

Government of the People's Republic of Bangladesh
Office of the Project Director (SE), RHD
Construction of Kewatkhali Bridge at Mymensingh Project
Roads and Highways Department (RHD)
Room # 227, Level-2, Part-B, Sarak Bhaban, Tejgaon, Dhaka.
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Memo No-35.01.0000.276.32.032.22 - 848

Date: 23th November 2022

Subject: Clarification No.01 regarding Construction of Kewatkhali Bridge with Approach Road & Associated Structures, Package No WP 01.

As per the clause ITT 7.1 of Volume 1 of 7 of Tender Document, it was declared that the employer will respond in writing to any request of clarification, provided that such request is received no later than fourteen (14) days prior to the deadline for submission of Tenders i.e. 5th December 2022. In response to that, after getting all the questions and queries in written form from the interested Tenderers till 21st November 2022, the Project Director hereby replies to the questions and queries from the Tenderers with clarifications in written form (Clarification No 01).

Hence, a total of 42 queries were received within the stipulated time. Response of these queries is attached herewith.

Attachment: (i) Clarification No 01 - Response to Tenderer's Queries/Suggestions (19 pages).

(ii) Pre-Tender Meeting Minutes of Construction of Kewatkhali Bridge with Approach Road & Associated Structures, Package No WP 01.

(iii) Addendum 1 of Construction of Kewatkhali Bridge with Approach Road & Associated Structures, Package No WP 01.

(iv) Addendum 2 of Construction of Kewatkhali Bridge with Approach Road & Associated Structures, Package No WP 01.

(Noor E-Alam)

ID No. 005074

Project Director (SE), RHD
Construction of Kewatkhali Bridge at
Mymensingh Project

Distribution:

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..... (All Tenderers who have acquired Tender Documents)

Copy for kind Information:

1. Chief Engineer, Roads and Highways Department, Sarak Bhaban, Tejgaon, Dhaka.
2. Sr. Investment Operation Specialist – Transport, Infrastructure Investment Department, Region 1, Asian Infrastructure Investment Bank (AIIB), AIIB Headquarters, Tower A, Asia Financial Center, No. 1 Tianchen East Road, Chaoyang District, Beijing 100101, China.
3. Project Manager (EE), RHD, Construction of Kewatkhali Bridge at Mymensingh Project, Sarak Bhaban, Tejgaon, Dhaka.

Clarification No 01: Response to Tenderer's Queries/Suggestions

S.N	Reference of the Queries		Query/Suggestion by the Tenderer	Response from the Employer
	Volume	Section & Clause/Reference		
1	Volume 1 & 3	Personnel & Equipment Requirement	Personnel requirement and Equipment requirement in Volume 1 Tendering Procedures and Volume 3 Work's Requirements are different, please kindly clarify which List we shall follow.	Please, Refer to the Response SN 13 of Minutes of Pre-Tender Meeting.
2	Volume 1	Section III, Evaluation and Qualification criteria, Clause 3.4.2(b) Key Activity, No 4	If we can use Cement Stabilized aggregates experience to meet the requirement of Aggregate stone Base course?	Cement Stabilized aggregates experience can be used to meet the requirement of Aggregate stone Base course.
3	Volume 1	Form EQU: Equipment, Page 68 of 94	There is no option of "Leased" at the 6 th line of Form Equ: Equipment, please kindly revise it.	Please, Refer to Appendix A of Addendum 2 (SN 1).
4	Volume 1	Section III, Evaluation and Qualification criteria, Clause 3.4.2(a)	The Compliance Requirements for "Each member" of Joint Venture said "Must meet 20% of the value of Tenderer's participation and experience of any Bridge work of length 200 meter or more". If it means that each member must have one experience that the contract value is at least 170 million USD* 20%, viz. 34 million USD, and this experience contains at least one bridge whose length is at least 200m? Please kindly clarify.	Please, Refer to the Response SN 66 of Minutes of Pre-Tender Meeting.
5	Volume 2 & Volume 3	BOQ & Part. Spec. Div-7, Cl 7.1	There are different types of steel material of the main bridge in the drawings, but there is only one item in BOQ, please clarify if the employer will revise this item of BOQ to separate it into different items.	Please, Refer to the Technical Specifications (Particular) and Detailed Design Drawings (Summary of Steel).
6		General	As the steel material of main bridge is under Japanese Steel Standards, so can we use similar steel materials from other countries that can also meet the specification requirements of the main bridge?	Please, refer to clause 7.1.1.2 of Technical Specifications (Particular)
7	Volume 2	BOQ, Division 6, Bill No. 6: Incidentals 6/21/5	Please provide the drawing for this different type of cables.	Please, Refer to clause 6.21.5 of Technical Specifications (Particular)

Clarification No 01: Response to Tenderer's Queries/Suggestions

S.N	Reference of the Queries		Query/Suggestion by the Tenderer	Response from the Employer
	Volume	Section & Clause/Reference		
8	Volume 4 & 5	Drawing	Please clarify which part of the bridge C10, C20 and C25 concrete are used in respectively.	Refer to Volume 4 & 5 of Tender Document (Final Detailed Design Drawing)
9	Volume 3	Part. Spec. Div-6, Cl 6.1 6/1/2a	Please clarify where Concrete Concrete Block is used in this project.	Refer to Volume 4 & 5 of Tender Document (Final Detailed Design Drawing)
10		General	We purchased the tender document under our company's name, if we submit the bidding document under a Joint venture, if we need to purchase another tender document under the name of Joint venture?	Any member of the Joint Venture can purchase the documents on behalf of the Joint Venture.
11		General	Due to the current epidemic situation in China, we met big difficulty to collect our related document. Thus, we sincerely request that you kindly extend the tender submission date by at least another three weeks.	Please, Refer to Addendum 01 (SN 3,4 & 5).
12	Volume 1 & 3	Personnel & Equipment Requirement	Personnel requirement and Equipment requirement in Volume 1 Tendering Procedures and Volume 3 Work's Requirements are different, please kindly clarify which List we shall follow.	Please, Refer to the Response SN 13 of Minutes of Pre-Tender Meeting.
13	Volume 1	Section III, Evaluation and Qualification criteria, Clause 3.4.2(b) Key Activity, No 1	The requirement is "Minimum 35m span Pre-Cast Pre-Stress Concrete (PSC) Girders, its transportation & erection of 200 nos. such Girders". Please kindly clarify that if the experience of Pre-Cast Pre-stress Concrete Box Girders will be accepted.	The experience of Pre-Cast Pre-stress Concrete Box Girders will be accepted.
14	Volume 1	Section III, Evaluation and Qualification criteria, Clause 3.4.2(a)	The requirement for Each member of Joint Venture is "must meet 20% of the value of Tenderer's participation and experience of any bridge work of length 200 meter or more", please kindly clarify that if we can use the experience of Railway Bridge project to meet the requirement.	Please, Refer to the Response SN 66 of Minutes of Pre-Tender Meeting.
15	Volume 3	Part. Spec. Div-4, Cl 4.1.3.12 04/01/6a	For the item "Base Grouting", please clarify if it contains the cost of GI (Grade B-ASTM A53) U type pipes, and which piles will the Base grouting be applied to.	The item 04/01/6a Base Grouting contains the cost of all materials required.

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Clarification No 01: Response to Tenderer's Queries/Suggestions

S.N	Reference of the Queries		Query/Suggestion by the Tenderer	Response from the Employer
	Volume	Section & Clause/Reference		
16	Volume 2	BOQ	There is no item of test piles in BOQ. Please clarify how should we consider the cost of test piles. If there are test piles, please clarify where they will be located, are they at the design piles location or do we need to find other locations?	Also, please refer to response SN 9 of Pre-Tender Meeting Minutes. Test piles have been included in the item no 4/1/1g & 4/1/1g(i). Also, please refer to response SN 5 of the Pre-Tender Meeting Minutes.
17	Volume 1	Section III, Evaluation and Qualification criteria, Clause 3.4.2(a)	There is no Particular Form for JV each member to prepare for their experience of "must meet 20% of the Value of Tenderers Participation and experience of any Bridge work of Length 200 meter or more" as the Form EXP-3.4.2(a) is only or One member. Please Check the attachment and clarify"	Please, Refer to Appendix B of Addendum 2 (SN 2).
18	Volume 3	The table 3.2-1 in the chapter 3.2.2 section VIIB particular specification	The percent passing in the sieve size in 2 mm at Grading B shall be range of 20-25, which is very narrow, could we propose it to be 20-45 same like other similar RHD project ? and could we propose the percent passing range in the sieve size in 0.425 mm at Grading B replace to 15-30 from 15-25?	Existing clauses shall remain unchanged.
19	Volume 1	Section III, Evaluation and Qualification criteria, Clause 3.4.2(a) Page 52 of 94	It states that, "Participation, as a prime contractor, joint venture member or subcontractor, in at least one contract with a value of the Tender's participation at least USD: 170 million that have been successfully and substantially ⁵ completed within the last 07 (seven) years, (starting September 1, 2015) and that is similar to the proposed works. The similarity of the Tender's participation shall be based on: 1. Steel Arch Bridge having 4 Lanes/Double track rail with at least a single span of minimum 150 m length or more If the above contact is executed by a Joint Venture, the value of Tender's participation shall be taken as contact amount multiplied by Tender's share in JV."	Please, Refer to response SN 97 of Pre-Tender Meeting Minutes.
			We request you to Kindly accept the Qualification of the JV Partner to fulfil this criteria as the same is accepted as per the MORTH /NHAI guidelines. Hence, we request you to Kindly allow	

Clarification No 01: Response to Tenderer's Queries/Suggestions

S.N	Reference of the Queries		Query/Suggestion by the Tenderer	Response from the Employer
	Volume	Section & Clause/Reference		
			Any member of JV may meet the requirement of Specific Construction and Contract Management Experience	
20		General	<p>Last date & time of online submission of Tender Last date & time for submission of Tender: Upto 11:00 Hrs.(BST) on 14.11.2022</p> <p>As the reference project is an EPC Mode, we need to carry out detailed designing, hence request you to Kindly grant us 4 weeks Extended time form the original date of submission i.e (14.11.2022) in order to provide you with best competitive offer.</p>	Please, refer to Addendum 01 (SN 3,4 & 5)
21	Volume 1	Section I - Instructions to Tenderers, ITT 19.8	<p>The Tender Security or the Tender-Securing Declaration of a JV shall be in the name of the JV that submits the Tender. If the JV has not been legally constituted into a legally enforceable JV at the time of Tendering, the Tender Security or the Tender-Securing Declaration shall be in the names of all future members as named in the letter of intent referred to in ITT 4.1 and ITT 11.5</p> <p>As per ITT19.8 mentioned that Please clarify: I. In case of JV, is it acceptable to submit the tender securities separately in each JV partner's name?</p>	Please, refer to ITT 19.8 of Section I - Instructions to Tenderers, Volume 1.
22	Volume 5	FINAL DETAILED DESIGN DRAWING V2, in Drawing No. C2-1-294 & 295	<p>Refer to FINAL DETAILED DESIGN DRAWING V2, in Drawing No. C2-1-294 & 295, the diagram shows the general layout of prestressing tendon of 40m span simply supported to continuous PSC I girder, that is the prestressing tendons are $3 \times 19\Phi 12.7mm$ steel strands (T1/T2/T3) + 3 $\times 12\Phi 12.7mm$ steel strands (2T4/T5). For the Approach Bridge of Kewatkhali Bridge, the 40m span PSC I girder between P9~P10 &</p>	The Girders of Approach Bridge of Kewatkhali Bridge, Overpass Bridge and Ramp Bridge are simply supported.

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S.N	Reference of the Queries		Query/Suggestion by the Tenderer	Response from the Employer
	Volume	Section & Clause/Reference		
			<p>P13~P14 is simply supported girder and there is no T4/T5 prestressing tendon at the top surface of I girder.</p> <p>Question: Please clarify: For the Approach Bridge of Kewatkhalali Bridge between P9~P10 & P13~P14, is the layout of prestressing tendon of 40m span simply supported PSC I girder referred to the <u>3x22ϕ15.2mm</u> steel strand applied to the 40m span simply supported PSC I girder in Design Drawing No. C2-2-018 & 050 & 157 of Overpass Bridge and Ramp Bridge? If not, please provide the relevant drawings.</p>	
23	Volume 5	FINAL DETAILED DESIGN DRAWING V2, in Drawing No. C2-1-296 & 297, supported PSC I girder is 3x22 ϕ 12.7mm steel strands, while the prestressing tendon of the 40m span simply supported PSC I girder in Design Drawing No. C2-2-018 & 050 & 157 is 3x22 ϕ 15.2mm steel strands.	<p>Refer to FINAL DETAILED DESIGN DRAWING V2, in Drawing No. C2-1-296 & 297, the prestressing tendon of the 50m span simply supported PSC I girder is 3x22ϕ12.7mm steel strands, while the prestressing tendon of the 40m span simply supported PSC I girder in Design Drawing No. C2-2-018 & 050 & 157 is 3x22ϕ15.2mm steel strands.</p> <p>Question: Please confirm if it is correct to apply 3x22ϕ12.7mm mm steel strand for the 50m span simply supported PSC I girder in Drawing No. C2-1-296 & 297.</p>	Please, Refer to Drawing No. C2-1-296 & C2-1-297.
24		FINAL DETAIL DESIGN V2	<p>Refer to FINAL DETAIL DESIGN V2, Design Drawing No. C1-1-480, in which, the expansion joint types of Joint 80, Joint 100 and Joint 150 are listed, but it is not clear which pier the listed joints are used for.</p>	Please, Refer to Design Drawing No. C1-003~005_KEWATKHALI BRIDGE PLAN AND PROFILE

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Clarification No 01: Response to Tenderer's Queries/Suggestions

S.N	Reference of the Queries		Query/Suggestion by the Tenderer	Response from the Employer
	Volume	Section & Clause/Reference		
25		FINAL DETAIL DESIGN V2	Please clarify which position Joint 80, Joint 100 and Joint 150 are respectively used for Refer to FINAL DETAIL DESIGN V2, Design Drawing No. C1-1-481, in which, the expansion joint types of Joint 200 and Joint 350 are listed, the tenderer understands that Joint 200 is used for P10 and Joint 350 is used for P13. Please confirm whether the tenderer's understanding is correct or not.	Expansion Joint Type of "Joint 200" is used for P10 and "Joint 350" is used for P13.
26		Minutes of the Pre-Tender Meeting, Response to Tenderer's Queries/Suggestions SN 5	Refer to Minutes of the Pre-Tender Meeting regarding Construction of Kewatkhali Bridge with Approach Road & Associated Structures, Package No WP 01 (Memo No-35.01.0000.276.3.032.22-773)-Response to Tenderer's Queries/Suggestions SN 5, it is confirmed that only 2 Nos 2500mm diameter test piles and 4Nos 1500 mm diameter test piles will be carried out as pilot pile for this project, the bidders understand that 2 Nos Bi-Directional Load Tests under BOQ Item Code 4/4/1f are to be applied on 2 Nos. pilot piles. Moreover, Pile Integrity Test and Sonic Logging Test shall be performed on all 6 Nos pilot piles. Question: please clarify: ① whether 2 Nos. Bi-Directional Load Tests are respectively used for 1 no. 2500mm diameter pilot pile and 1no. 1500 mm diameter pilot pile or not? What is the test load applied to each of these 2 Nos. Bi-Directional Load Tests?	(1), (2), (3) & (4) It will be decided by the Engineer after completion of Confirmatory sub-soil investigation by the contractor.

