be rejected. Bid Security shall be address to the Vice Chancellor, Uva Wellasa University, Badulla
- 11. A Pre-Bid Meeting will be held in the **Mini Boardroom-Senate Building** of Uva Wellassa University at **10.30 hrs. on 15**<sup>th</sup> **February 2021** for bidders to get clarified any obscurities of the Tender Document.
- 12. Procurement committee reserves the right to accept a suitable bid out of the bids received or reject all bids and the decision of the Procurement Committee is final.

Chairman

Procurement Committee Uva Wellassa University Passara Road Badulla.

## SECTION - 1

**❖** INSTRUCTIONS TO BIDDERS

#### **INSTRUCTIONS TO BIDDERS**

Instructions to Bidders applicable to this contract shall be those given in Section-I of the Standard Bidding Document, Procurement of Works, and ICTAD Publication No. CIDA/SBD/01, Second Edition, January 2007 with addenda issued up to February 2011, published by the Construction Industry Development Authority (CIDA), "Savsiripaya", 123, Wijerama Mawatha, Colombo 7.

This publication will not be issued with the Bidding Document and the Bidder is advised to purchase it from CIDA.

Instructions to Bidders shall be read in conjunction with the Bidding Data provided under Section-5 of Bidding Document.

Instructions to Bidders will not be a part of the Contract and will cease to have effect once the Contract is signed.

### SECTION - 2

- ❖ STANDARD FORMS (CONTRACT)
- **\*** FORM OF LETTER OF ACCEPTANCE
- **❖** FORM OF AGREEMENT
- **❖** FORM OF PERFORMANCE SECURITY
- \* FORM OF ADVANCE PAYMENT SECURITY
- **❖ FORM OF RETENTION MONEY GUARANTEE**

#### STANDARD FORMS (CONTRACT)

#### Notes:

- a) Bidders should submit the completed form of Bid Security (See page 60-61) in compliance with the requirements of the Bidding Documents.
- b) Bidders should not complete the Form of Agreement at the time of preparation of bids.
- c) The successful bidder will be required to sign the Form of Agreement after the award of contract.
- d) Any corrections or modifications to the accepted bid resulting from arithmetic correction, acceptable deviations or quantity variations in accordance with the requirements of the Bidding Documents should be incorporated into the agreement.
- e) The Form of Performance Security, Form of Advance Payment Security and Form of Retention Money Guarantee should not be completed by the bidders at the time of preparation of bids.

The successful bidder will be required to provide these securities in compliance with the requirements herein or as acceptable to the Employer.

## FORM OF LETTER OF ACCEPTANCE

[letter head paper of the employer]

To:	(Date)
(Name an	d Address of the Contractor)
This is to notify you that your bid o	dated[insert date] for the
construction and remedying defect	es of the
of the contract and Identification No.) for th	e contract price of
(name of cur	rrency)
	(amount in figures and words) as
correct in accordance with Instruct	ions to Bidders and / or modify by a Memorandum
of Understanding is hereby accepte	ed.
You are hereby instructed to proceed	ed with the execution of the said Works in accordance
with the Contract Documents.	
The start date shall be	(fill the date as per Conditions of Contract)
The amount of Performance Secur	rity is(fill the date as per Conditions of
Contract) The Performance Se	ecurity shall be submitted on or before
(fill the	date as per Conditions of Contract)
Authorized Signature :	
Name and Title of signatory:	
Name of Agency:	

#### FORM OF AGREEMENT

This AGREEN	/IENT n	nade the	(	day)			••••
(month)		(year) bet	ween				••••
						(hereinafter c	
		nployer") of th					direct direct
		_ ,	-				
••••••	• • • • • • • • • •	•••••					•••••
(name and ad	dress of th	ne contractor) (he	reinafter cal	lled and	referred	l to as "the Cor	ntractor"),
of the other pa	art:						
WHEREAS	the	Employer	desires	that	the	Contractor	execute
•••••		••••••	•••••	•••••	•••••		(name &
identification nun	ıber of Co	entract) (hereina	ıfter called	and refe	rred to	as "the Works'	") and the
Employer has	accept	ed the Bid by	the Contrac	ctor for t	he exec	ution and com	pletion of
such Works a	nd rem	edying of any	defects ther	ein.			

#### 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 hereinafter referred to.
- 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 Witn	ess whereof the parties here	eto have caused this agreement to be executed
the day	and year aforementioned, in	n accordance with laws of Sri Lanka.
Authoria	zed signature of Contractor	Authorized signature of Employer
COMMO	ON SEAL	COMMON SEAL
In the pr	resence of:	
Witness	es:	
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)	
To:	
[ Name and Address of employer]  Date:	
PERFORMANCE GUARANTEE NO. :	
We have been informed that	
(hereinafter called "the Contractor") has entered into Contract No.	
(Reference No. of the Contract) dated	
[	
name of the contract and brief description of works] (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 the 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, not later than the day of
20 (insert date, 28 days beyond the intended Completion Date) and any demand for payment
under it must be received by us at this office on or before that date.
Signature(s)
0

