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**SOLICITATION AMENDMENT
MODIFICATION DE L'INVITATION**

The referenced document is hereby revised; unless otherwise
indicated, all other terms and conditions of the Solicitation
remain the same.

Ce document est par la présente révisé; sauf indication contraire,
les modalités de l'invitation demeurent les mêmes.

Comments - Commentaires

**Vendor/Firm Name and Address
Raison sociale et adresse du
fournisseur/de l'entrepreneur**

Issuing Office - Bureau de distribution
Public Works and Government Services Canada - Pacific
Region
800 Burrard Street, Room 219
800, rue Burrard, pièce 219
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V6Z 0B9

Title - Sujet Mise à niveau du circuit d'eau de l	
Solicitation No. - N° de l'invitation F1700-204309/A	Amendment No. - N° modif. 006
Client Reference No. - N° de référence du client F1700-204309	Date 2020-10-09
GETS Reference No. - N° de référence de SEAG PW-\$PWY-028-8811	
File No. - N° de dossier PWY-0-43048 (038)	CCC No./N° CCC - FMS No./N° VME
Solicitation Closes - L'invitation prend fin at - à 02:00 PM on - le 2020-10-20	
F.O.B. - F.A.B. Plant-Usine: <input type="checkbox"/> Destination: <input checked="" type="checkbox"/> Other-Autre: <input type="checkbox"/>	
Address Enquiries to: - Adresser toutes questions à: Chiasson (PWY), Danielle	Buyer Id - Id de l'acheteur pwy038
Telephone No. - N° de téléphone (604) 349-7097 ()	FAX No. - N° de FAX (604) 775-6633
Destination - of Goods, Services, and Construction: Destination - des biens, services et construction: DFO - Institute of Ocean Science – Sidney, BC	

Instructions: See Herein

Instructions: Voir aux présentes

Delivery Required - Livraison exigée	Delivery Offered - Livraison proposée
Vendor/Firm Name and Address Raison sociale et adresse du fournisseur/de l'entrepreneur	
Telephone No. - N° de téléphone Facsimile No. - N° de télécopieur	
Name and title of person authorized to sign on behalf of Vendor/Firm (type or print) Nom et titre de la personne autorisée à signer au nom du fournisseur/ de l'entrepreneur (taper ou écrire en caractères d'imprimerie)	
Signature	Date

Solicitation No. - N° de l'invitation
F1700-204309/A

Amd. No. - N° de la modif.
006

Buyer ID - Id de l'acheteur
pwy028

Client Ref. No. - N° de réf. du client

File No. - N° du dossier CCC No./N°

CCC - FMS No./N° VME

Les documents français seront disponibles sur demande.

The Solicitation Amendment 006 is raised for the following purposes:

- 1) To issue Addendum 002
 - 2) To publish additional drawings
-

Amendment 006

- 1) Please see Addendum 002 herein.
- 2) Please view additional drawings under the section "Attachments"

Attachments:

C-006 2020 10 05

C-007 2020 10 05

C-010 2020 10 05

E-001-E05 2020 09 30

All other terms and conditions remain unchanged.

The following changes in the tender documents are effective immediately. This addendum will form part of the contract documents.

Drawings:

1. Replace drawing "E-001 Sheet 1 (Rev 1) - Site Plan Proposed Heat Trace Panel Location" with attached Drawing "E-001 – Sheet 1 Rev 2"
2. Replace drawing "E-002 Sheet 1 of 2 (Rev 1) – Main Pier Heat Trace Schematics Proposed Upgrades with attached Drawing titled "E-002 – Rev 2"
3. Replace drawing "E-002 Sheet 2 of 2 (Rev 1)– Main Pier Panel Layout Proposed Upgrades" with attached Drawing E-002 Sheet 2 of 2 Rev 2"
4. Replace drawing "E-003 Sheet 1 of 2 (Rev 1) – South Wing Heat Trace Schematics Proposed Upgrade" with attached Drawing titled "E-003 Rev 2"
5. Replace drawing "E-004 Sheet 1 of 2 (Rev 1) – North & NS Heat Trace Schematics Proposed Upgrades" with attached Drawing file titled "E-004 (Rev 2)"
6. Add attached drawing "E-005 Sheet 1 of 2 (Rev 1)– Buried Pipes Heat Trace Schematics Proposed Upgrades"
7. Add attached drawing "E-005 Sheet 2 of 2 (Rev 1)– Buried Pipe Heat Trace Panel Layout Proposed Upgrades"
8. Replace Drawing "C-006 - Plan Causeway and Floats with attached file titled "C-006 2020 10 05.pdf"
9. Replace Drawing "C-007 – Sections and Details - Causeway and Floats" with attached file titled "C-007 2020 10 05.pdf"
10. Replace Drawing "C-010 – Details-Sheet 3" with attached file titled "C-010 2020 09 29.pdf"