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Clarification No 01: Response to Tenderer's Queries/Suggestions

S.N	Reference of the Querites		Query/Suggestion by the Tenderer	Response from the Employer
	Volume	Section & Clause/Reference		
27	Volume 3 Sub-Section VIIB Particular Specifications, Division 5 - Structures, Clause 5.9.3.10		<p>② whether 6 Nos. Lateral Load Test under BOQ Item Code 4/4/1e are used for 2 Nos. 2500mm diameter pilot piles and 4Nos. 1500 mm diameter pilot piles or not?</p> <p>③ If the above understanding is correct, then the Lateral Load Test will be carried out on 6 Nos pilot piles, and Bi-Directional Load Tests will be carried out on 2 Nos piles among 6 pilot piles, then whether the Conventional Static Vertical Load Test needs to be carried out for the other 4 Nos. piles among 6nos. pilot piles?</p> <p>④ whether the PDA test needs to be carried out for the 6nos. pilot piles or not?</p>	<p>1. Dia. of down pipe The downpipe has a diameter of 100mm. However, this means the nominal diameter, not the inner diameter. 2. Material The material of the drainage pipe was selected in consideration of weldability and maintainability according to the type of deck and is as follows. ① Concrete bridge deck (Approach bridge, viaduct and ramp bridge) Catch basin: Aluminum-Alloy (ASTM B26 514.0) Grating: Aluminum-Alloy, (ASTM B26 514.0)</p>

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Clarification No 01: Response to Tenderer's Queries/Suggestions

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28	Volume 5	FINAL DETAIL DESIGN	<p>grating material conform to ASTM A126 Class C, that is catch basin and grating material apply gray iron casting; Table of "quantities of drainage" shows Steel pipe D90, which means down pipe is dia. 90mm steel pipe.</p> <p>Question: The materials and diameters of the bridge deck drainage pipes shown in different documents above are inconsistent with each other, please clarify:</p> <p>① Material specification of catch basin & grating & down pipe for drainage and diameter of down pipe for concrete bridge deck of approach bridge, viaduct and ramp bridge.</p> <p>② Material specification of catch basin & grating & down pipe for drainage and diameter of down pipe of main bridge steel deck.</p> <p>Refer to FINAL DETAIL DESIGN VII, Notes of drawing No. C2-1-474, C2-1-475, C2-1-476, C2-1-477, C2-3-088, C2-3-114, C2-3-140, it states that "<i>ESM - ESCO SLIDING MATERIAL</i>"</p> <p>AND</p> <p>Refer to TENDER DOCUMENT Volume 3 of 7 Sub-section VIIB Particular Specifications, Division 5-Structures, Clause 5.12.3.3 ESM (Engineering plastic sliding material), it states that:</p> <p>b) <u>Contact Stress</u></p>	<p>Down pipe: Aluminum-Alloy Tube (ASTM B221 6063 T5)</p> <p>② Main bridge steel deck</p> <p>Catch basin: Stainless Steel (ASTM A240 304)</p> <p>Grating: Aluminum-Alloy, (ASTM B26 514.0)</p> <p>Down pipe: Aluminum-Alloy Tube (ASTM B221 6063 T5)</p> <p>ESM equivalent bridge specification or manufacture's specification can be applicable to replace Esco Sliding Material.</p>

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	Volume	Section & Clause/Reference																	
			<p><u>The maximum contact stress of ESM shall be less than or equal to 60Mpa. And it can be adjustable according to the maximum compressive strength of Non Shrinkage mortar under the bearing.</u></p> <p>AND</p> <p>Refer to TENDER DOCUMENT Volume 3 of 7 Sub-section VIIB Particular Specifications, Division 5-Structures, Clause 5.12.4.1 ESM (Engineering plastic Sliding Material), it states that:</p> <p><u>Table 5.12-1: Mechanical Properties</u></p> <table border="1"> <thead> <tr> <th rowspan="2">Item</th> <th rowspan="2">Material</th> <th colspan="3">Property</th> </tr> <tr> <th>Compressive Strength in 10% deformation (MPa)</th> <th>Tensile Strength (MPa)</th> <th>Elongation (%)</th> <th>Specific Gravity</th> </tr> </thead> <tbody> <tr> <td>Sliding Material</td> <td>Polyamide Resin</td> <td>Min.50</td> <td>Min.45</td> <td>Min.15</td> <td>1.0-1.2</td> </tr> </tbody> </table> <p>AND</p>	Item	Material	Property			Compressive Strength in 10% deformation (MPa)	Tensile Strength (MPa)	Elongation (%)	Specific Gravity	Sliding Material	Polyamide Resin	Min.50	Min.45	Min.15	1.0-1.2	
Item	Material	Property																	
		Compressive Strength in 10% deformation (MPa)	Tensile Strength (MPa)	Elongation (%)	Specific Gravity														
Sliding Material	Polyamide Resin	Min.50	Min.45	Min.15	1.0-1.2														

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Clarification No 01: Response to Tenderer's Queries/Suggestions

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	Volume	Section & Clause/Reference		
			<p>Refer to TENDER DOCUMENT Volume 3 of 7 Sub-section VIII B Particular Specifications, Division 5-Structures, Clause 5.12.5 Manufacture, it states that:</p> <p><i>Steel, ESM, HS-Slider shall be manufactured following to the bridge specification or Manufacture's specification.</i></p> <p><i>Performance such as stiffness and durability of ESM, HS-Slider shall be verified and approved based on the report in advance.</i></p> <p>Question: According to the cited content of the Tender Document, the tenderer concludes that ESM equivalent bridge specification or manufacture's specification can also be applicable to replace Esco Sliding Material. Please confirm the tenderer's understanding is correct or not.</p>	
29	Volume 3	Sub-Section VIII B Particular Specifications, Division 2 – Earthwork,	<p>Refer to TENDER DOCUMENT Volume 3 of 7, Sub-Section VIII B Particular Specifications, Division 2 – Earthwork, Clause 2.8.5.2 Materials, it specifies that: "PP Mat (Polypropylene Mat): Strip tensile strength =>25kN/m (ASTM D4632)."</p> <p>AND</p> <p>Refer to FINAL DETAIL DESIGN VII, Notes of drawing No. D-002, it states that "<i>Soft Soil Treatment: P.P Mat (50kN/m)</i>"</p> <p>AND</p>	The data of PP Mat is 50kN/m.

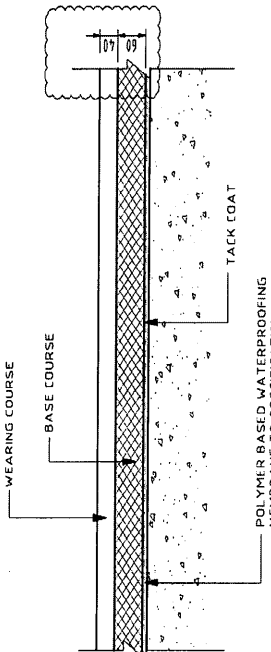
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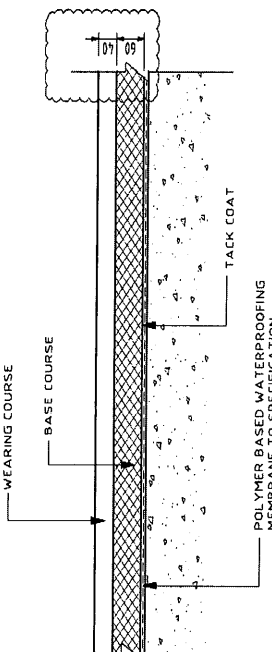
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Clarification No 01: Response to Tenderer's Queries/Suggestions

S.N	Reference of the Queries		Query/Suggestion by the Tenderer	Response from the Employer
	Volume	Section & Clause/Reference		
30	Volume 2	Sub-Section IVB Financial Tender Forms Schedules and Bill of Quantities)	<p>Refer to Volume 2 of 7, Sub-Section IVB Financial Tender Forms (Financial Schedules and Bill of Quantities), Item Code 2/8/1b, it states that "<u>PP Mat (50kN/m)</u>".</p> <p>Question: Please confirm the data of P.P Mat.</p> <p>Refer to Volume 2 of 7, Sub-Section IVB Financial Tender Forms (Financial Schedules and Bill of Quantities), Item Code 5/9/2a "Asphalt water proof"</p> <p>Item Coder 5/9/2b "Providing Waterproofing Membrane for Bridge deck".</p> <p>Question: Please provide the plan of the position where the water proof and waterproofing membrane will be used. Please provide the cross-sectional drawing or detail drawing of water proof and waterproofing membrane (the drawing below is an example).</p>  <p>TYPICAL ROAD SURFACING AND WATERPROOFING DETAILS</p>	<p>Item Code 5/9/2a "Asphalt water proof" : The location of the asphalt waterproofing is located on the back side (between soil and abutment concrete) of the abutment</p> <p>Item Coder 5/9/2b "Providing Waterproofing Membrane for Bridge deck" : The location of the waterproofing membrane for the bridge deck is located on the top of concrete deck on the bridge (between the asphalt pavement and the deck concrete).</p> <p>Please, Refer to Appendix C of Addendum 02 (SN 3).</p>

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Clarification No 01: Response to Tenderer's Queries/Suggestions

S.N	Reference of the Queries		Query/Suggestion by the Tenderer	Response from the Employer
	Volume	Section & Clause/Reference		
31	Volume 3	Sub-Section VIIB Particular Specifications	<p>Refer to TENDER DOCUMENT Volume 3 of 7, Sub-Section VIIB Particular Specifications, Clause 3.16 Pavement of the steel deck bridges (Guss Asphalt).</p> <p>AND</p> <p>Refer to Volume 2 of 7, Sub-Section IVB Financial Tender Forms (Financial Schedules and Bill of Quantities), Item Code 3/16/1a "PSMA (Modified Asphalt) Pavement (upper)(t=2.5cm)" and Item Code 3/16/1b "Guss (Mastic) Asphalt Pavement(lower)(t=2.5cm)".</p> <p>Question: Please provide the plan of the position where the PSMA pavement and Guss Asphalt pave will be used. Please provide the cross-sectional drawing or detail drawing of PSMA pavement and Guss Asphalt pave (the drawing below is an example).</p> <div style="text-align: center;">  </div>	<p>Please, Refer to Appendix D of Addendum 2(SN 4).</p>

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	Volume	Section & Clause/Reference		
32	Volume 2	Sub-Section IVB Financial Tender Forms (Financial Schedules and Bill of Quantities) and Item Coder 4*320m for steel arch bridge".	Refer to Volume 2 of 7, Sub-Section IVB Financial Tender Forms (Financial Schedules and Bill of Quantities), Item Code 7/8/1a "Railing 2*320m for steel arch Bridge" and Item Coder 7/8/1b "Guardrail 4*320m for steel arch bridge". Question: Please provide the following information: 1) Material requirements of the main structure of Railing and Guardrail. 2) Material requirements of odd structure (except the main structure) of Railing and Guardrail. 3) Please specify the type of connection between components and requirements of connection material between components.	Please, Refer to 7.8 Steel Barrier for Steel Arch Bridge of Section 6 (division 7) of the Technical Specifications Refer to Design Drawing No. C2-1-482~483_BARRIER Details of Main Bridge.
33	1	Section III- Evaluation and Qualification Criteria No. 3.4.2 (b)	Refer to TENDER DOCUMENT V1, Section III- Evaluation and Qualification Criteria No. 3.4.2 (b)	For each key activity, Form EXP-3.4.2(b) must have to be filled up. If one contract satisfies any key activity requirement, Tenderer can merge Year 1, year 2, year 3 & year 4 with project duration.