## FORM OF ADVANCE PAYMENT SECURITY

••••	
••••	
(Issi	uing Agency's Name and Address of Issuing Branch or Office)
To :[ Na	me and Address of employer]
Dat	e:
AD	VANCE PAYMENT GUARANTEE NO. :
We	have been informed that
(hei	reinafter called "the Contractor") has entered into Contract No.
•	
••••	•••••••••••••••••••••••••••••••••••••••
[ nar	ne of contract & brief description] (hereinafter called "the Contract"). Furthermore, we
und	lerstand that, according to the conditions of the Contract, an advance paymen
in tl	he sum(amount in
figur	res)

At the request of the Contractor, we
(name of the agency)
hereby irrevocably undertake to pay you any sum or sums not exceeding in total
an amount of (amount in figures)
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
beyond the expected expiration Date of the contract)
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)	
To: [ Name and Address of employer]	
Date:	
RETENTION MONEY GUARANTEE NO. :	
We have been informed that	
(hereinafter called "the Contractor") has entered into Contract N	
& brief description of works](hereinafter called "the Contract"). Furthermore,	
understand that, according to the conditions of the Contract, when the Works ha	ve
being taken over and first half of the Retention Money has been certified	for
payment, payment of the second half of the Retention Money may be made again	nst
a Retention Money Guarantee.	

At the request of the Contractor, we
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 to 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)

## **SECTION - 3**

\* CONDITIONS OF CONTRACT

#### CONDITIONS OF CONTRACT

Conditions of Contract that will be applicable for this Contract shall be that given in Section 3 of the Standard Bidding Document for Procurement of Works, ICTAD Publication No. ICTAD/SBD/01, Second Edition, January 2007 with addenda issued up to February 2011, published by the Institute for Construction Industry Development Authority (CIDA) "Savsiripaya", 123, Wijerama Mawatha, Colombo 07.

The above publication will not be issued with the Bidding Document and Bidder is advised to purchase it from CIDA

This Conditions of Contract shall be read in conjunction with Contract Data in Section 05 in Bidding Document which shall take precedence over the Conditions of Contract.

## **SECTION - 4**

- **❖** FORM OF BID
- **❖** QUALIFICATION INFORMATION

#### FORM OF BID

Name of Contract:	Development of Infrastructure Facilities of the Uva Wellassa
	University -Phase II- Alternative Water Supply System

To: The Vice-Chancellor

Uva Wellassa University

**Badulla** 

#### Gentleman,

- 2. We/I acknowledge that the schedule forms part of our Bid.
- 3. We/I undertake, if our Bid is accepted, to commence the Works as stipulated in the Schedule, and to complete the whole of the Works comprised in the contract within the time stated in the schedule.
- 4. We/I agree to abide by this bid for the period stated in the Sub-Clause 15 of Instructions to Bidders or any extended period and it shall remain binding upon us and may be accepted at any time before the expiration of that period.
- 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/me.

6. We/I unde	erstand that you are not bound to accept the lowest or any Bid you		
may receiv	e.		
Dated this	day of		
authorized to sign tenders for and on behalf of			
	(IN BLOCK CAPITAL)		
Signature :			
Address:			
Witness:			

## **Qualification Information**

(It is compulsory for all bidders to provide this information. Failure to provide this information will be considered as an incomplete bid)

ICTAD Registration	
Registration number	(attach copies of relevant pages from the registration book)
Grade (Only C4 & C5 allow)	
Specialty	
Expiry Date	
Blacklisted Contractors	
	aulted contractor by NPA or any other Agency?
IF yes provide details	
VAT Registration Number	
	( · · · 1
Construction Program	( attach as annex)
Legal status	(attach relevant status copies, as annex)
Value of Construction works performed in last 3 years (Excluding 2020)	(attach copies of Certificate of Completion etc. and other documents such as profit-loss and income expenditure statement)
Year	
Year	
Year	
Value of similar works completed in last 3 years (Excluding 2020) (indicate only the three largest projects) Contract value not be less than 30 M	1. Value Year
Major items of construction equipment proposed	1. Type       Capacity         2. Type       Capacity         3. Type       Capacity         4. Type       Capacity         5. Type       Capacity
Qualification and experience of key staff - Site & Head Office (Permanent, Contract basis & Consultants) As per 4.4 Bid Data	Technical: 1. 2. 3.

	Managerial:
	1.
	2.
Register under the public	(Attached copy of certificate of registration)
contract Act No.03 of 1987	
Other information requested	
under ITB Clause 5.2	

- Audited financial statement of the last three years certified by a qualified Auditor and bank facilities should be submitted along with the Tender.
- The Tenderer shall submit documentary evidences as to his current working capital, which should not be less than 30% of the total amount tendered by him. In the event the said working capital is less than 30% the documentary evidence as to the bank overdraft facilities should be submitted by the tenderer with a letter issued by the bank to be addressed to the Vice –Chancellor, Uva Wellassa University, Badulla indicating that the said overdraft facility is specifically for this job.

Signature of the Contractor
Name & Address:
Date

## **SECTION 5**

\* BIDDING DATA & CONTRACT DATA

#### G. Bidding Data

## **Instructions to Bidders Clause Reference**

(1.1) The Employer is

Name: Vice Chancellor Address: The Vice-Chancellor

Uva Wellassa University

Badulla

The Works consists of: Alternative Water Supply System

(1.2) Intended Completion Date is 270 Days from the Start Date.

