

Government of West Bengal
Irrigation & Waterways Directorate
Office of the Superintending Engineer –I
Kangsabati Circle, Kenduadihi, Po. & Dist. – Bankura, PIN-722102,
Telephone:03242-250322 email ID: se1.kc.iwd@gmail.com

Memo No. 1057

Date- 26.05.2017

Reference No- WBIW/SE-I/KC/REOI-1/17-18

Date- 26.05.2017

REQUEST FOR EXPRESSION OF INTEREST (REOI)

i. **Invitation to EOI**

Assignment Title: Selection of a Design consultant for “**Preparation of Detail Design, Drawing and construction methodology for construction of identified 31 nos. of pre-fabricated segmental bridges on the irrigation canals of Kangsabati reservoir Project in Bankura and Mayurakhshi reservoir project in Birbhum,**” in the state of west Bengal.

1. Brief about objectives and scope of work:

A. Objectives: The Irrigation & Waterways Department in Government of West Bengal has identified 31 nos. of existing bridges on the canal systems of Kangsabati Reservoir Project and Mayurakshi Reservoir Project, respectively in the districts of Bankura (17 nos.) and Birbhum (14 nos.), which need replacement since they had been constructed almost 40-50 years back and are in dilapidated condition. It has been decided to construct pre-fabricated segmental concrete bridges in replacement of existing dilapidated bridges. The super structures will be pre-fabricated segmental units, constructed at two central workshops, one **or more** in each district in the proximity of the bridge sites, to ensure better quality management, reduced construction period & cost and improved supervision. The sub structures may be cast-in-situ concrete structures. A list of the identified 31 bridges, showing their locations on the canal systems in two districts with latitude and longitude, existing bridge length

and carriageway width, length of the spans, width of approach roads, applicable IRC loading pattern, is enclosed as **Annexure-I**. This department intends to engage a consultant for carrying out detailed design, drawing and preparing a construction methodology for each of the 31 bridges. It is very difficult to maintain good quality and adequate supervision if conventional cast in situ concrete bridges are constructed. It is expected that constructing pre-fabricated segmental superstructures at centralised location and installing these at sites on cast-in-situ sub structures, would ensure better quality, lesser depth of superstructures, ease in supervision and cost reduction in comparison to conventional bridge construction.

B. Scope of work: The scope of work under this assignment can be broadly classified as-

- i. Preparation of model design and drawing of pre-fabricated, segmental superstructures of single spans of 10 M, 12 M, 15 M, 17 M and 20 M for carriageway widths of 4.25 M (footpath on one side) and 5.50 M (without footpath). Superstructures should be designed in such away so that it can be fabricated at a centralised workshop in each zone of activity and carried to the site for installation over newly constructed substructures. Pre or post tensioning along the longitudinal direction during fabrication and post tensioning in the transverse direction during installation may be explored to reduce the depth of superstructures.
- ii. Using the above designed superstructures, GAD of each of 31 identified bridges, detailed design of substructures, construction drawings are to be prepared separately.
- iii. Cost estimates to be prepared for each of 31 bridges separately, using SORs of this department or that of State PWD and also by analysing rates if not available in the SORs.
- iv. Preparation of a construction plan stating clearly the sequential activities to be undertaken during fabrication, carriage and installation of superstructures and construction of cast-in-situ sub structures.
- v. Undertaking site visits to identify the best suitable methodology.

2. Instructions to the Consultants:

Nature of job & Submission requirement of the Consultant: The nature of job has already been mentioned under clause-1. The consultant will provide the soft copies and hard copies of all the drawings of model superstructures, construction drawings, cost estimates and construction plan of each of 31 bridges. The design notes in soft (excel format) and hard copies of the model superstructures and separately for 31 bridges are to be provided.

