



GOVERNMENT OF BERMUDA
Ministry of Public Works and Environment

August 06, 2026

Dear Proponents,

Ref: 44-28-75-04-N Swing Bridge Replacement

This Addendum #12 contains (49) pages including this front page. The following addendum supersedes information contained in the RFP to the extent referenced. This addendum forms part of the RFP documents and will be subject to all of the conditions set out in the contract.

PART 1 – Questions and Responses

	Question	Response																
1.0	Could you please confirm the weights for each of the spans?	As requested for the purpose of initial logistics information only, the estimated span weights of the steelwork only can be taken as follows: <table><tr><th>Span</th><th>Weight (kg)</th></tr><tr><td>S1 (A1 to P2)</td><td>45,000kg</td></tr><tr><td>S2 (P2-P3)</td><td>50,000kg</td></tr><tr><td>S3 (P3-P4)</td><td>50,000kg</td></tr><tr><td>S5 (P5-P6)</td><td>55,000kg</td></tr><tr><td>S6 (P6-P7)</td><td>50,000kg</td></tr><tr><td>S7 (P7-A8)</td><td>45,000kg</td></tr><tr><td>Lift Span (P4-P5)</td><td>240,000kg</td></tr></table> It will be for the individual contractors to verify these and undertake detailed take-off of quantities and weights of elements once the full Works Information package is provided.	Span	Weight (kg)	S1 (A1 to P2)	45,000kg	S2 (P2-P3)	50,000kg	S3 (P3-P4)	50,000kg	S5 (P5-P6)	55,000kg	S6 (P6-P7)	50,000kg	S7 (P7-A8)	45,000kg	Lift Span (P4-P5)	240,000kg
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S1 (A1 to P2)	45,000kg																	
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S6 (P6-P7)	50,000kg																	
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Lift Span (P4-P5)	240,000kg																	
2.0	Is UK Export Finance support being sought for this project, and thus subsequent UK content requirements associated with the scheme?	The Government of Bermuda is <u>not</u> seeking UK Export Finance support for this project. We do not impose any UK content requirements. We place no restrictions on proponents from participating in this or similar schemes, but will not assume responsibility for eligibility/compliance.																

3.0	When do you want the bridge to start delivering? Erection complete?	The Government will be ready to hand over the site upon execution of the Agreement (estimated October 28th 2026). Preparations are already underway to create the necessary laydown and working areas on the south side of the bridge, and more details about this will be included in the Works Information Package. Proponents will have broad discretion to schedule the deliveries of materials and components to suit their construction/erection methods, be it front loaded, just-in-time, or somewhere in-between. The Government is seeking efficient project delivery, and this should be reflected in the Programme (mandatory submission requirement). That said, we do not have a hard deadline for completion and do not require a highly compressed schedule.
4.0	Could you please confirm whether the Government intends to appoint (or has already appointed) an independent Engineer or independent construction supervision team for this project? Additionally, we would like to understand the scope of their role during design review, construction, and commissioning.	The Government intends to appoint an independent Engineer to administer the contract. The Engineer will have the typical broad authority afforded by the FIDIC contracts. A summary of duties and authority is included in clause 3.1 of the Conditions of Contract and amended by the Particular Conditions. The scope of services may be better appreciated once the full specifications are released to registered parties on April 15th. The Government of Bermuda is planning to issue an RFP for the services of the Engineer in the week of April 13th. Firms interested in the role of the Engineer may choose to register for both RFP's to keep abreast of any changes/amendments. Firms providing design or management services under the main contract will not be allowed to perform the role of the Engineer.
5.0	Will you make the list of GCs and or registered companies public before or after the site visit?	The Government will <u>not</u> be sharing the details of registered proponents. The Meet-and-Greet event is the appropriate opportunity for proponents and contractors to share their details with each other, if they wish to do so. Proponents will be required to undertake their own research and due diligence on contractors and vice versa. The Government of Bermuda, as the client, will remain removed from such discussions. Additionally, the Government has an RFI open to gather information from companies interested in participating as trade specialists during the construction process of the Swing Bridge Replacement. Responses and information gathered during this RFI will be shared with registered proponents of the RFP. The intended purpose of the RFI is to link registered proponents to locally available resources, however it is not restricted to local businesses. Any specialist company (ie erection specialist, hydraulic specialist, heavy fabricators) could submit their information through the RFI, and it will be disseminated to <u>all</u> registered proponents of the RFP. The Trade Specialist RFI can be found here: https://www.gov.bm/procurement/rfi-44-28-75-04-o-swing-bridge-replacement-trade-specialists

6.0	Is there a Value Engineering avenue available for bidders to try to combine some constructability items with the design for overall value?	Yes, but within defined limits and through specific channels. The first pathway is described in Appendix D part B Material Disclosures (page 30) reproduced here for convenience: Request for Changes to Design or Specifications Prior to Submission of Proposal If the Proponent wants approval of a change to design or specifications prior to tender submittal, he may request the change during the Question and Answers period of the tender process: the question and answer will then be made public allowing all Proponents the same deviation from design or specifications. If submitting a request for change, please include a clear description of the proposed change and what it replaces, technical justification for the change, and assertion that the design intent and performance requirements are maintained. Alternatively, proponents may demonstrate innovative/alternative construction techniques in the Method Statement portion of their submission. Again, this should include a clear description of the proposed change and what it replaces, technical justification for the change, and assertion that the design intent and performance requirements are maintained. With this approach, the change would not be approved ahead of submission, and the Government of Bermuda is under no obligation to accept an alternative proposal. Proponents may choose to submit two options (as-designed and value-engineered) for consideration. It is also worth noting that an independent check (Category 3) of the existing detailed design has already been performed. Any structural changes would need to be re-checked, the cost of which would be borne by the proponent. Deviation from the construction sequence (3502-RAM-SB-XX-DR-CB-30201 to 3502-RAM-SB-XX-DR-CB-30204) may alter the built-in stresses and require re-checking. Value-engineered changes proposed after contract award would be subject to the variation procedures and design requirements as described in the contract documents.
7.0	Having looked through the Works Information Package there does not seem to be a formal ITT Document, Scope of Works, or a programme for the return of Tenders. Is the information shared with us complete?	The documents issue to date are complete. The Works Information Package is to be read together with the documents published on the Government's procurement website. The formal Invitation to Tender is Part 1 of the main RFP document. This section also includes the return of tenders; 1.5 Submission of Proposals. The scope of works is described in Appendix D – RFP Particulars, section A titled "Deliverables".

8.0	Could the level of performance bond be changed?	Question received – we are reviewing the performance security requirements and will provide an answer in separate addendum.
8.1	Is there a payment component to the performance bond?	As it is currently written, no. This may be revisited if the level of cover is reduced (see above).
8.2	Does Bermuda have any lien laws?	No, Bermuda does not have lien laws.
8.3	Do you have any recommendations on bond structure?	Securities can take many forms, and we do not have a stated preference. Surety bonds are common for the expected contract value, and bank guarantees are acceptable. Parent company guarantees are less desirable, but will be assessed individually. Simple structures are preferred, but given the international nature of the Works we are open to intermediaries/SPVs if necessary.
9.0	The following information was requested about Stokes Point - Bathymetry - Dimensions of piers - Channel widths - Historic/record drawings of the pier construction - Route of cables/services crossing the channel	The requested information is included in the documents as part of this addendum. Details of existing services in the area are not available at this time, but inquiries are being made.
9.1	Can we demolish any of the Stokes Point piers?	Yes. Demolition should be complete down to seabed, and work methods should include all appropriate protections for workers and the natural environment. Proponents should also be aware of services in the area, which cross the channel on both sides, parallel to the old bridge alignment.
10.0	Is bathymetry available for Marginal Wharf?	Yes; refer to the included survey information.
10.1	Is Marginal Wharf privately owned? Is there a cost to use it?	The wharf is operated by the Bermuda Land Management Corporation (BLMC) which is a quango. BLMC are aware of the project and ready to support it. Berthing fees may be waived, but the wharf is not intended to be used as laydown. Goods left on the wharf for an extended time may be subject to demurrage.
10.2	Would the Government be interested in modifications to Marginal Wharf to help with larger ship deliveries?	The Government and BLMC are open discussion about modifications. The wharf is used somewhat regularly, so any modifications must be considerate of current and future use.

11.0	What are the Customs arrangements when delivering at Marginal Wharf?	Importers may write to the Collector of Customs requesting permission to land goods at Marginal Wharf, or any other facility not typically staffed. The request should include the vessel information, arrival date, manifest etc. Requests are typically made 1 month in advance.
11.1	Are there associated costs with Customs at Marginal Wharf?	There are no additional fees for clearing customs at Marginal Wharf (or other facilities) within normal working hours. After-hours work may incur a call-out fee.
11.2	Will Customs accept deliveries directly to the site?	Yes, Customs will be able to accept shipments directly to the site.
11.3	What is the timing of customs declaration for duty relief?	Duty relief is applied for at time of import. The Bermuda Customs Declaration form is reviewed, along with the supplier invoices, and verify that the goods are for the intended end-use. A waiver certificate is then issued, which the importer can present to Customs or the shipping agent.
11.4	Can local suppliers benefit from the duty reliefs associated with this project, when contractors make purchases in their shops?	Duty relief can be claimed up to 12 months after import. The importer will need to produce the documentation from the time of import and apply for a refund of duty already paid. Local suppliers may be reluctant to sell their goods 'duty free' before the refund is received. This is not a common practice, and retailers may not have a system in place at the point-of-sale. Overall this process is not well suited to smaller retail purchases, but may be worthwhile if arranged in advance with larger suppliers.
12.0	What are the Government's expectations for project accommodation?	The Government is not in a position to supply accommodation for the project. Proponents must make their own arrangements. Past projects of a similar scale have housed workers in hotel or guest houses. Anecdotally, hoteliers have been pleased to receive long term commitments, particularly over the winter months.
12.1	Would the Government be interested in on-site temporary accommodation? eg shipping container village	The Government and BLMC are open to the concept. Land for this use is limited; a temporary village will not be acceptable on Park land. A possible location is the "Potential Laydown Area" marked in blue on drawing 3502-RAM-SB-XX-DR-Z-30031. Temporary accommodations would be subject to approval by the Department of Planning. More information about that process can be found on their website https://planning.gov.bm/ Zoning and other information can be viewed here: https://bdagov.maps.arcgis.com/home/index.html
13.0	Can we release the Works Information Package to our subcontractors?	Yes, the Works Information Package can be shared with subcontractors as needed. Subcontractors should abide by the same confidentiality as required of the prime proponents.
14.0	Are there fees associated with building permits?	Building permit fees will either be waived or paid directly by the Ministry of Public Works and Environment: no cost to the contractor.

15.0	Do extension of working hours require permits? What are the limitations on working hours?	Proposed site working hours shall be subject to prior agreement with the Bermuda Government Planning Department. Normal site working hours for Contractors are Monday to Saturday – 0730 to 1930 hours. Any working outside of these hours is to be agreed in advance with the Employer. No work on the site shall be undertaken on Sundays or Public Holidays, unless approved in writing by the Overseeing Organisation's Site Representative. Permission for extended working hours will not be unreasonably withheld, but of course will need to consider the impacts of noise, light, and other disruptions.
16.0	Are disposal fees waived?	Yes, disposal fees at Government facilities will be waived.
16.1	Can dredge materials be disposed of at the airport dump?	Yes, the airport waste facility can accept uncontaminated dredge materials, as well as clean demolition waste. Care should be taken during transport not to foul the roadway. Additional relevant information can be found at the following links: https://www.gov.bm/solid-waste-management https://www.gov.bm/commercial-waste
16.2	Are contaminated soils expected?	Contaminated soils are not expected. If contamination is discovered, remediation and proper disposal will be treated as a variation.
17.0	When does the design of Contractor designed parts need to be submitted?	Please refer to the following documents: Procuring Entity Requirements: Submittals Section 9 of the Hydraulic Specification
18.0	Where is the location of the Transformer room?	The proposed transformer room and trench route is marked in the attached drawing PL-SB-150.
19.0	Can painting systems be proposed?	Three acceptable Type II paint system are described in the Civil and Structural specification document 3502-RAM-XX-XX-SP-CB-30111. This document references paint numbers defined in the Specification for Highway Works series 1900. Recognising the ongoing advancements in coating technologies, demonstrably superior products/systems may be proposed as a value-add.
19.1	Would Fluoropolymer paint systems be permissible as alternatives?	The Government would consider alternatives should these be demonstrated to be able to be more durable with longer life to maintenance, this would include Fluoropolymer paint systems. Incidentally we understand that these are now part of the accepted paint systems adopted in National Highways SHW since the original specifications were written.
19.2	Can weathering steel be proposed?	Weathering steel will <u>not</u> be accepted as an alternative material.

