

Government of the People's Republic of Bangladesh
Office of the Project Director (Superintending Engineer, RHD)
Construction of the Mirganj Bridge over the Arial Kha River at 8th
kilometer of Rahmatpur-Babuganj-Muladi-Hizla Highway (Z8034)
Roads and Highways Department
Sarak Bhaban, Tejgaon, Dhaka-1208, Bangladesh
Telephone: 02-8879337

Memo No: 35.01.0000.152.14.045.034.25-148

Date: 25.03.2025


Request for Expression of Interest (Consulting Firm: Lump-sum)

1.	Ministry/Division	Ministry of Road Transport and Bridges/ Road Transport and Highways Division	
2.	Agency	Roads and Highways Department	
3.	Procuring Entity Name	Project Director, Construction of the Mirganj Bridge over the Arial Kha River at 8 th kilometer of Rahmatpur-Babuganj-Muladi-Hizla Highway (Z8034)	
4.	Request for	Expression of Interest (EOI) for Proof Checking Consultancy Services for Construction of Mirganj Bridge over the Arial Kha River at 8 th kilometer of Rahmatpur-Babuganj-Muladi-Hizla Highway (Z8034)	
5.	Reference No	35.01.0000.152.14.045.034.25-148	
6.	Date	25 March 2025	
KEY INFORMATION			
7.	Procurement Method	Quality and Cost Based Selection (QCBS) (International Competitive Bidding)	
FUNDING INFORMATION			
8.	Budget and Source of Funds	Development Budget of the Government of Bangladesh	
9.	Development Partners	Not applicable	
PARTICULAR INFORMATION			
10.	Project Name	Construction of the Mirganj Bridge over the Arial Kha River at 8 th kilometer of Rahmatpur-Babuganj-Muladi-Hizla Highway (Z8034)	
11.	Package No	PD/Mirganj/SP 01	
		Date	Time
12.	EOI submission Closing Date and Time	29 April 2025	1400 hrs. (Bangladesh Standard Time)
13.	EOI Opening Date and Time	29 April 2025	1400 hrs. (Bangladesh Standard Time)
14.	Name & Address of the office(s) receiving of the EOI	Mr. Abdur Rahman Kaoser Office of the Project Director (Superintending Engineer, RHD) Construction of the Mirganj Bridge over the Arial Khan river at 8 th km of Rahmatpur-Babuganj-Muladi-Hizla Highways (Z8034) Room-438, Level-4, Part-C Sarak Bhaban, Tejgaon, Dhaka 1208, Bangladesh Telephone: +88-02-8879337 Mobile No +8801730782559 Email: sebcmc.rhd@gmail.com	
INFORMATION FOR APPLICANT			
15.	Brief Description of Assignment	<p>Government of Bangladesh is going to implement the project titled "Construction of the Mirganj Bridge over the Arial Khan river at 8th km of Rahmatpur- Babuganj - Muladi-Hizla Highway (Z8034)". The Project includes the construction of an extradosed bridge including main bridge, viaduct, approach road, riverbank protection work and other related works through a design-build contract.</p> <p>The Roads and Highways Department (RHD) earlier appointed international consultants for the feasibility study and conceptual design of the proposed 4-lane bridge. Based on the feasibility study report the total length of the project is 5.957 km (approach road: 4,473 meters, main bridge: 544 meters and viaduct 940 meters). The main bridge is an Extradosed with single cell box girder. Further, two major junctions are to be developed at the start and end of the project road. Considering the geotechnical condition, the feasibility study recommended large-diameter deeper piles (approximately, 2.5 meters diameter and length over 100 meters) for the foundations of the main bridge. However, the design will be finalized based on the Contractor's design prepared in compliance with Employer's Requirements and to be checked by a Proof Consultant appointed by RHD.</p> <p>RHD will recruit a Proof Checking Consultant primarily for construction supervision. All payments pertaining to the Consultancy Services will be made in Bangladeshi Taka (BDT) only.</p>	