(1.3) The office for collection of bid forms is

"Senior Assistant Registrar Capital Works Division Uva Wellassa University

Badulla"

The non-refundable fee is Rupees **8,700.00**The Bid forms will be issued from **1st February 2021** *up to* **22**<sup>nd</sup> *February* **2021** *from* **09.00** *hrs. to* **15.00** *hrs.* 

(2.1) The source of funds is GOSL

(4.2) The registration required

Specialty: Building Construction

Grade: C4 & C5 Only

- (4.3) The following information shall be provided in Section 4:
  - \* ICTAD Registration;

Registration number

Grade

Specialty

**Expiry Date** 

- \* VAT Registration number
- \* Construction Program
- \* Legal Status (Sole proprietor, Partnership, Company etc.)
- \* Total monetary value of construction work performed for each of the last five years;
- \* Experience as prime contractor in last 5 years;
- \* Major items of construction equipment proposed to carry out the Contract;
- \* Qualifications and experience of key site management and technical personnel proposed for the Contract;
- \* any other.

(4.4)

- \* Average of the annual volume of construction work performed in the last three years shall be at least **Rs. 50 million** 
  - \* Experience of construction a similar complexity work not less than **Rs. 30 million** in last **3** years (Excluding 2020)
  - \* Proposals for the timely acquisition (own, lease, hire, etc.) of the essential equipment listed in the Bidding Data clause 4.3;
  - \* Following technical and managerial Staff:
  - (a) Technical officer I Civil (Full time at site) NCT or equivalent with minimum 5 years' experience.
  - (b) Project Manager Civil (Part time) Chartered Civil Engineer with 3 years post qualifying experience as Contract Manager.

\*The minimum amount of liquid assets and/or credit facilities net of other contractual commitments and exclusive of any advance payments which may be made under the contract shall be not less 30% of Tender Sum.

(9.1) Employer's address for the purpose of clarification is;

Address: Engineer Projects

**Uva Wellassa University** 

**Badulla** 

Tel No: 055-3050847

Fax: 055-2226633

E-mail: capitalworks@uwu.ac.lk

(11.1) The language of the bidding document shall be English

- (13.3) VAT component shall not be included in the rates. The amount written in the Form of Bid shall be without VAT.
- (13.4) The Contract is subjected to price adjustment in accordance with Clause 47 of the Conditions of Contract.
- (15.1) The Bid shall be valid up to 91 days from submission of Bid.
- (16.1) Bid shall include a Bid Security using the form included in Section 9.
- (16.2) Bid Security shall be:
  - for an amount **Rs. 332,600.00 (Address** to the Vice Chancellor, Uva Wellasa University, Badulla)
  - Valid until 119 days (Date: 22<sup>nd</sup> June 2021)
  - Issued by Bank operated in Sri Lanka approved by the Central Bank of Sri Lanka for acceptance of guaranties using the form for bid security (unconditional guarantee) included in Section 9, Standard Forms.
- (17.0) Pre-Bid meeting at Mini Boardroom- Senate Building of Uva Wellassa University on 15<sup>th</sup> February 2021 at 10.30 hrs

(19.2) a The Employer's address for the purpose of Bid submission is Chairman, Procurement Committee, Uva Wellassa University, Passara Road, Badulla.

(19.2) b Contract name:. **Development of Infrastructure** 

Facilities of the Uva Wellassa

**University -Phase II- Alternative** 

Water Supply System

## Contract no: UWU/CW/Phase II B/NCB/Alternative Water Supply

The deadline for submission of Bids shall be 14.00 **hrs on 23**<sup>rd</sup> **February 2021** 

(34.0) The amount of Performance Security is 5% of the Initial Contract Price.

(36.0) The Adjudicator shall be appointed by the consent of both parties.

"The Adjudicator proposed by the Employer is Construction Industry & Development Authority (CIDA)

Fees and types of reimbursable expenses to be paid to the Adjudicator shall be on a case to case basis and shall be shared by the Contractor and the Employer. 50% by the employer & 50% by the contractor.

## **Contract Data**

(Please note that the Clause nos. given hereunder are that of Conditions of Contract)

(1.1)	The Employer is	
	Name:	Vice Chancellor.
	Address:	The Vice-Chancellor
		Uva Wellassa University
		Badulla
	Name of A	Authorized Representative: <b>Registrar, Uva Wellasa University, Badulla</b>
(1.1)	The Engin	eer is General Manager
	Address:	Central Engineering Consutultancy Bureau
		No:415, Bauddhaloka Mawatha,
		Colombo-07
	Name of E	ingineer's Representative :
	Additiona	l General Manager (Central Province).
(1.1)		s consists of Proposed Alternative Water Supply r Uva Wellassa University– Badulla.
	The Site is	located at, <b>Uva Wellassa University</b> .
(1.1)	The Start I	Date shall be <b>14 Days</b> from the Letter of Acceptance.
(2.3)	The follow	ring documents also form part of the Contract:
	1. Day wo	rks Schedule 1 - Labour
		rks Schedule 2 - Materials orks Schedule 3 - Plant
(8.1)	Schedule o	of other contractors: None

(9.1) Schedule of Key Personnel:

Minimum persons with qualifications and experience to be defined,

**Technical** 

- (a) Technical officer I Civil (Full time at site) NCT or equivalent with minimum 5 years' experience.
- (b) Project Manager Civil (Part time) Chartered Civil Engineer with 3 years post qualifying experience as Contract Manager.

Attendance certified by the Engineers' Representative shall be attached to Interim Claims. If the Contractor fails to employ such personnel, the above-mentioned payment in respect of each person shall be deducted from payment due to the Contractor. And also, the work shall be suspended till the required staff is employed.