General Inquiries/Clarifications:

1. I am trying to figure out how much fence and how many lamp standards I have to remove and replace for this work and there is no information on the drawings that I can see to aid in my efforts. Can you please clarify the area(s) where we are to remove and replace the fence?
 - a. Refer to addendum 1 and attached revised drawings. No fence or light standard work is included.
2. On drawing E-001 note 7 it indicates that the heat trace wire to be installed in a copper tube for easy removal, Please provide more information. Size of tube?
 - a. Tube shall be 19 mm (3/4") secured in place. The copper pipe shall bend upwards to the surface of the insulation, and, shall have a steel cable gland at each end. The main goal is to facilitate heat trace replace should it becomes damage.. Alternate of pre-molded cable route within the insulation that facilitate easy removal of heat trace cable is acceptable. The heat trace shall begin and end with a similar or equivalent power connection kit i.e. Terminator DP. The following link can be used as a reference:-

https://content.thermon.com/pdf/us_pdf_files/PN50840-Terminator-DP-Installation.pdf

3. Termination/ pull boxes, type?
 - a. It is preferred to use vendor's recommended power connection such as the terminator DP.
4. Location of termination boxes?
 - a. Termination Box should be near the manholes and mid point of the run. First termination point shall be close to the control panel.
5. If the copper tube is 2" size, are we to increase the pipe insulation diameter to compensate? This would leave large uneven pockets of air and the aluminum finish over the insulation will look egg shaped, is this acceptable?
 - a. The copper tube is 3/4" in size. It is preferred not to leave uneven pockets of air. Our main goal is to achieve reasonable R value of insulation throughout the whole pipe assembly.
6. The electrical drawings indicate 4 power feeds for the north wharf, 4 power feeds for the south wharf and 4 power feeds from the starting point of the piping in the tunnel. We only have 2 pipes to be insulated and heat traced. Is the intent to provide two runs with separate power feed for each run of pipe? If so would it not be better to have the power termination point half way down the piping run?
 - a. Yes, the intention is to have 2 runs of heat trace on each pipe. This serves as a redundancy for the piping system. The placement of the heat trace is on the lower left side, while the other heat trace will be on the lower right side of the pipe. Hence, the copper conduit will be apart. In addition, the panel serves as an indication of the start point of the heat trace. Hence during troubleshooting, the operator or electrician can troubleshoot from there.
7. Is there any piping run out to kiosks, fire hydrants or flushing lines that are exposed to the ocean below?
 - a. No
8. There is a reference to switch materials from Steel to HDPE (which I believe we are also able to provide schedule 40 stainless in lieu of the HDPE?) just outside the chamber. I was under the impression the new buried fire and domestic water lines are to be C-909 PVC. Are you able to confirm?
 - a. All three material types are acceptable i.e. SS (316 and 304), HDPE DR9 and originally specified PVC.
9. Permission to use 0.016 SS jacketing on the floating dock and gangway in lieu of the 0.9mm embossed aluminum as noted in the specifications under materials 2.2.2.1
 - a. No floating dock work is required. Fixed wharf and causeway is where work is required. Please review drawings carefully. S.S. 0.016 (assuming 0.016 inches) jacketing can be used. Alternatively 50 mil polyethylene jacket is also acceptable.
10. Permission to use 0.030 PVC in the gallery and Kiosk in lieu of the 2.54 PVC jacket noted in the noted in the specifications under materials 2.2.2.2

