

PANAMA CANAL AUTHORITY	VARIATION	PAGE 1 OF 4
1. REQUEST FOR PROPOSAL No.: RFP-76161	2. CONTRACT No.: CMC-221427	3. DATE: August 5, 2011
		4. VARIATION No.: 17

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)

Mr. Bernardo Gonzalez
Grupo Unidos por el Canal
Building 22 B, Brujas Road
Cocoli, Republic of Panama

7. CONTRACTOR'S TELEPHONE NUMBER:

507-316-9900

8. CONTRACTOR'S FACSIMILE NUMBER:

9. VARIATION:

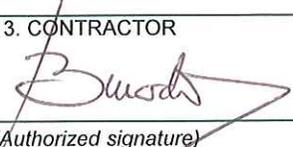
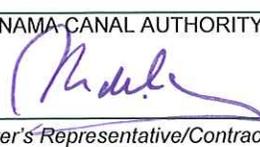
- The contract referred to in item No. 2 is hereby varied as set forth in item 10, entitled "DESCRIPTION OF VARIATION".
 YES. NO. The contractor shall send a copy, duly signed, of this Variation to the Employer's Representative/Contracting Officer.

	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: 18/08/2011
15. PANAMA CANAL AUTHORITY  (Employer's Representative/Contracting Officer's signature)	16. DATE: 5/08/2011

Variation No. 17 is issued to incorporate the following changes:

1. **Volume II, Part 2, Section 26 33 00 [Direct Current Equipment]-** Delete Paragraph 1.01 A.1 and replace it with the following:

"1. Scope of work shall be in accordance with Paragraph 1.01 D. of Section 01 81 26 (*Communications, Control, Safety, and Security Systems*), as required, for direct current electrical power distribution in the Works. The Sections listed in Table 26 33 00-1 shall be read in conjunction with this Section of the Employer's Requirements." (RFV 0073)

2. **Volume II, Part 2, Section 26 33 00 [Direct Current Equipment]-** Delete Paragraph 1.01 A.2.c entirely and replace it with the following:

"c. (*Deleted*)" (RFV 0073)

3. **Volume II, Part 2, Section 26 33 00 [Direct Current Equipment]-** Delete Paragraph 1.03 B.1.e and replace it with the following:

"e. *Battery rooms for +125 VDC systems shall be located in the ground floor of each control building, and shall have a door connecting to adjacent electrical equipment room. Battery rooms shall be sized as required, with no less than 20 m² in control buildings and 10 m² in machinery rooms.*" (RFV 0073)

4. **Volume II, Part 2, Section 27 05 28 [Communication Pathways for Inside Plant]-** Delete Paragraph 1.01 A and replace it with the following:

"A. **Scope:** Scope of work shall be in accordance with Paragraph 1.01 D. of Section 01 81 26 (*Communications, Control, Safety, and Security Systems*), as required, for buildings in the Works. This Section of the Employer's Requirements shall be read in conjunction with the Sections listed in Table 27 05 28-1. (RFV 0073)

5. **Volume II, Part 2, Section 27 05 28 [Communication Pathways for Inside Plant]-** Delete Paragraph 1.04 B.1. and replace it with the following:

"1. *Pathways shall be designed as required for all communications and electronic signaling necessary for locks operations, and shall comply with BICSI TDMM.*" (RFV 0073)

6. **Volume II, Part 2, Section 27 10 00 [Structured Cabling System for Communication Inside Plant]-** Delete Paragraph 1.01 A. and replace it with the following:

"1. **Scope:** Scope of work shall be in accordance with Paragraph 1.01 D. of Section 01 81 26 (*Communications, Control, Safety, and Security Systems*), as required for buildings in the Works. This Section of the Employer's Requirements



shall be read in conjunction with the Sections listed in Table 27 10 00-1.” (RFV 0073)

7. **Volume II, Part 2, Section 27 10 00 [Structured Cabling Systems for Communication Inside Plant]-** Delete Paragraph 1.04 A.1.a and replace it with the following:

“a. Provide means to transport data, video, and voice signals as required for locks operations.” (RFV 0073)

8. **Volume II, Part 2, Section 27 31 23 [IP-Based Telephone Systems]-** Delete Paragraph 1.01 A. and replace it with the following:

*“A. **Scope:** Scope of work shall be in accordance with paragraph 1.01 D. of Section 01 81 26 (Communications, Control, Safety, and Security Systems) for extending IP-based telephone systems from Gatun and Miraflores, as required for telephony services in the third set of locks of the Panama Canal. This Section of the Employer’s Requirements shall be read in conjunction with the Sections listed in Table 27 31 23-1.” (RFV 0073)*

9. **Volume II, Part 2, Section 27 31 23 [IP-Based Telephone Systems]-** Delete Paragraph 1.03 C. and replace it with the following:

*“C. **Software and Licenses:** Shall be furnished as required to meet the Employer’s Requirements and increase the number of telephone extensions to serve the third set of locks. This shall include Avaya (Nortel) ISMs and licenses as required.” (RFV 0073)*

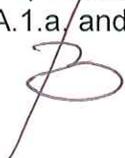
10. **Volume II, Part 2, Section 27 31 23 [IP-Based Telephone Systems]-** Delete Paragraph 1.04 B. and replace it with the following:

*“B. **Design Criteria:** Existing Avaya (Nortel) telephone systems at Gatun and Miraflores shall be expanded to cover Atlantic and Pacific Locks complexes, respectively.” (RFV 0073)*

11. **Volume II, Part 2, Section 28 16 00 [Intrusion Detection Systems (IDSs)]-** Delete Paragraph 1.01 A. and replace it with the following:

*“A. **Scope:** Scope of work shall be in accordance with Paragraph 1.01 D. of Section 01 81 26 (Communications, Control, Safety, and Security Systems), as required, for intrusion detection and physical security in the Works. This Section of the Employer’s Requirements shall be read in conjunction with the Sections listed in Table 28 16 00-1.” (RFV 0073)*

12. **Volume II, Part 2, Section 28 16 00 [Intrusion Detection Systems]-** Delete Paragraph 1.04 A.1.a. and replace it with the following:



“a. Provide the second layer of defense for physical security of buildings and property in the third set of locks.” (RFV 0073)

13. **Volume II, Part 2, Section 40 70 00 [Electrical Supervisory Control and Data Acquisition (SCADA) System]**- Delete Paragraph 1.04 A.1.a. and replace it with the following:

“a. (Deleted)” (RFV 0073)

14. **Volume II, Part 2, Section 01 86 13 [Plant Mechanical Systems and Equipment]**- Delete Paragraphs 1.04 M. and 1.04 M.1. and replace them with the following:

*M. **Above Ground Diesel Tanks Design:** Design one Diesel Storage Tank per each cluster of Diesel Generators in each lock complex. The Works shall include the design of the following: steel storage tanks, containment dikes, and piping.*

*1. **Steel Storage Tanks:** Welded steel, horizontal, cylindrical tanks complete with all the required fittings, controls, ventilations, piping, valves, manhole, cradle and appurtenances required for a safe and operating diesel storage tank. One Diesel Storage Tank per cluster of Diesel Generators in each lock complex will be designed.* (RFV 0072)

15. **Volume II, Part 2, Section 01 86 13 [Plant Mechanical Systems and Equipment]**- Delete Paragraph 1.04 C, and replace it with the following:

*“C. **Mechanical Ventilation Systems:** General ventilation systems shall be in accordance with ASHRAE 62.1. Ventilation systems used at the cross-under tunnels and other confined spaces shall be designed in accordance with OSHA 29 CFR 1926.800, except that reversible air flow for the ventilation systems is not required. The Contractor shall comply with the following design condition* (RFI 0295)

16. **Volume II, Part 3, Subpart 1, Section 01 35 29 [Health & Safety Mgmt./Emer. Response Procedures]**- Delete Paragraph 1.04 C.2.e, and replace it with the following:

*“e. **Accident and Incident Investigations:** All accidents/incidents/near misses shall be thoroughly investigated without delay. The incident investigation procedure shall include a decision chart for identifying root causes. Results of all investigations (including root cause analyses and corrective actions) shall be shared with the Employer within fourteen (14) days following its occurrence.* (IAE-0534)

17. This Variation has no cost or time implications to the Contract.