(13.1) The minimum insurance covers shall be:

- (a) The minimum cover for insurance of the Works and of Plant and Materials is 110% of initial Contract Price
  - The maximum deductible for insurance of the Works and of Plant and Materials is 5% of initial Contract Price
- (b) The minimum cover for loss or damage to Equipment is **5% of initial contract price.** 
  - The maximum deductible for insurance of Equipment is Nil
- (c) The minimum cover for insurance of other property (other than the Site) is **Rs. 1,000,000.00**
- (d) The minimum cover for personal injury or death,
  - for third party and employees of the Employer and other persons engaged by the Employer in the Works is Rs. 1,000,000.00 per event
- (a) The minimum cover for personal injury or death,
  - for the Contractor's workmen is **Rs. 1,000,000.00** per event
  - Contractor's employees other than workmen is Rs. 1,000,000.00 per event
- (17.1) The Intended Completion Date for the whole of Works shall be 270 days from Order of Commence

(21.1)	The Site Possession Date shall be 14 Days from Letter of Acceptance
(27.1)	The Contractor shall submit a detailed construction program for the Works within <b>7 Days</b> of delivery of the Letter of Acceptance.
(27.3)	The period between Program update is Monthly
(27.4)	The amount to be withheld for late submission of a Detailed Construction Program is <b>2</b> % <b>of Initial Contract Price</b>
(35.1)	The Defects Liability Period is 365 Days.
(39.2)	Engineer may order variations up to a total cumulative bill value including variation not exceeding 110% of initial contract sum (With written consent of Employer)
(40.2)	In fixing the appropriate new rates, mark up for overheads & profits shall be limited to maximum of 20% of the "Basic Cost" of such items. The Basic cost means cost of materials, labour and equipments.  In fixing such "Basic cost" the Engineer shall use the rates for labour as given in day works schedule 1 and prices for materials and equipments shall be used the prevailing market prices."
(47.1)	The Contract Price is subjected to price adjustment
(48.1)	The retention from each payment shall be 10% of the certified work done.
	The limit of retention shall be 5% of the Initial Contract Price.
(49.1)	The liquidated damages for the whole of the Works shall be <b>0.05</b> % <b>of initial contract price per Day.</b>
(50.1)	The maximum amount of liquidated damages for the whole of the Works shall be 10 $\%$ of the Initial Contract Price
(52.1)	The Performance Security shall be 5 % of the Initial Contract Price.
(58.1)	Schedule of operating and maintenance manuals shall be submitted during handing over the Work.
(60.1)	The percentage to apply to the value of the work not completed, representing the Employer's additional cost for completing the Works, is <b>25</b> % <b>of Initial Contract Price.</b>

## **SECTION 6**

**❖** SPECIFICATIONS

#### **SPECIFICATIONS**

For drafting specifications, the Employers are advised to use the following standard specifications published by ICTAD.

• SCA/4 - Building Works (Vol.I)

• SCA/4/II - Building Works (Vol.II)

• SCA/3/2 - Water Supply Sewerage and Storm Water

• SCA/8 - Electrical and Mechanical Works

#### **SPECIFICATIONS FOR GENERAL REQUIREMENTS & CIVIL WORKS**

#### 1.0 GENERAL

This specification shall be read in conjunction with the other documents, which form the Contract Agreement for the Works. Notwithstanding the subdivision of the specification under different headings each and every part of it shall be deemed supplementary to and complementary every other part thereof.

All materials and workmanship shall be in accordance with the appropriate current Sri Lankan Standards or where such standards are not available the relevant British Standards shall be applicable. Where such standards are in conflict with this specification the interpretation in accordance to this specification shall prevail.

#### 1.1 Equivalency of Standards and Codes

Wherever reference is made in the Contract to specific standards and codes to be met by the goods and materials to be furnished, and work performed or tested, the provisions of the latest current edition or revision of the relevant standards and codes in effect shall apply, unless otherwise expressly stated in the Contract. Where such standards and codes are national, or relate to a particular country or region, other authoritative standards that ensure a substantially equal or higher quality than the standards and codes specified will be accepted subject to the Engineer's prior review and written consent. Differences between the standards specified and the proposed alternative standards shall be fully described in writing by the Contractor and submitted to the Engineer at least 14 days prior to the date when the Contractor desires the Engineer's consent. In the event the Engineer determines that such proposed deviations do not ensure substantially equal or higher quality, the Contractor shall comply with the standards specified in the documents.

#### 1.2 Definitions

In this specification the terms 'approved', 'approval' and 'required' mean 'approved by the Engineer', 'approval of the Engineer' and 'required by the Engineer' respectively.

#### 1.3 Scope of Work

The works to be executed under this Contract comprise the following.

- (a) The provision at site of all necessary labour, materials plant & equipment, tools instruments etc. together with personnel of all types of skills for the mobilization execution with supervision demobilization and removal of plant tools etc. and other resources provided by the Contractor there from.
- (b) The execution of all necessary surveys for the setting out of building and for required completion of works.
- (c) The maintenance of proper site records, preparation and submission of calculations. Drawings progress reports etc. to the Engineer as required under this Contract Agreement.
- (d) Complete the construction works including all temporary works in accordance to the requirements under this Contract Agreement and as required by the Engineer.
- (e) The testing of required tests in accordance to the specifications therein and as directed by the Engineer.
- (f) All other works associated with the above for the completion of the Works as specified in contract.