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Clarification No 01: Response to Tenderer's Queries/Suggestions

S.N	Reference of the Queries		Query/Suggestion by the Tenderer	Response from the Employer						
	Volume	Section & Clause/Reference								
			<table border="1"> <thead> <tr> <th colspan="2">Eligibility and Qualification Criteria</th> </tr> <tr> <th>No.</th> <th>Subject Requirement</th> </tr> </thead> <tbody> <tr> <td>3.4.2 (b)</td> <td>For the above and other contracts executed during the period indicated in 3.4.2(a) above, a minimum construction experience is required in the following key activities: <ol style="list-style-type: none"> Minimum 35 m span Pre Cast Pre Stress Concrete (PSC) Girders. its transportation & erection of 200 nos. such Girders. Dense Bituminous Surfacing (polymer modified bitumen or higher quality) minimum 3400.00 m². Dense Bituminous Surfacing (Wearing course/ Base Course) minimum 9000.00 m³. Aggregate stone Base course minimum 24,000.00 m³. A minimum total length of 18,000 meter cast in situ pile </td> </tr> </tbody> </table> <p>Question: We understand that we only need to provide one experience with total work quantity complying with the required work quantity of each item, rather than the yearly completed work</p>	Eligibility and Qualification Criteria		No.	Subject Requirement	3.4.2 (b)	For the above and other contracts executed during the period indicated in 3.4.2(a) above, a minimum construction experience is required in the following key activities: <ol style="list-style-type: none"> Minimum 35 m span Pre Cast Pre Stress Concrete (PSC) Girders. its transportation & erection of 200 nos. such Girders. Dense Bituminous Surfacing (polymer modified bitumen or higher quality) minimum 3400.00 m². Dense Bituminous Surfacing (Wearing course/ Base Course) minimum 9000.00 m³. Aggregate stone Base course minimum 24,000.00 m³. A minimum total length of 18,000 meter cast in situ pile 	
Eligibility and Qualification Criteria										
No.	Subject Requirement									
3.4.2 (b)	For the above and other contracts executed during the period indicated in 3.4.2(a) above, a minimum construction experience is required in the following key activities: <ol style="list-style-type: none"> Minimum 35 m span Pre Cast Pre Stress Concrete (PSC) Girders. its transportation & erection of 200 nos. such Girders. Dense Bituminous Surfacing (polymer modified bitumen or higher quality) minimum 3400.00 m². Dense Bituminous Surfacing (Wearing course/ Base Course) minimum 9000.00 m³. Aggregate stone Base course minimum 24,000.00 m³. A minimum total length of 18,000 meter cast in situ pile 									

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Clarification No 01: Response to Tenderer's Queries/Suggestions

S.N	Reference of the Queries		Query/Suggestion by the Tenderer	Response from the Employer
	Volume	Section & Clause/Reference		
			<p>quantity exceeding the required work quantity of each item. For example, in order to meet the requirement of Item No.2 <u>Dense Bituminous Surfacing (polymer modified bitumen or higher quality) minimum 3400.00 m³</u>, we may provide one experience containing a total work quantity of 3500m³ Dense Bituminous Surfacing, even the experience has a construction period of 3 years and the yearly completed work quantity is definitely less than <u>3400.00 m³</u>. Besides, if the above understanding is correct, we understand it is not required to fill the yearly completed work quantity and percentage participation in Form EXP-3.4.2 (b), we only need to attach the Acceptance Certificate of one experience showing the total work quantity exceeding the required work quantity.</p> <p>Please clarify whether the tenderer's understanding is correct or not.</p>	
34		General	<p>We would like to apply for 3 weeks extension to the tender submission deadline which presently stands at 5th December 2022, considering the huge amount of work involved in the bid preparation.</p>	Please, refer to Addendum 1 (SN 3,4 & 5)
35	Volume 2	SECTION-IVB BILL OF QUANTITIES	<p>BOQ Item-</p> <ul style="list-style-type: none"> (i) Subgrade drain – 02/12/01, (ii) Cement Concrete Block (Concrete Class 35) including labor for laying - 6/1/2b (iii) Concrete post (ROW Post) – 06/09/02 (iv) Concrete Guide Post - 6/15/01 (v) Concrete Kilometer Post - 6/16/01 	<p>Please, Refer to</p> <ul style="list-style-type: none"> (i) Roads & Highways Department's Standard Drawing no SDR 02 and Technical Specifications (General), Division 2, Clause No 2.12 (ii) Technical Specifications (Particular), Division 6, Clause No 6.1

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Clarification No 01: Response to Tenderer's Queries/Suggestions

S.N	Reference of the Queries		Query/Suggestion by the Tenderer	Response from the Employer
	Volume	Section & Clause/Reference		
36	Volume 2	SECTION-IVB BILL OF QUANTITIES	<p>(vi) Project Commemorative Plaques, Black Granite Stone Plaques (Lettering and Installation Complete) with RC Stand - 06/18/01 &</p> <p>(vii) Bridge identification Plaques, Black Granite Stone Plaques (Lettering and Installation Complete) with RC Stand - 06/18/01a</p> <p>There is no relevant drawing, would you please provide specific drawings or general drawings (for example, the drawing number) of the above-mentioned items.</p>	<p>(iii) Technical Specifications (General), Division 6, Clause No 6.9</p> <p>(iv) Technical Specifications (General), Division 6, Clause No 6.15</p> <p>(v) Roads & Highways Department's Standard Drawing no SDR 12 and Technical Specifications (General), Division 6, Clause No 6.16</p> <p>(vi) Technical Specifications (Particular), Division 6, Clause No 6.18 (dimensions will be 2.00m x 1.75m) &</p> <p>(vii) Technical Specifications (Particular), Division 6, Clause No 6.18 (dimensions will be 600mm x 600mm)</p> <p>Please, Refer to</p> <p>(i) Technical Specifications (Particular), Division 6, Clause No 6.23</p> <p>(ii) Technical Specifications (Particular), Division 6, Clause No 6.23</p>
37	Volume 5	FINAL DETAILED DESIGN DRAWING V2, in Drawing No. C2-1-474,	<p>BOQ Item</p> <p>(i) Reinforced Earth (Minimum internal angle 34 degree) Filling including geotextile according to the approved design - 06/23/01</p> <p>(ii) Supply & delivery of RE Wall Components consisting of Octagonal shaped precast panels (C-30), hot dipped galvanized Omega lug, cross bar, HD Reinforcing Tendon including concrete, rebar, installation etc as per approved by Engineer - 06/23/02</p> <p>The drawing number "07_C4-001~016_RETAINING WALL BLACK" provided by the Employer is cantilever or arm type retaining wall, but the two payment numbers are reinforced retaining wall, and there is no corresponding drawing. Would you please provide.</p> <p>Refer to FINAL DETAILED DESIGN DRAWING V2, in Drawing No. C2-1-474, the Dimension Table of 2250KN Free Isolation Bearing shows the 1st stiffness, 2nd stiffness, effective stiffness and yield strength of the bearing, however, the Dimension Table of 5000KN Guided Isolation Bearing and 35000KN Guided Isolation Bearing & Fixed Isolation</p>	<p>Please, Refer to Technical Specifications (Particular), Division 5, Clause No 5.12 and Final Detailed Design Report.</p>

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Clarification No 01: Response to Tenderer's Queries/Suggestions

S.N	Reference of the Queries		Query/Suggestion by the Tenderer	Response from the Employer
	Volume	Section & Clause/Reference		
			<p>Bearing in Drawing No. C2-1-475 & 476 & 477 does not show the above-mentioned parameters of bearing.</p> <p>please kindly confirm whether the 1st stiffness, 2nd stiffness, effective stiffness and yield strength of 5000KN Guided Isolation Bearing and 35000KN Guided Isolation Bearing & Fixed Isolation Bearing are the same as that of 2250KN Free Isolation Bearing. If not, please kindly provide the 1st stiffness, 2nd stiffness, effective stiffness and yield strength of 5000KN Guided Isolation Bearing and 35000KN Guided Isolation Bearing & Fixed Isolation Bearing.</p>	
38	Volume 5	FINAL DETAILED DESIGN DRAWING V2, the Drawing No. C2-1-474 shows the 1st stiffness of 2250KN Free Isolation Bearing is 148313KN/M, the yield strength calculated by the tenderer based on this stiffness value is inconsistent with the yield strength shown in the design drawing, and the calculated recovery strength is also abnormal, and 148313KN/M is much larger than the conventional 1st stiffness of Isolation Bearing, please kindly confirm whether the stiffness value is correct or not	<p>Refer to FINAL DETAILED DESIGN DRAWING V2, the Drawing No. C2-1-474 shows the 1st stiffness of 2250KN Free Isolation Bearing is 148313KN/M, the yield strength calculated by the tenderer based on this stiffness value is inconsistent with the yield strength shown in the design drawing, and the calculated recovery strength is also abnormal, and 148313KN/M is much larger than the conventional 1st stiffness of Isolation Bearing, please kindly confirm whether the stiffness value is correct or not</p>	<p>Please, Refer to Technical Specifications (Particular), Division 5, Clause No 5.12 and Final Detailed Design Report.</p>
39	Volume 5		<p>Refer to FINAL DETAILED DESIGN DRAWING V2, Drawing No. C2-1-474 & 475 & 476 & 477, Drawing No. C2-3-088 (should be C2-2-088), Drawing No. C2-2-114, Drawing No. C2-3-140 (should be C2-2-140), and Refer to Tender Documents Volume 3 of 7, Sub-Section VIII Particular Specifications, Division 5 - Structures, Clause 5.12.4.1 & 5.12.4.2中的sliding material.</p>	<p>Please, Refer to Technical Specifications (Particular), Division 5, Clause No 5.12.</p>

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Clarification No 01: Response to Tenderer's Queries/Suggestions

S.N	Reference of the Queries		Query/Suggestion by the Tenderer	Response from the Employer
	Volume	Section & Clause/Reference		
			<p>① Please confirm whether the equivalent material can be used to replace the ESM and HS-Slider material under the condition of reaching the same bearing design parameters.</p> <p>② Please provide other parameters of ESM and HS-Slider materials, such as static friction coefficient/dynamic friction coefficient/tensile strength/tensile strain at break, etc.</p>	
40		General	<p>As this tender is one of the prestigious project and scope of work involves construction of Steel Arch Bridge which is special type of bridge, we want to undertake a detailed physical site visit to assess the local site conditions and collect the various data/information needed from ground-which we feel, are critical to make a responsible offer with competitive pricing and most importantly, be able to complete the project within the stipulated time when awarded.</p> <p>In order to submit a competitive and comprehensive bid after completion of the site visit, we request you to allow us more time to prepare the offer. Hence, we request you to consider extension of bid submission date by 6 weeks from the present date of December 5, 2022.</p>	Please, refer to Addendum 1 (SN 3,4 & 5)
41		General	<p>According to the Addendum no.1 dated October 27th 2022, the deadline for tender submission is 5 December 2022, considering the adverse impact of the Covid-19 for travelling internationally of our bidding team and complexity of steel structure of Kewatkhalhi Bridge which needs more time for acquiring international quotation, so you are kindly requested to further extend the tender submission deadline for two weeks,i.e., up to December 19th 2022 in order to fully prepare the tender documents of this project.</p>	Please, refer to Addendum 1 (SN 3,4 & 5)

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Clarification No 01: Response to Tenderer's Queries/Suggestions

S.N	Reference of the Queries		Query/Suggestion by the Tenderer	Response from the Employer
	Volume	Section & Clause/Reference		
42.	Volume 1		You are requested to confirm if the Employer accept the Electronic official seal which will be affixed on the tender document for Construction of Kewatkhalhi Bridge with approach road & associated structure?	Electronic official seal will be accepted.

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Response to Tenderer's Queries/Suggestions

S.N.	Reference of the Queries		Query/Suggestion by the Tenderer	Response from the Employer
	Volume	Section & Clause/Reference		
1	Volume 3	Sub-Section VIII B Particular Specifications, Division 4 - Foundation Work, Clause 4.1.5 Payment Paragraph 3, Page 10	The bidder understands that the last sentence shall be read as "However, payment shall be allowed for lap splices when the bars are longer than 12 meters." Please clarify.	Payment shall not be allowed for lap splices.
2	Volume 3	Sub-Section VIII B Particular Specifications, Division 5-Structures, Clause 5.2.4, page 10	The bidder understands that the last sentence shall be read as "However, payment shall be allowed for lap splices when the bars are longer than 12 meters." Please clarify.	Payment shall not be allowed for lap splices.
3	Volume 3	Sub-Section VIII B Particular Specifications, Division 4 - Foundation Work - Clause 4.8 Ground Conditions, page 16	we understand that only bore log shall be provided by the Contractor to the Engineer. No further information or work, such as Standard Penetration Test, collection of disturbed Samples and Undisturbed Samples, Handling and Labelling of Samples, Groundwater Table Measurement, Laboratory Tests etc., are required to be provided or carried out by the Contractor. Please clarify.	Refer to Sub-clause 4.8.1.1, 4.8.1.2, 4.8.1.3, 4.8.1.4, 4.8.1.5, 4.8.1.11, 4.8.1.8, 4.8.1.9, 4.8.1.10, 4.8.1.11 of Volume 3, Sub-Section VIII B Particular Specifications, Division 4 - Foundation Work.
4	Volume 3	Sub-section VIII B Particular Specifications, Division 4-Foundation Work Clause 4.8 Ground Conditions, last sentence of paragraph 3 & Clause 4.8.11	Considering the quantity of "Confirmatory Sub-soil Investigation" can not be determined until construction period commences, it is advised to add a new BOQ Item for "Confirmatory Sub-soil Investigation" with a Provisional Sum determined by the Employer for tender purpose.	Existing clauses shall remain unchanged.
5	Volume 2 & 3	Volume 3, Sub-Section VIII B Particular Specifications Division 4-Foundation Work- Clause 4.1.3.3 & Volume 2, Section IVB-Appendix	(1) Please confirm that only 2 Nos 2500mm diameter test piles and 4Nos 1500 mm diameter will be carried out as pilot pile for this project. (2) The bidder's understanding is that BOQ Item Code 4/4/1f Bi-Directional Load Tests are to be applied only on 2 Nos. pilot piles not for working	(1) & (2) Tenderer's understanding is correct. (3) & (4) It will be decided by the Engineer after completion of Confirmatory sub-soil investigation by the contractor. (5) Pile Integrity test, Sonic Logging Test shall be performed on pilot piles in addition to Bi-Directional load test & Lateral load test.