20.0	Can adequate aggregate be found on island, or is importing necessary?	While local material is available, aggregate is regularly imported for use in concrete and asphaltting. Local suppliers will be well positioned to assist in sourcing quality material for the project. There have been cases of AAR in the past, so particular attention should be paid to reactivity.
21.0	Will the government accept temporary blocking to waterway traffic during construction?	Yes, we recognise that this is unavoidable. Efforts should be made to maintain access for small vessels whenever possible. Marine activity should be coordinated with the Maritime Operations Centre (MarOps) and Rescue Coordination Centre (RCC), formerly Bermuda Radio. These bodies are ready to support the project and can issue Notice to Mariners whenever the marine channel will be closed, or for any other relevant reason.
22.0	What are the government's thoughts regarding a temporary trestle or bridge to provide access for marine works, spanning over the shoreline and terminating within the project site? (may span over protected species)	Generally this would be acceptable. We would consider this from the perspective of ecological impact; a trestle could reduce the amount of spudding and propwash from barges over the project duration and contain foreshore activity to one location. Proposals should include justification for this approach, as well as environmental impacts and mitigations, and how it compares to the alternative (barge based work). Any temporary works of this nature must be fully removed upon completion.
23.0	Are there permit requirements for work near the airport (tall cranes, drone flying etc.)	This falls within the authority of the Bermuda Civil Aviation Authority. The airport operator, Skyport, would be involved as well. The Airport Control Protection Area uses the ICAO Annex 14 Obstacle Limitation Surfaces, and is defined in Chapter 25 of the Bermuda Plan 2018, available for download at https://planning.gov.bm/index.php/bermuda-plan-2018/ Past determinations set the allowable height at 46.99m (154.2') above sea level. Within this height we expect simple consultation/notification will be sufficient, rather than formal permitting. The crane was required to fly a red and white flag on top of the boom. Barge cranes must lower their boom when transiting Ferry Reach. Aerial Work Permission may be granted for drone pilots to operate within the St George's No-Fly zone. This requires an application form, Class 3 FAA medical certificate, third party liability insurance for Bermuda and territorial waters to the minimum amount of 1,000,000 SDRs, and a documented operating procedure. Once this is reviewed and accepted, the pilot must pass an Air Law Quiz and complete a demonstration flight. A list of Aerial Work Permission holders and map of the no-fly zones are available on the BCAA website https://www.bcaa.bm/

24.0	Is everything of the old bridge to be demolished to seabed?	The approach piers are to be demolished down to seabed. The pivot pier is to be demolished to 300mm below seabed. The south abutment is to be demolished to seabed, and the foreshore re-graded to a natural state. The north abutment is to be re-graded down to the level of the adjacent dock in such a way as to allow access to the operator's cottage.
25.0	What special surfacing is on lift span?	Hot rolled asphalt, grading and binders per SHW specification append 7/1.
26.0	What electrical requirements or conduits etc are installed within lift span?	None.
27.0	Are nose locks required eg for wind vibration or surges?	Not required, by design.
28.0	Is there a specific manufacturer for the barrier?	No there is not as it is a completely bespoke barrier.
29.0	Why not using a wireless system rather than cables?	Wireless system is less reliable and more sophisticated. The risk of intentional or accidental damage to the cables was evaluated as very low.
30.0	Can the submission deadline be modified by two weeks?	Yes – the key dates in section 1.4.1 are updated as below.
31.0	Will a local Bermudian stamp be required for contractor means and methods, phasing, design of temporary works to facilitate the construction (for either the erection of the superstructure or the design of the cofferdams)?	A local stamp will <u>not</u> be required for temporary works. This does not relieve the Contractor of their typical responsibilities for ensuring the stability and safety of temporary works. Rather, we will expect the industry accepted engineering/design of your home jurisdiction, as appropriate for local conditions. Additionally, the Contractor need not procure local review/stamp of the Contractor Design Portions; the category 3 independent check will be sufficient. The notable exception to this is the electrical works. As per Appendix D part D (page 36 of the RFP document) the team must include a local Bermudian electrical sub-contractor to ensure compliance with requirements of the Department of Planning and to facilitate future maintenance works. While a full review and stamp is not explicitly required, it is expected that a local electrical engineer will be engaged to ensure compliance with the latest version of the National Electric Code (NEC).
32.0	The drawing indicate all elevations are based on Ordnance Datum (General Note 4, Dwg 30111). Please confirm that the drawings are actually completed in Ordnance Datum.	The drawings are completed in Ordnance Survey Datum.

32.1	The boreholes indicate a datum of BNG 2000.....but my understanding is that this is a coordinate system not a vertical datum. Please identify the vertical datum used for the boreholes.....is it BNG 200 or BDA 2000?	BNG 2000 is a Bermuda local horizontal cartesian grid coordinate system, in meters, and utilizes the vertical datum of Ordnance Survey Datum (OS Datum). However, other vertical datums can be referenced. BDA 2000 is a geo-centric cartesian reference system , that can be used for xyz coordinates however this is <u>not</u> used in the Swing Bridge project documentation, or typically any local Bermuda project. Geotech report is in BNG2000, with vertical levels to Ordnance Survey Datum. Boreholes were drilled from a barge, and levels appear to be referenced from the barge deck; tide levels may not have been accurately accounted for in the records. The recently supplied hydrographic “Swing Bridge Project Map” uses lidar data from 2019 and the depth depictions reference a vertical datum of British Admiralty Chart Datum. A note has been added to the document to reflect this. 0.00m Ordnance Survey Datum = +0.61m Chart Datum. Bermuda Vertical Datum Difference Table (updated April 2015) is supplied as part of this addendum.
32.2	I understand a more modern vertical datum in Bermuda is BDA 2000. If the borehole datum is different than the drawing datum can the difference between the two datums be provided?	BDA 2000 is <u>not</u> a vertical datum. It is not used in the Swing Bridge project documentation. The bore holes reference the same datum as the drawings: Ordnance Survey Datum.
32.3	It appears as if the soundings represented in the drawing package on drawing 30101 are in BDA 2000 not Ordnance Datum.....I am simply comparing the actual survey drawing included in the Site Information folder (which indicates BDA 2000) to drawings 30101 of the Civil Structural drawings.	The survey information supplied in the Site Information folder is to BNG 2000 with vertical levels to Ordnance Survey Datum. Both drawings use the same BNG2000 and OS Datum system.

33.0	On Page 38 of the RFP reference is made in paragraph 2 under F. RATED CRITERIA to “specified businesses.” What is meant by the term specified businesses ?	The term “Specified business” is defined on the Local Benefits Form (annex E), reproduced here for convenience: “Specified Business”, according to the Code of Practice Project Management and Procurement (page 8 and 9), means a Bermudian-owned and owner-operated business enterprise with such characteristics as the Bermuda Economic Development Corporation may determine and (A) gross annual sales of less than one million dollars, or an annual payroll of less than five hundred thousand dollars; or (B) at least three of the following attributes: (i) gross annual revenue of between \$1,000,000 and \$5,000,000; (ii) net assets of less than \$2,500,000; (iii) an annual payroll of between \$500,000 and \$2,500,000; (iv) between a minimum of 11 and a maximum of 50 employees; and (v) been in operation for a minimum of 10 years. Please note that BEDC has not yet requested any additional requirements of businesses to be categorized as a Specified Business. Any Bermuda owned company that satisfies the criteria on item A or item B above will be considered a Specified Business.
34.0	The Sample Certificate of Incumbency references the Islands of Bermuda; please confirm whether we may revise the certificate to reflect our registration in our location, or alternatively, satisfy this requirement by providing our Articles of Incorporation	Articles of Incorporation, or similar documents, from your own place of registration will be accepted. We recognise that different jurisdictions have different legal structures and terminology. Please be assured that submissions will not be rejected if the documents provided don’t align directly with the descriptions in the RFP. Administrative items like this may be clarified post-submission.
35.0	Considering both difficulties with travel arrangements and time constraints, we kindly ask that you consider accepting the bid submissions electronically.	Electronic submission will <u>not</u> be accepted. The submission requirements (section 1.5 of the RFP document) remain unchanged.
36.0	When do Contractor Designed Parts need to be submitted?	Please refer to the document titled “Submittals – PER.Rev01”, which is part of the Works Information Package. This is a revised document, and supersedes the previously issued “Submittals – PER”.

37.0	Will the government provide assistance with obtaining work visas for foreign workers?	The Ministry of Public Works and Environment will lend support to the applicants, in relation to the Swing Bridge Replacement project. We will not provide concierge application services; it is up to the applicant to ensure that the documents are completed and submitted properly. Proponents should familiarize themselves with the Work Permit Policy: https://www.gov.bm/sites/default/files/2026-05/WorkPermit-Policy.pdf The Ministry of Public Works and Environment will support a waiver of advertising for key members of the project team, and for specialist skills that are not available locally.
38.0	Annex F - Submission Checklist lists several items under "Additional Information" that are also included in the Method Statement requirements (E.g., proposals for Contractor Designed Parts, subcontractor selection process, proposals for customer care, etc.). Please confirm whether this information should be submitted twice, or only within the Method Statement.	The submission checklist is primarily an administrative aide, to help ensure that all documents are submitted. There is no need to duplicate information in the submission documents.
38.1	Please confirm that the response to the Request for Proposals should be in the order of documents as written on the Submission Checklist.	The submission checklist is provided as a guide. There is no requirement for documents to be ordered in the same way. You may format your submissions in the way that best fits your proposals.
39.0	Any there any restrictions on using graphics or photos in the Proposal submission?	No restrictions. The key thing to be aware of is that there is no incorporation by reference; the entire content of the proponent's proposal should be submitted in a fixed form, and the content of websites or other external documents referred to in the proponent's proposal but not attached will not be considered to form part of its proposal.
40.0	Do the Professional Reference Letters have to be project-specific? May the firms use reference letters from award submissions or other pursuits?	Professional references should be recent and relevant. Firms can generally reuse reference letters from award submissions or other pursuits, provided the scope and context align with the Swing Bridge Replacement project. Permission should be sought from the referee, or at minimum notified of the intent to re-use the reference.
40.1	May Professional Reference Letters be provided for firms that are not listed in 2.03 of the Submission Checklist?	Yes, absolutely. The submission checklist is provided as a guide, not a limit. Additional information that helps us to understand your team and key players will be welcome, even if not explicitly requested.