Information/data to be provided by the Department:

- i. The location of each bridge site with latitude and longitude, proposed carriageway, width & layout of approach roads, IRC loading applicable, hydrological data of the canal.
- ii. Geotechnical investigation report for each bridge site.
- iii. Two separate geo referenced index map one each for Bankura and Birbhum zone, showing the bridge locations, approach roads and proposed location of the central fabricating unit.

Bid processing fees: There will not be any bid processing fees.

Last date of submission of expression of interest:

Expression of interest with the accompanying information must be delivered in the written form in sealed envelope physically in any one of the following two offices by **28 June-2017**, in between 10:30 hrs (IST) to 17:30 hrs (IST) on working days:

Place of submission of expression of interest:

- a) Office of the Superintending Engineer-I
Kangsabati Circle
Irrigation & Waterways Directorate
Government of West Bengal
Kenduadihi, P.O. District- Bankura
Pin-722101, West Bengal
Telephone & Fax: 03242-250322
Email: se1.kc.iwd@gmail.com
- b) Office of the Superintending Engineer
Investigation & Planning Circle-I
Irrigation & Waterways Directorate
Government of West Bengal
3rd Floor, Jalsampad Bhavan,
Salt Lake, Kolkata-700091
Telephone & Fax: 033-2334-0411
Email: seipc12015@gmail.com

3. Shortlisting of consultant based on Pre Qualification criteria:

Consultancy Tender Evaluation committee (CTEC), to be constituted by Irrigation & Waterways department for carrying out this consultant selection procedure, shall evaluate the consultants for short listing, among the EOIs received , based on the following short listing criteria:

- a. The firm should have **at least five years'** experience in the business of providing consultancy service of similar nature at the **national level**. (Provide a brief description of the organization including ownership details, date and place of incorporation of the firm, objectives of the firm, details of similar assignments undertaken in last five English financial years.)
- b. The firm should have completed at least one similar nature of project in the last five years for Central/State Government projects. (Provide letter of Award of contract from the employer and documentary evidence of completion in last five English financial years.)
- c. The firm should have achieved a minimum annual turnover of **Rs.500.00 Lakh** or more in any one of the last three completed financial years. (Provide Audited Financial reports of last three completed years.)

4. Final Selection:

No proposals (Technical or Financial) are required now. The short listed firms will be invited to submit (Request for Proposals or RFP) their Technical and Financial proposals. The consultant shall be selected based on evaluation of their Technical and Financial proposals.

Enclosed: as stated

**Superintending Engineer-I
Kangsabati Circle
Irrigation & Waterways Directorate
Government of West Bengal**

Copy forwarded for information to :

1. The Sabhadhipati, Bankura Zilla Parishad.
2. The Karmadhakshya, Krishi-o-Sech, Bankura Zilla Parishad, Bankura
3. The Secretary to the Government of West Bengal, Irrigation & Waterways Department, Jalsampad Bhawan, Salt Lake, Kolkata-700091
4. The Joint Secretary to the Government of West Bengal, Irrigation & Waterways Department, Jalsampad Bhawan, Salt Lake, Kolkata-700091
5. The Deputy Secretary (Works) -I to the Government of West Bengal, Irrigation & Waterways Department, Jalsampad Bhawan, Salt Lake, Kolkata-700091
6. The Chief Engineer-South West, I. & W. Dte , Khasjungle, Abash, Medinipur, Paschim Medinipur.
7. The Superintending Engineer, Mayurakshi Canal Circle, Irrigation & Waterways Directorate, Suri, Birbhum.
8. The Superintending Engineer Investigation & Planning Circle-I, Irrigation & Waterways Directorate, Jalsampad Bhawan, Salt Lake, Kolkata-700091
9. The Superintending Engineer-I, Kangsabati Circle, Bankura.
10. The District Magistrate, Bankura.
- 11-14. The Executive Engineer, Bankura Irrigation Division, Kangsabati Canals Division No. II, Khatra / III, Bishnupur and T.A to S.E.-I/K.C., Bankura.
15. The Director of Information & Cultural Affairs, Department of Information & Culture, 3rd Floor, Nabanna, Howrah.
16. The Executive Engineer, D.V.C. Study Cell, I& W.Dte. Jalsampad Bhawan, Kol-91. The REOI documents Notice may please be uploaded in the REOI link of Departmental Website.
17. The District Information & Cultural Officer, Bankura.
18. The Divisional Accounts Officer of Bankura Irrigation Division, Bankura.
19. Notice Board of the office of Superintending Engineer-I, Kangsabati Circle, Bankura.

ii.A

Name, Location, Span, Carriage way of dilapidated condition of Bridges under Kangsabati Circle which are to be replaced immediately.