#### 1.4 Site Security

The Contractor shall provide all necessary fencing, hoardings, watching and lighting for the security of site and safeguarding the Works. The shelters, guard house and other facilities to be provided for the watchmen to do their duty in an efficient manner. Altering, shifting and adapting same from time to time shall also be the responsibilities of the Contractor. All costs in connection with this shall be borne by the Contractor.

#### 1.5 Advertisement

The Contractor shall allow no advertisement to be placed on any hoarding, scaffolding or fencing erected in connection with the Works without the permission of the Engineer.

#### 1.6 Temporary Works

The Contractor shall submit to the Engineer details, particulars, drawings etc., of all temporary works necessary for the Works for latter's information. The Engineer reserves the right to call for technical justification of the Contractor's proposals and to order any necessary modifications. But the Contractor shall be solely responsible for the stability and safety of all temporary works and for the quality of the permanent works resulting from the Temporary Works eventually adopted.

#### 1.7 Temporary Services

The Contractor shall provide and maintain temporary services necessary for the execution of the Works under the Contract shall make applications and install such services in accordance with the regulations and requirements of the relevant authorities.

The Contractor shall be responsible for all costs and charges in connection with the installation, alteration, shifting, adopting use and maintenance of such services. On completion of the Works, the Contractor shall disconnect such service, which are no longer required by him and or the Employer and clear away all traces.

#### (a) Power

The Contractor shall apply and pay for the required power and install temporary electrical installation for the Works, Site Office, Engineer's and Consultants Offices, Stores, Labour Huts, Yards and Site lighting and testing for mechanical and electrical services done by others.

A stand-by generator, with adequate capacity should be made available by the Contractor at the site for use in an emergency, if any intention to work during night time and or during power failures. The cost of supplying, installing, running and maintaining of the stand-by generator shall be borne by the Contractor.

#### (b) Water

The Contractor shall apply and pay for the continuation of temporary water supply connection to the site and construct storage tanks with adequate capacity, together with the necessary internal temporary PVC distribution system including an overhead tank at an adequate elevation, water pumps as may be required and providing taps, valves, etc. in order to provide water for the Works, for drinking purposes, and also for washing, bathing and sanitary facilities required by the Contractor's workmen, the Employer, the Engineer's staff.

Water Bowsers with adequate capacity should be made available in order to bring water to the site from outside and to pump into the storage tanks in an emergency and/or during water cuts and all costs in connection therewith shall be borne by the Contractor.

#### 1.8 Equipment

If Engineer needs to set the Telephone calls, Photocopies & Printing of Documents related to contract. The contractor shall provide such services cost should be borne by the contractor.

#### 1.9 Flammable stores

All petroleum, explosives and flammable materials shall be stored in fireproof buildings and such precautions taken with regard to sitting and fire risks as the Engineer may direct. The Contractor shall make all arrangements with the licensing authority for the necessary license.

#### 1.10 Safety on Site

Safety precautions throughout the construction operations shall comply with all relevant state statute, ordinance, decree, or other law or decree or any regulation or byelaw of any local or duly constituted authority applicable within the country at that time.

The Contractor shall provide and maintain the following safety measures in accordance with the regulations and requirements stipulated by the relevant Statutory Authorities.

- i. Safe working conditions
- ii. Safe means of access and exit
- iii. Safety systems for Plant, Machinery and Equipment

- iv. Appropriate safety equipment required at the site and yards such as Helmets, Gum Boots, gloves, eye protectors, Masks, Welding Masks, Safety Belts, etc. to the workmen and others engaged in the Works.
- v. Safety nets, safety canopies, safety signs, handrails, guardrails, platforms and other measures ensuring safety of workmen and others engaged in the Works.
- vi. Training, instructions, information and supervision as may be required to enable employees to avoid any potential dangers and hazards.
- vii. All measures ensuring the health and workmen including satisfactory welfare facilities, working conditions and environment.

Safety signs should be in the Sinhala, Tamil and English languages.

#### 1.11 Sources of supply

The Contractor shall have obtained from the Engineer approval of sources of supply of his materials and shall not change his sources without prior approval.

All material that shall be rejected shall be promptly removed from site.

#### 1.12 Soil Conditions

#### 1.12.1 Unexpected ground conditions

The Contractor shall report immediately to the Engineer any circumstance, which indicates that in the Contractor's opinion the ground conditions differ from those expected by him from his interpretation of the site investigation reports.

#### 1.13 Setting out

All the dimensions given in the drawings should be checked at the site by the Contractor prior to commencing all work. In the event of any discrepancies the Contractor shall inform the Engineer and request well in advance and prior to commencing work. Setting out shall be carried out from the main grid lines of the proposed structure. The Contractor shall employ a suitable responsible officer for site setting out works in accordance with the drawings.

The Contractor shall set out and check all column centers and floor levels and carry out such other surveys as may be necessary to establish accurately the placing of forms and all other basic structural works and setting out in both vertical and longitudinal directions. All survey marks and pegs shall be clearly identifiable with accurate records kept onsite by the Contractor that must be related to Bench Marks. In this regard Contractor must maintain accurate survey instruments at the sites at all times for any checking of level that the Engineer or his representative may desire.