40.2	May additional resumes be provided in addition to the ones for the Project Director and the Project Manager?	Yes, as above.
43.0	Evidence of Bonding Capacity is not included in the Submission Checklist. Where should this be submitted?	Evidence of Bonding Capacity should be submitted as part of Envelope B.
41.0	Do you have any documentation available that highlights the below; - Schedule of Payments Payment Terms	The FIDIC Conditions of Contract for PLANT and Design-Build (1999), Annex A – Sample Form of Agreement, and Annex B – Illustrative Activity Schedule Pricing Form. Proponents shall submit their own Activity Schedule, with corresponding lump sum amounts. The Schedule of Payments will be agreed with the Procuring Entity, and shall be reasonably consistent with the Activity Schedule Pricing Form submitted with the Contractor's Proposal and with the Contractor's accepted Programme. Instalments will be paid against the actual progress, following the relevant Contract clauses (14.3 Application for Interim Payment Certificates, 14.4 Schedule of Payments etc) as amended by the Particular Conditions. Payment Terms will follow the FIDIC General Conditions, as amended by the Particular Conditions.
42.0	The Approval in Principle – M&E, along with several other project documents, references the Structural AIP (Document No. 3502-RAM-SB-XX-RP-CB-30001). We have been unable to locate this document within the Works Information package provided to date. Please confirm whether this document forms part of the tender information and, if so, provide a copy for our review. If the document is not intended to form part of the tender package, please advise accordingly.	The document (including one addendum) has been added to the shared OneDrive folder 44-28-75-04-N Swing Bridge Replacement Works Information Package → 5. Supplementary → e. Structural AIP

43.0	Is the reconstruction of the swing bridge cottage (future swing bridge operator's hut) as shown in Control Hut.pdf included as part of the RFP? If not, will that work be performed by others outside of this RFP?	Renovation of the cottage is <u>outside</u> the scope of this RFP, and will be performed by others. The drawings for this renovation work are provided for context, to show what the state of the cottage will be when handed over. The tender for this ancillary project is now closed, and the works are expected to be completed by the end of the calendar year.
44.0	Are three-dimensional (3D) CAD models of the bridge steelwork, including the approach spans and bascule leaf, available? If so, can these models be provided to the proponents for the purposes of estimating, planning, and development of construction methodologies?	3D CAD model of the bridge steel work for bascule leaf and approach spans are <u>not</u> available. All information regarding geometry, plate sizes and thickness are available on 2D drawings only.
45.0	3502-RAM-SB-XX-SP-ME-30221-T01 section 9.3 Hydraulic Simulation Please can you confirm the limits of the inputs into the simulation. What outputs do you expect from the simulation? Some values won't be available until later in the design process and the requirement is for the simulation to be completed early.	The simulation is used to provide a more detailed verification of the bridge operation for the following: - • Sizing of the proportional flow control valve taking into consideration the varying bridge load moving from vertical to horizontal • Selection of Counterbalance Valve pilot ratios and settings to optimise performance across the full range of bridge loading • Calculate Inertia loads, and induced pressures produced when transitioning from fast to creep to stop • Calculate Inertia loads, and induced pressures produced during E-stop operation at full speed • Simulate the effects of operation due to sinusoidal wind loadings • Simulate the effects of lowering using 1 cylinder Inputs to the simulation will be resultant cylinder loads due to the mass of the bridge and wind loading. Outputs will be cylinder pressures The model is to be refined and verified using real time data obtained during FAT testing and on-site commissioning.

46.0	3502-RAM-SB-XX-SP-ME-30221-T01 section 2.4 Supply of Contamination Test Equipment Please clarify if this is limited to contamination monitoring built into the system or if a portable unit is also required to be plugged in anywhere in the system.	This item refers to portable test equipment for use during system flushing.
47.0	3502-RAM-SB-XX-SP-ME-30221-T01 section 2.5 Detailed Design of System The Cat 3 check in CG300 is “a true "blind" parallel design validation... When applied to a non-civils design what process and criteria will be used for Cat 3 checks?	To carry out a CAT 3 independent check on the hydraulic system based on the requirements of DMRB CG300 (Technical Approval of Highway Structures) Section 6.6 Mechanical and Electrical Installation certification requires the following Stage 1 Certification. 1. To confirm that the principles in the Clients requirements have been translated into appropriate levels of equipping, design, and specification. 2. To confirm that sufficient information has been provided to enable the detailed design of the equipment in accordance with the Clients requirements (final version of the AIP - signed off by the Client). 3. Require that details of work tests for equipment/systems tested at the manufacturer's work site and commissioning trials have been specified for the purpose of performance verification and formal handover. Stage 2 Certification shall confirm that the following meet the Clients requirements: - 1. the completed design proposals (detailed design calculations and drawings). 2. the testing of components (FAT and SAT test plans only). 3. the commissioning of the complete installation (proposed commissioning plans only) Cylinder loads are calculated as part of the mechanical check for the various load cases. Please note that an initial Independent Check of the hydraulic and electrical system concluded “Sufficient information has been provided to enable the detailed design of the installation to be developed in accordance with the Overseeing Organisation's requirements and enable a contractor to take responsibility for completing the final design of the hydraulic and electrical systems.”

48.0	3502-RAM-SB-XX-SP-ME-30221-T01 section 2.5 Detailed Design of System - Codes and Standards There are multiple standards listed, often superseded versions or in some cases fully withdrawn standards. Where contradictions occur is it within the authority of the contractor to decide which standard is applied or does approval have to be sought from the Procuring Entity?	Latest versions of all listed standards shall be used for new designs. Obsolete standards shall be considered not applicable, but their replacement is to be used in its place.
48.1	The response to Question 48 concerning Codes and Standards states “Latest versions of all listed standards shall be used for new designs.” Please confirm that this requirement does not apply to the various Specifications called out in the Specification for Highway Works Schedule of Pages and Relevant Publication Dates contained in Specification – Civil and Structural, Document No. 3502-RAM-XX-XX-SP-CB-30111.	We confirm that this requirement only applies to standards applicable for the works designed by the Contractor and does not apply to the various Specifications called out in the Specification for Highway Works Schedule of Pages and Relevant Publication Dates contained in Specification – Civil and Structural, Document No. 3502-RAM-XX-XX-SP-CB-30111
48.2	The response to Question 48 concerning Codes and Standards states “Latest versions of all listed standards shall be used for new designs.” Please confirm that this requirement only applies to the works designed by the Contractor and not to the civil and structural works already designed by the Procuring Entity. If the stipulation is to apply to procuring Entity-designed works, please confirm that any changes required for compliance with later standards and codes will be treated as a Contract Change/Variation.	We confirm that this requirement only applies to the works designed by the Contractor and not to the civil and structural works already designed by the Procuring Entity.

49.0	3502-RAM-SB-XX-SP-ME-30221-T01 section 9.2 Information to be issued directly after contract award Within 4 weeks - plan, functional schematic, functional description, cylinder design calculations. Within 8 weeks - Detailed project plan and calculations. These deadlines are not achievable, and rushing a design through at this early stage will only lead to issues further down the line.	Please refer to the Submittals document in the Works Information Package. 44-28-75-04-N Swing Bridge Replacement Works Information Package -> 1. Procuring Entity's Requirements -> 10 Submittals A revised document "Submittals - PER.Rev02" supersedes the previously issued "Submittals – PER.Rev01" The timelines in this document take priority over the Specifications.
50.0	3502-RAM-SB-XX-SP-ME-30221-T01 section 2.6 3502-RAM-SB-XX-SP-ME-30241-T01 section 4.1 3502-RAM-SB-XX-SP-ME-30242-T01 section 5.3 Mineral hydraulic oil is mentioned several times, but document 30221 lists in para 2.5 a standard (BS ISO 15380) for biodegradable oils. Given the location and the large volume of oil in the system we believe it should operate with biodegradable oil. Please clarify the specification.	Biodegradable oil vs mineral was considered at outset of design and recorded in design decision register. The disadvantages of biodegradable oil outweighed any benefits for this environment and hence biodegradable oil has been rejected in favour of mineral oil.
51.0	3502-RAM-SB-XX-SP-ME-30241-T01 section 4.2 Each lift cylinder shall be capable of producing the pushing force for one or two cylinder operation given in section 3. The forces given in section 3 are not attainable while moving the bridge as back-pressures (which will be significant due to the long line lengths have not been considered. Can the anticipated force curve through the movement of the bridge (with and without wind-loading) be shared to confirm sizing of cylinders, etc	The forces indicated are for the cylinder design and include a factor of 1.2 to account for the dynamic behaviour of the hydraulic system

52.0	3502-RAM-SB-XX-SP-ME-30241-T01 section 5.1 This required performance level also includes the Hydraulic Cylinders – reliability data for these items is to be supplied by the Contractor and factored into the final calculations. Given that the cylinders will be bespoke to the application this will be difficult to demonstrate. The cylinder will be designed and documented as annex C of ISO 13849-2 and that the required PLr will be achieved by evaluating the entire fluid power system, including its control and monitoring components.	The cylinders need to be considered as assemblies including control valves manifolds and pipework.
53.0	3502-RAM-SB-XX-SP-ME-30241-T01 section 5.7 The specification calls for a second rod (pressure) seal to provide a back-stop to the primary seal. We consider this to be inadvisable and unnecessary and propose that a more standard seal configuration and leak detection be used.	The price needs to be provided based on the tender design as it was developed in response to the extremely aggressive environment of Bermuda and the on island technical capacity. This change can be integrated in the bid as a variation highlighting its benefits in terms of robustness and service life.
54.0	3502-RAM-SB-XX-SP-ME-30241-T01 section 7.1 3502-RAM-SB-XX-SP-ME-30221-T01 section 8.1.3 Manifolds are to be carbon steel and electro-less nickel plated to a depth of 20µm We consider this level of protection to be inadequate for the environment and life of the equipment. For this type of application we would normally supply either stainless steel (316L) manifolds or steel manifolds with an off-shore type of protection (such as ENP + Xylan). Should we quote for the protection specified, and request a change if successful in winning the project, or include the additional costs for the enhanced protection the tender?	Stainless steel manifolds are non-preferred due to issues with galling. Alternative coating methods can be proposed by the contractor for approval.

55.0	3502-RAM-SB-XX-SP-ME-30241-T01 section 7.1 Ports on the cylinder manifold are to be "arranged on one face of the manifold block" This requirement will almost certainly increase the size of the manifold block, and so make it more expensive. While it is normal to preclude interfaces on hard-to-reach faces of a manifold there is no benefit to having them all on one face and we suggest that this requirement is dropped.	Consideration needs to be given to installing the pipework in the cylinder pits since space is limited. 3-D models or GA drawings should be produced to show fixed pipe termination points and flexible hose routes in relation to the cylinder manifold termination points before manufacture.
56.0	3502-RAM-SB-XX-DR-ME-36501-T01 Decompression of the cap end of the cylinders prior to lowering the bridge As drawn the hydraulic system does not comply with BS EN 4413 as there is no means to decompress the cap end of the cylinders in a controlled manner prior to lowering the bridge	Cylinders are decompressed prior to lowering by piloting open cylinder P.O check valves (402.1 / 402.2 / 402.5 / 402.6) using valve 302 solenoid 'u'.
57.0	3502-RAM-SB-XX-DR-ME-36201-T01 section 3.11.7 Navigation Obstruction Marker Lights 3.11.7 references drawing 3502-RAMSB-XX-DR-ME-36001 which is not in the tender pack. The positions are vaguely shown on drawing 3502-RAM-SB-XX-DR-ME-36201 but there is no specification requirement. There is not enough information to quote for these lights, including type, luminescence, where they are mounted etc. Please provide the required details.	Details of the Navigation lights, casing, and positioning can be found on the architectural finishes drawing Nos 3502-RAM-SB-XX-DR-A-39402 and 39403 and in Architectural Specification 3502-RAM-XX-XX-SP-A-30301 section Q57 for element EXT-901

58.0	3502-RAM-SB-XX-DR-ME-36201-T01 3502-RAM-SB-XX-DR-ME-40001-T01 Nose Shock Absorber Assemblies Please provide the following information:	Lowering speed-both accidental and controlled	Creep speed value 0.042m/s Speed value in fault condition 0.263m/s
		Force to be reacted	Propelling force 278.5kN per shock absorber
		Stroke	Stroke length is 0.2m
		It is noted that the bridge nose will be fully rested on the structural bearing pads before the dampeners bottom out. what is the remaining stroke (or height difference)?	The remaining stroke is 14mm
		What is the expected lateral displacement due to misalignments and wind load at the bridge nose?	Max lateral displacement due to wind (45mph) or thermal expansion is +-2mm. Shim packs integrated in the design of the nose lateral restraint pads to allow for extra adjustments at installation.
		What is the force distribution over the 2 dampeners assemblies due to stiffness of bridge about longitudinal axis or/and 1 cylinder reacting/generating more force.	The shock absorbers were designed to be as close as possible to the centre line of the bridge deck (hence in line with its centre of mass) to reduce the potential risk of creating extra torque in the deck structure. Hence the force distribution over the 2 shock absorber assemblies is considered the same.
		Is the top of the shock absorber PTFE or stainless?	Top of the shock absorber should be equipped with a PTFE or ORKOT type pad.
59.0	3502-RAM-SB-XX-DR-ME-35001-T01 to 3502-RAM-SB-XX-DR-ME-35609-T01 Traffic Barrier Assemblies We propose the use of electrically operated swing barriers instead of hydraulic.	Electrically operated barrier were considered not robust enough for the environment in which they will be installed. Proposals should include the hydraulic barriers. Alternate systems may be presented for consideration, and should speak to robustness, reliability, and value.	