Sl. No.	Location	Latitude & Longitude (in degree)	Clear Span				Type of pier & Abutment	Carriageway (meter)	Approch road width (meter)
			Between Abutment (meter)	Between Abutment & pier (meter)	Between pier & pier (meter)	Between pier & abutment (meter)			
Kangsabati Canals Division No.II, Khatra, Bankura.									
1	Bridge at ch.55.00 of KMC(u) Mouza-Dakshin Baid,Block-Khatra.	22.9589N 86.8733E	29.00	8.00	13.00 X 1	8.00	Boulder Masonary	2.1	3.10 Kacha (VR)
2	Bridge at ch.47.00 of RBMC Mouza-Rajsole,Block-Ranibundh.	22.9227N 86.7623E	36.1	8.15	19.80 X 1	8.15	Boulder Masonary	3.6	3.25 Bituminous (O D R)
3	Bridge at ch.76.50 of RBMC Mouza-Thutasole,Block-Ranibundh.	22.9227N 86.7635E	38.85	9.525	19.80 X 1	9.525	Boulder Masonary	3.6	3.20 Kacha (VR)
4	Bridge at ch.499.50 of RBMC Mouza-Rajakata,Block-Ranibundh.	22.8741N 86.8289E	35.35	7.8	19.75 X 1	7.8	Boulder Masonary	3.6	3.25 Bituminous (O D R)
5	Bridge at ch.531.00 of RBMC Mouza-Birkham,Block-Ranibundh.	22.8669N 86.8343E	35.35	7.775	19.80 X 1	7.775	Boulder Masonary	3.6	3.25 Bituminous (O D R)
6	Bridge at ch 953.00 of R.B.M.C. Mouza-Kalasal Block Raipur	22.773643N 86.864447E	28.00	7.00	14.00 x 1	7.00	Boulder Masonary	3.00	4.80
7	Bridge at ch 888.00 of R.B.M.C Mouza- Nischintapur Block- Raipur	22.790534N 86.865379E	48.00	5.00	4 x 5.9 + 1 x 15.00	5.00	Boulder Masonary	3.500	5.20
8	Bridge at ch 670.00 of R.B.M.C. Mouza – Sonagara, Block - Raipur	22.847158N 86.864037E	35.15	9.50	1 x 16.5	9.50	Boulder Masonary	2.200	4.00
9	Bridge at ch 761.00 of R.B.M.C. Mouza – Jhari, Block - Raipur	22.821600N 86.865830E	31.00	5.00	2 x 4.00 + 1 x 13.00	5.00	Boulder Masonary	2.200	4.00

