

PANAMA CANAL AUTHORITY	VARIATION	PAGE 1 OF 7
1. REQUEST FOR PROPOSAL No.: RFP-76161	2. CONTRACT No.: CMC-221427	3. DATE: February 7, 2013
		4. VARIATION No.: 62

5. ISSUED BY:

PANAMA CANAL AUTHORITY
Employer's Representative
Locks Project Management Division
Building 740, Corozal
Panama, Republic of Panama

6. NAME AND ADDRESS OF CONTRACTOR (INCLUDE PHYSICAL & POSTAL ADDRESS) Grupo Unidos por el Canal, S.A. Building 22B, Brujas Road Cocoli, Republic of Panama	7. CONTRACTOR'S TELEPHONE NUMBER: 507-316-9900
	8. CONTRACTOR'S FACSIMILE NUMBER:

9. VARIATION:

- ☒ The contract referred to in item No. 2 is hereby varied as set forth in item 10, entitled "DESCRIPTION OF VARIATION".
☒ YES. ☐ NO. The contractor shall send a copy, duly signed, of this Variation to the Employer's Representative/Contracting Officer.

	9 A. THIS VARIATION IS EXECUTED ON THE BASIS OF: (Specify the legal authority). THE VARIATION DESCRIBED IN ITEM 10 IS HEREBY INCORPORATED AND MADE A PART OF THE CONTRACT.
	9 B. THE CONTRACT REFERRED TO IN ITEM NO. 2, IS VARIED TO INCORPORATE ADMINISTRATIVE CHANGES (such as the paying office, account numbers, etc.).
X	9 C. THIS BILATERAL AGREEMENT IS SIGNED AND INCORPORATED INTO THE CONTRACT REFERRED TO IN ITEM NO. 2 OF THIS FORM, ON THE BASIS OF: (Specify the legal authority) Volume III, Conditions of Contract, Sub-Clause 1.16 [Entire Agreement], 4 th Paragraph
	9 D. OTHER. (Specify manner and the legal authority).
	9 E. ACCOUNT NUMBER (If required):

10. DESCRIPTION OF THE VARIATION (List in accordance with the order of the Contract. If additional space is required, use blank sheets).

See attached

Except for the variation(s) herein specified, all other terms and conditions of the Contract remain unchanged.

11. NAME AND TITLE OF THE PERSON AUTHORIZED TO SIGN (Type or print) Bernardo Gonzalez Contractor's Representative	12. NAME AND TITLE OF THE EMPLOYER'S REPRESENTATIVE/CONTRACTING OFFICER (Type or print) Jorge de la Guardia, Employer's Representative
13. CONTRACTOR  (Authorized signature)	14. DATE: 7/02/2013
	15. PANAMA CANAL AUTHORITY  (Employer's Representative/Contracting Officer's signature)
	16. DATE: 7/11/2013

Variation No. 62 is issued to incorporate the following:

1. **Volume II, Part 2, Section 01 83 00 - Facility Shell Performance Requirements**
– Delete Paragraphs 1.05 B [Final Design] and 1.05 C [Before Taking-Over Documentation] in their entirety and replace them with the revised Paragraphs 1.05 B [Final Design] and 1.05 C [Before Purchase of Equipment/Materials] and add the new Paragraphs 1.05 D [Before Construction] and 1.05 E [Before Taking-Over Documentation] as follows:

"B. Final Design:

1. For Shell:

- a. *Architectural drawings and rendering showing all building elements that are part of the shell with sizes and locations to scale.*
- b. *Identification of assemblies and methods for fire resistance.*
- c. *Drawings showing openings, enclosure elements, floor areas, and ventilation solutions to achieve required amenity and comfort for buildings.*
- d. *Engineering design calculations and drawings prepared by licensed engineer.*

2. For Superstructure:

- a. *Design calculations, for future reference.*

3. For Exterior Enclosure:

a. For Walls

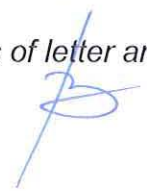
- 1) *Product data of materials to be used.*
- 2) *Identification of materials and their proposed use and location.*

b. For Exterior Windows:

- 1) *Identify air velocity; show AMCA 511 certified water penetration ratings.*

c. (Reserved).

d. For Exterior Wall Fixtures:

- 1) *Details of letter and number signs and support system.*
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4. For Roofing:

- a. *Calculations of capacity.*
- b. *Fire rating identification numbers recognized by code authorities, on the construction drawings.*

C. Before Purchase of Equipment/Materials

1. For Shell:

- a. *Acoustical analysis for occupied building, prepared by an acoustical engineer.*

2. For Superstructure:

- a. *Certifications of laboratory tested fire resistive materials to be used.*
- b. *Certification of products to be used.*

3. For Exterior Enclosure:

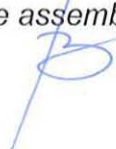
a. Walls.

- 1) *Certification of products.*

b. For Exterior Windows.

- 1) *For standard manufactured products, certification of specified properties by the National Fenestration Rating Council (NFRC) or other testing agency acceptable to the Employer's Representative; for custom-fabricated elements, test reports.*
- 2) *For standard manufactured fenestration products, certification of specified properties by NFRC or other testing agency acceptable to the Employer's Representative; for other elements, test reports.*
- 3) *Details of method of weather sealing; test reports on window/frame assemblies.*
- 4) *Specifications and technical data.*
- 5) *Certification of compliance with code or standards.*

c. For Exterior Doors.