60.0	3502-RAM-SB-XX-DR-ME-30243-T01 section 6.1 Fixed pipework For all pipework above 42mm o/d and as an alternative to pipework with dimensions in accordance with ANSI/ASME B36.19M-1985 may be used and manufactured using Stainless steel Socket Weld Fittings and SAE socket weld flanges. We would propose the use of a non-weld system in stainless steel with extensive marine & industrial certification (TUV, Lloyds Register, ASME etc). Such systems have the added benefit of eliminating the need for hot works on site and the NDT of welded pipework (section 6.3) and they significantly reduce the amount of contamination in the pipework and the subsequent risk of that entering the hydraulic system	No objection to this concept. Details of proposed method to be submitted for approval.
61.0	3502-RAM-SB-XX-SP-ME-30211-T01 section 1.10.12 Flame Cutting and Shearing Details procedures for flame cutting and shearing, but no mention of water jet cutting or laser cutting. some of the profiles in the mechanical package may be better suited to water jet cutting for a cleaner edge, allowing easier fabrication. alongside some of the thinner profiles being suited to laser cutting. Are procedures needed for these process too, if so, what will they look like?	As long as the Contractor follows the requirements of SHW series 1800 and BS EN 1090-2 for thermal cutting for these techniques then there would not be an objection.

62.0	3502-RAM-SB-XX-SP-ME-30201-T01 section 2.1.1.3 Cylinder Design Pressure In this list "The test pressure shall be used as the design pressure for the cylinder" PED requires that the test pressure be "The maximum allowable pressure multiplied by the coefficient 1.43", where the maximum allowable pressure is "...the maximum pressure for which the equipment is designed, as specified by the manufacturer", essentially the design pressure . We have based our quotation on the cylinder having a design pressure of 250 bar (as defined in ...30241) and a test pressure of 375 bar	Accepted.
63.0	3502-RAM-SB-XX-SP-ME-30221-T01 section 4 3502-RAM-SB-XX-SP-ME-30201-T01 section 3 3502-RAM-SB-XX-SP-ME-30242-T01 section 3 Operation Interval The specifications clearly define the maximum operations per year (2920, equivalent to 8 per day) but is not clear if this is a maximum of 8 per day or a typical 8 per day What is the maximum number of bridge operations (outside of commissioning) that would be required in a 24 hour period and what is the minimum interval between operations. Information is required to estimate the cooling requirements of the hydraulic system (which could be significant)	Forecast no. operations has been agreed in AIP and this forms the design basis from which we should not vary. "The bridge is designed for 2920 operations per year, based on a maximum of 8 operations per day and a maximum short-term frequency of 2 movement per hour."

64.0	3502-RAM-SB-XX-SP-ME-30211-T01 section 1.13 Machining Machining post-weld requirements Document states "Unless stated otherwise on the drawings, final machining shall be carried out on the completed fully welded and assembled fabrication" this is not possible on some items (e.g. the lubrication hole on 3502-RAM-SB-XX-DR-ME-32501)	The contractor is required to follow the notes, but if there is significantly post welding work to do this can be raised by TQ upon award. For minor items such as lubrication holes, these will be accepted as they have no impact on the final shape of the component.
65.0	3502-RAM-SB-XX-SP-ME-36507-T01 Float mode Maintaining cylinders in float configuration We note that cylinder float, when the bridge is in the lowered position, is maintained by accumulators holding valves 403.1, 402.3 et al open. This requires the pilot line between the HPU and the cylinders to be held at pressure (c120 based on the accumulator precharge) and that the pilot pump will need to run intermittently. Are other means of holding the cylinders in float permitted.	Alternative methods may be proposed.

66.0	3502-RAM-SB-XX-SP-ME-36501-T01 Line Lengths Concern over the distance between the HPU and lift cylinders We are concerned about the long line lengths between the HPU and the cylinders and effects they will have; principally pressure drops (efficiency in the main system and drain line back pressure), the controllability of the system, and the ability of the cylinders to pull in oil during emergency recover. During the detailed design can parts of the hydraulic system that currently reside in the plant room be moved to the cylinder pit, and can the function of the system be significantly reconsidered to reduce the flow requirements between the HPU and cylinder?	Refer to Purchase Specification 3502-RAM-SB-XX-RP-ME-31002 Section 5.1 Hydraulic Circuit Design It is the responsibility of the contractor to develop the detail design to meet performance requirements in this specification. A hydraulic circuit is included to show the basic functionality of the equipment, required flow rates and pressures. The equipment will need to be designed to suit their location and the cylinder pits are considered to be an external environment with limited access. The exemplar design allows for the majority of the hydraulic equipment to be located in the plant room which is a more controlled environment and easier to access and ultimately maintain.
67.0	3502-RAM-SB-XX-SP-ME-35001-T01 etc Barrier hydraulics Can any additional information be provided on the hydraulic system for the barriers? Working pressure, cylinder bore and rod, required operating forces (operational and holding), motor size, operating time, etc	Working pressure, cylinder bore and rod are provided on drawing 3502-RAM-SB-XX-DR-ME-35532-T01. Part numbers for the motor and tank are provided on drawing 3502-RAM-SB-XX-DR-ME-35001-T01.

68.0	3502-RAM-SB-XX-SP-ME-35001-T01 etc Barrier hydraulics We recommend that the barrier hydraulics be operated using biodegradeable oil. The drawings show a drain, which presumably goes either directly into the watercourse or into a rainwater drain with no protection between the barrier system and the environment. Regardless of the means of operating the barriers (see TQ18) we would also recommend that all greases and other lubricants used in the barriers are biodegradeable.	Mineral oil has been selected at design stage as per previous response. The risk of contamination is such that the oil type in the design should be kept the same.
69.0	Specification 3.4.4 calls for an Emergency Recovery Operation where the bridge is up and must be brought down by opening valves at the hydraulic cylinders to lower the span. Plans do not show any valves capable of lowering the span manually. Is it the responsibility of the hydraulic system supplier to provide valves to make this emergency lowering possible?	Emergency lowering is achieved using the handpump (301) to pilot open the cylinder P.O. check valves (402.2 and 402.6) and isolation valve (313).
70.0	Hydraulic Purchase Specification 5.6.6 calls for a Portable Hand Pump capable of lowering the span if it becomes stuck in the open position. The hydraulic schematic shows that the handpump will open pilot operated check valves 402 & 403 but doing so will not allow the hydraulic circuit to remove fluid from the cylinder bores or replenish fluid on the rod side of the cylinder. Is it the responsibility of the hydraulic system supplier to provide valves to make this manual lowering possible?	In addition to opening the P.O. check valves isolation valve (313) is opened to allow a flow of fluid to fill the cylinder annulus with the remainder passing through valve 309 to the reservoir. This methodology removes the need for operators to enter the cylinder pits.

71.0	Specifications call for the hydraulic system to have the capability of single cylinder operation. Plan Sheet 36501 shows cylinder manifolds that don't allow this to be accomplished without completely removing one of the cylinders. Typical movable bridge hydraulic systems provide this redundancy feature within the hydraulic cylinder manifolds. Is the design intent to have this feature within the cylinder manifolds or to remove the cylinder to obtain this single cylinder operation redundancy feature?	Each cylinder is designed to hold the bridge in the event of a cylinder failure. Depending on the failure mode the failed cylinder can be hydraulically isolated and removed or left in circuit while the bridge is manually lowered on the remaining cylinder. The faulty cylinder would need to be isolated from the hydraulic circuit once lowered. Next it would need to be attached to the lashing plate and physically disengaged. Once the faulty cylinder is disengaged from the deck, it will be possible to operate the bridge on a single cylinder. Single cylinder operation whilst possible is recommended only for very short periods, under reduced opening speed and reduced wind speeds, as the redundancy provided by twin cylinder operation has been lost.
72.0	Specification 2.1.2 Checking calls for Category 3 independent design review for electrical, hydraulics, and control systems per CG300 Design Manual for Roads and Bridges. Do the independent design reviewers need to be Professional Engineers with experience in the discipline they are reviewing?	CG300 is a UK design guidance, we believe that the questions relate to Professional Engineers in the American sense. Hence, they need to be registered with the national engineering body which for the UK would mean they are chartered. Other similar accreditation will be acceptable.
73.0	Hydraulic Specification 9.1.2 Tender Information calls for the contractor to submit Confirmation that the parts listed in the hydraulic documentation will be adhered to and where alternative suppliers are being proposed the details of the alternative. The proposed system is extremely complicated and has several areas of technical concern. These concerns are difficult to address without extensive engineering and simulation of existing and alternate design possibilities. Do the specifications allow for alternate component parts and designs or is the intent of the plans to provide exact system as shown?	Refer to sections 5.1 / 5.2 document 3502-RAM-SB-XX-SP-ME-30242 HYDRAULIC EQUIPMENT PURCHASE SPECIFICATION It is the responsibility of the contractor to develop the detail design to meet performance requirements in this specification. A hydraulic circuit is included to show the basic functionality of the equipment, required flow rates and pressures. Alternatives to the equipment specified may be proposed by the contractor for approval (refer to section 5.2). Any proposed alternative component shall be selected from manufacturers' current product ranges, obsolete or phased out (or being phased out) components are not permitted. Components shall be selected such that the operational performance shall not be impaired as a direct result of fluid viscosity, when operating under the ambient temperature conditions detailed in section 3.