Bankura Irrigation Division, Bankura									
10	Bridge at chainage 236.00 of Simlapal Branch Canal Araldihi, Mouza-Paraydanga, Block-Taldangra.	23.048609 86.985629	8.45	1 X1.550	1 X6.850	1x1.55	Boulder Masonary	2.2	2.45
11	Minor Road bridge of ch.1295.00 of Bishnupur Branch Canal, Mouza-Douni, Block-Taldangra.	23.006621 87.208649	16.77	1 X 2.525 M	1 X9.620 M	1X2.525	Boulder Masonary	3.658	3.658
12	Cart bridge of ch.1406.70 of Bishnupur Branch Canal ,Mouza-Mazuri-Prasadpur, Block-Taldangra	23.018908 87.236035	29.261	1 X6.943 M	1 X 13.275	1 X6.943 M	Boulder Masonary	3.05	3.5
Kangsabati Canals Division No.III, Bishnupur, Bankura.									
13	Ch. 1897.00 of Bishnupur Branch Canal, Moza-Morar, G.P.Morar, Block-Bishnupur.	23.027891 87.344077	26.50 M	8.07 M	10.36 M	8.07 M	Boulder Masonary	3.60 M	Moorum
14	Ch.220.27 of Kotalpur Branch Canal, Mouza-Brindabanpur(13), G.P. Routhkhanda, Block-Joypur.	23.070623 87.433881	9.60 M	NIL	NIL	NIL	Boulder Masonary	3.60 M	Moorum
15	Ch.921.70 of Kotalpur Branch Canal, Mouza-Khiri(90), G.P. Kotalpur, Block-Kotalpur.	23.021453 87.614939	17.80 M	3.35 M	9.20 M	3.35 M	Boulder Masonary	3.50 M	Moorum
16	Ch.666.65 of Dy-6L of Ghatal Branch Canal, Mouza-Baladwip, G.P. Sihar, Block-Kotalpur.	22.891736 87.611538	8.65 M	NIL	NIL	NIL	Boulder Masonary	4.00 M	Moorum
17	Bridge at ch 1658.00 of B.B.C. Mouza- Dhengasol Block- Bishnupur	23.010559 87.284220	27.8	5.65	16.50x1	5.65	Boulder Masonary	2.75 M	Moorum

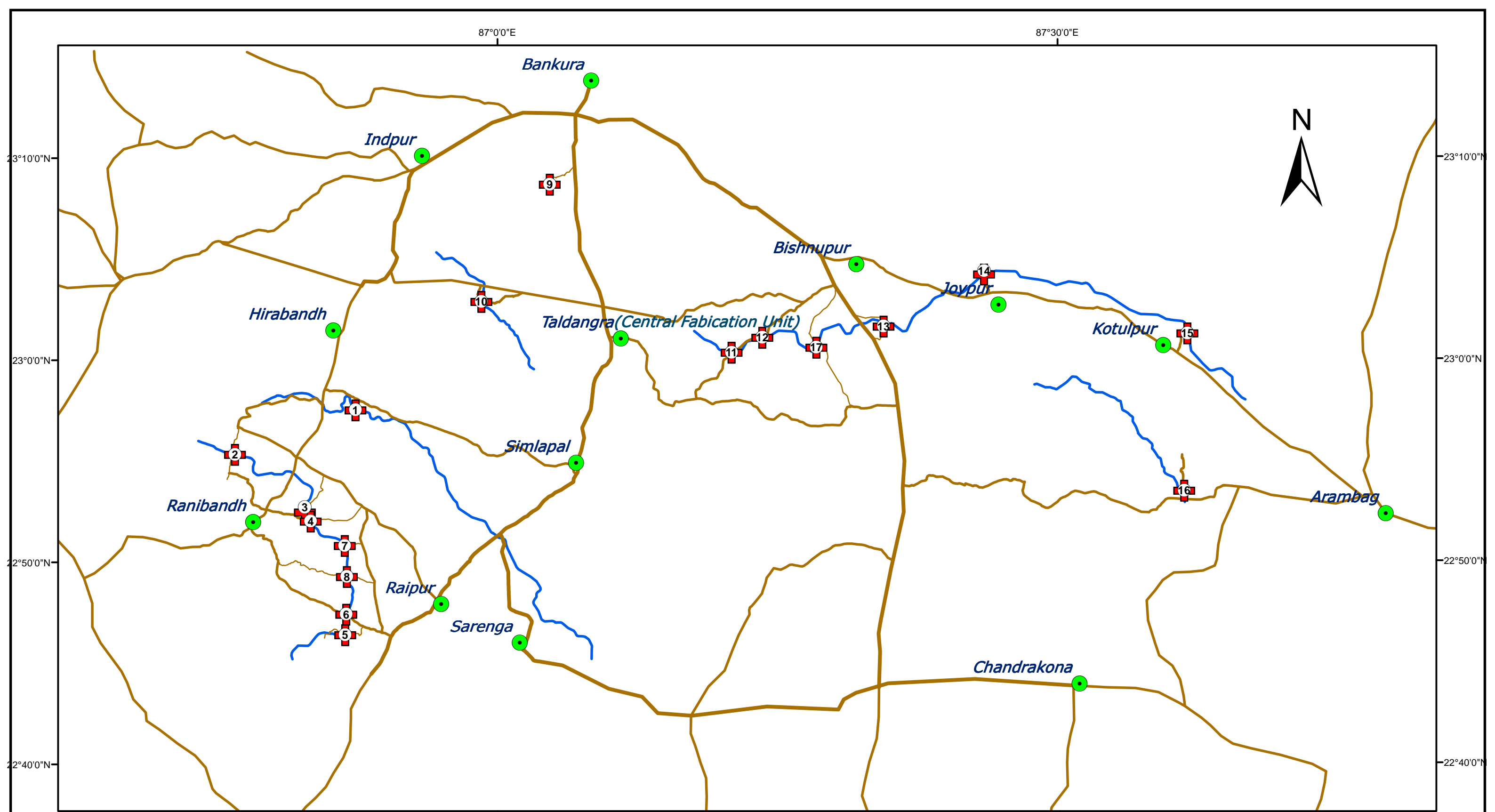
Superintending Engineer-I,
Kangsabati Circle, Kenduadihi, Bankura