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Response to Tenderer's Queries/Suggestions

S.N.	Reference of the Queries		Query/Suggestion by the Tenderer	Response from the Employer
	Volume	Section & Clause/Reference		
		B to Financial Part-BOQ Item Code 4/4/1e	<p>piles. Please confirm bidder's understanding is correct or not.</p> <p>(3) Please confirm that whether BOQ Item Code 4/4/1e Lateral Load Tests shall be applied on the others 4 Nos. pilot piles or not.</p> <p>(4) Please clarify the length, lateral design working load, vertical design working load for the pilot piles, or provide the design drawing of pilot piles with relevant parameter.</p> <p>(5) Please clarify what other tests shall be carried out on each pilot pile apart from above Lateral Load Test or Bi-Directional Load Test.</p>	
6		General	<p>6. Please clarify that whether Conventional Static Vertical Load Test shall be carried out on the working piles selected by the Engineer or not.</p>	No Conventional Static Vertical Load Test shall be carried out on the working piles.
7	Volume 3	Sub-Section VIIB Particular Specifications, Division 4-Foundation Work, Clause 4.4.16.1 & Clause 4.4.16.3	<p>The numbers of PDA tests in Clause 4.4.16.1 is inconsistent with the numbers of PDA tests in Clause 4.4.16.3. Please clarify which Clause shall prevail?</p>	Clause 4.4.16.3 shall prevail.
8	Volume 3	Sub-Section VIIB Particular Specifications, Division 4-Foundation Work, Clause 4.3.7	<p>Please confirm that whether Pile Integrity Tests shall be carried out on all the working pile and pilot piles? If not, please advise how many piles shall have Pile Integrity Tests.</p>	Pile Integrity Tests shall be carried out on all the working piles and pilot piles.
9	Volume 3	Sub-Section VIIB Particular Specifications, Division 4-Foundation Work, Clause 4.1.3.12	<p>The bidder understands that: (1) base grouting shall be applied to all of the bored piles (including pilot piles and working piles); (2) shaft grouting is only required for the potential defective piles as emergency measure. Is it correct? Please advise.</p>	Only Base grouting shall be applied to the piles of P6 on kewathali approach bridge.
10	Volume 3	FINAL DETAIL DESIGN V1, Notes of drawing No. C1-I-1111,	<p>According to the cited content of the Tender Document, the bidder concludes that:</p>	Refer to Clause 7.1.1.2 & 7.1.2 of the Technical Specifications (Particular).

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Response to Tenderer's Queries/Suggestions

S.N.	Reference of the Queries		Query/Suggestion by the Tenderer	Response from the Employer
	Volume	Section & Clause/Reference		
		Volume 3 of 7 Sub-section VIIB Particular Specifications, Division 7-Steel Bridge Superstructures, Clause 7.1.2.3, Clause 7.1.9.1, Clause 7.1.9.2 & Clause 7.1.1.2	(1) Steel superstructure materials (including steel plate, bolt, nut, washer, paint, etc.) shall conform to JIS Standard as specified in Drawings and Technical specification or equivalent ASTM and EN Standard. (2) Fabrication and erection of the steel superstructure shall conform to AASHTO/AWS D1.5 Bridge Welding Code and JRA Specification for Highway Bridges, equivalent EN 1090-2 Standard can also be applicable for fabrication and erection (including welding, painting, etc) of steel superstructure. Please confirm the bidder's above understanding-(1) and-(2) is correct or not.	
11		General	Please tell the Datum Reference adopted for the "ground level, design level" shown in FINAL DETAIL DESIGN V1&V2 and explain its relationship with the Bangladesh public works datum (PWD)	The datum reference adopted for the "ground level, design level" shown in final detail design drawing (vol 1 & vol 2) is datum of Survey of Bangladesh (SoB). PWD is below 1.5ft (0.46m) MSL.
12		Volume 3 of 7, Sub-section VIIB Particular Specifications, Division 4 - Foundation Work, Clause 4.4.17.2, FINAL DETAIL DESIGN V1-Drawing No.C1-001-General notes-3. Design Criteria and Standards	Please advise which version of RHD Technical Specifications shall apply to this project, 2011 version or 2016 version?	RHD Technical Specifications 2016 shall apply to this project as Technical Specification (General).
13		(i) Volume 1 of 7 Section III Evaluation and Qualification Criteria, sub-section 4 Contractor's Representative and Key	Different key personnel and equipment requirements, asking the tenderer to demonstrate his capacity to mobilize key equipment and personnel using Form PER 1, PER2 and Form EQU, are raised under Volume 1 and Volume 3 respectively. Please clarify.	The requirements for Contractor's Personnel & Equipment stated in sub-section 4 & 5 of Section III - Evaluation and Qualification Criteria of Volume 1 shall be considered at tender stage.

Response to Tenderer's Queries/Suggestions

S.N.	Reference of the Queries		Query/Suggestion by the Tenderer	Response from the Employer
	Volume	Section & Clause/Reference		
		Personnel and sub-section 5 Equipment and (ii) Volume 1 of 7, Section III Evaluation and Qualification Criteria, sub-section 1, Clause 1.1 (iii) Volume 3 of 7, Sub-Section VIIB(i) Equipment Requirement & Personnel Requirement.	which requirements the tenderer shall refer to at tender stage.	
14	Volume 2	Sub-Section IVB, Appendix B to Financial Part: Bill of Quantity, under Item Code 5/11/1c	As per Drawing No.C2-1-479 in FINAL DETAIL DESIGN V2, the bidder understands the 4 bearings (8000KN) shall be Elastomeric Wind Load Bearing rather than Elastomeric Vertical Load Bearing for Pier 11 and Pier 12 for Kewatkali Main Bridge. Please check and confirm.	Please refer to Addendum 01 (SN 7 & 9)
15	Volume 2	Section IV Tender forms, Sub-Section IV B - Financial Tender Form Appendix A to Financial Part, Schedule of Cost Indexation. The formula for the price adjustment	Please check ^{BR} k Eq ^o in the formulae and modify if needed.	Please refer to Addendum 01 (SN 1)
16	Volume 2	Sub-Section IVB- Appendix B to Financial Part: Bill of Quantities, under Item Code 4/1/5h	Please provide the detailed drawing showing the size, spec and length for permanent steel casing.	Refer to clause 4.1.21. The permanent steel casing shall be used to the piles of P6 of Kewatkali approach bridge @20m per pile.

Response to Tenderer's Queries/Suggestions

S.N.	Reference of the Queries		Query/Suggestion by the Tenderer	Response from the Employer
	Volume	Section & Clause/Reference		
17			Has the land acquisition for this project been completed? If it is not completed, please provide the completed land acquisition paragraph and the planned completion node.	Land acquisition of this project is ongoing. Please refer to PCC 2.1.
18			The bidding currency for this project is Bangladeshi taka. Is a certain percentage of US dollars provided?	Refer to IIT 15.1 (TDS).
19			Does the employer provide borrow pit and spoil pit?	Borrow pit and Spoil pit shall be arranged by the contractor.
20			Are the electric lighting system, monitoring system, lightning protection system, etc. in this project carried out by the relevant government departments designated by the employer?	The electric lighting system, monitoring system, lightning protection system, etc. in this project shall be carried out by the contractor following clause 6.21 & 7.6 of particular specifications.
21			5/13/1, 5/13/2 anchor subhead, please specify the length.	Follow detailed design drawing.
22			Are the four piles foundation sub-items 4/4/1c, 4/4/1d, 4/4/1e, and 4/4/1f test pile foundations?	(Drawing B6-005) (Volume 5 of TD) Refer to Clause 4.4.16, 4.4.17, 4.4.18, 4.4.19, Technical Specifications (Particular)
23			Which work content does the list content of 4.4.16-4.4.19 correspond to, and does it overlap with the list item 4.1?	Refer to Clause 4.1, 4.4.16, 4.4.17, 4.4.18, 4.4.19, Technical Specifications (Particular)
24			Except for the Pile Test listed in the BOQ (4/4/1c PDA Test & 4/4/1d Sonic Logging Test & 4/4/1d Lateral Load Test & 4/4/1f Bi-Directional Load Test), are there any other test for Pile Foundations should be considered in the Quotation?	Any tests for pile which are not mentioned in the Technical Specifications (General & Particular) should not be considered in the Tender.
25			The number of permanent shields in the list is insufficient. Is it based on the quantity of drawings or the quantity of the list?	Refer to clause 4.1.21. The permanent steel casing shall be used to the piles of P6 of Kewatkhali approach bridge @20m per pile.
26			During the construction of the rail over pass, is there a window period for railway operation, and what protective measures are required by the local railway department?	No window period shall be provided. Safety & protective measures during constructions over rail line shall be as per requirements of Bangladesh railway.

Response to Tenderer's Queries/Suggestions

S.N.	Reference of the Queries		Query/Suggestion by the Tenderer	Response from the Employer
	Volume	Section & Clause/Reference		
27			Will navigation be guaranteed during the construction of Kewakthali Bridge? The approach bridge on the south side of the bridge is located on a pond. Is this pond reserved?	Navigation clearance shall be guaranteed as per BIWTA requirement during the construction of Kewakthali Bridge. The pond is not reserved.
28			Is the power grid of the expansion section of the project transferred? If yes, can you provide the transfer plan and time point?	The power grid of the expansion section of the project shall be transferred. The compensation for transferring the power grid line has already been paid to relevant government departments. This power grid line shall be shifted progressively.
29			The traffic flow within the project route is relatively large. Are there any relevant requirements for traffic guidance and reform, please clarify?	24 hours traffic flow shall be ensured during construction with adequate safety measures and maintenance requirements by the contractor. Also, Refer to Clause 1.1 of Particular Specification.
30			Can the compacted sand piles in the project be constructed with the filling sand purchased around the project?	Refer to Particular specification, Clause 3.8.6.4 (3)
31			There is a road repair section under implementation within the project route. Is it a project planned by the employer that is being implemented, and does it conflict with this project?	This road maintenance works is being implemented by Roads & Highways Department for smooth movement of the traffic before the project work commences.
32			Could you please share the BOQ in Microsoft Excel version?	Microsoft word version of Volume 2 of Tender Document will be shared via email as per request from the Tenderer.
33			If the tender will be submitted by Joint Venture, is it mandatory to purchase the tender document in the name of the joint venture, or any one partner can purchase it?	Tender can be purchased by any partner of a Joint Venture.
34	Volume 1	SECTION I/II, ITT 21.1, page no 42	As the project includes a large nos of structure and Steel bridge Material resourcing and all the bid preparation work is influenced by the COVID -19 pandemic situation in china, hence, we kindly request	Please, refer to Addendum 01 (SN 3,4 & 5)

Response to Tenderer's Queries/Suggestions

S.N.	Reference of the Queries		Query/Suggestion by the Tenderer	Response from the Employer
	Volume	Section & Clause/Reference		
			the employer to extend the tender documents submission time to 14th December, 2022 instead of 14th November, 2022.	
35	Volume 1	Section IV, Appendix A	It is assumed that the price adjustment will be applicable from the first Interim Payment Certificate, please kindly confirm.	The price adjustment shall be applicable from the first Interim Payment Certificate.
36	Volume 1	Section IV, Tables of Payment Currencies	Please, kindly clarify the payment of the foreign currency will be paid by foreign currency directly or in a local currency with the exchange rate valid in that time, if payment by local currency, is there any limitation for the outward remittance.	The payment of the foreign currency will be paid by foreign currency directly as per Table C. Summary of Payment Currencies, Volume 2, page no 13
37	Volume 1	Section IV, Bill No 2, 2/1/1	Is it available to provide the area for the wastage materials disposal?	The area for the wastage materials disposal will be arranged by the contractor.
38	Volume 1	Section IV, Bill No 2, 2/2/2a	Please kindly clarify the quantity of the preloading work and the pay items accordingly	Existing clauses shall remain unchanged.
39	Volume 1	Section IV, Bill No 3, 3/1/1, 3/1/2	Is those items set for the compensation of the temporary road and diversion road pavement work required for contractor's material & equipment mobilization. Please clarify.	Item No 3/1/1 & 3/1/2 are not set for the compensation of the temporary road and diversion road pavement work required for contractor's material & equipment mobilization. Refer to Clause 3.1 of Technical Specifications (General).
40	Volume 1	Section IV, Bill No 4, 4/4/1c/e/f Load Test	Please provide the specific value of the load tests.	Refer to Clause 4.4 & 4.9 of Volume 3, Technical Specifications (Particular).
41	Volume 1	Section IV, Bill No 4, 4/1/5(h) Test	Please kindly provide the detailed drawings with location and length of the pile steel casing shall be lowered respectively.	Please refer to the response serial no. 25.
42	Volume 1	Section IV, Bill No 4, 4/4/1 Sonic Logging Test	Please kindly provide the lay out drawings of the pile need to fix the sonic steel pipe.	The lay out shall be decided during the construction stage by the Engineer.
43	Volume 1	Section IV, Bill No 5, 5/1/3(c)	Please kindly clarify which part of the structure shall be paid under the item 5/1/3c Concrete Class - 20 for the different components of structures. (Batching Plant).	Refer to Volume 4 & 5 of Tender Document (Final Detailed Design Drawing)

Response to Tenderer's Queries/Suggestions

S.N.	Reference of the Queries		Query/Suggestion by the Tenderer	Response from the Employer
	Volume	Section & Clause/Reference		
44	Volume 1	Section IV, Bill No 5, 5/1/3(h)	Please kindly clarify which part of the structure shall be paid under the item 5/1/3h Concrete Class - 25 for the different components of structures. (Batching Plant)	Refer to Volume 4 & 5 of Tender Document (Final Detailed Design Drawing)
45	Volume 2	Section IV, Bill No 5, 5/1/1(a)	The bearing of the Roundabout Overpass Bridge and Road Overpass bridges and Ramp bridges is "Elastomeric Vertical Load Bearing for Overpass and Ramp Bridges (2500kN)", as detailed in the drawings on the pages C2-2-029, C2-2-062, C2-2-063, C2-2-062, C2-2-063, however, the detail of "Elastomeric Vertical Load Bearing for Overpass and Ramp Bridges (2250kN)" in the BOQ Items 5/1/1a is not specified, please kindly clarify.	Please, refer to Addendum 01. (SN 8 & 9)
46	Volume 2	Section IV, Bill No 5, 5/1/1(c)	The bearing capacity of the Kewatkali Main Bridge is "Elastomeric Wind Load Bearing" is 8000kN, as detailed in the drawings on the page C2-1-479, but in the BOQ however, it is "Elastomeric Vertical Load Bearing for Kewatkali Main Bridge 8000kN" in the BOO Items 5/1/1c, please kindly clarify.	Please, refer to Addendum 01 (SN 7 & 9)
47	Volume 2	Section IV, Bill No 7, 7/2/1	Are there any fire prevention coatings requirements for the hanger cable system, if any, please provide the specification and drawings accordingly.	The parallel wire strand (PWS) has been adopted as a hanger cable. The PWS is surrounded by an anti-flame material that provides enough cover thickness. In addition, the cover material acts as an electric insulator that protects from fire caused by a lightning strike. Thus, additional fire protection coating system is not applied to the design.
48	Volume 3	Section VIIB, Technical Specifications (Particular), General	Please kindly clarify, is it allowed for the waterway navigation of Old-Brahmaputra River be blocked during the construction of the main bridge super-structure, otherwise, please mention the width of navigation channel that shall be reserved?	Navigation clearance shall be guaranteed as per BIWTA requirement during the construction of Kewatkali Bridge.