- a. Yes. Assuming 0.030 is in inches.
- 11. Can you provide a log of all questions posed by other contractors?
 - a. The list of questions and answers are included in Addendum No 1 and No 2
- 12. Can you provide backfill details (with elevations) for the work under the road (Valve chamber to edge of wharf trench) ?
 - a. Refer to detail on Drawing C010 (Rev.3)
- 13. Can we assume the work under the road is only located under the narrow asphalt strip and not under the concrete roadway?
 - a. Review Contract Drawings carefully. Pipe alignment is shown in the middle of the road near the Causeway and concrete gallery/trench. Alternate route to the north of the road in this location is acceptable provided necessary changes (fittings, restoration etc) are included in the alternate method.
- 14. Can you provide more information on the heat trace and insulation? i.e. Watts / meter for heat trace, type of heat tracing requested, Type and thickness of insulation and insulation covering (aluminum?)
 - a. Refer to attached revised heat trace design drawings and Addendum 1. Insulation has been clarified in Addendum 1 and in this document.
- 15. Will we be required to provide removable jackets for the valves/backflow preventers etc ?
 - a. yes
- 16. There are conflicting notes on the drawing. One is indicating to remove all existing buried 200mm and 150mm diameter fire and domestic mains in one note, and another one indicating to disconnect, plug and abandon them. There is no clear demarcation indicating one section to be abandoned in place and another section to be removed. Which are we to allow for ?
 - a. Existing buried pipes needs to be removed as new pipes are being installed at the same location.
- 17. There are lines on the drawings that are extremely faint, which are notes as new items. This is not typically how we see new or proposed works. Would it be possible for the consultant to re-issue the drawings with better/more clear lines ?
 - a. Revised drawings are included.
- 18. Sheet C-006 has some references to trench section A, but not B. On sheet C-007, there are two section details, Section A and Section B. Can you please indicate where section B applies ?
 - a. Refer to revised C-006 drawing (attached).
- 19. Can you provide a detail that clearly shows what size of piping goes to each kiosk?
See sheet C-005 detail 1 & 3 are confusing.
 - a. Refer to as built drawings for routing and arrangement of the replacement pipes connections for the Kiosks. All kiosks connection are 75 mm in size.
- 20. Can you provide a shop drawing of the new Kiosk provided by the separate contract?
 - a. No new Kiosks are being installed. Consider any reference to new Kiosks deleted.

21. The piping serving the jetty is PVC, heat trace is called up with 26watts per meter, please confirm that PVC pipe will accept this heat tracing ?
 - a. Heat trace shall be read as 5 watts per meter.
22. Coating system; Can you confirm this is for all metal supports we are installing new? Section 00 98 70 3.8 references potable water contact surfaces, .1 .1 inside Piping ?
 - a. If plain steel pipe is being used it needs to be coated on both inside and outside per specification document. All metal supports should be either galvanized or coated to protect from potential corrosion.
23. I have not found any wording that water is to be maintained for Domestic and Fire Water serving the jetty. Please confirm ?
 - a. Yes temporary water connection shall be provided. It is expected that work will be performed on section by section
24. Is the contractor responsible for seismic and thermal expansion of the fire and domestic water piping with in the jetty ?
 - a. Department is not looking for seismic and thermal expansion design from the Contractor
25. With regard to the steel plates that are uses with the removable concrete panels on the jetty, is the contractor to make any repairs to the grout or steel plates ?
 - a. No repairs are required for the grout or steel plates, unless it was damaged by the Contractor. Contractor will make good any damage to conditions previously existing or to match new work as acceptable to the Engineer
26. Is the main wharf – under deck non – tunnel a confined space? Can this area be identified on a drawing ?
 - a. Majority of the work in this Contract is confined space. Contractor shall refer to Work Safe BC guidelines and is expected to have adequate training and knowledge about worker safety.
27. The drawings don't show the proposed buried works in the amount of detail we would normally expect on engineered drawings. The water lines are shown as thin, simple and sometimes faint lines without any real details. The proposed works are so faint in some locations, it is very difficult to see them. Meanwhile, the existing works are darker and look more like proposed works. Very confusing. Could the drawings be refreshed and re-issued for clarity ?
 - a. Refer to attached revised drawings.
28. With respect to the water system flushing, there are prescribed flow rates in the specifications. Having just finished a water system installation for a local municipality, we were required to hit 30L/s for 8", which took a lot to achieve, their system almost could not handle it. The specifications for this project are requiring 75L/s for 8" and 115L/s for 10". This will likely require a 6" diesel pump to meet those rates. Can you please confirm there is adequate water available on site ?
 - a. As a minimum, Contractor to follow CRD's standard flushing requirements.
29. There is something going on with the drawings I downloaded from the Buy and sell website. They won't print in anything other than 8-1/2" x 11". I have tried with a

number of printers from different workstations to no avail. Can you please see if there is anything on your end that can be done to allow for printing off full size drawings ?

- a. Refer to the technical support from your IT department. Drawings were plotted on full size format. There was some discussions during the online zoom meeting about plotting configuration that worked for others.