ii.B **Name, Location, Span, Carriage way of dilapidated condition of Bridges under Mayurakshi Canal Circle which are to be replaced immediately.**

Sl. No.	Location	Latitude & Longitude (in degree)	Clear Span				Type of pier & Abutment	Carriageway (meter)	Approch road width (meter)
			Between Abutment (meter)	Between Abutment & pier (meter)	Between pier & pier (meter)	Between pier & abutment (meter)			
1	Bridge at Ch. 1074.00 of Kopai South Main Canal at Paruldanga of Bolpur Sriniketan P.s.	Latitude- 23°41'38.42"(N) Departure - 87°42'36.55" (E)	20.10 mtrs	5.20 mtrs	5.20 mtrs	5.20 mtrs	Bricks structure	3.05 mtrs	3 mtrs.
2	Bridge at Ch. 1083.00 of Kopai South Main Canal at Khoskadampur of Bolpur Sriniketan P.s.	Latitude- 23°41'37.59"(N) Departure - 87°43'9.20" (E)	20.10 mtrs	5.20 mtrs	5.20 mtrs	5.20 mtrs	Bricks structure	3.05 mtrs	3.50 mtrs.
3	Bridge at Ch. 1128.00 of Kopai South Main Canal at Tiluthia of Bolpur Sriniketan P.s.	Latitude- 23°42'42.50"(N) Departure - 87°45'40.05" (E)	18 mtrs.	3.40 mtrs	3.40 mtrs	3.40 mtrs	Bricks structure	3.05 mtrs	3.50 mtrs.
4	Bridge at Ch. 674.00 of Kopai South Main Canal at Lohagarh of Bolpur Sriniketan P.s.	Latitude- 23°39'36.56"(N) Departure - 87°37'35.21" (E)	21 mtrs	6.50 mtrs	6.50 mtrs	6.50 mtrs	Bricks structure	3.05 mtrs	3.00 mtrs
5	Bridge at Ch. 280.00 of Brakeswar Kopai Branch Canal at Prasadpur of Bolpur Sriniketan P.s.	Latitude- 23°43'31.72"(N) Departure - 87°34'57.49" (E)	10 mtrs	3.75 mtrs	3.75 mtrs	3.75 mtrs	Bricks structure	3.05 mtrs	3.00 mtrs
6	Bridge at Ch. 130.00 of Kopai South Main Canal at Dhanai of Illambazar P.s.	Latitude- 23°42'18.47"(N) Departure - 87°31'51.80" (E)	22.60 mtrs	4.55 mtrs	6.00 mtrs	4.55 mtrs	Bricks structure	3.05 mtrs	4.50 mtrs
7	Bridge at Ch. 198.00 of Kopai South Main Canal at Koyera of Illambazar P.s.	Latitude- 23°41'50.61"(N) Departure - 87°32'50.74" (E)	21.80 mtrs	6.50 mtrs	7.25 mtrs	6.28 mtrs	Bricks structure	3.05 mtrs	4.20 mtrs