- 1) *Details of method of weather sealing; test reports on door/frame assemblies.*
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- 2) *Specifications and technical data.*
- 3) *Certification of compliance with code or standards.*

d. For Exterior Wall Fixtures.

- 1) *Specifications and technical data.*

4. For Roofing:

- 1) *Evidence of product compliance.*
- 2) *As specified for service life span in Section 01 10 00 (General Project Requirements), including service life analysis and life cycle cost analysis.*

D. Before Construction

1. For Shell:


- a. *For structures engineered by manufacturers or fabricators other than the Contractor, detailed design analysis prepared by a licensed structural engineer, with approval of engineer-of-record recorded, including stamped shop drawings.*

2. For Superstructure:

- a. *Construction procedures and methods to be used.*
- b. *Drawings, showing construction and assembly details.*
- c. **Welding Procedures:** *Certified Welding Procedures Specifications (WPS) and Certified Procedure Qualification Records (PQR).*

3. For Exterior Enclosure:

- a. *(Reserved).*
- b. **For Exterior Windows.**
 - 1) *Shop drawings details and location of windows, accessories, and hardware.*

- c. **For Exterior Doors.**
- 

1) *Shop drawings details and location of doors, accessories, and hardware.*

d. ***For Exterior Wall Fixture.***

1) *Shop drawings.*

4. ***For Roofing:***

- a. *Identification of proven-in-use products and assemblies; in addition to substantiation items specified in Section 01 10 00 (General Project Requirements), provide, for minimum material thickness or gage, impermeability, overlaps, and shop drawings of details for flashing and accessories.*
- b. *Quality assurance program to be implemented to ensure complete and correct installation of weather-barrier elements.*

E. ***Before Taking-Over Documentation:***

- 1. *As built drawings, manuals, reports, and supporting documentation.*
- 2. *Field tests to verify compliance with performance requirements.*
- 3. *Certification of service life for building components.*
- 4. ***Roofing***
 - a. *Reports of first 3 significant rainfalls after completion of each roofing element, including rainfall amount and intensity, wind speed and direction, and results of inspection of roof and underside.*
 - b. *Provide manufacturer and installer warranty.*
 - c. ***Water Tests:***
 - 1) *Comply with requirements of static pressure test in accordance with ASTM E 331.*
 - 2) *Comply with requirements of cyclic pressure test in accordance with ASTM E 547.*
- 5. ***Life Cycle Cost Analysis:*** *Service life span for shell is the same as building service life, except as follows:*

- a. **Load-Bearing Structural Members:** Minimum of 50 years. No anticipated deterioration when protected as required.
 - b. **Protective Elements:** Minimum 25 years.
 - c. **Wall Primary Weather-Barrier Elements:** Minimum 50 years functional and aesthetic service life, excluding joint sealers.
 - d. **Transparent Elements (Glazing):** Same as other wall primary weather-barrier elements, except accidental breakage is considered normal wear-and-tear.
 - e. **Joint Sealers:** Minimum 20 years before replacement.
 - f. **Surfaces Exposed to View:** Minimum 10 years aesthetic service life; deterioration includes color fading, crazing, and delamination of applied coatings.
 - g. **Roof Covering Weather-Barriers:** Minimum 20 years, fully functional." (RFV-074)
2. **Volume II, Part 2, Section 33 11 00** – Delete Paragraph 1.04 A.4, entirely and replace it with the following:
- “4. **Gate Valves:** The gate valves shall be designed and fabricated according to the requirements of AWWA C500 or AWWA C515. The valve body shall be of ductile iron conforming to ASTM A 395/A 395M or A 536. Gate valves of 30-inch diameter or larger shall be provided with a gear system for opening and closing purposes with a relief line connected directly from the body. The epoxy coating shall conform to AWWA C550 and NSF 61.” (RFV-160)
3. **Volume II, Part 2, Section 33 11 00.13** – Delete Paragraph 1.04 B.4, entirely and replace it with the following:
- “4. **Gate Valves:** The gate valves shall be designed and fabricated according to the requirements of AWWA C500 or AWWA C515. The valve body shall be of ductile iron conforming to ASTM A 395/A 395M or A 536. Gate valves of 30-inch diameter or larger shall be provided with a gear system for opening and closing purposes with a relief line connected directly from the body. The epoxy coating shall conform to AWWA C550 and NSF 61.” (RFV-160)
4. **Volume II, Part 2, Section 40 96 45** – Delete Paragraph 1.03 A.7.a, entirely and replace it with the following:
- “a. Be designed and developed to have, as a minimum, an integrity level in accordance with the result of the risk assessment study carried out as specified by Paragraph 1.04.G of Section 01 81 26. All software for SIL-rated

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Design and Construction of the Third Set of Locks

safety functions allocated by the risk assessment study shall be designed, documented, and developed, following specific guidelines, based on IEC 61508 and CENELEC EN 50128 (IEC 62279)." (RFV-153)

There is no time or cost impact to the Locks Contract as a consequence of this Variation.

A handwritten signature in blue ink, consisting of a stylized 'B' with a vertical line through it.