

BIDDING DOCUMENT

For

Procurement of EPC Contract

For

**Construction of Inter-modal IWT Terminal at Kalughat,
Bihar**

VOLUME-3

BILL OF QUANTITIES

NCB No: CANW-1/IWAI/JMV/

**Employer: Inland Waterways Authority of India, Ministry of Shipping,
Government of India**

Country: India

December, 2020

TABLE OF CONTENTS

1	SCHEDULE OF PRICES	1
1.1	PREAMBLE	1
1.1.1	General	1
1.2	CURRENCY.....	2
1.3	BILL NO. 1.....	3
1.3.1	Engineering, Procurement of Materials and Construction of Site Grading.....	3
1.4	BILL NO. 2.....	4
1.4.1	Engineering, Procurement of Materials and Construction of Berthing Structures and Appurtenances	4
1.5	BILL NO. 3.....	5
1.5.1	Engineering, Procurement of Materials and Construction of Bank Protection Works	5
1.6	BILL NO. 4.....	6
1.6.1	Engineering, Procurement of Materials and Construction of Stockyard Development.....	6
1.7	BILL NO. 5.....	7
1.7.1	Engineering, Procurement of Materials and Construction of Buildings with Rain Water Harvesting System	7
1.8	BILL NO. 6.....	8
1.8.1	Engineering, Procurement of Materials & Construction of Internal Roads and Vehicle Parking Area	8
1.9	BILL NO. 7.....	9
1.9.1	Engineering, Procurement of Materials & Construction of Water Supply Works.....	9
1.10	BILL NO. 8.....	10
1.10.1	Engineering, Procurement of Materials & Construction of Storm Water Drainage Works	10
1.11	BILL NO. 9.....	11
1.11.1	Engineering, Procurement of Materials & Construction of Sewerage System & Waste Collection Centre	11
1.12	BILL NO. 10.....	12
1.12.1	Engineering, Procurement of Materials & Construction of Gate House Complex and Boundary Wall with Fencing	12
1.13	BILL NO. 11.....	13
1.13.1	Engineering, Procurement of Materials & Construction of Electrical Works.....	13
1.14	BILL NO. 12.....	14
1.14.1	Engineering, Procurement of Materials & Construction of Fire Fighting System	14
1.15	BILL NO. 13.....	15
1.15.1	Engineering, Procurement of Materials & Construction of Communication and IT System.....	15
1.16	BILL NO. 14.....	16
1.16.1	Engineering, Design, Procurement of Materials, Manufacturing, Supply, Erection, Construction/Installation, Commissioning & Performance Testing of Road Weigh Bridge	16
1.17	BILL NO. 15.....	17
1.17.1	Environmental Management Plan (EMP)	17
1.18	BILL NO. 16.....	20
1.18.1	Model Studies.....	20

RFP No:NCB No: CANW-1/IWAI/JMV/

Tender ID:

Assignment title: Construction of IWT Inter-modal Terminal at Kalughat, Bihar

1.19	BILL NO. 17.....	21
1.19.1	Duties and Taxes.....	21
1.20	GRAND SUMMARY.....	22
1.21	SCHEDULE A.....	23
1.21.1	Items of Work*.....	23
1.22	SCHEDULE B.....	24
1.22.1	Format of Monthly RA Bill*.....	24

1 SCHEDULE OF PRICES

1.1 PREAMBLE

1.1.1 General

The following shall be read in conjunction with the Conditions of Contract, Authority's Requirements, Scope of Work, Specifications and drawings for Construction of Intermodal IWT Terminal at Kalughat including Material and Workmanship. All Lump Sum prices and units quoted in the Schedule of Prices shall include the following instructions where applicable.