	<p>The main objectives of the Proof Checking Consultant's assignment are to independently verify and validate the design calculations, engineering analysis and technical aspect of the bridge design submitted by the design-build Contractor, ensuring that the proposed structure meets the necessary safety standards; regulatory requirements, and project specifications before construction commences.</p> <p>The professional input essential for this assignment is of 36 person-months approximately from 8 key experts. The assignment will span over a period of 6 (six) months from the date of commencement. The Consultancy Services is expected to commence in August 2025.</p> <p><i>The draft Terms of Reference (TOR) can be obtained from www.rhd.portal.gov.bd or by applying to the Project Director by email at ee1.bcnd.rhd@gmail.com.</i></p>
<p>16. Experience, Resources and Delivery Capacity Required</p>	<p>The Roads and Highways Department will short-list the interested consulting firms for the above-mentioned service. The firms should provide information demonstrating that they have the required qualifications and relevant experience to render the services. The key qualifications and experiences of the Consulting firms required are as follows:</p> <ol style="list-style-type: none"> General Experience: At least 10 (ten) years overall experiences in Road/ Bridge/ Expressway design project; Design/Proof Checking of pre-stressed concrete or steel girder bridge over perennial river/sea/creek. Experience of Design/Proof Checking of Extradosed/ Suspension/ Cable-stayed Bridge; Experience of design/proof checking of foundations of long span bridges in river involving large diameter long piles; Design/Proof Checking of similar type of bridge project completed in the last 10 years; Experience of Design-build/EPC type contract management in highway/bridge project; Details of work experience in similar geographic area (south-asia).
<p>17. Other Details</p>	<p>The EoI should especially include (along with certified English Translation if not English).</p> <ol style="list-style-type: none"> The firm's updated registration certificate, Legal Entitlements of the Firm (Trade License, TIN, VAT, Registration, etc.); Company profile: including management, personnel (especially key personnel regarding consultancy services), firm's specialty, performance; The latest annual report; General and overall experience of firm(s) (limited to 5 pages); Experience of similar nature of services in last 10 years including procuring entity's name, nature of services, contract amount, person-months, duration of the services with commencement and completion date; Summary of permanent professional employees with key qualifications; Audited financial statement (Balance sheet, Profit & Loss Account and Cash Flow Statement) for last 3 (three) years; and Average annual turnover in last 3 (three) years. <p>Consultants will be selected under Quality and Cost Based Selection (QCBS) Method in accordance with the procedures set out in the Public Procurement Rules, 2008 (PPR 2008) considering all subsequent amendments.</p> <p>With all supporting documents, the EoI Application must be submitted to the signatory address at or before 1400 hrs. Bangladesh Standard Time (BST) on 29 April 2025 (Tuesday) in sealed envelopes (One original and One copy) marked with "Request for Expressions of Interest (EoI) for Proof Checking Consultancy Service for Construction of the Mirganj Bridge over the Arial Kha River at 8th kilometer of Rahmatpur-Babuganj-Muladi-Hizla Highway (Z8034)". Any late submission will be rejected.</p> <p>The Procuring Entity shall not be responsible for any costs or expenses incurred by the firm(s) in connection with the preparation or submission of the EoI. The</p>

	<p>Procuring Entity reserves the right to accept or reject all the Expressions of Interest (EoI) without assigning any reason.</p> <p>Interested applicants may obtain further information by applying to the undersigned during normal office hour or through email.</p>
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25.03.2025

Abdur Rahman Kaoser

ID No.: 601960

Project Director (SE, RHD)

Construction of the Mirganj Bridge over the Arial
Kha River at 8th kilometer of Rahmatpur-Babuganj-
Muladi-Hizla Highway (Z8034)

Room-438, Level-4, Block-C

Sarak Bhaban, Tejgaon I/A, Dhaka-1208, Bangladesh

E-mail: sebcmc.rhd@gmail.com

Copy for kind information and necessary action:

1. Senior Secretary, Road Transport and Highways Division, 16, Abdul Goni Road, Rail Bhaban, Dhaka (*Attention: Senior System Analyst, ICT unit, RTHD with request to take necessary action to publish the IFP Notice in RTHD website*)
2. Chief Engineer, Roads and Highways Department, Sarak Bhaban, Tejgaon, Dhaka
3. Chief Executive Officer, Bangladesh Public Procurement Authority (BPPA), IMED, Ministry of Planning, Agargaon, Sher-E-Bangla Nagar, Dhaka (*with request to take necessary action to publish the IFP Notice in BPPA website*)
4. Additional Chief Engineer, RHD, Management Services Wing, Sarak Bhaban, Tejgaon, Dhaka
5. Additional Chief Engineer, RHD, Bridge Management Wing, Sarak Bhaban, Tejgaon, Dhaka and *Project Coordinator, Construction of the Mirganj Bridge over the Arial Kha River at 8th kilometer of Rahmatpur-Babuganj-Muladi-Hizla Highway (Z8034)*
6. Additional Chief Engineer, RHD, Barishal Zone, Amtoli, Barishal
7. Senior System Analyst, RHD, Management Information Cell, Sarak Bhaban, Tejgaon, Dhaka (*with request to take necessary action to publish in RHD website*)
8. Chief Account and Finance Officer, Ministry of Road Transport and Bridges, C.G.A Bhaban, Shegun Bagicha, Dhaka
9. Executive Engineer, RHD, Bridge Construction and Maintenance Division-I, Sarak Bhaban, Tejgaon, Dhaka
10. Office Copy

Terms of Reference

for

Proof Checking Consultancy Services

for

Construction of Mirganj Bridge over the Arial Kha River at 8th kilometer of Rahmatpur-Babuganj-Muladi-Hizla highway (Z8034)

1. Background

The Government of Bangladesh has placed an importance on replacing ferry crossings with bridges to ensure uninterrupted road communication. Although most of the river gaps in National and Regional Highways have been bridged. There are still a number of river gaps that need to be bridged. The proposed Mirganj Bridge over the Arial Kha River at 8th kilometer of Rahmatpur-Babuganj-Muladi-Hizla highway (Z8034) will connect three upazilla of the Barishal district, namely Muladi, Hizla and Mehendiganj with Barishal district, the divisional headquarter. Presently ferry service provides the connectivity of this corridor, which is highly unreliable in natural hazards like flood and cyclone.

Rahmatpur-Babuganj-Muladi-Hizla Highway (Z8034) is a District Road having a total length of 35.0 km. This road is connected with Dhaka-Mawa-Bhanga-Barishal-Patuakhali (N8) corridor, providing connectivity of the people of these three upazillas with rest of the country.

Recognizing the role of infrastructure in economic development, Bangladesh is investing in the development in transportation infrastructures. Improvement of Highways and bridges plays in spurring and sustaining economic growth. The construction of the bridge will connect Hizla, Muladi and Mehendigonj, which are remotest Upazillas of Barishal division, with the main road network of Bangladesh.

The Roads and Highways Department (RHD) of the Ministry of Road Transport and Bridge will implement the project. The scope of civil works under the project includes the construction of about 1484 meter of Mirganj Bridge with 4.473 kilometer of approach road. The Feasibility Study and Concept Design have already been done. The Contractor for the construction of the bridge will be selected through an international competitive bidding. It will be a design-build contract where the design will be provided by the Contractor in compliance with the Employer's Requirement.

2. Location

The proposed Mirganj Bridge will be constructed over the river Arial Kha, at 8th km of Rahmatpur-Babuganj-Muladi-Hizla highway (Z8034). Babuganj Upazilla is situated on the left bank and Muladi Upazilla is situated on the right bank of the Arial Kha river respectively.

3. Objectives of the assignment

The main objectives of the Proof Checking Consultant's assignment are to independently verify and validate the design calculations, engineering analysis and technical aspect of the bridge design submitted by the design-build Contractor, ensuring that the proposed structure meets the necessary safety standards; regulatory requirements, and project specifications before construction commences.

4. Scope of the project

The scope of the project as per feasibility study includes construction of a bridge of length approximately 1,484 m (Main bridge-544 m Cable stayed extradosed+viaduct-940 m PC Girder) long, comprising standard multilane dual carriageway with pedestrian walkway on each side. The major project components are shown briefly in Table 1. Table 1: Project components

No.	Description	Unit	Quantity (Approx.)
1.	Mirganj Bridge over the Arial Kha river	Meter	1484.00
2.	Land Acquisition, Resettlement and Compensation	Ha	21.55
3.	River-bank protection works (RTW)	Meter	460.00

4.	Rigid pavement (Approach road)	Meter	500
5.	Flexible pavement (Approach road)	Meter	3973
6.	Bridge Health Monitoring system	LS.	1
7.	Toll plaza (computerized toll collection system)	Nos.	1
9.	Mechanical and Electrical works	LS	1
10.	Ancillary works (protective works, intersection, landscaping, Bus-bay, Road divider, Drain, Turfing, Sign-Signal, Km post, Road marking, Rumble strips, road safety design, electrification and lightening, pedestrian stair etc.)	LS	1
11.	Institutional capacity development of RHD engineers	L.S	1

* The table showing the basic components of the project and the length has been estimated primarily based on the feasibility study. But the items and its actual dimensions might be varied based on the site condition which will be deemed practicable for the best engineering aspects.

