

RFP No: **CANW-1/IWAI/JMV/16**

Assignment Title: Engineering Procurement and Construction Contract for
New Navigational Lock at Farakka, West Bengal

Amendment – 4

This amendment forms an integral part of the Bid Document issued on 27th May, 2016

Consequent to the queries received from the potential Bidders regarding various issues, the modifications suggested to the original Bid Document for Engineering Procurement and Construction Contract for New Navigational Lock at Farakka, West Bengal are as under:

S. No.	Volume, Section and clause No. in Bid document	Original Text	Amendment
1.	Vol I, Section II, ITB 22.2	<p>The deadline for bid submission is: Date: 11th July, 2016 Time: 1500 hrs IST Bidders have to submit their bids electronically.</p> <p>The documents comprising the Bid shall be digitally signed by the person duly authorized to sign on behalf of the Bidder. The documents comprising the Bid shall then be uploaded on the e-procurement portal https://eprocure.gov.in/eprocure/app. After electronic on line bid submission, the system generates a unique bid identification number which is time stamped as per server time. This shall be treated as acknowledgement of bid submission.</p>	<p>The deadline for bid submission is: Date: 26th August, 2016 Time: 1500 hrs IST Bidders have to submit their bids electronically.</p> <p>The documents comprising the Bid shall be digitally signed by the person duly authorized to sign on behalf of the Bidder. The documents comprising the Bid shall then be uploaded on the e-procurement portal https://eprocure.gov.in/eprocure/app. After electronic on line bid submission, the system generates a unique bid identification number which is time stamped as per server time. This shall be treated as acknowledgement of bid submission.</p>

2.	Vol I, Section II, ITB 25.1	<p>The bid opening shall take place at the Office of the Inland Waterways Authority of India, A-13, Sector-1, Noida – 201301, Uttar Pradesh, India on Date: 11th July, 2016 Time: 15:30 hrs IST</p> <p>The Employer will open all the Bids received (except those whose original documents were not received up-to specified time), including modifications made pursuant to Clause 22 and 24, online and this could be viewed by bidders online. In the event of the specified date of Bid opening being declared a holiday for the Employer, the Bids will be opened at the appointed time and location on the next working day.</p>	<p>The bid opening shall take place at the Office of the Inland Waterways Authority of India, A-13, Sector-1, Noida – 201301, Uttar Pradesh, India on Date: 26th August, 2016 Time: 15:30 hrs IST</p> <p>The Employer will open all the Bids received (except those whose original documents were not received up-to specified time), including modifications made pursuant to Clause 22 and 24, online and this could be viewed by bidders online. In the event of the specified date of Bid opening being declared a holiday for the Employer, the Bids will be opened at the appointed time and location on the next working day.</p>
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Pre-Bid Queries for "Engineering Procurement and Construction Contract for New Navigational Lock at Farakka, West Bengal"

S. No	Document Ref	Reference Clause No.	Existing Provision	Bidder's Query	Reply
1.	Volume-2	Cl. 1.2.4	The stability both inlet and outlet structures shall be done separately considering the cases. (a) Lock considered as empty, i.e. maintenance condition.	Is this criteria is applicable , from inlet to outlet of length 179m of the total structure & to be checked structural safety in stability or else it is to be checked only from feeder culvert inlet to culvert outlet only in maintenance condition? .In this regards , should we consider the actual water table showing in the borehole data? Please confirm the same as this criteria is governing critical condition in counterfort retaining wall concept as well as Diaphragm wall concept	Complete structure has to be checked for stability. The backfilling should considered fully saturated while checking the stability for height of back-fill refer amended clause 1.2.4.
2.	Volume-2	Cl. 1.2.4	The stability both inlet and outlet structures shall be done separately considering the cases. (b) Lock considered fully filled but no back filling along the structure, i.e. testing condition.	As per option provided by the client, the contractor can go to Diaphragm wall instead of counter fort retaining wall. In this regard, this criteria can be ignored particularly in D-wall construction for the structural stability checking. Please confirm the same.	No, it cannot be ignored. Stability should be checked for construction stage and subsequent operation stage, regardless of type of retaining wall considered.
3.	Volume-2	Cl. 1.2.4	The contractor can envisage alternate option, as one alternate the specification for Diaphragm wall is given in the document.	Can the contractor have flexibility to go third option instead of counterfort retaining wall & Diaphragm wall for the design best optimum structure & this optional arrangement restricted only in retaining wall? Can we make combine retaining wall with base slab as a third option? Please confirm.	Yes, it can be considered, if the contractor assures stability of the structure in construction and subsequent operation stage. However, alternative design is limited to the design of retaining wall only. Bidders have to submit the base bid considering retaining wall along with alternative bid.
4.	Volume-2	Cl. 2.1.6	Average response acceleration coefficient, which depends on time period of the structure. The time period, T of the structure will be evaluated by STAAD analysis	The time period evaluation of the structure either we can go empirical formula as specified by the code IS-1893 or we can go to detailed dynamic Eigen-Value Analysis to find out exact	Confirmed ok, dynamic analysis can be done.