- a) This is an EPC Fixed Price Lump sum Contract.
- b) The Schedule of Prices as quoted in Bills shall be the fixed contract price. However the Contractor is required to furnish **Schedule A** – Items of Work also containing the components of work, their quantities and the unit rate. This schedule will be used only for the purpose of making interim payments. Interim measurements of the work will be made and the Contractor will be paid based on the actual quantities of work executed. The total of such interim payments will be limited to the lump sum price quoted under Bills. - Format of monthly bill is enclosed as **Schedule B** for the information of the Contractor and the same format shall be used by the Contractor during execution of the project.
- c) It shall be clearly understood that there shall not be any claim whatsoever by the Contractor on the ground that there are inadequate items of work (work based on quantity and work based on specified items) provided in the Schedule of Prices for pricing by the Contractor.
- d) The whole cost of complying with the provisions of the Tender document shall be included in the items provided in the priced Schedule of Prices and where no items are provided, the cost shall be deemed to be distributed among the rates and prices entered for the available items of work. The price quoted shall include all costs up to successful completion of Defects Liability Obligations by the Contractor.
- e) The rates and prices tendered by the Contractor in the Schedule of Prices shall, except in so far as it is otherwise provided under the Contract, including but not limited to all Contractor's equipment, labor, supervision, materials, plant, wastage, fuel, erection, maintenance, insurance, profit, overheads, together with all general risks, liabilities and obligations set out or implied in the Tender document including all Taxes (including Goods and Service Tax) , Duties, Fees, Royalty and other statutory deductions.
- f) General requirements, directions and descriptions of work and materials, given in the Specifications or Drawings or Conditions of Tender / Contract are not necessarily repeated nor summarized in the Schedule of Prices. Contractor is specifically advised to check and include any other item required for completeness of the total work as per the scope of work and specification and satisfactory performance of the total system.

1.2 CURRENCY

All monetary reference in the Price Schedule shall be made only in the currencies quoted and agreed as per the Tender document. Summary of Currencies of Tender for the Whole of Works that is to be included in the Commercial Bid shall be as given below.

	A	B	C	D
Name of Currency	Amount of Currency	Rate of Exchange (Local Currency per unit of foreign (US \$))	Local Currency equivalent $C = A \times B$	Percentage of Tender Price $100 \times C \div$ Tender Price
Local currency Indian Rupees		1.00		
Foreign Currency (US \$)				
Total			[Tender Price]	100.00

Dated this Day of 2018

Signature in the capacity of

Duly authorised to sign Tenders for and on behalf of

.....

(IN BLOCK LETTERS)

Address Witness

.....

..... Occupation

1.3 BILL NO. 1**1.3.1 Engineering, Procurement of Materials and Construction of Site Grading**

S. No.	Description	Qty.	Unit	Amount
1.1	Site Grading Site grading including mobilisation & demobilisation and ready to use as per approved designs, drawings and specifications including testing, inspection and defect rectifications, complete in all respects.	LS	LS	
1.2	Design Fee	LS	LS	
	TOTAL OF BILL NO. 1: SITE GRADING CARRIED OVER TO GRAND SUMMARY			

Total Amount in Words.....

Datedday of2018

Signature of Bidder

1.4 BILL NO. 2**1.4.1 Engineering, Procurement of Materials and Construction of Berthing Structures and Appurtenances**

S. No.	Description	Qty.	Unit	Amount
2.1	Berth Berth including mobilisation & demobilisation and ready to use as per approved designs, drawings and specifications including testing, inspection, commissioning and defect rectifications, complete in all respects.	LS	LS	
2.2	Approach Trestles Approach trestles including mobilisation & demobilisation and ready to use as per approved designs, drawings and specifications including testing, inspection, commissioning and defect rectifications, complete in all respects.	LS	LS	
2.3	Berth Appurtenances	LS	LS	
(a)	Supply and Installation of 30T Bollards and ready to use as per approved designs, drawings and specifications including testing, inspection, commissioning and defect rectifications, complete in all respects.			
(b)	Supply and Installation of SM 800, grade M2 fender of Bridgestone make or equivalent and ready to use as per approved designs, drawings and specifications including testing, inspection, commissioning and defect rectifications, complete in all respects.	LS	LS	
(c)	Supply and Installation of all other Appurtenances such as Mooring Ring , safety ladders , hand rails , Rubbing stripe, Drain Pipe, Edge Angle etc. and ready to use as per approved designs, drawings and specifications including testing, inspection, commissioning and defect rectifications, complete in all respects.	LS	LS	
2.4	Design Fee	LS	LS	
	TOTAL OF BILL NO. 2: BERTHING STRUCTURES AND APPURTENANCES CARRIED OVER TO GRAND SUMMARY			

Total Amount in Words.....