74.0	Are the St George's Ferry Terminal and Penno's wharf areas available for use as transshipment areas for the steel bridge sections? If yes, would these be freely available or would there be a cost involved. If not, are there other possible areas available for transshipment?	Penno's Wharf is operated by Bermuda Yacht Services on behalf of the Corporation of St George's, and is generally available to support the project. For commercial operations a shipping agent is typically engaged, and they can make the necessary arrangements with the wharf operator. Public ferry operations at the St George's ferry stop (Hunter's Wharf) should not be interrupted. This is not expected to be an issue, even for very large vessels at Penno's.
75.0	Can the intended separating / sliding surface of the bearings for the bascule operation be clarified please. We have assumed a standard elastomeric bearing and that the operating interface is elsewhere (e.g. between upper bearing plate and taper plate). The designer describes the proposed bearing as a deformation bearing not a sliding bearing. Our bearing specialists have experience with providing a solution utilizing an elastomeric bearing + sliding interface for previous bascule bridges. Would an alternative solution here be open for consideration?	The bascule steelwork is provided with a machined tapered bearing plate welded to the soffit plate of the bascule steelwork complete with 15thick stainless steel bearing plate welded to the taper plate – details of these are shown on drawing 3502-RAM-SB-XX-DR-CB-37028. The elastomeric bearing is assumed to be provided complete with an upper bearing plate, as part of the bearing design, to provide a robust wear/"slide" surface as shown on drawing 3502-RAM-SB-XX-DR-CB-37046. Hence, during opening the separation will occur between the lower surface of the stainless steel bearing plate on the bascule steelwork, and the upper surface of the bearing plate fitted to the elastomeric bearing. The interface will allow some sliding but undoubtedly friction between the two bearing plates will inevitably result in deformation of the elastomeric bearing, both due to thermal effects in the bridge down position and also as the bridge lowers onto the bearing and the reversal of deflection from cantilever to simple support with resulting longitudinal deformations in the bearing together with rotations. The bearing supplier will be permitted to propose solutions but these will need to be simple, robust and durable and be able to accommodate the forces, deformations, displacements and rotations defined in the bearing schedule on drawing 3502-RAM-SB-XX-DR-CB-37045.
76.0	The sizing of the Elastomeric Block (400x500x112) is defined as a back-calculation of the deformation stiffness indicated by the Bearing Schedule (force resistance to a given deformation). Based on the vertical loads only, the block size could be much smaller. Would an alternative solution here be open for consideration also?	Plan size of bearings shall be maintained as per the bearing schedule requirements and cannot be reduced; the design, layout and spacing of stiffeners within the bascule steelwork elements at the bearings have been predicated on the basis of appropriate dispersal of transverse stress between steelwork and bearings based on the minimum plan area of the bearing components.

77.0	The party responsible for appointing, procuring, and paying the Independent Checker: Appendix D in the RFP states that the Contractor shall procure an independent check, whereas the Approval in Principle - M&E document (3502-RAM-SB-XX-RP-ME-30001) states that the Independent Checker is to be appointed by the Government of Bermuda. Please confirm the intended arrangement and identify the party responsible for the associated costs.	The independent check is to be procured by the Contractor, who will bear all associated costs. The Engineer must approve the checker; approval shall not be unreasonably withheld.
78.0	Appendix D of the RFP states that a Stage II check of the Mechanical Systems has been completed. Please confirm whether any further independent checking of the Mechanical Systems is to be provided by the Contractor and, if so, identify the scope of the additional checking required.	The detailed mechanical design has been independently checked (Category 3 independent check) and hence any hence does not need repeating for the mechanical design shown on the drawings. The Contractor shall procure an independent (Category 3) check, as per CG300 of Design Manual for Roads and Bridges for the electrical, hydraulic and control systems.
79.0	CG 300 uses digits when referring to categories and stages (e.g., Category 3, Stage 1). Certain documents within the RFP use Roman numerals (e.g., Category III, Stage II) when referring to the independent check process. Please confirm that these reference designations are equivalent and interchangeable, and do not refer to a different procedures.	We confirm that these designations are equivalent and interchangeable ie Category 3 = Category III, Similarly Stage 2 = Stage II
80.0	The document " Annex K Geotech Summary" dated 2026 - has a " Pile Design" table that lists various lengths of "Sockets" for Bents Northern Abutment,P4,P3,Nose Pier and Pier 1, in addition to various embedment lengths into basalt for the Lift Pier, P2 and the Southern Abutment. These Sockets/Embedments are not shown on the tender drawings. Can you clarify if is a requirement to follow this table ?	The geotechnical information contained in Annex K is information developed at the outset of the design to form the initial Design Basis Approval in Principle (AIP) assessment and is provided for background information only; it is not a requirement to follow the table for sockets and embedment from this document. The design has been fully developed and the estimated pile toe levels are scheduled on drawings 3502-RAM-SB-XX-DR-CB-31001 and 31002. There is a requirement for the piles to toe into the underlying Basalt, and as shown on drawing 3502-RAM-SB-XX-DR-CB-31002 the piles for P2 and P3 shall be grouted.

81.0	The document " Annex K Geotech Summary" dated 2026 - has a " Pile Design" table also lists a lot of elevations and loadings that differ from the tender documents. Please clarify if this amends the information on the drawings.	The geotechnical information contained in Annex K is information developed at the outset of the design to form the initial Design Basis Approval in Principle (AIP) assessment and is provided for background information only; it does not amend the drawings or specification. The design has been fully developed and the estimated pile elevations and loadings that shall be followed are scheduled on drawings 3502-RAM-SB-XX-DR-CB-31001 and 31002.
82.0	Per the contract drawings, dewatering of closed cofferdams will be required to complete pier construction. Various means may be considered to cut off water flow into the base of cofferdams during dewatering. Upon review of the geotechnical information, it is understood that karst limestone bedrock is present, and the report notes the presence of voids and frequent interbedding of silt and clay. This condition may allow higher than expected water infiltration through existing voids and any fissures in the bedrock, which could create dewatering challenges, particularly given the hydraulic head differential anticipated during construction. Has any in-situ testing been completed as part of the geotechnical investigation to determine the permeability or groundwater flow rate through the limestone bedrock and surrounding soils?	There have been no in-situ or laboratory permeability tests conducted to determine permeability. Particle Size Distribution tests were conducted which may offer an estimate on permeability rates within the superficial deposits.
83.0	The new bridge will be constructed in close proximity to the existing bridge structure. This includes significant excavations to facilitate pier construction. Are drawings or construction details available for the foundations of the existing bridge structure so that the possibility of undermining the old bridge can be determined.	There are no historic drawings of the existing bridge foundations available. The temporary works cofferdams should be designed such that they prevent any movement that may cause damage to the existing structure. It is recommended that the Contractor undertakes a ground movement assessment prior to installation of coffer dams to assess the risk and mitigate through the temporary works design.
83.1	Can you please provide as-built drawings showing all substructure construction (piles, pile caps, piers, etc.), electrical, hydraulics, etc	Unfortunately, we do not have as-built records for the substructure. Additional drawings, including mechanical and electrical, from the 2002 rehabilitation have been added to the Works Information Package shared folder 44-28-75-04-N Swing Bridge Replacement Works Information Package -> 3. Existing Structures -> a. Existing Swing Bridge -> Additional Drawings 2002 Rehabilitation

84.0	Please can you extend the date where contractors can raise TQs to 2 weeks prior to submission date?	The time between Deadline for Questions and Deadline for Issuing Addenda is necessary to allow time for full responses. The time between the Deadline for Issuing Addenda and the Submission Deadline is to ensure that proponents have adequate time to incorporate the additional information into their proposal.
85.0	We are unable to find any references in the plans and specifications calling for coating of the interiors of the approach and lift spans. Please clarify whether the interiors of these spans are to be coated and if so, specify the coating system to be used and the extents/limits of the elements to be coated, if other than the full interior.	All steelwork areas for surface preparation and protective systems are specified in Specification for Highway Works (SHW) Series 1900 table 19/2A. Hence, for the interior surfaces these are described as Area B in Table 19/2A with a requirement for blast clean to SA 2 ½ Medium profile with protective paint system Type III given in Table 19/2B requiring a 2 coat paint system either comprising paint item no.s 109 & 112, 111 & 112, or 113 & 114 with paint item no.s clarified in Table 19/1. Please take note of other Areas A to G scheduled in table 19/2A and take note also that the paint system type II given in SHW Table 19/2B has been modified for this project in project specific numbered Appendix 0/2 to the SHW to include metal spray.
85.1	In accordance with Table 19/2A of MCHW is the area under the waterproofed bridge surfacing on the lift span to be treated as Area A or Area B?	The upper surface of steel deck plate on the lift span is not painted; it is blast cleaned and waterproofed as described in Appendix 20/71 for waterproofing in the carriageway area and as described in Appendix 20/72 for combined waterproofing and non-slip surfacing in the pedestrian walkway area. Table 19/2A sets out the requirements for surface preparation and protective paint systems for exposed steel surfaces such that Area A specifies the preparation and protective systems for all exterior main surfaces and shop welds during fabrication stage, and Area B specifies the preparation and protective systems for all interior box girder surfaces and shop welds during fabrication stage.
85.2	Referring to the response to Question 85, please confirm that the Type III Protective System to be applied to the Area B interior of box girder surfaces does not require the application of a metal spray coating.	We confirm Type III Protective System to be applied to the Area B interior of box girder surfaces does not require the application of a metal spray coating and shall comply with the Type III system in Specification for Highway Works (SHW) Series 1900 table 19/2B. Only the paint system type II given in SHW Table 19/2B has been modified for this project in project specific numbered Appendix 0/2 to the SHW to include metal spray.
86.0	Regarding the pile isolation sleeves shown on Drawing No. 3502-RAM-SB-XX-DR-CB-31002, are the sleeves intended to pass fully through the cofferdam base concrete plugs to prevent the transfer of excess hydrostatic uplift forces acting on the concrete plugs to the bridge pilings, i.e., is a true gravity seal to be provided?	As shown on drawing 3502-RAM-SB-XX-DR-CB-31002 the length of the isolation sleeve is required to be 2m from the underside of the foundation plus sufficient length to provide a grout plug to resist uplift water pressures through a combination of gravity and frictional resistance between the pile and the isolation sleeve.

87.0	Geotechnical Factual Report: Drawing No. 3502-RAM-SB-XX-DR-CB-30111 in the Civil Structural plan set refers to a Geotechnical Factual Report (see Note No. 3 under Piling). Please confirm this is the report found in the Ground Investigation Report at Appendix C - Brunel Ltd Ground Investigation Factual Report.	We confirm that it refers to the Brunel factual report in Appendix C of the Ground Investigation Report 3502-RAM-XX-XX-RP-CE-30001.
88.0	Pre-boring: Note. No. 6 on Drawing No. 3502-RAM-SB-XX-DR-CB-30111 in the Civil Structural plan set states "Based on the results of driving assessments the piles are not sized to be driven through the limestone layers and it is anticipated that there will be a need to drill and drive piles through limestone rock layers...". The recommendations in the Geotechnical Design Report suggest a drill and drive approach to penetrating the hard limestone layer(s), whereby the Contractor advances the piling incrementally by drilling through the pile approximately 1.5 pile diameters ahead of the pile toe and then driving through the pre-bore. The process is repeated until the limestone is cleared. Will the Contractor be allowed to pre-bore a slightly oversize hole through the limestone layers before pitching the pile, in lieu of the drill and drive approach recommended in the design document?	No. The restriction on depth of the pre-bore ahead of the driven pile (1.5x pile diameter) must be adhered to. The design allows for some disturbance of the material immediately outside of the pile diameter, however it is expected that some shaft resistance will be developed from this disturbed Limestone material. Therefore, it is accepted that the contractor may pre-bore a slightly oversized hole through the Limestone, while not advancing more than 1.5x pile diameter. The diameter of the pre-bore shall be no greater than +0.1m of the pile diameter (outside diameter).

89.0	Minimum toe elevation: Are the estimated toe levels given in the Pile Schedule on Drawing No. 3502-RAM-SB-XX-DR-CB-31001 in the Civil Structural plan set to be interpreted as the minimum toe elevations for the piles? That is, if a pile achieves a capacity of 1.5 x Specified Working Load (test load) at a level above the estimated toe level for the foundation, must driving continue until the pile toe reaches the estimated level and the pile achieves the required capacity or refusal?	The estimated toe levels given on drawing 3502-RAM-SB-XX-DR-CB-31001 are the anticipated minimum levels as the design requirement is for the piles to toe into the underlying Basalt strata.
90.0	Driving criteria: Are the working piles to be driven to a capacity of at least 1.5 x Specified Working Load per Appendix 16/8, Item (c), or to refusal per Piling Note No. 3 on Drawing No. 3502-RAM-SB-XX-DR-CB-31001 in the Civil Structural plan set and defined as 100 blows per 250mm of penetration in Appendix 16/8, Item (e)?	The piles shall be installed to the set requirement stated in Appendix 16/8 item (e) and to such a level that the piles penetrate into the top of the Basalt. The test piles identified in item (a) shall be tested in accordance with item (c) whereby a minimum 1.5x SWL shall be mobilised.
91.0	Note No. 2 under Concrete Outline Notes on Drawing No. 3502-RAM-SB-XX-DR-CB-30111v in the Civil Structural plan set lists the type of concrete to be used for various elements in the bridge. What type of concrete is to be used for the diaphragms and retaining wall footings and stems?	Refer also to project specific civils specification numbered Appendix 17/1 which clarifies the relevant mix references for all elements including the retaining walls and footings, and pier diaphragms.
92.0	Are the design team review times indicated in the Works Information Package Submittals document calendar days or business days?	Calendar days.
92.1	Can you please clarify if the Contractor will need to interact with the Design Team?	The Contractor will not need to interact with The Design Team on any matter related to the contract. However, The Engineer shall seek support and obtain approval of the Design Team for all aspects of a technical nature that have a direct influence on the design, in order to insure the integrity of the design is maintained.