# **SECTION 7**

**❖** BILL OF QUANTITIES

#### PREAMBLE TO THE BILL OF QUANTITIES

1. This Bill of Quantities is prepared in accordance with the standard specifications given in Section-6 and shall be read in conjunction with all documents, which comprise the contract.

2. The cost of complying with all conditions, obligation and liabilities described in the Conditions of Contract, Specifications and the Bill of Quantities including all overhead charges and profit in carrying out the work as shown on the Drawings shall be deemed to be spread over and included in the prices of sums stated by the Bidder in the bill of Quantities unless separately measured.

3. If the bidder fails to price any item in the Bill of Quantities then the cost of the work under such item shall be held to be spread over and included in the prices given against other items of work.

4. The quantities set out in the Bill of Quantities are provisional and cover the approximate scope of the work anticipated to be performed by the Contractor .The actual quantities will be determined by the Engineer by measurement of the work completed by the Contractor.

5. The following abbreviations are used in the Bill of Quantities.

L.S. - Lump Sum

P.S. - Provisional Sum

m - Metre

m<sup>2</sup> - Square metre

kg - kilogram

No - Numbers

Rs. Cts. - Sri Lankan Rupees and Cents

m<sup>3</sup> - Cubic metre

ton - Metric ton

- 6. When trade names, brands and or Catalogue numbers are referred to, sole preference to any material or equipment is not intended. Any other material or equipment may be used, provided that the characteristics of type, quality, appearance, finish, method of construction and/or performance is superior than specified.
- 7. Whenever the method of measurement is not clear from the discount available, the principles as given in the Sri Lanka Standard 573, Method of Measurements Building Works shall be applicable.

#### **GENERAL**

It is the tenderer's responsibility to see that the prices include for complying with all the requirements of the other documents whether specifically referred to in Bill of Quantities.

The Tenderer is advised to visit the site of the proposed work and it is the responsibility of the Tenderer to ascertain the conditions governing access to the site, the extent of working space storage area etc.

The rate for each item shall also include for all the following.

- 1. Labour and all connected cost.
- 2. Materials and goods including all connected cost.
- Complying with regulations of the Municipal Council and/or any other relevant authority under which particular item of work is to be executed unless otherwise included in the preliminaries.
- 4. Plant and equipment unless and otherwise included in preliminaries.
- 5. Protecting and clearing.
- 6. In addition to above, the rate for item of work in substructure shall include for the works at depth extending below ground water table where applicable including excavation under water, removal and disposal of mud, stand and preparation of place to a condition suitable for proper execution of the work.

7. Establishment charges and overheads (not included in preliminaries or anywhere in the Bill of Quantities) and Profits.

#### **EXCAVATION**

All works under this section are measured net and no working space is allowed. Rates shall include for;

- a) Levelling bottom of trenches and sides plumbs.
- b) Back filling with selected excavated material and consolidating.
- c) Planking and strutting if required.
- d) Disposal of surplus soil and keeping all excavation free from water.
- e) Existing ground levels shown in the drawings have been taken at the surface of the ground, with no particular differentiation to indicate buried foundations, paving etc.

#### **CONCRETE**

Unless otherwise specified all concrete in Slabs, Beams & Walls shall be Grade-C25 Ready mixed concrete.

Unless otherwise specified all concrete shall be Grade-C25. All concrete shall be dense with a vibrator. All concrete shall be so cast as to receive only that finishing on its exposed surfaces as specified in the respective item, Unless otherwise specified in the items all formwork and reinforced measured separately.

Rates for concrete work shall include for:-

- 1. Mixing as per specification, depositing, handling, hoisting and placing at any height or depth.
- 2. Packing and tampering around steel reinforcement including vibrating.
- 3. Contractor's designed kickers, construction joints and sealants.
- 4. Curing and making good after removing formwork etc.

#### Formwork

Rate shall include for:-

All necessary boarding, supporting, erecting, framing, cutting angles, skirting or removal, cleaning, wetting and treating before placing concrete.

Formwork is measured as the net contact surface measurement between concrete and formwork plywood or other type of shuttering to produce fair faced concrete finish. Formwork including class II timber joints and necessary props (Rates to include for removal)

#### Reinforcements

Rate shall include for:

Cutting, bending, fabricating placing in position, holding and supporting including temporary fixing supports hangers space bars, cover blocks, chairs, laps, binding wires and waste.

High yield steel and mild steel bars use for construction.

Reinforcements as per B.S. 4449 or 4461 having minimum characteristic strength of 460N/mm<sup>2</sup> for high yield steel & 250 N/mm<sup>2</sup> for mild steel.

#### **MASONRY WORK**

Rates to include for joggles, craps, dowels, ties, templates, rough and fair cutting, forming splays, angles, reveals, & pointing, including hoisting not exceeding 6m above ground level.

#### **BRICKWORK**

Brick should be of superior quality subject to minimum strength 4.8 N/mm<sup>2</sup> and blocks should be 2.8 N/mm<sup>2</sup> approved by the Engineer.

Rate to include for all rough and fair cutting, plumbing angles, forming, rebated reveals, rough arches raking out joints for painting, plastering etc. cutting chases, making good and sundry items of that nature.

#### **ROOFING**

Rate shall include for

All shops fabrications hoisting and fixing complete with Screws, clips etc;

All straight and square cutting waste.