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			considering Dead load & 50% Live load.	time period through Modal analysis. In static analysis, STAAD does not give time period, it is to be pick from empirical formula as specified by code & then as a input to be given in STAAD. In case of Dynamic-Modal analysis, STAAD gives exact time period performing 90% mass petrification to a particular direction. In this regard, should we go dynamic analysis? Please confirm.	
5.	Volume-2	Cl. 2.1.7	Average response acceleration coefficient, which depends on time period of the structure. The time period, T of the structure will be evaluated by STAAD analysis considering Dead load & 50% Live load.	The time period evaluation of the structure either we can go empirical formula as specified by the code IS-1893 or we can go to detailed dynamic Eigen-Value Analysis to find out exact time period through Modal analysis. In static analysis, STAAD does not give time period, it is to be pick from empirical formula as specified by code & then as a input to be given in STAAD. In case of Dynamic-Modal analysis, STAAD gives exact time period performing 90% mass petrification to a particular direction. In this regard, should we go dynamic analysis? Please confirm.	Confirmed ok, dynamic analysis can be done.
6.	Volume-2	Cl. 2.1.14	Factor of safety in overturning to be follow 1.5 & 1.2 for seismic cases.	Generally. F.O.S against overturning check in seismic cases we considered empty condition & full operating condition. In both cases the governing safety factor of the structure would be different. Please specify which cases to be follow 1.2 & 1.5 in the seismic event condition.	For both empty as well as full operating condition, factor of safety for overturning is 1.5 in seismic case and 2.0 in normal case. Factor of safety for sliding is 1.2 in seismic case and 1.5 in normal case.

S. No	Document Ref	Reference Clause No.	Existing Provision	Bidder's Query	Reply
7.	Volume-2	Cl. 2.1.16.7	Structural concrete to used M40 grade concrete for building works	Should we use M40 grade concrete also in building works?	The grade of concrete M-30 can be used in building works.
8.	Volume-2	DWG No FL-004 & 005	Clear height of electrical shaft, it is indicated in the DWG No FL-004, 2 m & in the DWG No FL-005 it is indicated as 2.5 m.	Please confirm the clear height to be used for Electrical cable shaft.	The height of electrical shaft is 2.5 m.
9.	Volume-2	DWG No FL-014 & 015	Plan dimension towards counter fort wall side is given 6.5m in both drawing, FL-014 & FL-015. In the drawing no.FL-003 it is 8.5m indicated.	Please clarify the same	These dimensions are indicative only and contractor should finalize drawing based on actual design. However, the dimension of 8.5 m is correct, drawing FL-014 and FL-015 amended.
10.	Volume-2	DWG No FL-003 (R0 & R1)	Title - General Arrangement of Plan, New Navigation Lock, Farakka "Hold" is mentioned at the upstream and downstream junction of existing navigation lock and new navigation lock.	Please clarify the same	The structures of existing lock is still not known and the details can only be worked out after excavation or after as built drawings are made available. However, U/S and D/S guide walls on the left side of the lock are to be tied to ends of the right guide walls of the existing lock to prevent flooding in the area between the two locks. The sections of guide walls at the ends will have to be increase suitably to enclose the ends of guide walls of the existing lock. The details should be worked out before submitting detailed construction drawings for approval by the Engineer-in-Charge.
11.	Volume-1	Cl. 2.4.2 (a)	a) Participation ⁵ as contractor, joint venture members, management contractor, or subcontractor, in at least one (1) contracts within the last ten (10) years from 1st April 2005 to 31st March 2015..... Fabrication/installation/commissioning	Bidder understands that "JV or sub-contractor should have necessary experience in construction / installation / commissioning of either CAISSON GATE or MITRE GATE" as any one of the above two types of gates are separated by slash in the beginning of	The experience in construction / installation / commissioning of both Caisson gate and Mitre gate are required.