93.0	We understand from discussions with freight forwarders that on past government-funded projects in Bermuda, it was common for the government to arrange for clearance of the goods coming into the country. Will the government arrange clearance of the goods imported for this project, or must the Contractor hire an agent to handle clearance?	The Contractor will be responsible for all aspects of importation. Engaging an agent is not strictly required, but adhering to the rules and processes set out by the Customs Department is. As previously stated (11.3) the Government will provide duty relief certificates for good related to the project.
94.0	For scheduling purposes, will the review times for resubmissions of shop drawings, etc., that address the Engineer's comments on the prior version be subject to the same review times as the original submittal, or can a shorter time be used.	For scheduling purposes, please allow 14 calendar days for review and response of resubmittals.

95.0	Exposed surface protective system: From our recent knowledge in quoting structural steel for UK bridges, we note that Aluminum Metal Spray has been withdrawn from SHW Series 1900 Protection of Steelwork Against Corrosion, and all current Type II coatings are without this metal coating. However, the Specification – Civil and Structural (3502-RAM-XX-XX-SP-CB-30111 T01) replaces Table 19/2B in the Series 1900 Specification and requires the application of an Aluminum Metal Spray to the steel. Please confirm whether an equivalent coating system with zinc/aluminum metal spray could be used.	The Client would be happy to consider alternative paint systems should these be demonstrated to be able to be more durable with longer life to maintenance, this would include Fluoropolymer paint systems which are now part of the accepted paint systems adopted in National Highways SHW since the original 2019 quoted specifications were written. However, any equivalent coating system proposed shall include, and be fully compatible with, either zinc or aluminium metal spray as this is a pre-requisite of the Client to suit the particularly aggressive environment that the bridge will likely experience.
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96.0	3502-RAM-SB-XX-SP-ME-30231 T01 pg 5/20 The text states that current US Standards and codes (NFPA 70 / NEC) have an "overriding authority." The text also requires the Contractor to deliver a Technical File and Declaration of Conformity to enable CE/UKCA marking. True CE/UKCA marking typically mandates compliance with European Harmonized Standards, which directly conflict with NFPA 70 wiring methodologies, grounding practices, and component listing requirements. Will the Owner confirm that an electrical system designed, fabricated, and installed strictly in accordance with NFPA 70 / National Electrical Code (NEC) satisfies the contract? Furthermore, will the Owner confirm that standard North American electrical components and wiring methodologies which have UL and or CSA marks, but may not have CE/UKCA marks, are acceptable for the complete machinery installation?	An electrical system designed, fabricated, and installed strictly in accordance with NFPA 70 / National Electrical Code (NEC) satisfies the contract. Standard North American electrical components and wiring methodologies which have UL and or CSA marks will be acceptable. Where the Contractor proposes to use such components, the Contractor must demonstrate that the complete installations meets the health and safety requirements of Machinery Directive 2006/42/EC (including the provision of the Technical file and Declaration of Conformity).
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97.0	3502-RAM-SB-XX-SP-ME-30201 T01 pg 7/40 The scope outlines that the Contractor is responsible for "CE/UKCA marking of the complete installation." In a comprehensive moveable bridge infrastructure project, "complete installation" can be interpreted as either the entire bridge asset or just the functional mechanical, hydraulic, and electrical operating machinery components. Please clarify the exact physical and regulatory boundaries of this requirement. Will the Owner confirm that the Contractor's responsibility to provide CE/UKCA marking applies strictly to the functional operating machinery and mechanical drive systems treated as industrial machinery? Alternatively, does this requirement extend to the structural bridge spans and fixed civil steelwork?	The Contractor's responsibility to provide CE/UKCA marking applies to the functional operating machinery (including all assemblies shown in 3502-RAM-SB-XX-DR-ME-30001-T01), the traffic barriers, the whole hydraulic and electrical system, as well as ancillary equipment such as traffic barriers, control desk, control building, plant room, etc. The complete installations must meet the health and safety requirements of Machinery Directive 2006/42/EC.
98.0	3502-RAM-SB-XX-SP-ME-30291 T01 pg 9/24 The text permits CE/UKCA compliant products as an alternative to North American certified items "subject to approval by the Overseeing Organisation's Site Representative." This condition would seem to limit the approval of CE/UKCA products and materials to post-bid consideration. Will the Owner confirm that off-the-shelf industrial components bearing CE/UKCA marks and meeting the requirements of the above-mentioned specifications are pre-approved for inclusion in the Air Conditioning and Dehumidification environmental control system?	Off-the-shelf industrial components bearing CE/UKCA marks and meeting the requirements of 3502-RAM-SB-XX-SP-ME-30291 T01 are pre-approved, but the Contractor must demonstrate that such items are compatible with whole electrical system.

99.0	3502-RAM-SB-XX-SP-ME-30201 T01 pg 7/40 & 38/40 The specifications outline that the Contractor is responsible for the final testing, commissioning, and the ultimate issuance of the Declaration of Conformity to enable CE/UKCA marking of the installation. In a comprehensive project where the Prime Contractor executes civil works, concrete foundations, and bridge mechanical/electrical systems under a single contract, "complete installation" requires a clear operational boundary for regulatory marking purposes. A European CE/UKCA Declaration of Conformity typically applies strictly to functional machinery and operating mechanisms. Will the Owner confirm that the final Declaration of Conformity and subsequent CE/UKCA marking scope applies exclusively to the functional mechanical, electrical, and hydraulic operating machinery systems of the movable bridge? Furthermore, will the Owner confirm that the successful completion and sign-off of the Site Acceptance Test (SAT) - referenced on Page 38 of 40 - serves as the formal milestone to satisfy the CE/UKCA marking contractual requirement?	The final Declaration of Conformity and subsequent CE/UKCA marking scope applies exclusively to the functional mechanical (including all assemblies shown in 3502-RAM-SB-XX-DR-ME-30001-T01), electrical, and hydraulic operating machinery systems of the movable bridge as well as ancillary equipment such as traffic barriers, control desk, control building, plant room, etc. Site Acceptance Test (SAT) and CE marking are two separate requirements and the successful completion and sign-off of the Site Acceptance Test (SAT) does not serve as a formal milestone to satisfy CE/UKCA marking requirements.
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100.0	Please clarify whether CE/UKCA Marks, a Technical File, and Declarations of Conformity are required for the following bridge components: a) Steel pilings. b) Traffic barrier assemblies. c) Shock absorber assemblies. d) Bridge bearing assemblies. e) Bridge mechanical components. f) Miscellaneous metal fabrications, including but not limited to, hand/safety railings, parapets, ladders and platforms, hatches, gates and doors, and steel joint plates.	a) Required by SHW and standards referenced therein for all steelwork material including for steel pilings as defined in accordance with the SHW series 1600 and 1800 for steelwork and BS EN 1090 referenced therein. Where the Contractor proposes steel sourced from alternative (non-UK/European) origins, the Contractor must demonstrate that the proposed material: a. is equivalent to the SHW-specified requirements (mechanical properties, chemical composition, dimensional tolerances, coatings, etc.); b. is supported by appropriate documentary evidence, including mill test certificates/material certificates, heat/lot traceability, welding/fabrication records, and relevant test reports; and c. has been produced under equivalent conformity procedures providing equivalent levels of factory production control, testing and third-party inspection as required by BS EN 1090. b) CE/UKCA Marks, a Technical File, and Declarations of Conformity are required for the Traffic barrier assemblies; Shock absorber assemblies and all Bridge mechanical components. Where the Contractor proposes components from alternative (non-UK/European) origins, the Contractor must demonstrate that the complete installations meet the health and safety requirements of Machinery Directive 2006/42/EC (including the provision of the Technical file and Declaration of Conformity). c) As per item b) d) Required for bridge bearing assemblies – As noted in SHW Appendix 21/1 refer to BS EN 1337, in particular Part 3, and Appendix ZA therein. Where the Contractor proposes bearings sourced from alternative (non-UK/European) origins, the Contractor must demonstrate that the proposed bearings: a. are equivalent to the BS EN 1337, Part 3, Appendix ZA -specified requirements (including materials, loading, rotations, durability etc); b. has been produced under equivalent conformity procedures providing equivalent levels of factory production control, testing and third-party inspection as required by BS EN 1337, Part 3, Appendix ZA. e) As per item b) f) Required for all steelwork applications, including miscellaneous metal fabrications, hand/safety railings, parapets, ladders and platforms, hatches, gates and doors, and steel joint plates, as defined in accordance with the SHW series 1800 for steelwork, BS EN 1090 referenced therein, and the relevant standards defined in the appropriate sections of the Architectural Specification 3502-RAM-XX-XX-SP-A-30301. Where the Contractor proposes steel sourced from alternative (non-UK/European) origins, the Contractor must demonstrate that the proposed material: a. is equivalent to the SHW-specified requirements (mechanical properties, chemical composition, dimensional tolerances, coatings, etc.); b. is supported by appropriate documentary evidence, including mill test certificates/material certificates, heat/lot traceability, welding/fabrication records, and relevant test reports; and
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		c. has been produced under equivalent conformity procedures providing equivalent levels of factory production control, testing and third-party inspection as required by BS EN 1090.
101.0	The Specification – Civil and Structural, Appendix 18/1: Requirements for Structural Steelwork requires an assembly check under Clause Reference 1806.10. Please clarify/confirm the trial assembly requirements. For the approach spans can these be erected and checked as individual spans or must each 3- span assembly be erected and checked together as a unit? Are the lift span and the two adjacent approach spans to be trial erected and checked together as a unit?	The purpose of the trial erection is to allow Contractor and fabricator the opportunity to confirm fit between components and to prove methodology of the erection sequence to maintain stability during erection before the steelwork is shipped to site where adjustment for alignment and fit would likely be more challenging given the remoteness of the site. During trial erection support conditions of adjacent spans should represent the support conditions during erection on site and the trial erections to be meaningful should demonstrate that: - Webs of adjacent spans are vertical and aligned. - Bottom flange (soffit) plates of adjacent spans are aligned. - Span dimensions, girder spacing and relative levels of girders are such that temporary support positions are correctly set out and aligned. - All butt weld splices at flanges and webs are aligned. - Trial erection of the interface of the lift span and approach spans is recommended to be performed prior to delivery to site and site erection to demonstrate alignments, levels and joint spacing to ensure final set out of bearings and pivots and to maintain adequate clearances during bridge lift operations. In order to achieve these: - For the approach spans it is recommended that sufficient spans are erected to demonstrate fit, it is unlikely that checking as individual spans would be sufficient to demonstrate alignment and fit, and our recommendation would be that at least 2 adjacent spans be erected at each trial, and that all spans are trial erected with associated adjacent spans at least. If all 3- span assembly could be trial erected as one unit then this may be beneficial to the Contractor and Fabricator prior to shipping to Bermuda, but this will be at Contractors option/preference and may be advantageous to minimize need for any additional adjustments to be carried out on site for alignment and fit in Bermuda. - It is recommended that the Lift span and adjacent approach spans be trial erected and checked for alignment and fit, this could be with alternate approach spans in separate trials but could be all together as a unit. As noted above this will be at Contractors option/preference and may be advantageous to minimize need for any additional adjustments to be carried out on site for alignment and fit in Bermuda. - In any trial erection it is recommended that due allowance is taken of the specific environmental conditions in Bermuda at expected time of erection be considered as these will undoubtedly be different and of significance compared with trial erection held within the fabrication facility.