Response to Tenderer's Queries/Suggestions

S.N.	Reference of the Queries		Query/Suggestion by the Tenderer	Response from the Employer
	Volume	Section & Clause/Reference		
49	Volume 3	Section VIII, Technical Specifications (Particular), General	Please kindly provide the location, structure type, quantity, and related drawings of the structure need to be dismantled, especially the local residents' property (such as house and tree, etc.) and the drawings of the pipe line, etc. underground structure.	The local residents' property (such as house and tree, shop) and other utility service structure will be removed by the owner of the property.
50	Volume 3	Section VIII, Technical Specifications (Particular), 2.10/11	Is there any Earth shoulder and Hard shoulder work for this project, please kindly provide the quantity and drawings if any.	Refer to drawing B7-001 to B7-012 & other relevant drawing of Final Detailed Design Drawing
51	Volume 3	Section VIII, Technical Specifications (Particular), 3.8/3.9	Is there any Prime seal and Bituminous Surface treatment work for this project, please kindly provide the quantity and drawings if any.	There is no Prime seal and Bituminous Surface treatment work for this project.
52	Volume 3	Section VIII, Technical Specifications (Particular), 4.1.3.12	Please kindly clarify which pile shall execute the base grouting.	Base grouting shall be applied to the piles of P6 on kawatkhali approach bridge.
53	Volume 3	Section VIII, Technical Specifications (Particular), Drawings No. B1-017, B4-011 to B4 025	The Drainage inlet, Collection ditch, Concrete chute, Drainage ditch, Rain water drain and Utility Conduit detailed in the drawings is not specified in the BOQ items, please kindly clarify respectively.	The relevant components (Concrete reinforcement etc) of the Drainage inlet, Collection ditch, Concrete chute, Drainage ditch, Rain water drain and Utility Conduit have been incorporated in BOQ.
54	Volume 7	Section IX, PCC, 2.1	Please kindly provide the exact location of Site on existing ROW & Site to be acquired as the sub clause. It is preferred to highlight in the road plan.	Please, refer to the Road Plan (Drawing W' 001 to B2-010).
55	Volume 7	Section IX, PCC, 8.1	Please kindly inform the scheduled commencement date.	Tentative commencement date will be during the 2 nd quarter of 2023.
56	Volume 7	Section IX, PCC, 13.4	It is noted that the DAAB fees of employer will be included in the Provisional Sum, please kindly clarify is that the DAAB fees of the contractor also included, or, kindly state how much the DAAB will be incurred.	Please, refer to clause 21 of the General Conditions of Contract and sub-clause 13.4 of the Particular Conditions of Contract.
57	Volume 7	Section IX, PCC, 14.15	The Schedule of Payment Currencies did not find in the bidding documents, please kindly clarify.	Refer to page 13 of Volume 2 (Table C Summary of Payment Currencies)

Response to Tenderer's Queries/Suggestions

S.N.	Reference of the Queries		Query/Suggestion by the Tenderer	Response from the Employer
	Volume	Section & Clause/Reference		
58	General	General	Is it allowed to construct the temporary intersection (leveling crossing) road joint with the railway, at Railway Overpass Bridge #1, for the convenient of the access to the K3+900--K6+000 construction site, please kindly clarify.	Temporary levelling crossing shall not be allowed.
59	General	General	"Tender No. and Title: 35.01.0000.276.32.032.22-712, Construction of Kewatkhali Bridge at Mymensingh" Please clarify that contractor's understanding is correct.	Please Refer to the Addendum 01. (SN 2)
60	General	General	Please kindly provide the complete soil investigation report including empirical data.	Please, refer to the following link: https://drive.google.com/drive/folders/1LFSRM5LjAwDOZedDTYVZAVH0UingYK?usp=sharing The documents in the above link shall not be considered as part of the Tender Document. It is provided for better understanding about the project.
61	Volume I	Section III, Evaluation and Qualification criteria, Clause 3.4.2(a) Page 52 of 94	Participation, as a prime contractor, joint venture member or subcontractor, in at least one contract with a value of the Tenderer's participation at least USD: 170 80 million, that have been successfully and substantially5 completed within the last 07 (seven) years, and that is similar to the proposed works. The similarity of the Tenderer's participation shall be based on: 1. Steel Arch Bridge having 4 Lanes / Double track rail with at least a single span of minimum 150 m length or more. If the above contact is executed by a Joint Venture, the value of Bidders' participation shall be taken as contact amount multiplied by Bidders share in JV. OR	Existing clauses shall remain unchanged

Response to Tenderer's Queries/Suggestions

S.N.	Reference of the Queries		Query/Suggestion by the Tenderer	Response from the Employer
	Volume	Section & Clause/Reference		
62	Volume I	Section III, Evaluation and Qualification criteria, Clause 3.4.2(b) Page 53 of 54	<p>Participation, as a prime contractor, joint venture member or subcontractor, in at least one contract with a value of the Tenderer's participation at least USD: 150 million, that have been successfully and substantially completed within the last 07 (seven) years, and that is similar to the proposed works. The similarity of the Tenderer's participation shall be based on: 1. Steel Arch Bridge having 4 Lanes / Double track rail with at least a single span of minimum 150 m length or more. If the above contract is executed by a Joint Venture having bidders's share less than or equal to 40%, the value of bidder's participation shall be taken as contract amount multiplied by bidders's share in JV. If the above contract is executed by a Joint Venture having bidders's share more than 40%, the value of bidders's participation shall be taken as 100% of the contract amount.</p> <p>For the above and other contracts executed during the period indicated in 3.4.2(a) above, a minimum construction experience is required in the following key activities⁶:</p> <ol style="list-style-type: none"> 1. Minimum 35-25 meter span PSC Girders, its transportation & erection of 200 nos such Girders or total length of 7000m in a single contract. 2. Dense Bituminous Surfacing (polymer modified bitumen or higher quality) minimum 3400.00 m³. 3. No change requested. 4. No change requested. 	Existing clauses shall remain unchanged.

Response to Tenderer's Queries/Suggestions

S.N.	Reference of the Queries		Query/Suggestion by the Tenderer	Response from the Employer
	Volume	Section & Clause/Reference		
63	Volume I	Section III, Evaluation and Qualification criteria, Clause 3.4.2(a) & Clause 3.4.2(b)	<p>5. A minimum total length of 18,000 meter cast in situ pile having minimum diameter of 1500mm-1200 mm.</p> <p>6. A total of 1900 1000 meter minimum 1500 mm diameter pile of minimum length 70 60 meter each.</p> <p>7. No change requested</p> <p>(a) The description of original clause 3. 4. 2(a): Participation, as a prime contractor, joint venture member or subcontractor, in at least one contract with a value of the Tenderer's participation at least USD: 170 million that have been successfully and substantially completed within the last 07 (seven) years, (starting September 1, 2015) and that is similar to the proposed works, that proposed to be modified as: Participation, as a prime contractor, joint venture member or subcontractor, in at least one contract (road or bridge) with a value of the Tenderer's participation at least USD: 170 million that have been successfully completed or start working (under construction) within the last 07 (seven)- years, (starting September 1, 2015) and that is similar to the proposed works.</p> <p>(b) The description of original clause 3. 4. 2 (a) 1 item: Steel Arch Bridge having 4 Lanes/ Double track rail with at least a single span of minimum 150 m length or more, that proposed to be deleted.</p> <p>(c) The description of original clause 3. 4. 2 (b) 1 item: Minimum 35 m span Pre Cast Pre Stress Concrete (PSC) Girders, its transportation & erection of 200 nos. such Girders that proposed to be modified as:</p>	Existing clauses shall remain unchanged.

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Response to Tenderer's Queries/Suggestions

S.N.	Reference of the Queries		Query/Suggestion by the Tenderer	Response from the Employer
	Volume	Section & Clause/Reference		
64	Volume I	Section II, TDS, ITT 19.1	<p>Minimum 30 m span T—type Pre Cast Stress Concrete (PSC) Girders.</p> <p>(d) The description of original clause 3. 4. 2 (b) 5 and 6 item, that proposed to be deleted.</p> <p>(e) The description of original clause 3. 4. 2 (b) 7 item: Earthwork in road /rail embankment minimum 400000 cum that proposed to be modified as: Earthwork in road/rail minimum 200000 cubic Metre cum.</p> <p>(f) The description of original clause 3. 4. 2 (b) from 2 to 4 item proposed to be deleted.</p> <p>(g) Add a new clause: completed at least one tunnel with a minimum length of 900 meter.</p>	<p>Please refer to the following links of Bangladesh Bank: https://www.bb.org.bd/civ/index.php/links/links/9</p>
65		General	<p>The bank guarantee shall be issued by a designated bank of Bangladesh or if issued by a bank in a foreign country then it must be counter guaranteed by a scheduled bank of Bangladesh such that any claim by the employer against the said bank guarantee can be effected directly with the bank of Bangladesh. We'd like to know which designated banks of Bangladesh are acceptable and approved by employer that are capable to provide counter guarantee. Please give us some names of designated banks in Bangladesh</p> <p>Considering the issuance date of tender to the date of tender deadline, the available time is quite tight. We may require the employer to extend the tender deadline if appropriate.</p>	<p>Please Refer to the Addendum 01. (SN 3.4 & 5)</p>
66	Volume I	Section III, Evaluation and Qualification criteria, Clause 3.4.2(a)	<p>In Section III – Evaluation and Qualification Criteria under column Each Member of 3.4.2(a) it is stated as:</p>	<p>Each member of a JV should have a Participation, as a prime contractor, joint venture member or subcontractor, in at least one contract which has</p>

Response to Tenderer's Queries/Suggestions

S.N.	Reference of the Queries		Query/Suggestion by the Tenderer	Response from the Employer
	Volume	Section & Clause/Reference		
			<p>“Must meet 20% of the value of Tenderer’s participation and experience of any Bridge work of length 200 meter or more.” From the above sentence we understand that:</p> <ul style="list-style-type: none"> i. Each Member of a JV should have the management and execution experience of a contract of value USD 34 million (20% of USD 170 million); and ii. Also should have the experience of completion of Bridge having length of 200m or more in that contract or in any other Contract. <p>i.e two (02) separate contracts completed within the period of seven years starting from September 01, 2015 will satisfy the criteria for Each Member. Is our understanding correct?</p>	<p>(a) Minimum value of Tenderer’s participation of 34 million USD (20% of 170 million USD) (b) experience of any Bridge work of length 200 meter or more (c) Contract has to be successfully or substantially completed within the last 07 (seven) years, (starting September 1, 2015) (d) If the contract is executed by a Joint Venture, the value of Tenderer’s participation shall be taken as contact amount multiplied by Tenderer’s share in JV.</p>
67		General	<p>The Project under this tender is quite large and in this regard it is to be mentioned that many large projects are completed recently in Build Operate and Transfer basis, where the client for EPC contractor is the project developer / concessionaire. We consider that the work completion certificate(s) from the developer/ concessionaire will be considered for evaluation. Please clarify. It is worthy to mention here that, in the previous tenders of SASEC Dhaka-Sylhet Corridor Road Investment Project in reply to the same question the Engineer had given the answer that “Completion Certificate from the developer/concessionaire will</p>	<p>Work completion certificate as Developer/Concessionaire under the BOT/EPC form of the contracts shall also be considered.</p>

Response to Tenderer's Queries/Suggestions

S.N.	Reference of the Queries		Query/Suggestion by the Tenderer	Response from the Employer
	Volume	Section & Clause/Reference		
68	Volume 1	Section III, Evaluation and Qualification criteria, Clause 3.4.2(b)	<p>be considered." [copy of relevant pages are attached as Annex-A].</p> <p>In Section III – Evaluation and Qualification Criteria under 3.4.2(b): Construction Experience in seven (07) different Key Activities is sought.</p> <p>In this case to satisfy these criteria we understand that, if a contractor executed a contract in Joint Venture, each partner of the Joint Venture will get the full experience of Key Activities irrespective of his share.</p> <p>Please confirm.</p> <p>It is worthy to mention here that, in the previous tenders of SASEC Road Connectivity Project-II in reply to the same question the Engineer had given the answer that "Key activities relates to quantity only. Bidder will get the experience of full executed quantities." [copy of relevant pages are attached as Annex-B].</p>	<p>If a contractor executed a contract in Joint Venture, each partner of the Joint Venture will get the full experience of Key Activities irrespective of his share.</p>
69	Volume 2	Section IV: Sub-Section IVB: Financial Form [page 11 of 64] source of Index for Price Adjustment	<p>In Section IV: Sub-Section IVB: Financial Form [page 11 of 64] source of Index for Price Adjustment of different inputs are provided.</p> <p>For Stone, it is stated that the source of Index will be the "Table 3.4: Average Retail Price of Selected Building Materials at Principal Towns" of BBS (Bangladesh Bureau of Statistics) Statistical Bulletin. In case of 'town' column the 'Dhaka' row will be followed, as the construction site Mymensingh being closest to Dhaka compared to other town.</p> <p>But the BBS (Bangladesh Bureau of Statistics) Statistical Bulletin does not publish any index/rate of stone for Dhaka. In the BBS Bulletin in Table 3.4; index/price of Stone is published only at</p>	<p>Refer to Addendum 01 (SN 6)</p>