Implementation Arrangements: The Ministry of Road Transport and Bridge (MORTB) is the oversight body with the Roads and Highways Department (RHD) as the executing agency, and the Project Director is the representative of the Client. In addition, the RHD will assign its technical units (i.e., Technical Services Wing, Bridge Management Wing, Planning and Maintenance Wing etc.) to review the consultant's reports and provide technical guidance as required. The Bridge Construction and Maintenance Circle of the Bridge Management Wing under RHD will act as Project Implementation Unit (PIU). The PIU will coordinate and communicate the review comments to the consultant and will provide necessary guidance from time to time.

5. Detailed Tasks of the Assignment

The scope of the proof checking will mainly include the main bridge (foundation, sub-structure and super-structure); viaduct (foundation, sub-structure and super-structure) and other components outlined here. This includes but not limited to the followings:

- To check to ensure that the design loads conform to the Code/Contract;
- To check the construction specifications in the Contract;
- To carry out a full study of all relevant documents including Tender Documents in order to understand the detailed scope of proposed design;
- To carry out proof checking to ensure that the structural scheme and span arrangement chosen by Contractor meet the intended function of the project and the requirements in the Contract between the Construction Contractor and the Employer/Client/Owner of the project. The Proof Checking Consultants shall develop their own independent structural and geotechnical models to validate the design;
- To confirm that the geometry, structural design and working drawings of the project including the bridge, viaduct and highway (Foundations, substructure, superstructure, pavement, drainage structures, intersections, crash barrier, retaining wall, RE wall, footpath) conform to codes and standards following good engineering practices. The design incorporates pertinent results and recommendations of geotechnical, hydraulic and other engineering investigations and should be reviewed against Environmental and permitting requirements;
- To review against storm water requirement and ensure deck geometry is correct for satisfactory drainage of the bridge deck, and appropriate collection and transport of storm water away from the bridge and water body;
- To review the design against aesthetic requirements and a user perspective;
- To review estimate of probable construction durations. Ensures logical and of appropriate duration for assumed method of construction;
- To review that all reference special provisions are included for applicable project special provisions;
- It shall also include the modification in design/drawings, at no extra cost, required to be done due to any site constraints or otherwise as directed by RHD;
- To check the constructability of the designs/drawings considering the site condition;

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- To check against the provision for bridge inspection and maintenance during operational phase;
- In case of necessity, the Proof Consultant shall make independent calculations to form a basis for arriving at the conclusions and will suggest measure for improvement either to increase the margin of safety or to optimize the proposed design;
- To complete the Proof checker's QC/QA Checklist for these milestones.

The complete consultancy project envisaged here is time bound. All the design shall be based on standard and relevant codes of respective field/ practice as applicable.

6. Consultant's Inputs

The assignment will be carried out over a period of Six (06) months from the date of commencement. The assignment will be implemented by a consulting firm. It is anticipated that about 36 person-month of input by 8 key-Experts, but the consultant may propose alternative staffing arrangement required to complete the assignment as described in TOR, and to meet the output and reporting requirements in the TOR. The Consultants will also provide such support staff and other resources necessary to undertake the assignment. Consultants are to base their proposals on the inputs set out in table-2, which are for all components of the assignment. Staff Classification and person-month inputs are to be adopted without significant change from the list given below.