S. No	Document Ref	Reference Clause No.	Existing Provision	Bidder's Query	Reply
			of caisson gates/mitre gate requires a special skills. Either a member of JV or sub-contractor should have necessary experience in construction/installation/ commissioning of atleast one of each gate	the sentence which means either or. Hence kindly confirm.	
12.	Volume-1, Bidding Documents	Cl. 2.4.2 Pg. 38	<p>Specific Experience</p> <p>a) Participation⁵ as contractor, joint venture member⁶, management contractor, or subcontractor, in at least one (1) contracts within the last ten (10) years from 1st April 2005 to 31st March 2015.</p> <p>With a value of at least one contract of at least INR 3024 Million or USD 50.4 Million / two contracts each with the value of at least INR 2268 Million or USD 37.8 Million / three contracts each with the value of at least INR 1512 Million or USD 25.2 Million or an equivalent amount in a freely convertible currency that have been successfully and substantially⁷ completed and that are similar⁸ to the proposed Works within last ten (10) years. The similarity shall be based on the physical size, complexity, methods / technology or other characteristics as described in Part 2, Employer's Requirements. Harbour with pile foundation / diaphragm wall / retaining wall in river/sea with executed under BOQ contracts shall also be considered as similar works. Fabrication / installation /</p>	<p>1. Bidder reads the red text clause no. 2.4.2 as:.</p> <p>"Harbour with pile foundation OR Diaphragm wall OR Retaining wall in river OR sea with executed under BOQ contracts shall also be considered as similar works.</p> <p>Fabrication, installation, commissioning of caisson gates</p> <p>OR</p> <p>mitre gate requires a special skills. Either a member of JV or sub-contractor should have necessary experience in construction OR installation OR commissioning of atleast one of each gate.</p> <p>Please confirm and clarify whether our</p>	<p>Yes, the bidder's understanding is correct as far as similarity of works is concerned.</p> <p>However, bidders understanding with respect to Caisson gates / Mitre gates is concerned, experience is required in fabrication, installation and commissioning of atleast one of each of these gates.</p>

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			commissioning of caisson gates / mitre gate requires a special skills. Either a member of JV or sub-contractor should have necessary experience in construction / installation / commissioning of atleast one of each gate. *Cost of works of previous years shall be increased by 7% per year based on Rupee value to bring them to 2014-15 price level.	understanding is correct.	
13.	Volume-1, Bidding Documents	Cl. 2.4.2 Pg. 38	Fabrication / installation / commissioning of caisson gates / mitre gate requires a special skills. Either a member of JV or sub-contractor should have necessary experience in construction / installation / commissioning of atleast one of each gate.	Most of the gate specialised subcontractor have experienced in either Caisson gate or Mitre gate fabrication and installation, however this kind situation of having caisson and Mitre gates in single project comes rarely, please allow the contractor who has done the either gate fabrication, installation and commissioning., please confirm and clarify.	The bidder can have experience in construction, installation and commissioning of Mitre and Caisson Gates in separate projects but the experience of both the Gates is mandatory.
14.	Volume-1, Bidding Documents		Tender submission time	Please extend the online bid submission time till 1700 HRS instead of 1500HRS	No changes, tender conditions prevail.
15.	Volume-2, Technical Specification and Drawings	Cl. 2.1.4 Pg. 32	Fendering System The Fender of AN 800 grade E3.0of Trelborg or equivalent has been provided.	A) Is there any other fendering system allowed other than ARCH fender? B) Provide the vessels size for 300DWT and 3000 DWT. C) What will be approach velocity within the lock structure D) What approach velocity to be considered before entering to lock structure. E) Is there any requirement to consider the fenders at approach location on U/s and D/s.	A) The ARCH Fender is not mandatory. Please refer to the amended Clause 2.4.2. B) Range of Vessels is amended as '300 T to 3000 T' Sizes of vessels are as follows: Length of vessel = 50 to 95 m. Width of vessels = 9.5 to 15 m Moulded depth = 2.8 m to 4.00 m, Draft of the vessel = 1.2m to 2.5m. C) & D) Please refer Clause 4.22.2.2 Vo. 2 of Tender Document for berthing

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				<p>F) Please clarify whether multiple fenders condition need to be checked under lock structure, if yes please specify the velocity for the same.</p>	<p>velocity and other technical specifications. E) Yes, the fenders should be considered at approach locations on upstream and downstream for waiting vessels. F) Yes, the multiple fenders condition should be checked. The fendering system should be capable to take care of all range of vessels as per point (B) above and considering all water levels likely to prevail inside the lock during operation.</p>