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Response to Tenderer's Queries/Suggestions

S.N.	Reference of the Queries		Query/Suggestion by the Tenderer	Response from the Employer
	Volume	Section & Clause/Reference		
70			<p>Sylhet "(a) Chattak" and "(b) Goainghat". [copy of relevant pages are attached as Annex-C]. Please clarify.</p> <p>The fabrication of Steel Arch Bridge of Kewatkhali are to be fabricated with materials satisfying different code of JIS (Japanese Industrial Standards) or equivalent as specified in Division 7, Section VIIB of volume 3 of 7. The total quantity as mentioned under BoQ item Code No. 7/1/1: Fabrication and Transport of Balanced Steel Bridge..... is 8,088 tonne. We consider that the fabrication of the Steel Bridge including factory welding, factory painting, field welding, non-destructive inspection of such Major Bridge is to be done in a foreign country. Regarding this issue we have the following query and request:</p> <p>a. The fabricated Bridge Parts including other accessories is to be imported once the fabrication is complete as per specification as provided under Division 7 of Section VIIB: Particular Specification. Our query is the importation of such materials requires payment of Import duties and other taxes at Seaport. Normally the Import duties and other taxes varies year to year and is difficult to estimate to include in the unit rate of Imported material, as such usually the expenses on this head (Import duty & tax) are to be reimbursable including regular Tax</p>	<p>(a) The Contractor shall be entirely responsible for all applicable taxes, custom duties, VAT, and other levies imposed or incurred inside and outside Bangladesh.</p> <p>(b) Refer to Addendum 01 (SN 3.4 & 5)</p>

Response to Tenderer's Queries/Suggestions

S.N.	Reference of the Queries		Query/Suggestion by the Tenderer	Response from the Employer
	Volume	Section & Clause/Reference		
71			<p>and VAT of this reimbursement payment to the Contractor.</p> <p>We like to mention here that an item for the reimbursement of Import duties and Taxes for Imported Steel I-Girders of Bridges was included in the specification as well as in BoQ of Western Bangladesh Bridge Improvement Project in Rangpur Zone; of JICA funded Project. [copy of relevant pages are attached as Annex-D].</p> <p>We request your honor to consider the matter.</p> <p>b. To arrange a reliable foreign manufacturer & finalize the supply agreement takes a considerable time.</p> <p>We request your honor to extend the Bid Submission date by another 45 days.</p> <p>Please consider.</p> <p>Under sub-clause 14.5(c)(i) of Section IX: Particular Condition of Contract regarding payment on Material at site, four (04) materials are specified i.e. (i) Bitumen, (ii) Stone Aggregates, (iii) Pre-stressing Steel & (iv) Reinforcing Steel. Although the Structural Steel for Balanced Steel Arch Bridge is a major item with BoQ quantity of 8,088 tonne, and will be subject to several inspections by the Employer's Representative, Engineer's Representatives and an independent Inspector [sub-clause 7.1.15: Inspection, under Section VIII, Division 7 – Steel Bridge Superstructures] is not in the said list.</p>	Existing clauses shall remain unchanged.

Response to Tenderer's Queries/Suggestions

S.N.	Reference of the Queries		Query/Suggestion by the Tenderer	Response from the Employer
	Volume	Section & Clause/Reference		
72			<p>We are requesting your honor to include the Structural Steel of Balanced Steel Arch Bridge in the list of sub-clause 14.5(c)(i) of Section IX: Particular Condition of Contract. Please consider.</p> <p>In clause 1.2.5: Engineer's Semi-permanent Laboratory Building [page 19] of volume 3 of 7, it is stated that "The field laboratory shall be located as close as convenient to and no greater than 100 meters from the Engineer's Office." Our query is the Laboratory Building is to be constructed on Employers Land or on Contractor's arranged land and who will be the owner of the Laboratory Building after completion of the Project? Please Clarify.</p>	<p>Semi-permanent Laboratory building shall have to be constructed on contractor's arranged land. The provided Laboratory infrastructure & equipments shall remain property of the Contractor after completion of the Work.</p>
73	Volume 1	Section-II, ITT Clause No. 22.1	<p>the submission date of Tender is on 14 November, 2022. It is a critical & special type of Bridge and requires more time for pricing & JV partner selection. We therefore, request you to extend the Bid submission date for at least one more month.</p>	<p>Please, refer to Addendum 01. (SN 1, 4 & 5)</p>
74	Volume 2	Section-IV, BOQ Item No. 1/2/3a, 1/2/3b, 1/2/3b(i) & 1/2/5.	<p>Furnish & Equip Engineer's Permanent Office, Semi Permanent Field Office, Semi Permanent Accommodation & Lab Equipment, Unit of measurement is Lump Sum</p> <p>We request you to put the amount in Provisional Sum with Contractors Mark up to ensure the quantity of Furnishing item & Equipment supply.</p>	<p>Existing clauses shall remain unchanged.</p>
75	Volume 2	Section-4, BOQ Item No. 1/2/1c	<p>It Provides Engineers Semi-Permanent Field Laboratory Building, Unit sqm. Please confirm after completion of the Project its ownership will be the Contractor or not.</p>	<p>Refer to response 72.</p>

Response to Tenderer's Queries/Suggestions

S.N.	Reference of the Queries		Query/Suggestion by the Tenderer	Response from the Employer
	Volume	Section & Clause/Reference		
76	Volume 2	Section-IV, BOQ Item No. 1/9/1	Unit of measurement are Lump Sum, Quantity - Nil. We think Quantity will be 1.00, Please confirm.	Please, Refer to Addendum 01. (SN 10)
77	Volume 2	Section-IV, BOQ Item No. 2/1/2	Remove & uproot Trees of different girth and disposes off site to Contractor's tip. In Volume 3 of 7, Section-VIIB, Clause No. 2.1.6.2, Ownership of the Removed Trees are uncertain. Please confirm about the ownership for quoting the price. If Govt. Agency is owner, it will be very difficult for handover/auction processing etc. It is better to make the removed Trees as the property of the contractor and make provision for deduction of the value of removed trees.	Existing clauses shall remain unchanged.
78	Volume 2	Section-IV, BOQ Item No. 6/18/1a Bridge Identification Plaques, Black Granite Stone Plaques with RC Stand, Unit each, No 16.	The same Item has been reflected in BOQ Item No. 6/18/1. Please confirm whether BOQ Item No. 6/18/1a is required or not. If yes then quantity is seems to very high	Existing clauses shall remain unchanged.
79	Volume 2	Section-IV, BOQ Item No. 6/1/2b	Cement Concrete Block (Concrete Class 35) including labor of laying - In our opinion Concrete Class 35 is seems to be very high. Please confirm	Existing clauses shall remain unchanged.
80	Volume 2	Section-IV, BOQ Item No. 6/18/1a Bridge Identification Plaques, Black Granite Stone Plaques with RC Stand, Unit each, No 16.	The same Item has been reflected in BOQ Item No. 6/18/1. Please confirm whether BOQ Item No. 6/18/1a is required or not. If yes then quantity is seems to very high	Existing clauses shall remain unchanged.
81		General	Request to extend the bid submission date at least 1 (one) month from the current date of bid submission	Please, Refer to Addendum 01. (SN 3,4 & 5)

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Response to Tenderer's Queries/Suggestions

S.N.	Reference of the Queries		Query/Suggestion by the Tenderer	Response from the Employer
	Volume	Section & Clause/Reference		
82		General	Request to extend the bid submission date at least 30 days from existing date of bid submission	Please, Refer to Addendum 01. (SN 3,4 & 5)
83		General	Application for a 1-month extension to the tender submission deadline which presently stands at 14 th November 2022, considering the huge amount of work involved in the bid preparation.	Please, Refer to Addendum 01. (SN 3,4 & 5)
84		Tender Notice	Please extend the Bid Submission by 1(one) Month.	Please, Refer to Addendum 01. (SN 3,4 & 5)
85	Volume 1	Eligibility & Qualification Criteria, 3.4.2(a)	Please, reduce the specific experience requirement for both the contract value (USD 170 million) and span length (150m)	Existing clauses shall remain unchanged.
86	Volume 3	Section VIIB, Technical Specifications (Particular)	In the Table 7.1.1: Type of Inspection and Minimum Frequencies, there will be Seven (07) Types of Inspections. There will be two (02) trips for Inspection of steel materials (confirmation of origin, and testing). Each Inspection will be comprised of one (01) Employer's Representative, two (02) Engineer's Representative and an independent Inspector. Since the materials will be Inspected by above four (04) members; we propose that after this inspection of each trip, the Material Advance for the "Structural Steel" shall be paid as per certification of quantity by the Team Members" while the material are at fabricator's workshop for fabrication. Our proposal is to ease the cash flow of the contractor and for smooth flow of work.	Existing clauses shall remain unchanged.
87	Volume 5	FINAL DETAILED DESIGN DRAWING V2, in Drawing No. C2-2-073, C2-2-074	Refer to FINAL DETAILED DESIGN DRAWING V2, in Drawing No. C2-2-073, C2-2-074, Details B, it shows that bearings of Railway Overpass Bridge-1 are Elastomeric Bearings. However, as shown in drawing No.C2-3-088 (which should be C2-2-088), bearings of Railway overpass Bridge-1 are Seismic Isolated Bearings.	Bearing type in Drawing no. C2-2-073, C2-2-074, C2-2-099, C2-2-100, C2-2-125 and C2-2-126 are mistakenly mentioned as "Elastomeric Bearing". Bearing type should be "Seismic Isolated Bearings". "Revised drawing" is attached with Addendum 01. (SN 12)

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Response to Tenderer's Queries/Suggestions

S.N.	Reference of the Queries		Query/Suggestion by the Tenderer	Response from the Employer
	Volume	Section & Clause/Reference		
88	Volume 5	FINAL DETAILED DESIGN DRAWING V2, in Drawing No. C2-2-080 & 106 & 132	<p>The same kind of inconsistent description regarding bearing type for one identical bridge also appears between drawings No. C2-2-099 & 100 and C2-2-114, between drawings No. C2-2-125 & 126 and C2-2-140.</p> <p>As commonly known, for $\Phi 15.2\text{mm}$ Nom.7 wire strands with 1860Mpa, tensile strength have a minimum breaking load of 260.7KN rather than 184KN. Whereas, for $\Phi 12.7\text{mm}$ Nom.7 wire strands with 1860Mpa, tensile strength have a minimum breaking load of 184KN. It seems that the diameter of strands does not match its minimum breaking load as shown in Drawing No. C2-2-080 & 106 & 132. The tenderer's understanding is that strands noted in Drawing No. C2-2-080 & 106 & 132 should be $\Phi 12.7\text{mm}$ with minimum breaking load of 184KN. Please confirm the tenderer's understanding is correct or not.</p>	<p>Tenderer's understanding is correct. "Revised drawing" is attached with Addendum 01. (SN 13)</p>
89	Volume 5	FINAL DETAILED DESIGN DRAWING V2, in Drawing No. C2-2-018 & 050 & 157, Notes-2	<p>It is found that the strands in Drawing No. C2-2-018 & 050 & 157 are $\Phi 15.2\text{mm}$ strands having a minimum breaking load of 260.7KN, the strands in Drawing No. C2-1-295 & 297 are $\Phi 12.7\text{mm}$ strands having a minimum breaking load of 184KN, the diameter and minimum breaking load of strands in Drawing No. C2-2-080 & 106 & 132 is subject to confirmation in above Question No.2.</p> <p>From tender design drawings, the tenderer's understanding is that tendon T1/T2/T3 in drawing No.C2-2-018 & 050 & 157 adopts 22nos.of $\Phi 15.2\text{mm}$ strands; tendon T1/T2/T3 in drawing No.C2-1-295 & 297 and C2-2-080 & 106 & 132 adopts 19nos.of $\Phi 12.7\text{mm}$ strands and tendon T4/T5</p>	<p>Tendon T1/T2/T3 in drawing No.C2-2-018 & 050 & 157 adopts 22nos.of $\Phi 15.2\text{mm}$ Nom, 7 wire stress relieved, low relaxation type strands conforming to AASHTO 2012 with a minimum breaking load of 260.7kN; tendon T1/T2/T3 in drawing No.C2-1-295 & 297 and C2-2-080 & 106 & 132 adopts 19nos.of $\Phi 12.7\text{mm}$ Nom, 7 wire stress relieved, low relaxation type strands conforming to AASHTO 2012 with a minimum breaking load of 260.7kN and tendon T4/T5 adopts 12nos.of $\Phi 12.7\text{mm}$ strands.</p>

Response to Tenderer's Queries/Suggestions

S.N.	Reference of the Queries		Query/Suggestion by the Tenderer	Response from the Employer
	Volume	Section & Clause/Reference		
90	Volume 5	FINAL DETAILED DESIGN DRAWING V2, in Drawing No. C2-2-005 & 013	adopts 12nos.of Φ 12.7mm strands. Please confirm whether the tenderer's understanding is correct or not. It kindly requested that the design load for piles of each pier and abutment for Kewatkhali bridge and its approach bridges could be provided to the tenderers.	Please, refer to the following link: https://drive.google.com/drive/folders/1LF8RM5LjJwDOZtdTYIZXl1l1YUrgYb?usp=sharing The documents in the above link shall not be considered as part of the Tender Document. It is provided for better understanding of the project by the Tenderer.
91	Volume 3	Section VIIB Particular Specifications Division 4-Foundation Work- Clause 4.8 Ground Conditions,4.8.1.9 Laboratory Tests	There is no specific/detailed requirement about what laboratory tests should the tenderer conduct. Please provide specific/detailed requirements of laboratory tests to be conducted.	Refer to the following link: https://drive.google.com/drive/folders/1LF8RM5LjJwDOZtdTYIZXl1l1YUrgYb?usp=sharing The documents in the above link shall not be considered as part of the Tender Document. It is provided for better understanding of the project by the Tenderer.
92	Volume 5	FINAL DETAILED DESIGN DRAWING (VOLUME -II)	Drawing No. C2-2-031 & 065 & 091 & 117 & 143 & 170 have only shown the diagram of expansion joints without indicating the design parameter and technical requirement as shown in Table in Drawing No. C1-1-480 & 481. Besides, Drawing No. C2-2-031 & 065 have not presented the diagram of expansion joints at Roundabout Overpass Bridge and Road Overpass Bridge abutment. Please kindly provide the design parameter and technical requirement of expansion joints in Drawing No. C2-2-031 & 065 & 091 & 117 & 143 & 170 and please also provide the diagram, design parameter and technical requirement of expansion joints at Roundabout Overpass Bridge and Road Overpass Bridge abutment.	“Revised drawing” is attached with Addendum 01. (SN 14)