The sheet shall be free from visible defects which may impair the appearance of serviceability. The sheets shall be of uniform texture, smooth on one side, rectangular in shape and all edges shall be neatly cut, formed and trimmed. The corrugation shall be true and regular.

#### Structural Steel Work

Rate shall include for;

All shop fabrication work, including cutting, drilling bolting, reverting, welding, grinding, delivering, unloading, hoisting, erecting and fixing.

Structural Steel strength should be PY 275 N/mm<sup>2</sup>.

#### **JOINERY**

Sizes of all timber given are finished sizes.

All timber shall be well seasoned and treated against insect and termite attack.

Timber used for joinery works shall be well seasoned well treated and in one species of special class timber recommended for the particular class of joinery works as specified in the specification.

#### Rates for joinery

Any type of cutting required, sawing notching, drilling, trimming, planning, forming and jointing and the like, fixing in position, completion with nails, spikes, plugs, screws and gluing and priming to joints and ends.

Painting rebates of frames before fixing of glass

Rate to include for heavy quality door lock, hinges & all other accessories.

#### **PLASTERING**

Rate shall include for all temporary rules screed, ground etc. for raking out joints of new brick work or backing new concrete for key internal and coved angles, joints between

new and old plastering arises inter sections between curved or irregular surface etc,. and all making good around pipes sanitary fittings and similar fixtures.

Rates for ceiling lining shall include for the following

- Working to sides and soffits of attached or isolated beams and soffit of staircases.
- ii. Straight, raking & circular cutting.

#### **PAVING**

#### Rate shall include for:

All temporary rules, screeds, grounds etc. all normal cutting arises, rounded angles and edges and the like, bedding and pointing making good between difference surfaces and between new and old work, making good around pipes, sanitary fittings, and other fixtures cleaning and protecting upon completion.

#### Wall tile finishing

(a) Glazed wall tiles 200mmx300mm of approved colour and quality laid to internal wall in toilets set in 12mm thick cement and sand 1:3 backing with neat cement floating and joint pointed with coloured grout to match tile neatly as directed.

#### Floor tile finishing

(a) Ceramic non-skid 200x200mm & 300x300mm homogeneous floor tiles of approved colour and quality laid on 12mm thick cement and sand 1:3 bedding with neat cement floating and joint pointed with coloured grout to match tiles neatly as directed.

#### **ALUMINIUM WORKS**

Rate shall include for

All Aluminium sections shall be Natural aluminium alloy sections with anodizing thickness not less than 10 -15 Microns

Glazing shall have 5mm thick clear float glass for windows & 6mm thick clear glass for doors.

Frame and/or sash sections shall be of 6063-T5 aluminium alloy having a nominal thickness of  $1.575 \text{mm} \pm 0.15 \text{mm}$ 

In glazed paneled partitions top panel shall be 6mm clear glass and bottom panel shall be PVC coated laminated plywood board (750mm height)

#### **PAINTING**

Rate shall include for:

Preparation of surfaces cleaning down, smoothing, knotting, stopping etc. protection of floors and fittings removing and replacing doors and windows furniture and cleaning, windows etc upon completion.

#### **Steel Works**

All galvanized steel works painting shall be one coat of etching primer and two coats of enamel paint.

#### **PLUMBER**

Rate for all pipes shall include for screws, nails, pipe brackets, jointing materials etc. and all hole chasing in the walls and making good in all trades and all necessary excavation and back filling unless otherwise specified separately in the Bill of Quantities.

Any special water supply and drainage fittings such as Bends, tees, sockets, reducers etc. unless otherwise specified separately in the Bill of Quantities shall be deemed to have been included in the relevant items and should accordingly be rated to include for such special etc. and for any minor extra works involved in the completion of such items. All "U" P.V.C. pipe for water supply should be of type 1000 and all waste water (drainage) and Sewerage pipes should be of Type 600.

Rate for all pipes shall include for pressure testing as specified and pipe work should not be covered up before pressure testing.

#### Ceramic Fittings and Accessories

Unless otherwise specified, all fittings should be approved quality.

All fittings should be "white" colour unless otherwise specified.

Fittings such as taps, waste water outlet, flushing cistern, internal overflows and the like and supporting brackets, incidental materials for fixing.

Assembling, jointing together fixing components parts and jointing to pipes including necessary coupling and for leaving perfectly clean undamaged and in perfect working order as on completion.

#### **ELECTRICAL INSTALLATION**

Rates in Bill of Quantities shall include all necessary materials Cables, conduits, PVC sunk box, bulbs, switches etc. and labour required to complete the electrical installation to good working order.

Except where specifically stated, all costs associated with provision of all holes, opening, chases, ducts and other builders' work required for installation and make them good, shall be included in the rates.

Where reference is made to certain manufacturers' products and items identified by registered trademarks, this has been done for the sole purpose of defining and establishing standards of quality and performance and not with the intention of restricting the procurement of material or fitting to a particular manufacturer.

Testing and commissioning of the electrical installation is to be carried out by the contractor and inspection report submitted according to the requirements of the power supply Authority. Cost of such testing and report to be included in the rates, as built electrical drawing to be submitted.

All type of fittings, materials, painting and finishes shall be approved by the Engineer prior To installation.

Electrical items (MCB,RCCB,RCBO etc) without an accredited agent in Sri Lanka shall not be accepted and guarantee cards (only for Fans) should be provided from Accredited agent when necessary.