Datedday of2018

Signature of Bidder

1.5 BILL NO. 3**1.5.1 Engineering, Procurement of Materials and Construction of Bank Protection Works**

S. No.	Description	Qty.	Unit	Amount
3.1	Bank Protection Works Bank Protection works including mobilization & de-mobilization as per approved designs, drawings and specifications including testing, inspection and defect rectifications, complete in all respects.	LS	LS	
3.2	Design Fee	LS	LS	
	TOTAL OF BILL NO. 3: BANK PROTECTION WORKS CARRIED OVER TO GRAND SUMMARY			

Total Amount in Words.....

Datedday of2018

Signature of Bidder

1.6 BILL NO. 4**1.6.1 Engineering, Procurement of Materials and Construction of Stockyard Development**

S. No.	Description	Qty.	Unit	Amount
4.1	Stockyard Development Stockyard Development including mobilization & de-mobilization and ready to use as per approved designs, drawings and specifications including testing, inspection and defect rectifications, complete in all respects.	LS	LS	
4.2	Design Fee	LS	LS	
	TOTAL OF BILL NO. 4: STOCKYARD DEVELOPMENT CARRIED OVER TO GRAND SUMMARY			

Total Amount in Words.....

Datedday of2018

Signature of Bidder

1.7 BILL NO. 5**1.7.1 Engineering, Procurement of Materials and Construction of Buildings with Rain Water Harvesting System**

S. No.	Description	Qty.	Unit	Amount
5.1	Terminal Administration Building Terminal Administration building including mobilization & de-mobilization and ready to use as per approved designs, drawings and specifications including testing, inspection, commissioning and defect rectifications, complete in all respects.	LS	LS	
5.2	Worker's Amenity building Worker's Amenity building including mobilization & de-mobilization and ready to use as per approved designs, drawings and specifications including testing, inspection, commissioning and defect rectifications, complete in all respects.	LS	LS	
5.3	Weigh Bridge control cabin & security office building with toilet Weigh Bridge control cabin & security office building with toilet including mobilization & de-mobilization and ready to use as per approved designs, drawings and specifications including testing, inspection, commissioning and defect rectifications, complete in all respects.	LS	LS	
5.4	Electrical Substation Building Electrical Substation building including mobilization & de-mobilization and ready to use as per approved designs, drawings and specifications including testing, inspection, commissioning and defect rectifications, complete in all respects.	LS	LS	
5.5	Security Office Security Office including mobilization & de-mobilization and ready to use as per approved designs, drawings and specifications including testing, inspection, commissioning and defect rectifications, complete in all respects.	LS	LS	
5.6	Toilet Block Toilet Block including mobilization & de-mobilization and ready to use as per approved designs, drawings and specifications including testing, inspection, commissioning and defect rectifications, complete in all respects.			
5.7	Design Fee	LS	LS	
	TOTAL OF BILL NO. 5 : BUILDINGS WITH RAIN WATER HARVESTING SYSTEM CARRIED OVER TO GRAND SUMMARY			

Total Amount in Words.....

Datedday of2018

Signature of Bidder

1.8 BILL NO. 6**1.8.1 Engineering, Procurement of Materials & Construction of Internal Roads and Vehicle Parking Area**

S. No.	Description	Qty.	Unit	Amount
6.1	Internal Roads Internal roads in terminal including mobilization & de-mobilization and ready to use as per approved designs, drawings and specifications including testing, inspection, commissioning and defect rectifications, complete in all respects.	LS	LS	
6.2	Vehicle Parking Area Vehicle parking area including mobilization & de-mobilization and ready to use as per approved designs, drawings and specifications including testing, inspection, commissioning and defect rectifications, complete in all respects.	LS	LS	
6.3	Design Fee	LS	LS	
	TOTAL OF BILL NO. 6: INTERNAL ROADS AND VEHICLE PARKING AREA CARRIED OVER TO GRAND SUMMARY			

Total Amount in Words.....

Datedday of2018

Signature of Bidder

1.9 BILL NO. 7**1.9.1 Engineering, Procurement of Materials & Construction of Water Supply Works**

S. No.	Description	Qty.	Unit	Amount
7.1	Water Supply Works Water supply works including mobilization & de-mobilization and ready to use as per approved designs, drawings and specifications including testing, inspection, commissioning and defect rectifications, complete in all respects.	LS	LS	
7.2	Design Fee	LS	LS	
	TOTAL OF BILL NO. 7: WATER SUPPLY WORKS CARRIED OVER TO GRAND SUMMARY			

Total Amount in Words.....