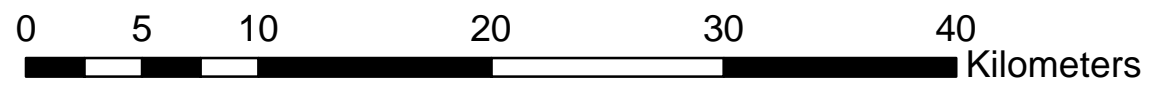
8	Bridge at Ch 340 of MBBC on Mohisa-Dohori-Sangra-Rangaipur PMGSY Road, Block: Sainthia, Birbhum under MHQD	Latitude 23°55'05.27"N Departure 87°38'11.13"E	11.30 Metre	4.50 m	-	4.50 m	Bricks structure	3.00 m	3.50 mtrs.
9	Bridge at Ch: 520 of MBMC, Block Suri-I, Mouza Bhurkuna under MHQD	Latitude 23°50'03.8"N Departure 87°29'39.1"E	25.40 Meter	5.0 m	3.85	5.0 m	Bricks structure	3.00 m	3.5 m
10	Bridge at ch. 431.59 of BNMC in Mouza- Rampur, J.L. No. 17, P.S.: Nalhati, Birbhum connecting road Nalhati to Bahadurpur, , G.P.: - Banior	24°18'06.2"N, 87°49'13.4"E	8.70	2.40	2.40	2.40	Concrete Structure	2.85	7.50
11	Bridge at ch. 299.00 (D/S of Aqueduct) of BNMC in Mouza- Haritoka, J.L. No. 19, P.S.: Nalhati, Birbhum connecting road Horitoaka to Bhabanandapur, Block:- Nalhati-I, G.P.: - Boutia	24°18'22.4"N, 87°47'04.2"E	9.30	3.00	2.00	3.00	Brick Structure	2.85	4.00
12	Bridge at ch. 202.13 of BNMC in Mouza- Bhabanandapur, J.L. No. 24, P.S.: Nalhati, Birbhum connecting road Nalhati to Bhabanandapur, G.P.: - Haridaspur, Block-Nalhati-I	24°17'36.7"N, 87°45'34.5"E	12.30	5.70	0.00	5.70	Concrete Structure	2.85	5.50
13	Bridge at ch. 1087.00 of DBMC in Mouza- Chakaipur ,JL No.-15, Block- Rampurhat-I, P.S. Rampurhat, G.P.- Kusumba.	24°12'40.4"N, 87°43'50.3"E	16.90	4.52	6.10	4.52	Brick Structure	3.05	3.75
14	Bridge at ch. 1229.00 of DBMC in Mouza- Baidhara ,JL No.-09, Block- Rampurhat-I, P.S. Rampurhat, G.P.- Narayanpur.	24°14'38.6"N, 87°43'53.0"E	13.90	3.75	4.75	3.75	Brick Structure	3.10	3.10

Superintending Engineer,
Mayurakshi Canal Circle, Suri , Birbhum.



Legend

- Places
- + Location_Of_Bridges
- Minor Roads
- Major District Roads
- Highways
- Canals



**LOCATION OF PROPOSED PRECAST/ PRE- FABRICATED BRIDGE
UNDER MAYURAKSHI CANAL CIRCLE**