#### **QUALITY OF MATERIALS & GENERAL STANDARD OF WORK**

All materials used in the work, shall be the best quality of their respective kinds as specified in this Particular Specification or in the standard ICTAD specifications, shall be obtained from services and suppliers approved by the Engineer and shall comply strictly with the test prescribed herein or in the standard ICTAD specification. When such specifications or tests are not laid down in the said specifications, these shall comply with the latest issue of the relevant British Standards or other Standards approved by the Engineer.

Where trade names, brands and/or catalogue numbers are referred to, sole preference for any manufacturer is not intended. Similar items may be used provided they are equivalent and provided the characteristics of type, quality, appearance, finish, method of construction and/or performance are not less than specified and provided also that the approval is first obtained from the Engineer.

Unless otherwise stated, the cost of all tests required by this specification or the relevant British or other approved Standards shall be deemed to be included in the contract sum and rates.

Test Certificates covering all materials for which Certificates are required and are supplied for the Works shall be submitted to the Engineer for approval.

No materials shall be used in the Works unless they have first been approved by the Engineer.

No approval by the Engineer of materials inspected by him or acceptance by the Engineer of Certificates of Tests in lieu of inspection shall vitiate the right of the Engineer to reject after delivery to site or incorporation in the works, material found to be unsuitable or not in accordance with this specification.

# BILL OF QUANTITIES FOR DEVELOPMENT OF INFRASTRUCTURE FACILITIES OF THE UVA WELLASSA UNIVERSITY- PHASE II ALTERNATIVE WATER SUPPLY SYSTEM

### **DAY WORKS SCHEDULES**

# DAY WORKS SCHEDULE SCHEDULE 1-LABOUR

Any labour engaged on Day work shall be paid at the rates given below. Day work rates quoted below shall also cover all the expenses of the contractor and particularly his supervision, repairing and maintaining the tools necessary to each class of workman. Contractor's profit and overheads should not be included in the rates.

Category	Gross Daily Wages	
	Rs	Cts
1. Special Skilled Labour (Plumber,		
Electrician, Welder, tileretc)		
2. Skilled labour	• • • • • • • • • • • • •	
3. Semi skilled labour		
4. Unskilled labour		

Add: Overhead & Profits ........... % to above

# DAY WORKS SCHEDULE SCHEDULE 2- MATERIALS

The

	Material Description	Unit	Basic Price
			Rs. Cts.
1	Cement	1 Bag (50kg)	
2	Reinforcement		
	Mild steel	ton	
	High Yield Steel	ton	
3	Metal		
	20 mm	Cum	
	40 mm	Cum	
4	Bricks	1000 Nos.	
5	Rubble (150mm-225mm)	Cum	
6	Sand	Cum	

Bidder shall give in this schedule the basic price of the following materials

Add: Overhead & Profits ...... % to above

# DAY WORKS SCHEDULE <u>SCHEDULE 3 - PLANT</u>

Any Plant engaged on Day works shall be paid at the rates given below. The rates are for wet hire. These rates shall include for all inputs for running of the plant, transport to site, operators, attendants, insurance and other overheads associated with such plant.

	Description of Plant	Hourly Rate
		Rs. Cts.
1	Farm Tractor with Trailer	
2	Backhoe Loader	
3	Excavator (0.5 m <sup>3</sup> )	
4	Concrete Mixer (10/7 Cu. ft.)	
5	Poker Vibrator including Prime Mover	
6	Lorry/Tipper (10 Ton )	
7	Welding Plant	

Add: Overhead & Profits ......... % to above

## **SECTION - 8**

\* DRAWINGS

# List Drawing

Description	DRG NO
Layout Plan	C662.WS/CSD/PL-01
Water Sump Concrete Out Line Detail	C662.WS/CSD/PL-02
Water Sump R/F Detail	C662.WS/CSD/PL-03
Water Sump R/F Detail	C662.WS/CSD/PL-04
Pipe Connection detail	C662.WS/CSD/PL-05
Section B-B R/F Detail	C662.WS/CSD/PL-06
Water Well Improvement	C662.WS /WI/01

# SECTION - 9

❖ STANDARD FORMS (BID)

#### 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: The Vice Chancellor, Uva Wellassa University, Badulla
Date: [insert (by issuing agency) date]
BID GUARANTEE No.: [insert (by issuing agency) number]
We have been informed that
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"); or
- (c) having been notified of the acceptance of its Bid by the Employer 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.
[signature(s) of authorized representative(s)]

## **CHECK LIST FOR BIDDERS**

### **CHECK LIST FOR BIDDERS**

Bidders are advised to fill the following table.

ITEM	ITB	YES	REFERENCE
	Clause	(tick)	
Form of Bid			
Addressed to the <b>Employer?</b>	18		
Completed?	18		
Signed?	18		
Bid Securing Declaration Form (if required)			
Properly filled and signed	16		
Bid Security (if required)			
Address to the Employer?	16		
Format as required?	16		
Issuing Agency as specified?	16		
Amount as requested?	16		
Validity <b>28 days beyond</b> the validity of Bid?	16		
Qualification Information			
All relevant information completed?	4		
Signed?	4		
Addendum			
Contents of the addendum (if any) taken in	10		
to account?			
Bid package			
All the documents given in ITB Clause 12	12		
enclosed in the original and copy?			
ITB Clause 19 followed before sealing the	19		
Bid package?			