Datedday of2018

Signature of Bidder

1.10 BILL NO. 8**1.10.1 Engineering, Procurement of Materials & Construction of Storm Water Drainage Works**

S. No.	Description	Qty.	Unit	Amount
8.1	Storm Water Drainage Works Storm water drainage works including mobilization & de-mobilization and ready to use as per approved designs, drawings and specifications including testing, inspection, commissioning and defect rectifications, complete in all respects.	LS	LS	
8.2	Design Fee	LS	LS	
	TOTAL OF BILL NO. 8: STORM WATER DRAINAGE WORKS CARRIED OVER TO GRAND SUMMARY			

Total Amount in Words.....

Datedday of2018

Signature of Bidder

1.11 BILL NO. 9**1.11.1 Engineering, Procurement of Materials & Construction of Sewerage System & Waste Collection Centre**

S. No.	Description	Qty.	Unit	Amount
9.1	Sewerage System Sewerage system works including mobilization & de-mobilization and ready to use as per approved designs, drawings and specifications including testing, inspection, commissioning and defect rectifications, complete in all respects.	LS	LS	
9.2	Waste Collection Centre Waste Collection Centre including mobilization & de-mobilization and ready to use as per approved designs, drawings and specifications including testing, inspection, commissioning and defect rectifications, complete in all respects.			
9.3	Design Fee	LS	LS	
	TOTAL OF BILL NO. 9: SEWERAGE SYSTEM & WASTE COLLECTION CENTRE CARRIED OVER TO GRAND SUMMARY			

Total Amount in Words.....

Datedday of2018

Signature of Bidder

1.12 BILL NO. 10**1.12.1 Engineering, Procurement of Materials & Construction of Gate House Complex and Boundary Wall with Fencing**

S. No.	Description	Qty.	Unit	Amount
10.1	Gate House Complex Gate house complex works including mobilisation & de-mobilisation and ready to use as per approved designs, drawings and specifications including testing, inspection, commissioning and defect rectifications, complete in all respects.	LS	LS	
10.2	Boundary Wall with Fencing Boundary Wall with fencing works including mobilisation & de-mobilisation and ready to use as per approved designs, drawings and specifications including testing, inspection, commissioning and defect rectifications, complete in all respects.	LS	LS	
10.3	Design Fee	LS	LS	
	TOTAL OF BILL NO. 10: GATE HOUSE COMPLEX AND BOUNDARY WALL WITH FENCING CARRIED OVER TO GRAND SUMMARY			

Total Amount in Words.....

Datedday of2018

Signature of Bidder

1.13 BILL NO. 11**1.13.1 Engineering, Procurement of Materials & Construction of Electrical Works**

S. No.	Description	Qty.	Unit	Amount
11.1	Electrical Works Electrical works including mobilization & demobilization and ready to use as per approved designs, drawings and specifications including testing, inspection, commissioning and defect rectifications, complete in all respects.	LS	LS	
11.2	Design Fee	LS	LS	
	TOTAL OF BILL NO.11: ELECTRICAL WORKS CARRIED OVER TO GRAND SUMMARY			

Total Amount in Words.....

Datedday of2018

Signature of Bidder

1.14 BILL NO. 12**1.14.1 Engineering, Procurement of Materials & Construction of Fire Fighting System**

S. No.	Description	Qty.	Unit	Amount
12.1	Firefighting System Firefighting system works including mobilization & de-mobilization and ready to use as per approved designs, drawings and specifications including testing, inspection, commissioning and defect rectifications, complete in all respects.	LS	LS	
12.2	Design Fee	LS	LS	
	TOTAL OF BILL NO. 12: FIREFIGHTING SYSTEM CARRIED OVER TO GRAND SUMMARY			

Total Amount in Words.....