102.0	The existing traffic circle at the south bridge approach contains street lighting. Drawing 50-RAM-SB-XX-DR-Z-3001 indicates to remove the existing street lighting. The design documents do not indicate any street lighting is required for the temporary traffic circle relocation and/or the permanent roadway reconfiguration. Confirm if interim and permanent street lighting at the bridge approach is part of this contract and if so, who is responsible for providing the design?	No interim street lighting is required by the Contractor. The Government is in the process of creating a temporary mini-roundabout and traffic diversion. These works will remove the existing lighting, and there will be no interim lighting for the duration of the project. Cats eye retroreflectors will be used. Permanent street lighting will be provided by the utility (BELCO) to fit the Contractor's final roundabout design. Reasonable communication and coordination between the BELCO and the Contractor is expected, such as allowing access to install cables and poles at a logical point in the works sequence.
103.0	Is the hatch in the footway for access to Pier 4 (see Drawing No. 3502-RAM-SB-XX-DR-A-39401, see Section D-D), to be designed for traffic loads?	Yes, Class B125 to BS EN 124, installation location is classified as group 2 location in BS EN 124, see also architectural specification L20 (note, class A15 not applicable for the particular DRS-601 hatch given proximity to carriageway)
104.0	In the Architectural Specification, the CODE COORDINATION MATRIX designates the Pedestrian/Vehicle Restraint Parapets (BAL-101 to BAL-105), Safety Railings (BAL-201), and Gates (BAL-301 and BAL-305) to be Contractor Designed Portions (CDP). In Specification Q41 for these works, Clause 112 – Tender Submittals requires the Proponent to submit a design response for these works with the Tender proposal. Please confirm whether the Proponent is required to submit a design response, as further described in Items 1.b and 1.c of Clause 112, with the Tender submittal.	A design response is not required with the Tender submittal. In the Architectural Specifications, under Submittals Section 410 item 6, "Tender Submittals: Where called for in the Specification, provide submittals at the time of Tender as listed in the Specification or post tender within a time frame defined by the client." In the Submittals document (Works Information Package -> 1. Procuring Entity's Requirements -> 10 Submittals) submittal number A-30301-1 calls the Contractor's Detailed Design Program to be submitted within 21 days after commencement. Detailed design of Contractor Design Parts (Architecture), submittal number A-30301-2, are to be submitted in alignment with the Program, and at least 6 weeks prior to commencement of any related works.

104.1	In the Architectural Specification, the CODE COORDINATION MATRIX designates the Navigation Light Casings (EXT-901) and Mooring Rings (EXT-901) to be Contractor Designed Portions. In Specification Q57 for these works, Clause 112 – Tender Submittals requires the Proponent to submit a design response with the Tender proposal. Please confirm whether the Proponent is required to submit a design response, as further described in Items 1.b and 1.c of Clause 112, with the Tender submittal.	As per item 104.0
104.2	In the Architectural Specification, Specifications F10, F30, L13, L20, L31, M20, M60, Q23, Q41, and Q57 require the submittal of Pre-contract Samples, which are defined as samples provided prior to contract award. Please confirm whether Pre-contract Samples are indeed required, and if so, designate the time frame available after the Tender submittal for the Proponents to deliver these samples.	As per item 104.0, samples are not required with the Tender submittal. Samples, benchmarks, and prototypes (submittal A-30301-#) are required 6 weeks prior to commencement of any related works. Note that "commencement of related works" includes, but is not limited, to ordering materials and components.
104.3	In the Architectural Specification, the CODE COORDINATION MATRIX refers to an External Metal Handrail (BAL-401). We are unable to locate this Code or description on the drawings. Please clarify.	BAL-401 should be marked in CODE COORDINATION MATRIX as relating to Longbird Bridge which does not form part of this contract.

104.4	In the Architectural Specification, the CODE COORDINATION MATRIX designates the Stainless Steel Step Iron (AM-311), the Vertical Stainless Steel Ladders with Safety Hoops (AM-401), the Inclined Stainless Steel Ladder (AM-405), and the Stainless Steel Grab Bars to be items designed by the Architect. In Specification L31 for these works, Clauses 210, 211, and 212 for these works say the dimensions are to be as indicated on the Design Drawings. a. Notes on the drawings for Items AM-311, AM-405, and AM-414 say these works are to be sized as appropriate. Are these items to be CDPs or will the dimensions for them be provided pre-tender by the Architect? Please clarify. b. We could not find any dimensions in the Design Drawings for Items AM-401. Are these items to be a CDP or will the dimensions for them be provided pre-tender by the Architect? Please clarify.	a. There are dimensions for width, angle and stile depth for AM-405 shown on Architectural drawing 3502-RAM-SB-XX-DR-A-39401, however these items are essentially CDP elements, and require contractor design to meet with any specific dimensions and layout requirements shown on the architectural finish drawing referenced above, and in compliance with the relevant parts of BS EN ISO 14122 Safety of Machinery – Permanent Means of Access to Machinery b. There are dimensions for width and length for AM-401 shown on Architectural drawing 3502-RAM-SB-XX-DR-A-39203, however, as previous response, this item is essentially a CDP element, and requires contractor design to meet with any specific dimensions and layout requirements shown on the architectural finish drawing referenced above, and in compliance with the relevant parts of BS EN ISO 14122 Safety of Machinery – Permanent Means of Access to Machinery.
104.5	In the Architectural Specification, the CODE COORDINATION MATRIX designates Concrete Common Blockwork (BLK-301) to be an item designed by the Architect. We could not find an item with this Code on the Design Drawings. Please clarify.	This blockwork reference relates to the reconstructed blockwork wall at the north east tie-in shown on drawing 3502-RAM-SB-XX-DR-CB-33021. This a standard blockwork used in Bermuda and much of this may be re-used from the existing blockwork boundary wall that needs to be demolished at this tie-in, also shown on this drawing, provided that the boundary wall is taken down carefully and the blockwork set aside and stored safely for re-use.
104.6	In the Architectural Specification, the CODE COORDINATION MATRIX designates GRP Floor Grating (EXT-111) to be an item designed by the Architect. We could not find an item with this Code on the Design Drawings. Please clarify.	EXT-111 GRP Floor Grating has been incorrectly labelled as DRS-611 on architectural drawings 3502-RAM-SB-XX-DR-A-39401 and 39402. DRS-611 is a hinged GRP floor grating used only on the Longbird Bridge which does not form part of this contract. Please replace references to DRS-611 with EXT-111 on architectural drawings 3502-RAM-SB-XX-DR-A-39401 and 39402.

105.0	Appendix 18/1 (via SHW Series 1800) requires compliance with EN/ISO standards, including: BS EN 1090-2 – Execution of steelwork (shop & site) BS EN ISO 3834 – Welding quality system BS EN ISO 15614 / 15613 – WPS/PQR qualification BS EN ISO 9606 / EN 287 – Welder qualification BS EN 12062 – Inspection and NDT framework However, it does not explicitly reference or address equivalent Canadian (CSA) or American (AWS/AISC) standards. We propose the following widely recognized equivalents for consideration: <table><tr><th>Function</th><th>EN / ISO Standard</th><th>Canadian (CSA / CWB)</th><th>American (AWS / AISC)</th></tr><tr><td>Execution (Shop & Site Welding)</td><td>EN 1090-2</td><td>CSA W59 + CSA S16</td><td>AWS D1.1 + AISC 360/303</td></tr><tr><td>Quality System</td><td>ISO 3834</td><td>CSA W47.1 (CWB)</td><td>AWS D1.1 QA</td></tr><tr><td>WPS / PQR</td><td>ISO 15614</td><td>CSA W47.1 / W59</td><td>AWS D1.1</td></tr><tr><td>Welder Qualification</td><td>ISO 9606</td><td>CSA W47.1</td><td>AWS D1.1</td></tr><tr><td>Inspection & NDT</td><td>EN 12062</td><td>CSA / CGSB standards</td><td>AWS / ASNT standards</td></tr></table>	Function	EN / ISO Standard	Canadian (CSA / CWB)	American (AWS / AISC)	Execution (Shop & Site Welding)	EN 1090-2	CSA W59 + CSA S16	AWS D1.1 + AISC 360/303	Quality System	ISO 3834	CSA W47.1 (CWB)	AWS D1.1 QA	WPS / PQR	ISO 15614	CSA W47.1 / W59	AWS D1.1	Welder Qualification	ISO 9606	CSA W47.1	AWS D1.1	Inspection & NDT	EN 12062	CSA / CGSB standards	AWS / ASNT standards	While broadly similar, the proposed standards are not directly equivalent, and therefore cannot be automatically approved. Compliance with the standards listed in Appendix 18/1 of the SHW and the EN/ISO standards referenced therein for all steelwork fabrication is required. Where the Contractor proposes steel fabrication procedures to follow alternative (non UK/European) origins, the Contractor must demonstrate that the proposed welding procedures, testing and quality : • is equivalent to the SHW specified requirements including welder qualifications, consumables, preparation, execution, testing, etc; • is supported by appropriate documentary evidence, including certificates, NDT records, etc; • has been produced under equivalent conformity procedures providing equivalent levels of factory production control, testing and third party inspection as required by BS EN 1090.
Function	EN / ISO Standard	Canadian (CSA / CWB)	American (AWS / AISC)																							
Execution (Shop & Site Welding)	EN 1090-2	CSA W59 + CSA S16	AWS D1.1 + AISC 360/303																							
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WPS / PQR	ISO 15614	CSA W47.1 / W59	AWS D1.1																							
Welder Qualification	ISO 9606	CSA W47.1	AWS D1.1																							
Inspection & NDT	EN 12062	CSA / CGSB standards	AWS / ASNT standards																							
106.0	Please clarify if a subcontractor engaged by one of our direct subcontractors (i.e., a tier-2 subcontractor) can be counted toward the Proponent's Participation Rate? Specifically, if a direct subcontractor utilizes a local Bermudian subcontractor for specialized services or expenses in Bermuda, will the Proponent receive full participation and local benefit credit for those tier-2 expenditures?	Yes, tier-2 subcontractors may be counted towards the Participation Rate.																								