Table 2: Required Experts

No.	Title	Relevant Experience and Qualification	Positions	Person-Months
KE01	Team Leader/ Sr. Bridge Engineer (Extradosed Bridge Expert)	<ul style="list-style-type: none"> • Minimum Bachelor's degree in Civil engineering, post- graduate degree preferred. • Min. 25 years of professional experience • Min. 15 years' experience in planning, design &/or construction supervision of highway and bridge projects in ICB contract. • Minimum 5 years' experience as Team leader in similar bridge projects in EPC contract. • Experience in Extra-dosed bridge design preferred. • Must have work experience in similar kind and size of project 	1	6
KE02	Senior Bridge Design specialist (Extradosed Bridge Expert)	<ul style="list-style-type: none"> • Minimum Bachelor's degree in civil engineering, post- graduate degree preferred. • Min.18 years of professional experience • Min.12 years of experience as bridge design specialist/ design engineer in ICB/EPC contract. • Experience of one Extra-dosed bridge not less than 500m 	1	6
KE03	Senior Geotechnical/ Foundation Engineer	<ul style="list-style-type: none"> • Minimum Bachelor's degree in Civil/Geotechnical engineering, post-graduate degree preferred. • Min. 18 years of professional experience in related field. • Min.12 years of design experience as Geotechnical/ foundation engineer in highways and bridge projects. 	1	4
KE04	Geotechnical/ Foundation Engineer	<ul style="list-style-type: none"> • Minimum Bachelor's degree in Civil/Geotechnical engineering, post-graduate degree preferred. • Min. 10 years of professional experience in related field. • Min.8 years of design experience as Geotechnical/ foundation engineer in highways and bridge projects. 	1	4
KE05	Hydraulic/River Training Engineer	<ul style="list-style-type: none"> • Minimum Bachelor's degree in Civil engineering/Water resource engineering, post- graduate degree preferred. • Min.15 years of experience professional experience in related field. • Min.10 years of design experience in hydraulic/River training and protective works in similar bridge project 	1	4
KE06	Bridge Engineer	<ul style="list-style-type: none"> • Minimum Bachelor's degree in civil engineering, post- graduate degree preferred. • Min.10 years of professional experience • Min.8 years of experience as bridge design specialist/ design engineer in ICB/EPC contract. • Experience of one Extra-dosed bridge not less than 500m 	1	4
KE07	Structural Design Engineer	<ul style="list-style-type: none"> • Minimum Bachelor's degree in Civil engineering. • Min.10 years of professional experience in related field. • Min.8 years of experience as bridge/structural engineer in ICB contract. • Must have experience in at least one Extra-dosed Design. 	1	4

No.	Title	Relevant Experience and Qualification	Positions	Person-Months
KE08	Highway Design Engineer	<ul style="list-style-type: none"> • Minimum Bachelor's degree in Civil or material engineering, post graduate degree preferred. • Min.10 years of professional experience • Min. 8 years of design experience in road pavement design and maintenance. 	1	4
Total			8	36

7. Expected Time Schedule

The proof-checking schedule is shown in Table 3.

Table 3: Implementation Schedule Expected

Key Activities	Date	Duration (months)
Expected Commencement of Proof Checking consulting services	August 2025	6
Expected Completion of Proof Checking	January 2025	

8. Output and Reporting Requirements

- The consultant shall submit reports on the activities and outputs according to the following time schedule. Adjustments to the outlines may be proposed by the consultant according to the field situation but will be subject to the employer's approval.
- The consultant will submit all reports/deliverables in English language in both hard and electronic copy along with all raw data. RHD will review the reports and provide suggestions and modifications to be incorporated in the final version.
- The consultant shall prepare and submit reports and documents to RHD as shown in Table 4. The consultant shall provide the hard copies as well as an electronic copies of these deliverables.

Table 4: Reports and documents requirements

Type of Deliverables	Timing (from commence of the service)	No of copies
Inception Report	Within 1 month	10
Checking of preliminary design with reports	Within 2 months	7
Checking of 50% of the detailed design and associated reports	Within 3 months	24
Checking of 100% of the detailed design and associated reports	Within 4 months	6
Checking of Final detailed design, drawings and associated reports etc.	Within 6 months	6

9. Payment Schedule

Lump-sum based payment shall be made upon submission of the deliverables as mentioned in Table 5.

Table 5: Payment Schedule

Sl.	Types of Deliverables	Payment amount as percentage (%) of contract value excluding provisional sum
1.	Inception Report	10%
2.	Checking of preliminary design with reports	20%
3.	Checking of 50% of the detailed design and associated reports	20%
4.	Checking of 100% of the detailed design and associated reports	20%
5.	Checking of Final detailed design, drawings and associated reports etc.	30%
Total =		100%

10. Client's Input

1. The client will provide all the data which are available at RHD and will facilitate communicating with the concern offices of RHD.
2. The client will assign the PIU as counterpart staff for day-to-day project management and facilitation.