With respect to Question 30 to 31 : The As built Mechanical drawings indicate a 3' Domestic main and 3" fire Flush main for typical Cribs, see drawing M-7. Please confirm the following:

30. Are we to allow for this piping, fittings, BFP
 - a. Allow for all fittings required for tie-in
31. How do we terminate the piping above the wharf or connect to existing under the wharf ?
 - a. Refer to addendum 1. All connection to terminate at 150mm below slab except at two locations where pipe stubs are cut flush with the slab allow for coring larger hole in concrete to facilitate connection below slab.
32. If 3" pipe is to be used, what type of material ?
 - a. Pipe shall be same material as main feed pipe, PVC, HDPE or SS 304 or 316
33. Is the 3" piping exposed to the ocean or is there a concrete floor below the piping ?
 - a. It is not exposed to the open water.
34. The insulation for buried pipe sections shall be as per the following:
 - a. Shall be Rigid polyurethane foam 50mm thickness (per ASTM standards) as supplied by GF Urecon Ltd. as U.I.P. system or equivalent, complete with 1.27mm (50 mils) black polyethylene jacket (butyl rubber) and seal as recommended by the manufacturer.
35. The insulation for concrete trench pipe sections shall be as per the following:
 - a. Shall be Rigid polyurethane foam 50mm thickness (per ASTM standards) as supplied by GF Urecon Ltd. or equivalent, complete with 1.27 mm (50 mils) black polyethylene jacket and seal as recommended by the manufacturer.
36. HDPE DR 9 to AWWA C906, iron pipe equivalent outside diameter piping material is acceptable as supplied by Sclairpipe or equivalent. Refer to latest edition of MMCD Waterworks Specification document and CRD Standards for supply and installation standards. The pipe shall be made from a HDPE material having a minimum material designation code of PE4710. The material shall be listed as meeting NSF/ANSI 61. Heat butt fusion to ASTM 02657 and in accordance with manufacturer's recommendations. Flanged joints to AWWA C906 flat faced stub end and loose hot-dip galvanized ductile iron (ASTM A536) backup ring drilling to ANSI 816.1, ANSI 816.5, or AWWA C207, class suitable for pressure rating specified in Contract Documents.

37. With the drawings not being to scale can you please provide how many lineal meters of trench will be under the asphalt?
 - a. See Drawing attached revised Drawing C006.
38. Is native backfill able to be used in the boulevard?
 - a. See Trench Detail on Drawing C010.
39. Is the gravel in the roadways to be replaced with 100% imported backfill?
 - a. See Trench Detail on Drawing C010.
40. Google earth shows a white building in the boulevard after the PRV. Is the a seacan that is now moved or is it a permanent structure where the pipe will have to be offset into the roadway?
 - a. The seacan will be removed by DFO
41. What pay item is the supply and installation of the water connection to the existing floats to be included under and what are the sizes?
 - a. Water Connections to floats should be considered part of the pipe installation as a lump sum item. Allow for connection to two floats.
42. The contractor is going to have a hard time finding a engineer that is willing to submit a sealed engineered assessment regarding the crane weight before accessing the pier. I would assume this has been completed in the past. Can the owner please provide this assessment so the risk of have to bring a barge mounted crane is not on the contractor?
 - a. Past uses of this facility have seen cranes of up to 130,000 lbs (5 axels) mobilize on to the wharf using specific drive paths and under engineering supervision; The wharf is rated for a two axel crane with a maximum Axel rating of 30000lbs, wheel base of 3.5m. Other crane configurations may be allowable but assessment is the responsibility of the contractor
43. Can you please provide a description of what is to be included in each line item on the tender form?
 - a. Refer to the drawings for your own takeoff.
44. Can you please provide a photo of under each kiosk so we know what to allow for to complete the tie in or provide a standard detail to allow for?
 - a. Photos are included in the tender photo package and described in C-SK-003. At two Kiosks allow for extension of the pipe that is cut-off flush with concrete by suitable transition couplings.
45. How is the piping to be reconnected to the kiosks where the pipework has been cut flush to the slab?
 - a. At two Kiosks, allow for two transition couplings and adjustment to the existing concrete penetrations diameter to allow installation of the transition coupling.
46. What line item is hooking up of the existing kiosks to be included in?
 - a. This item shall be allowed in the pipe installation lump sum.
47. Does all 12 kiosks get connected to the new piping?
 - a. yes