107.0	Please provide the names of various waterproofing materials, including slip resistance materials, including those listed on the drawings as proprietary.	Proprietary waterproofing materials for waterproofing the concrete structures, and the road deck section of the steel lifting span, shall be a spray applied permitted waterproofing system that either: • has a current BBA (British Board of Agrément) Roads and Bridges Agrément Certificate as described in SHW Series 2000 Clause 2003 • complies with ETAG 033 'Guideline for European Technical Approval of Liquid Applied Bridge Deck Waterproofing Kits for liquid applied systems'; • complies with PAS in MCHW Series 0100 Clause 104.16 and shall be approved by the Overseeing Organisation's Site Representative prior to commencement of the Works. Examples of such waterproofing systems include, but not exclusive: • Eliminator® Stirling Lloyd/Saint Gobain • Pitchmastic PmB Attention is drawn to the need for integrity testing for all systems, as described in Specification Appendix 20/1 and Appendix 20/71, noting different requirements for concrete and steel substrate minimum tension adhesion values. Combined bridge deck waterproofing and non-slip surfacing system to the footways over steel lifting span, and to concrete surfaces in bearing galleries, shall be as described in Appendix 20/72. Examples of acceptable materials are listed in section 2 therein and include Bridgemaster®, Bimagrip HD, Cicol NT or equal approved. Again, attention is drawn to the need for integrity testing and tensile adhesion tests to be carried out as described in Appendices 20/1 and 20/71 as appropriate, noting different requirements for concrete and steel substrate minimum tension adhesion values. All backfilled concrete surfaces are to be painted up to within 300mm of finished ground level with a below ground waterproofing system complying with the SHW Series 2000 Clause 2004 e.g. 2 coats of tar or cut-back bitumen with the material properties specified in clause 2004 and rate of spread specified in clause 2006.
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108.0	We note that the pile toes will terminate in basalt at every pile location. The design specifically includes rock sockets in the basalt for P2 and P3, but not for the other pile locations. Conventional drilling equipment is suitable for drilling through limestone with strengths of up to approximately 70 MPa, as indicated in the geotechnical investigation. However, it is not suitable for drilling into basalt or granite. Drilling through basalt would require reverse circulation drilling, but this method is not suitable for drilling through the overlying clay and sand layers. Repeatedly changing the drilling rig configuration between conventional drilling and reverse circulation could add significant time and cost to the drilling operation. Could you please confirm whether the client wishes to proceed in accordance with the current design, understanding the impact on construction time and costs or would they consider allowing the piles to terminate at the top of the basalt layer instead?	There is a requirement for all pile toes to terminate in basalt. For piles at A1, P4, P5, P6 P7, A8 this is approximately 0.5m into unweathered basalt. Only piles at P2 and P3 require extended length grouted rock sockets in the unweathered Basalt and this is necessary as part of the design. Attention is drawn to works information section 2. Site Information; c. Geotechnical Design Report 3502-RAM-XX-XX-RP-CE-30011-P01. Table 5.1 shows elevation levels of expected weathered basalt and unweathered basalt. Table 4.1 shows anticipated UCS values for karst limestone (16MPa), weathered basalt (3.2 MPa); and unweathered basalt (30MPa); all significantly less than the 70MPa quoted in the TQ for the conventional drilling equipment. Furthermore our understanding of reverse circulation drilling is that it also can be effective not only for the harder basalt but also the softer overlying materials. It will be for the Contractor to determine the most efficient and cost effective procedures and equipment to achieve the pile design and toe levels as defined on the drawings.
109.0	Can we please be provided with the electrical supply information from the substation feeding the bridge and the earthing arrangement for the system.	The utility (BELCO) will supply a transformer and switchgear to meet the requirements of the bridge. The Government is preparing the vault structure in advance, however the equipment selection will be informed by the contractor's final design. Approval level drawings of the transformer vault/house have been added to the shared OneDrive folder, for information: 44-28-75-04-N Swing Bridge Replacement Works Information Package -> 97. Addendum #11 – Transformer House Drawings The transformer will be grounded inside the vault, through an opening in the floor slab. Typically the same opening is used to connect to the trenched cables. There will also be a ground on the meter switch itself.
110.0	While the installation needs to be installed in line with good earthing practice, is there a requirement for the fitting of electrical surge protection on any specific circuits.	As per Clause 1.21 of 3502-RAM-SB-XX-SP-ME-30231 the Contractor shall include for any surge protection required to protect equipment from both lightning strikes and power surges.

111.0	As the bridge speed is controlled by the hydraulic controls, can we offer soft start controls for the hydraulic pumps?	The Contractor may offer this as a costed option.
112.0	Given the level of design undertaken so far, are there any calculations for the level of harmonics expected when the bridge is operated using VSDs	No
113.0	Please confirm that the Control panels and Junction Boxes detailed in the arrangement drawings provided, can be built in accordance with IEC 61439-2 and UKCA marked and that UL Certification is not required for these.	As per clause 2.1.1.4 of 3502-RAM-SB-XX-SP-ME-30201 the electrical system shall be designed to US standards and codes. UL certification of the complete system is required.
114.0	Allen-Bradley has confirmed that the Stainless-Steel option of the NEMA 12 MCC panel specified under Drawing No. 3502-RAM-SB-XX-DR-ME-37901 is no longer available for manufacture. Could you please advise how you would like us to proceed with this change?	An alternative manufacturer of Stainless Steel panels can be used, it is important that they are stainless steel due to corrosion requirements.
115.0	3502-RAM-SB-ME-30281-T1 section 4.9 Single Cylinder Operation Modes In the document specifying the cylinders it mentions the requirement to have a single cylinder lift the bridge up in emergency operation. This will take more than the 150 bar on the relief valve of the "push" solenoid on each pump. I can gather that the solenoids need to be all disengaged for lifting the bridge. it is not mentioned in section "4.6 Raise bridge hydraulic control" the sequence required for a lift using only one cylinder	The equipment included within the hydraulic works is capable of lifting the bridge on a single cylinder. The development of the sequence to achieve this is the responsibility of the Contractor as part of the detailed electrical and hydraulic design.

116.0	3502-RAM-SB-XX-DR-ME-30004 Centre of Gravity Can you please list CoG with dimensions from the pivot, CoG when lowered and opened would be ideal	The estimated position of the CofG in the lowered position from the centre of the pivot calculated in the design is X = 11268mm Y = 1497mm The contractor can use this to calculate the CofG in the raised position given an opening angle of 80 degrees. It is recommended that Contractor verifies the outturn CofG following fabrication.
117.0	Hydraulic Cylinder and Bridge Pivot Clevis Brackets Currently the design details the Hydraulic Cylinder and Bridge Pivot clevis brackets to be place on to mass concrete with a nominal 25 grout gap. To facilitate both the civil works and mechanical installation the introduction of Sole Plates would be beneficial, is this possible to amend the design to incorporate these. There is also an installation advantage that the pivot brackets and pin assemblies can to fitted to the bridge deck prior to installation	Please note the cylinder mount and pivot assemblies are placed on <u>reinforced</u> concrete with nominal 25mm grout bed. The pivot assemblies are detailed with a “sole plate” i.e. Pivot base plates shown on dwgs 3502-RAM-SB-XX-DR-ME-31001 item 7 for east pivot and 3502-RAM-SB-XX-DR-ME-42001 item 5 for west pivot. In principle we would be happy to accept an additional “sole plate” as part of the cylinder mount assembly at the contractors preference, provided that the additional “sole plate” can be accommodated within a slight reduction in height of the cylinder mount plinth, with corresponding lowering of plinth reinforcement, without the need for significant change to pier base reinforcement arrangements. If the Contractor feels this would be beneficial the costs associated with an additional “sole plate and associated adjustments to plinth etc shall be included within their tender return.
118.0	Bridge Pivot Bracket The Bridge Pivot bracket is shown as a casting is this for specific purposes rather than a fabricated bracket if proven to be of equal in strength and longevity	If it can be proven to be of equal strength, longevity and visual suitability then a fabricated version can be proposed.

119.0	Section B-B and Detail 5 on Drawing No. 3502-RAM-SB-XX-DR-CB-37003 show the ribs on the permanent GRP formwork panels running transversely (i.e., normal to the longitudinal centerline of the bridge). Reinforcement Note 12 on Drawing No. 3502-RAM-SB-XX-DR-CB-30111 states “Longitudinal bars have been detailed in multiples of 150mm to suit spacing of permanent formwork ribs,” indicating the ribs are to run parallel to the longitudinal centerline of the bridge. Please clarify the orientation of the panel ribs.	Permanent GRP formwork ribs run transversely spanning between grid lines D to B, B to C, and C to E; reinforcement note 12 on Drawing No. 3502-RAM-SB-XX-DR-CB-30111 therefore does not apply.
120.0	With regards to the stay in place forms, the drawings show the panels installed perpendicular to the bridge length. Can they be installed parallel to the bridge?	No, the GRP permanent formwork panels shall be installed transversely as shown. The upper Tee section of the transverse bracing within the box is not designed to take the weight of wet concrete if the panels were reorientated and installed longitudinally. Any additional stiffening or strengthening of the upper Tee section of the transverse bracing would restrict access within the box for future inspections and maintenance, which will not be acceptable.
121.0	Reinforcement Note 4 on Drawing No. 3502-RAM-SB-XX-DR-CB-30111 calls for a nominal cover to reinforcement of 50mm at the bridge deck soffit. Is this clearance taken from the upper face of the formwork panel or from the top of the formwork ribs. If from the former, with transverse ribs the longitudinal bars in the bottom mat will be resting directly on the panel ribs. Please clarify where the 50mm clearance is to be taken from.	Nominal cover is from upper face of formwork panel, i.e. soffit of deck concrete. Hence, where ribbed GRP provides the soffit formwork the reinforcement will have slightly greater cover than 50mm due to anticipated depth of ribs.

122.0	The underside of the bridge deck on the approach spans shows three reversals of the cross slope across the width of the bridge deck (see Section B-B on Drawing No. 3502-RAM-SB-XX-DR-CB-37003) – one at each gutter line and one at the crown. If the formwork ribs are to run transversely, the panels will have to be kinked to achieve the slope reversals. This will require expensive customization of the standard Type 3B panels used in the design. Alternatively, will the Contractor be allowed to install flat panels with transverse ribs and reduce the deck thickness at the gutters and increase the deck thickness at the crown.	It will not be acceptable to install flat panels with reduced deck thickness at gutters and increased thickness at crowns. Panels installed transversely shall be shaped to form the cross slopes, gutters and crowns with uniform deck thickness as shown.
123.0	How would costs associated with the design and construction be handled for structural modifications to the bascule pier should they be needed to accommodate mechanical, hydraulic, or electrical systems?	The bridge structure, including bascule pier, has been sized and developed to accommodate the mechanical, hydraulic and electrical systems designed, developed and detailed on the drawings and specifications. Thus, there should not be any need for any significant structural modifications to the bridge structure nor the bascule pier. Final design of the hydraulic and electrical equipment will need to be developed to fit within the constraints of the bascule pier geometry shown. Only minor modifications would be considered to suit specific fixings, but any such modification will be at Contractors' expense to suit their equipment and will require approval from the Engineer before implementation to ensure structural integrity and form are not compromised.
124.0	Per dwg PL-SB-150, showing the Barge Restricted Areas, is the contractor responsible for "Seagrass Harvesting for Translocation?" If so, please explain what this means.	No, the Contractor is not responsible for seagrass harvesting and translocation. These drawings are part of the Construction Environment Management Plan, which is a broader requirement for the project. Prior to the main construction works the Government will undertake activities that includes clearing of bridge landing areas; removal of invasive species; moving of protected land species (such as black mangroves, oxeeye and Bermuda palmetto tree) and marine species (such as sea cucumbers and seagrasses); installation of fencing to separate laydown area from protected foreshore area; relocation of moorings; establishing a barge exclusion zone and a barge landing zone. Our intention is to take care of all these environmental concerns ahead of time, so that we can hand over a clear site to the Contractor, who can then focus solely on the bridge works. The Contractor should be aware of the barge exclusion zone, which is primarily an environmental control to limit disruption to the seabed.

125.0	Per dwgs PL-SB-143,144, is the contractor responsible for the landscaping shown?	No. As above, the site will be cleared by the Government ahead of handover.
126.0	Is Annex D required for any team members aside from the Proponent?	Annex D is required for the Proponent only; However, please note that section 4 of Annex D encourages the inclusion of any relevant projects in which team members have participated, and their corresponding role in such projects. This section must include projects in which the proposed steel fabricator, and M&E subcontractor (or sub-contractors) were involved. Significant evaluation points can be obtained by providing sufficient information about the different team members.
127.0	From the contract information, it is stated that the project will use the 1999 version of the FIDIC Yellow Book. However, there is a 2017 version, as amended in 2022. Please confirm which version should be used.	The 1999 version of the General Conditions should be used, as modified by the Particular Conditions.

This Question and Response table will be updated and re-issued (via separate addenda) as more questions are received.

END OF PART 1