Datedday of2018

Signature of Bidder

1.15 BILL NO. 13**1.15.1 Engineering, Procurement of Materials & Construction of Communication and IT System**

S. No.	Description	Qty.	Unit	Amount
13.1	Communication and IT System Communication and IT system including mobilization & de-mobilization and ready to use as per approved designs, drawings and specifications including testing, inspection, commissioning and defect rectifications, complete in all respects.	LS	LS	
13.2	Design Fee	LS	LS	
	TOTAL OF BILL NO. 13: COMMUNICATION AND IT SYSTEM CARRIED OVER TO GRAND SUMMARY			

Total Amount in Words.....

Datedday of2018

Signature of Bidder

1.16 BILL NO. 14**1.16.1 Engineering, Design, Procurement of Materials, Manufacturing, Supply, Erection, Construction/Installation, Commissioning & Performance Testing of Road Weigh Bridge**

S. No.	Description	Qty.	Unit	Amount
14.1	Road Weigh Bridge Two numbers road weigh bridge including all necessary structural steel, mechanical component parts, switch gear, controls, cables, on-board PLC hardware, software and logic programming, with suitable PC and dot matrix printer of latest technology and the like necessary for a complete operating machine and ready to use as per approved specifications including testing, inspection, commissioning and defect rectifications, complete in all respects.	2	No.	
	TOTAL OF BILL NO. 14: ROAD WEIGH BRIDGE CARRIED OVER TO GRAND SUMMARY			

Total Amount in Words.....

Datedday of2018

Signature of Bidder

RFP No:NCB No: CANW-1/IWAI/JMV/

Tender ID:

Assignment title: Construction of IWT Inter-modal Terminal at Kalughat, Bihar

1.17 BILL NO. 15

1.17.1 Environmental Management Plan (EMP)

Component	Item	Unit	Qty.	Rate	Amount
15.1 Technical Support	All technical support needed to implement the EMP, and fulfil statutory environmental compliance requirements including monitoring and reporting	Lump sum	Lump sum		
15.2 Flora	Plantation and management of flora as per the EMP	Lump sum	Lump sum		
15.3 Aquatic Fauna	All precautionary measures to mitigate impacts on Dolphins as per the EMP	Lump sum	Lump sum		
15.4 Water	Provision of storm water and wastewater management system	For construction site & For labour camps (2 camp sites)			
	Construction of soak pits at construction sites & labour camps	Per site estimated three			
	Provision of clean drinking & domestic water facility at labour camps and construction site	Per month for 24 months			
	Construction, installation, testing and commissioning of a 50 KLD ETP cum STP (MBR Technology) for treating sewage up to secondary treatment standards as per applicable regulations, complete with electrical and mechanical equipment as per design, and as per EMP	Lump sum	As per EMP		
15.5 Health	Health checkup camps for construction workers	As per standards and frequency described in the EMP	Sufficient to comply with applicable regulations and the EMP		
	All other Environment, Health and Safety provisions and implementation of the Environmental health and Safety Systems during construction as per EMP				
15.6	Terrestrial and Aquatic Fauna	Per season (Once in six month)			

Environmental Monitoring in the construction phase	Ambient Air Quality	Per monitoring for 24 months (Once in two month)			
	Surface Water Quality	For upstream & downstream (Once in month)			
	Drinking Water Quality	Once in month			
	Noise & Vibration	Per monitoring for 24 months (Once in month)			
	Soil Quality, Erosion & Siltation and River Bed Sediment	Per Six months			
15.7 Other items of EMP	All other items of the EMP, the Contractors EMP or items needed for compliance of the applicable regulations as described in the EMP (Unless specifically quoted, these will be deemed to be included in the Bid Price).	Lump sum	Lump sum		
		SUB TOTAL (DESIGN AND CONSTRUCTION STAGE)			
TOTAL OF BILL NO. 15 : ENVIRONMENTAL MANAGEMENT PLAN (EMP) CARRIED OVER TO GRAND SUMMARY					

Total Amount in Words.....

Datedday of2018

Signature of Bidder

1.18 BILL NO. 16**1.18.1 Model Studies**

S. No.	Description	Qty.	Unit	Amount
16.1	<p>2D Model Studies</p> <p>2D Model Studies shall be carried out to access the extent of scouring at the Kalughat Terminal and conclude the length required for bank protection work. If length arrived at by model studies differs from the length proposed in tender document, the contractor shall implement the bank protection work based on length arrived at by model studies.</p> <p>The model studies shall include the effects of overtopping of river discharge and construction of proposed berth and approach trestle on stability of bank.</p>	LS	LS	
	TOTAL OF BILL NO. 16: MODEL STUDIES CARRIED OVER TO GRAND SUMMARY			

Total Amount in Words.....