Response to Tenderer's Queries/Suggestions

S.N.	Reference of the Queries		Query/Suggestion by the Tenderer	Response from the Employer
	Volume	Section & Clause/Reference		
93.	Volume 1	Section II - Tender Data Sheet (TDS), C. Preparation of Tenders, ITT 10.1:	<p>Refer to ITT 10.1, "Supporting documents and printed literature which is converted into English language shall have to be translated by licensed translator."</p> <p>we understand, supporting documents and printed literature shall be translated into English by a "licensed translator" and the "licensed translator" shall be a translator holding a translation qualification certificate. In order to prove the translator we employed is licensed, we consider to attach a copy of qualification certificate of the translator together with business license of the company where the translator works</p>	<p>Existing Clauses shall remain unchanged.</p>
94		General	<p>For Tenderer better understanding for the project, we would like to request your kindly convenience that provide the Design Report and Design Criteria for the project</p>	<p>Please, refer to the following link: https://drive.google.com/drive/folders/1Lr8RAM5LjhwD0ztdh1Y1ZAtHh1TpxYb7ay sharing. The documents in the above link shall not be considered as part of the Tender Document. It is provided for better understanding of the project by the Tenderer.</p>
95	Volume 1	Section III, Evaluation and Qualification criteria, Clause 3.4.2(a)	<p>Participation, as a prime contractor, joint venture member or subcontractor, in at least one Highway or Bridge contract with a value of the Tenderer's participation at least USD: 170 million that have been successfully and substantially completed within the last 07 (seven) years, (starting September 1, 2015) and at least one contract is similar to the proposed work. The similarity of the Tenderer's participation shall be based on: I. Steel Arch Bridge having 4 Lanes/ Double track rail with at least a single span of minimum 150 m length or more</p>	<p>Existing clauses shall remain unchanged.</p>

Response to Tenderer's Queries/Suggestions

S.N.	Reference of the Queries		Query/Suggestion by the Tenderer	Response from the Employer
	Volume	Section & Clause/Reference		
96	Volume 1	ITT 22.1	The project is very important and big project, for better preparation for the bidding document, we would like to request to extend the tender submission deadline to 13 th December 2022.	Please, Refer to Addendum 01 (SN 3,4 & 5)
97	Volume 1	Section III, Evaluation and Qualification criteria, Clause 3.4.2(a) page 52,	Specific construction and contract management experience, it is required that for JV, one member must meet 100% the requirement, please clarify whether that any member other than lead member meet 100% requirement is accepted	One member among all the JV members shall have to meet 100% of the qualification.
98	Volume 1	Section III, Evaluation and Qualification criteria, Clause 3.4.2(b), foot note 6 page 53,	we understand that the total volume, number or rate of production of any key activity demonstrated in one or more contracts combined shall be greater than the minimum requirement in last 7 years or shall be greater than the minimum requirement in any one year during the same period, please clarify.	The minimum requirement in any key activities can be demonstrated by any of the following ways (i) from one contract successfully or substantially completed within the last 07 (seven) years, (starting September 1, 2015). (ii) from multiple contracts combined if executed in any one year of same time period within the last 07 (seven) years, (starting September 1, 2015). Works executed during same calendar year shall be treated as executed during same time period.
99	Volume 1	Section III, Evaluation and Qualification criteria, Clause 3.4.2(b), foot note 6 page 53	we understand that different key activities can be meet in different calendar year within the last 7 years. (I.e., for 200 nos 35m span pre cast pre stress concrete girders constructed in 2018, and for 24,000.00 m ³ aggregate stone base course constructed in 2019.) or all the 7 key activities shall be completed in same calendar year during the last 7 years. Please clarify	Different key activities can be meet in different calendar year within the last 7 years, (starting September 1, 2015).
100		General	It is requested to extend the deadline for submission of the tender for one month please	Please. Refer to Addendum 01 (SN 3,4 & 5)

Government of the People's Republic of Bangladesh
Office of the Project Director (SE), RHD
Construction of Kewatkhali Bridge at Mymensingh Project
Roads and Highways Department (RHD)
Room No.-227, Part-B (Level-02), Sarak Bhaban, Tejgaon, Dhaka-1208
E-mail: pd.kewatkhali@gmail.com

Memo No. 35.01.0000.276.32.032.22 - 774

Date: 27-10-2022

Title: Construction of Kewatkhali Bridge with Approach Road & Associated Structures. Package: WP-01
Project Name: Construction of Kewatkhali Bridge at Mymensingh.

ADDENDUM NO. 1

The following modifications have been made in the Tender Documents of Work Package WP-01, all other terms and conditions of the Tender Documents shall remain valid and unchanged.

SN	Reference to TD	Original Provision of TD	Amended Provision of TD
1.	Volume 2 Section IV Tender forms, Sub-Section IV B - Financial Tender Form Appendix A to Financial Part, Schedule of Cost Indexation. (Page no 9)	The formulae for price adjustment shall be as under: $P_n = a + b \frac{LL}{LL^o} + c \frac{FL}{FL^o} + d \frac{FU}{FU^o} + e \frac{BI}{BI^o} + f \frac{CE}{CE^o} + g \frac{ST}{ST^o} + h \frac{PS}{PS^o} + i \frac{SS}{SS^o} + j \frac{RS}{RS^o} + k \frac{BR}{BR^o} + l \frac{MI}{MI^o}$	The formulae for price adjustment shall be as under: $P_n = a + b \frac{LL}{LL^o} + c \frac{FL}{FL^o} + d \frac{FU}{FU^o} + e \frac{BI}{BI^o} + f \frac{CE}{CE^o} + g \frac{ST}{ST^o} + h \frac{PS}{PS^o} + i \frac{SS}{SS^o} + j \frac{RS}{RS^o} + k \frac{BR}{BR^o} + l \frac{MI}{MI^o}$
2.	Volume 1 Section II Tender Data Sheet (TDS) ITT 1.1, page no 37.	The name of the Tender is: "Construction of Kewatkhali Bridge at Mymensingh"	The name of the Tender is: "Construction of Kewatkhali Bridge with Approach Road & Associated Structures."
3.	Volume 1 Section II Tender Data Sheet (TDS) ITT 22.1, page no 42	The deadline for Tender submission is: Date: 14 November 2022 Time: 11:00 (BST)	The deadline for Tender submission is: Date: 5 December 2022 Time: 11:00 (BST)
4.	Volume 1 Section II Tender Data Sheet (TDS) ITT 25.1, page no 42	The Tender opening shall take place at: Project Director (SE, RHD) Construction of Kewatkhali Bridge at Mymensingh Project, Roads and Highways Department Conference room: 213, Level-02, Part-B, Sarak Bhaban City: Tejgaon, Dhaka ZIP/Postal Code: 1208 Country: Bangladesh Date: 14 November 2022	The Tender opening shall take place at: Project Director (SE, RHD) Construction of Kewatkhali Bridge at Mymensingh Project, Roads and Highways Department Conference room: 213, Level-02, Part-B, Sarak Bhaban City: Tejgaon, Dhaka ZIP/Postal Code: 1208 Country: Bangladesh Date: 5 December 2022

SN	Reference to TD	Original Provision of TD	Amended Provision of TD																								
5.	IFT S.N 8 Last Date and Time for Selling of Tender	Time: 12:00 (BST) 13 November 2022, 15:00 (BST)	Time: 12:00 (BST) 4 December 2022, 15:00 (BST)																								
6.	Volume 2 Section IV: Sub-Section IVB: Financial Form [page 11 of 64] source of Index for Price Adjustment	Stone: For price adjustment of Stone, the source of Index will be the "Table 3.4: Average Retail Prices of selected Building Materials at Principal Towns" of BBS (Bangladesh Bureau of Statistics) Statistical Bulletin. In case of 'town' column the 'Dhaka' row will be followed, as the construction site Mymensingh being closest to Dhaka compared to other town.	Stone: For price adjustment of Stone, the source of Index will be the "Table 3.4: Average Retail Prices of selected Building Materials at Principal Towns" of BBS (Bangladesh Bureau of Statistics) Statistical Bulletin. In case of 'town' column the 'Sylhet' row will be followed.																								
7.	Volume 2 Sub-Section IVB, Appendix B to Financial Part: Bill of Quantity, under Item Code 5/11/1c Page no. 39	Description of Item: Elastomeric Vertical Load Bearing for Kewatkhali Main Bridge (8000kN)	Description of Item: Elastomeric Wind Load Bearing for Kewatkhali Main Bridge (8000kN)																								
8.	Volume 2 Sub-Section IVB, Appendix B to Financial Part: Bill of Quantity, under Item Code 5/11/1a Page no. 39	Description of Item: Elastomeric Vertical Load Bearing for Overpass and Ramp Bridges (2250kN)	Description of Item: Elastomeric Vertical Load Bearing for Overpass and Ramp Bridges (2500kN)																								
9.	Volume 3 Technical Specification (Particular) Division - 5, Clause 5.11 Page no. 18	<p>5.11.6 Payment</p> <p>➤ Add the following additional Pay Items in Clause 5.11.6.</p> <table border="1"> <thead> <tr> <th>Pay Item No.</th> <th>Description</th> <th>Measurement Unit</th> </tr> </thead> <tbody> <tr> <td>5/11/1a</td> <td>Elastomeric Vertical Load Bearing for Overpass and Ramp Bridges (2250kN)</td> <td>Each</td> </tr> <tr> <td>5/11/1b</td> <td>Elastomeric Wind Load Bearing for Kewatkhali Main Bridge (4300kN)</td> <td>Each</td> </tr> <tr> <td>5/11/1c</td> <td>Elastomeric Vertical Load Bearing for Kewatkhali Main Bridge (8000kN)</td> <td>Each</td> </tr> </tbody> </table>	Pay Item No.	Description	Measurement Unit	5/11/1a	Elastomeric Vertical Load Bearing for Overpass and Ramp Bridges (2250kN)	Each	5/11/1b	Elastomeric Wind Load Bearing for Kewatkhali Main Bridge (4300kN)	Each	5/11/1c	Elastomeric Vertical Load Bearing for Kewatkhali Main Bridge (8000kN)	Each	<p>5.11.6 Payment</p> <p>➤ Add the following additional Pay Items in Clause 5.11.6.</p> <table border="1"> <thead> <tr> <th>Pay Item No.</th> <th>Description</th> <th>Measurement Unit</th> </tr> </thead> <tbody> <tr> <td>5/11/1a</td> <td>Elastomeric Vertical Load Bearing for Overpass and Ramp Bridges (2500 kN)</td> <td>Each</td> </tr> <tr> <td>5/11/1b</td> <td>Elastomeric Wind Load Bearing for Kewatkhali Main Bridge (4300kN)</td> <td>Each</td> </tr> <tr> <td>5/11/1c</td> <td>Elastomeric Wind Load Bearing for Kewatkhali Main Bridge (8000kN)</td> <td>Each</td> </tr> </tbody> </table>	Pay Item No.	Description	Measurement Unit	5/11/1a	Elastomeric Vertical Load Bearing for Overpass and Ramp Bridges (2500 kN)	Each	5/11/1b	Elastomeric Wind Load Bearing for Kewatkhali Main Bridge (4300kN)	Each	5/11/1c	Elastomeric Wind Load Bearing for Kewatkhali Main Bridge (8000kN)	Each
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10.	Volume 2 Section-IV, BOQ Item No. 1/9/1 Page no 26	The Quantity of Item 1/9/1 is 1.																									

SN	Reference to TD	Original Provision of TD	Amended Provision of TD
11.	Volume 2 Section-IV, BOQ Item No. 1/2/5, Page no 23		The Quantity of Item 1/2/5 is 1.
12.	Volume 5	Drawing No. C2-2-073, C2-2-074, C2-2-099, C2-2-100, C2-2-125 and C2-2-126	Drawing No. C2-2-073, C2-2-074, C2-2-099, C2-2-100, C2-2-125 and C2-2-126 shall be replaced by C2-2-073-r01, C2-2-074-r01, C2-2-099-r01, C2-2-100-r01, C2-2-125-r01 and C2-2-126-r01 respectively. (Copy attached, Appendix A)
13.	Volume 5	Drawing No. C2-2-080, C2-2-106, C2-2-132	Drawing No. C2-2-080, C2-2-106, C2-2-132 shall be replaced by C2-2-080-r01, C2-2-106-r01, C2-2-132-r01 respectively. (Copy attached, Appendix A)
14.	Volume 5	Drawing No. C2-2-031, C2-2-065, C2-2-091, C2-2-117, C2-2-143, C2-2-170	Drawing No. C2-2-031, C2-2-065, C2-2-091, C2-2-117, C2-2-143, C2-2-170 shall be replaced by C2-2-031-r01, C2-2-065-r01, C2-2-091-r01, C2-2-117-r01, C2-2-143-r01, C2-2-170-r01 respectively. (Copy attached, Appendix A)

Attachment: Appendix A. Revised Detailed Design Drawing



Noor-E-Alam
ID No. 005072

Project Director (SE), RHD
Construction of Kewatkhalii Bridge at Mymensingh Project

Distribution:

..... (All Tenderers who have acquired Tender Documents)

Copy for kind Information:

1. Chief Engineer, Roads and Highways Department, Sarak Bhaban, Tejgaon, Dhaka.
2. Sr. Investment Operation Specialist – Transport, Infrastructure Investment Department, Region 1, Asian Infrastructure Investment Bank (AIIB), AIIB Headquarters, Tower A, Asia Financial Center, No. 1 Tianchen East Road, Chaoyang District, Beijing 100101, China.
3. Project Manager (EE), RHD, Construction of Kewatkhalii Bridge at Mymensingh Project, Sarak Bhaban, Tejgaon, Dhaka.