48. Tender item 6 has a quantity of 4 hydrants and on the Drawings I only see 3. Can you please point me to the location of the remaining hydrant to be replaced?
- a. Please review Drawing C-SK-003 that was issued part of Addendum 1, Crib 8, 7,4, 2 have been identified as recessed hydrant location.
49. What are the site protocols that the contractor will need to follow for COVID?
- a. All personnel entering the site will need to complete and submit a "COVID Screening Form". This form only needs to be submitted only once for each individual. On a daily basis, personnel entering the site will be screening for temperature and asked COVID related questions.
50. With the increased diameter of the pipe with the insulation and bulky joint restrainers it appears in some of the photos items will have to be relocated. Is this to be carried in the tender price or treated as an extra?
- a. Allow for relocation as needed. We will consider alternate route through adjacent concrete trench from Kiosk 11 to Crib 1.
51. Can you please provide the location of each access manhole?
- a. Refer to the as built drawing for typical MH location details. There are manholes for each Crib and Kiosks 11 and 12 locations.
52. Do you have drawings of the existing services that are assumed to be encountered when installing the underground pipework?
- a. Contractor must confirm underground services before excavating as available as built drawings may not reflect all buried services.
53. Are the hatches able to stay open while the work is being completed?
- a. Contractor to coordinate with Department Representative and complete all work in safe manner with unhindered access to the docks..
54. If the piping being installed is stainless steel can Galvanized couplings be used?
- a. No
55. Is Victaulic couplings the only grooved manufacturer approved?
- a. Victaulic or equivalent
56. Can Urecon pre insulated pipe be approved?
- a. Yes but pipe must be suitable for pressure rating required for the application.
57. What is the length and widths of the deck access panel?
- a. Refer to as built drawings
58. Can you please reconsider the use of sch 10 stainless steel for this project? Terra Brute has a rating of 235 PSI and Sch 10 stainless is over 300 PSI and there shouldn't be any corrosion issues with the piping being insulated.
- a. Schedule 10 Stainless steel is acceptable but pipe joint shall be either RX roll coupling or welded flange type. Alternatively HDPE DR9 as specified under item 2 above can be used.
59. For the temporary service:
- a. Is the temporary service to be the same diameter as the new piping?
 - i. Yes
 - b. What is the pressure requirements it has to meet?

- i. Allow for 60 psi temporary water supply system
 - c. It is not likely there will be room below deck for it to connect to the existing connections below deck and the kiosks doesn't look like there is access from outside. What style of connections are required and what are the spacing requirements?
 - i. Connection in the concrete trench is possible. We would review the proposed connection during execution of work.
- 60. Where is the new piping to be connected to the existing fire pump piping?
 - a. There is no existing fire pump. Fire supply line splits from domestic water line inside the valve chamber similar to existing. Refer to Contract documents for clarity.
- 61. On drawing M-7 detail M it shows the piping to the kiosks above the water. Is this correct or is all piping being installed not above open water?
 - a. All kiosks are within the deck accessible area not above the open water. Access is available from Concrete Trench or Cribs.
- 62. Are the buried joints to have joint restraints at each connection or are thrust blocks to be installed?
 - a. Both mechanical joint restrained and thrust blocks are acceptable and refer to Detail on revised Drawing C010 Rev.3.
- 63. The sanitary piping to be removed, is this the Sanitary main or Pumped sanitary main or bilge water main?
 - a. All piping needs to be removed.
- 64. What type of piping do we use for 3" flush pipe in the fire water system?
 - a. The pipe shall be same material as the main fire supply line.
- 65. Can we price an alternate for 316 SS sch 10 SS pipe for the fire water and Domestic water under the wharf?
 - a. Yes
- 66. Can you confirm that the existing concrete panels can be removed by use of the lifting eyes?
 - a. It is the understanding of the design team that the inserts within the panels are in serviceable condition
- 67. Can you please tell me how many concrete panels that are removable on the wharf?
 - a. There are 12 panels that are removable along the approach which are located in clusters of 4 panels per group located at Bent 2, 5, and 7; There is one group of 4 removable panels on the wharf located between GL C12-C13.
- 68. What is the physical size of each panel?
 - a. See reference drawings on sheet S15 and S16 of the facility record drawings
- 69. What is the procedure to remove panel and then to replace? From the limited photos on Buy and Sell it seems there is a coating above the steel plate? What is the coating?
 - a. It is understood that the panels have a keeper plate installed around the perimeter which would require to be reviewed. It will be the contractor's

responsibility to develop a lift procedure to be submitted that is specific to their equipment and means and ways

70. Are the steel plates fastened down?
- a. There are steel plates installed as joint covers which are held in place with bolts and washers. The bolts would have to be removed to remove the cover plates
71. Are all the lifting inserts usable?
- a. It is the understanding of the design team that the inserts within the panels are in serviceable condition
72. On Buy and Sell the Photos are not available can you see if they can be down loaded again?
- a. Please contact PSPC Contracting officer if there are issues with downloading any documents

End of Addendum No.2