Datedday of2018

Signature of Bidder

1.19 BILL NO. 17**1.19.1 Duties and Taxes**

BILL NO.	Description	Present Rate	% Contract Value	AMOUNT (in words)
17.	*Duties and Taxes including Goods and Service Tax (GST)			
TOTAL OF BILL NO. 17 CARRIED OVER TO GRAND SUMMARY				

*The Contractor has to state different duties and taxes as applicable.

Total Amount in Words.....

Datedday of2018

Signature of Bidder

1.20 GRAND SUMMARY

BILL NO.	DESCRIPTION	AMOUNT (in figures)	AMOUNT (in words)
1.	Site Grading		
2.	Berthing Structures and Appurtenances		
3.	Bank Protection Works		
4.	Stockyard Development		
5.	Buildings with Rain Water Harvesting System		
6.	Internal Roads and Vehicle Parking Area		
7.	Water Supply Works		
8.	Storm Water Drainage Works		
9.	Sewerage System & Waste Collection Center		
10.	Gate House Complex and Boundary Wall with Fencing		
11.	Electrical Works		
12.	Fire Fighting System		
13.	Communication and IT System		
14.	Road Weigh Bridge		
15.	Environmental Management Plan (EMP)		
16.	Model studies		
17.	Duties and Taxes including Goods and Service Tax (GST)		
	TOTAL CONTRACT PRICE CARRIED OVER TO FORM OF TENDER		

Total Amount in Words.....

Datedday of2018

Signature of Bidder

1.22 SCHEDULE B**1.22.1 Format of Monthly RA Bill***

S. No.	Description	Unit	Unit Rate	As per Contract		Cumulative as per the Progress	
				Qty.	Amount	Qty.	Amount
	Preliminary Works						
1.	Topography survey						
2.	Geotechnical investigations						
3.	Hydrographic survey						
	Site Grading						
1.							
2.							
	Berth Substructure						
1.	M40 grade concrete in piles						
2.	Reinforcement in piles						
3.	Permanent MS liner/Casing						
	Berth Superstructure						
1.	M40 grade concrete in beam						
2.	M40 grade concrete in deck slab						
3.	Reinforcement in beam						
4.	Reinforcement in deck slab						
	Berth Appurtenances						
1.	Supply and installation of Fenders						
2.	Supply and installation of Bollards						
3.	Supply and Installation of all other Appurtenances such as Mooring Ring , safety ladders , hand rails , Rubbing stripe, Drain Pipe, Edge Angle etc.						
	Approach trestles						
1.	Concrete						
2.	Reinforcement						

S. No.	Description	Unit	Unit Rate	As per Contract		Cumulative as per the Progress	
				Qty.	Amount	Qty.	Amount
	Bank Protection Works						
1.							
2.							
3.							
	Stockyard Development						
1.							
	Buildings with Rain Water Harvesting System						
1.							
2.							
3.							
	Internal Roads and Vehicle Parking Area						
1.							
2.							
3.							
4.							
	Water Supply Works						
1.							
2.							
3.							
	Storm Water Drainage Works						
1.							
2.							
	Sewerage System & Waste Collection Center						
1.							
2.							

S. No.	Description	Unit	Unit Rate	As per Contract		Cumulative as per the Progress	
				Qty.	Amount	Qty.	Amount
3.							
	Gate House Complex, Boundary Wall with Fencing						
1.							
2.							
	Electrical Works						
1.							
2.							
	Firefighting system works						
1.							
2.							
	Communication and IT System						
1.							
2.							
	Road Weigh Bridge						
1							
	Model Studies						
1.							
	Design Fee						
1.							
	Duties and Taxes including Goods and Service Tax (GST)						
1.							
	TOTAL OF SCHEDULE-B						

* To be filled by the Contractor as per Para 1.1.1.b of Volume III of Tender Document.

Total Amount in Words.....

Datedday of2018

Signature of Bidder