Government of the People's Republic of Bangladesh
 Office of the Project Director (SE), RHD
 Construction of Kewatkhali Bridge at Mymensingh Project
 Roads and Highways Department (RHD)
 Room No.-227, Part-B (Level-02), Sarak Bhaban, Tejgaon, Dhaka-1208
 E-mail: pd.kewatkhali@gmail.com

Memo No. 35.01.0000.276.32.032.22 - 849

Date: 23-11-2022

Title: Construction of Kewatkhali Bridge with Approach Road & Associated Structures. Package: WP-01
Project Name: Construction of Kewatkhali Bridge at Mymensingh.

ADDENDUM NO. 2

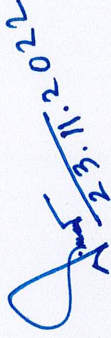
The following modifications have been made in the Tender Documents of Work Package WP-01, all other terms and conditions of the Tender Documents shall remain valid and unchanged.

SN	Reference to TD	Original Provision of TD	Amended Provision of TD
1.	Volume 1 Section IV Tender forms, Form EQU: Equipment, Page 68 of 94	Form EQU: Equipment	Revised Form EQU: Equipment (Copy Attached, Appendix A)
2.	Volume 1 Section IV Tender forms, Form EQU: Equipment, Page 86 of 94	Form EXP-3.4.2(a)	Revised Form EXP-3.4.2(a) (Copy Attached, Appendix B)
3.	Volume 3 Sub-Section VIIB Particular Specifications		Detailed Design Report of Waterproofing for Bridge Decks (Copy Attached, Appendix C)
4.	Volume 3 Sub-Section VIIB Particular Specifications		Detailed Design Report of Asphalt Pavements on Bridge Decks (Copy Attached, Appendix D)

Attachment: (1) Appendix A, Revised Form EQU: Equipment

K A 2

- (2) Appendix B, Revised Form EXP-3.4.2(a)
- (3) Appendix C, Detailed Design Report of Waterproofing for Bridge Decks
- (4) Appendix D, Detailed Design Report of Asphalt Pavements on Bridge Decks


23.11.2022

Noor-E-Alam
ID No. 005072
Project Director (SE), RHD
Construction of Kewatkhali Bridge at Mymensingh Project

2

Distribution:

..... (All Tenderers who have acquired Tender Documents)

Copy for kind Information:

1. Chief Engineer, Roads and Highways Department, Sarak Bhaban, Tejgaon, Dhaka.
2. Sr. Investment Operation Specialist – Transport, Infrastructure Investment Department, Region 1, Asian Infrastructure Investment Bank (AIIB), AIIB Headquarters, Tower A, Asia Financial Center, No. 1 Tianchen East Road, Chaoyang District, Beijing 100101, China.
3. Project Manager (EE), RHD, Construction of Kewatkhali Bridge at Mymensingh Project, Sarak Bhaban, Tejgaon, Dhaka.

Form EQU: Equipment

The Tenderer shall provide adequate information to demonstrate clearly that it has the capability to meet the requirements for the key equipment listed in Section III, Evaluation and Qualification Criteria. A separate Form shall be prepared for each item of equipment listed, or for alternative equipment proposed by the Tenderer.

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

Omit the following information for equipment owned by the Tenderer.

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

x

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2

2

**Form EXP-3.4.2(a)
Specific Construction and Contract Management Experience**

Tenderer's Name: _____
 Date: _____
 JV Member's Name _____
 Tender No. and title: _____
 Page _____ of _____ pages

Similar Contract*No.	Information			
Contract Identification				
Award date				
Completion date				
Role in Contract	Prime Contractor <input type="checkbox"/>	Member in JV <input type="checkbox"/>	Management Contractor <input type="checkbox"/>	Subcontractor <input type="checkbox"/>
Total Contract Amount				USD
If member in a JV or subcontractor, specify participation in total Contract amount				
Employer's Name:				
Address: Telephone/fax number E-mail:				
Description of the similarity in accordance with Sub-Factor 3.4.2(a) of Section III:				
1. Amount***				
2. Physical size of required works items**				
a. Total length of the steel arch Bridge (meter)				
b. Length of the maximum span of steel arch bridge (meter)				
c. Width of steel arch bridge (m)				
d. Number of Lane of steel bridge or Number of tracks in case of steel rail bridge				
3. Any other Bridge information (Type of Bridge, Total Length of Bridge etc)				
4. Complexity				
5. Methods/Technology				
6. Construction rate for key activities				
7. Other Characteristics				

- *Attach Employer's certificate as an evidence of Amount details
- ** Attach Employer's certificate as an evidence of required works items-2(a, b, c, d) & 3.
- *** Attach evidential documents of exchange rate on the day of entering into contract(s).
- **** Each JV member shall fill this form separately to show relevant experiences.

K A B 2

5.5.4 Waterproofing for Bridge Decks

The waterproofing for bridge decks is recognized as a vital and necessary operation to enhance the durability and longevity of the life of the bridge. It represents the first line of defense and prevents the ingress of water, road de-icing salts, and aggressive chemicals which would corrode the steel reinforcing bars in the concrete causing severe structural damages.

Concrete will always have some degree of porosity and allied with surface wear and hairline crack will allow water and corrosive materials to penetrate and attack the steel reinforcement. The primary defense against such destructive agents is good dense concrete, along with a proven waterproofing system is installed.

Bridge Deck Waterproofing Systems are largely divided into Preformed Membrane Systems and Liquid (Sprayed) Systems.

- **Preformed Membrane Systems**

A waterproofing membrane is a thin layer of water-tight material that is laid over a surface. This layer is continuous and does not allow water to pass through it.

The system is again classified as the rubberized asphalt type and the modified bitumen type, depending on the materials applied.

The rubberized asphalt type consists of a rubberized asphalt sheet reinforced with a polyethylene film or mesh. The modified bitumen sheet type consists of a polymer-modified bitumen sheet reinforced with stitch-bonded polyester fabric or fiberglass mesh.

- **Liquid (Sprayed) Systems**

These systems largely fall into acrylics and Polyurethanes and normally consist of three elements; Primer, Membrane applied in one or two coats, and tack coat specially developed to enhance the bond of the membrane to the surfacing mix.

- **Selection of the Waterproofing for Bridge decks**

Preformed Membrane Systems was selected as it was considered to be superior to the Liquid Systems in terms of reliability of waterproof performance.

The Preformed Membrane Systems are presented in **Figure 5-50** below

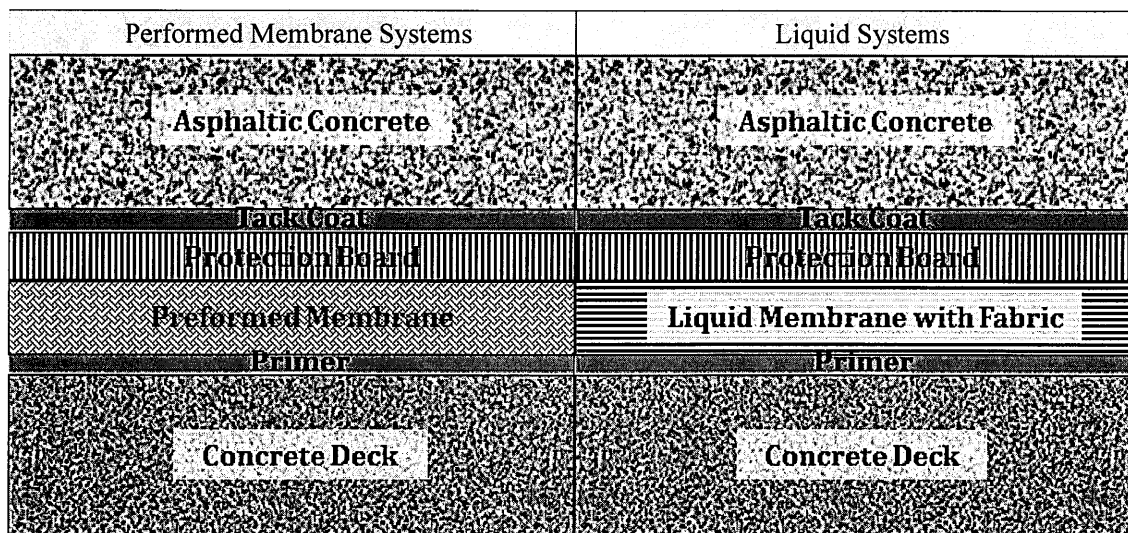


Figure 5-50 Details of asphalt pavement layers

(Handwritten marks and signatures)

5.5.3 Asphalt Pavements on Bridge Decks

(1) General

The primary role of the pavement is to protect a bridge deck from the repeated vehicle load and impact for improving durability of the deck. In addition, it ensures the riding quality and safety of the vehicle through minimizing permeation of harmful things such as rainfall, deicing chemical and arsenic chemical as well as minimizing early deterioration of deck which provides proper coefficient of friction to the vehicle.

(2) Pavement on the Steel Deck Plate

According to the recent study, it is defined that the life-cycle of deck plate is becoming shorter due to increasing traffic volume of heavy vehicles and the large local deformation characteristics of deck plate which induce severe cracks and plastic deformations. Since a deflection of the steel deck plate is three (3) times bigger than concrete deck plate, the life-cycle of pavement on the steel deck plate cannot assure longer durability compares to the typical pavement on the concrete deck. Thus, proper type of pavement must be installed on the steel deck plate which provide an endurance performance from the slip, plastic deformation and fatigue crack. In addition, it is required to withstand from the repeated deformation, and must be equipped the water proof system as well.

Therefore, considering all concerns above, GUSS Asphalt plus PMA type is adopted as a pavement on the steel deck plate.

GUSS Asphalt is a kind of Asphalt concrete which has good fluidity and workability, automatically leveling into shape without rolling after mixing in high temperature, with characteristics of impervious (minimum porosity), corrosion resistance, abrasion, oil proof and strong deformability.

GUSS Asphalt is particularly vulnerable to plastic deformation phenomenon. Thus, Polymer Modified Asphalt (PMA) which enhance a compatibility of bending on a base course is adopted in the wearing course section to resist plastic deformation, and it takes in charge of the functionality of each layers of the pavement.

This method does not require any compaction works but strict measure of filed quality control is necessary to ensure the long-term performance itself. To be specific, ensuring the temperature and fluidity of material is crucial factor in the quality control aspect, and it is required from the production stage to transportation stage to construction stage.

In general, the asphalt bridge pavement system can be split into four different layers: an adhesive layer (primer), a waterproofing layer, a protection layer and the wearing course layer. These four layers are described in **Figure 5-49** below.

(3) Pavement on the Concrete Deck Plate

In contrast with the steel deck plate, the local deformation is not commonly appeared in the behavior of concrete deck plate, thus SBS-PMA type is adopted as pavement on the concrete deck plate. SBS-PMA is one of the improved asphalt types which combined with general asphalt and SBS (Styrene Butadiene Styrene Block Copolymer).

Polymers are currently added to asphalt to increase characteristics that essentially improve the life of the asphalt. One polymer commonly added to asphalt is Styrene-butadiene-styrene(SBS). This polymer is common due to its elastic properties that increase viscosity, elastic response, and complex modulus.

This SBS-PMA type asphalt does not vary from the change of temperature, and maintain elasticity and flexibility of the material. In addition; it provides superior water proof system and storage stability as well. The layers of SBS-PMA is presented in **Figure 5-49** below.

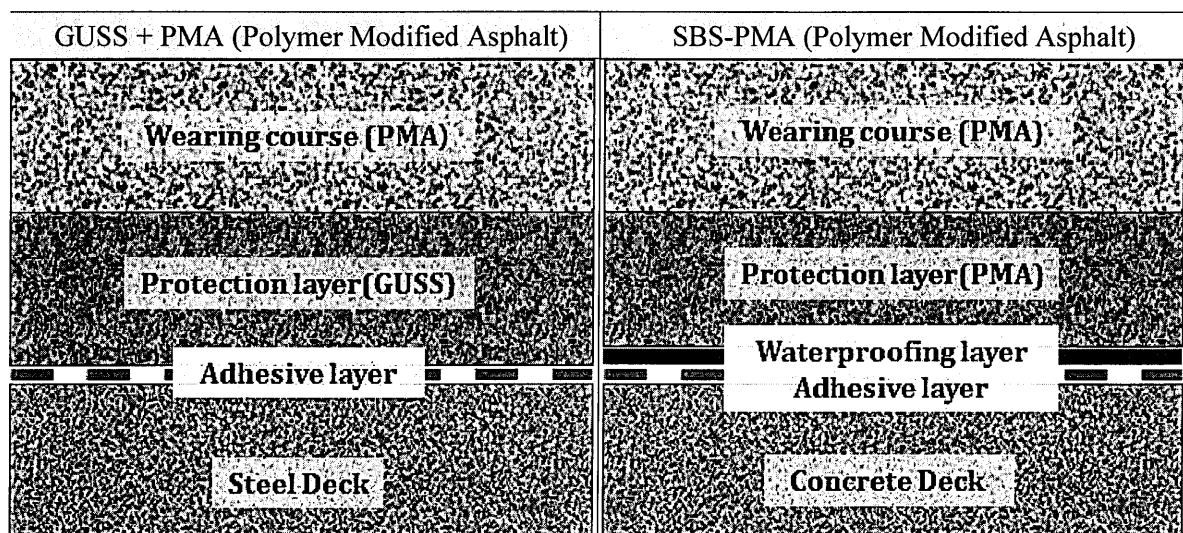


Figure 5-49 Details of asphalt pavement layers