

PANAMA CANAL AUTHORITY		VARIATION	PAGE 1 OF 4
1. REQUEST FOR PROPOSAL No.:	2. CONTRACT No.:	3. DATE:	4. VARIATION No.:
RFP-76161	CMC-221427	July 9, 2013	072

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)	7. CONTRACTOR'S TELEPHONE NUMBER:
Grupo Unidos por el Canal, S.A. Building 22B, Brujas Road Cocoli, Republic of Panama	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".

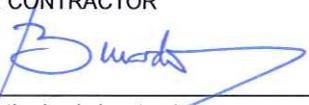
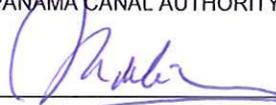
YES.  NO. The contractor shall send a copy, duly signed, of this Variation to the Employer's Representative/Contracting Officer.

	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 <sup>th</sup> 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)	12. NAME AND TITLE OF THE EMPLOYER'S REPRESENTATIVE/CONTRACTING OFFICER (Type or print)
Bernardo Gonzalez Contractor's Representative	Jorge de la Guardia, Employer's Representative
13. CONTRACTOR	14. DATE:
	9/10/2013
(Authorized signature)	15. PANAMA CANAL AUTHORITY
	16. DATE:
	
	9/10/2013
	(Employer's Representative/Contracting Officer's signature)

Variation No. 072 is issued to incorporate the following changes:

1. **Volume II, Part 2, Section 25 11 00 [Data Processing Equipment]-** In Table 25 11 00-5, the row "Hard Disk – Array Type" shall be deleted and replaced as follows:

Hard Disks	Array Type	RAID-1 or RAID 5
------------	------------	------------------

(RFV-189)

2. **Volume II, Part 2, Section 26 29 23 [Variable Frequency Drive]-** Delete Paragraph 1.04 E.4, and replace it with the following:  

"4. *Input harmonic demand distortion in current and voltage.*" (RFV-186)
3. **Volume II, Part 2, Section 26 29 23 [Variable Frequency Drive]-** Delete Paragraph 1.04 E.5, and replace it with the following:  

"5. *Input THD (average of the three phases) for current and voltage.*" (RFV-186)
4. **Volume II, Part 2, Section 26 29 23 [Variable Frequency Drive]-** Delete Paragraph 1.04 E.6, and replace it with the following:  

"6. *Line side power and load side power.*" (RFV-186)
5. **Volume II, Part 2, Section 26 29 23 [Variable Frequency Drive]-** Delete Paragraph 1.04.F.9.c.1)b) in its entirety and replace it as follows:  

"b) *Under-voltage, reverse phase, and power loss. Reverse phase alarm is not required if the VFD system is inherently protected against a possible phase reversal occurrence in which normal operation of the motors is not affected by a reverse phase condition.*" (RFV-185)
6. **Volume II, Part 2, Section 26 50 00 [Lighting Systems]-** Delete Paragraph 1.04.D.1.a.8 in its entirety and replace it as follows:  

"8) *[Type F] HID lighting fixture, explosion proof type, for hazardous locations classified as Class 1, Division 1. Light source shall be 50 or 150 watt high pressure sodium bulb. Fixture shall be suitable for wet location, provided with guard protection. Provide with high power factor dual tap ballast for operation on 120 or 277 volts AC.*" (RFV-184)
7. **Volume II, Part 2, Section 27 11 16 [Cabinets, Racks, Frames and Enclosures]-** Add a new Paragraph 1.03 A.5. as follows:  

"5. *Unless otherwise specified, the paint of all cabinets, enclosures, frames, and racks shall be as follows:*



- a. **For All Communications Systems Items:** Shall be graphite black (RAL 9011) with mate finish.
  - b. **For All Control and All Other Safety System Items:** Plinth and cabinet shall be light gray (RAL 7035) with matte or glossy finish. Plinth and cabinet shall have the same paint color and finish.
  - c. **For All Fire Alarm, Extinguishing, and Fighting Systems Items:** Shall be per the applicable fire standards.
  - d. **Stainless Steel and Non-metallic NEMA 4X Cabinets:** Shall not be painted.  
(Letter IAE-UPC-1234)  
(Letter IAE-UPC-1292)  
(RFV-165)
8. **Volume II, Part 2, Section 27 37 00 [Multi-band Mobile Radio]-** Delete Paragraph 1.03.C.6.a in its entirety and replace it as follows:
- “a. Leaky or radiating coaxial cable shall be of the intermittent-slot type, with a rugged, flame retardant, halogen free, low-smoke, and heat resistant construction.”* (RFV-180)
9. **Volume II, Part 2, Section 27 37 00 [Multi-band Mobile Radio]-** In Table 27 37 00-5: Leaky Coaxial Cable Characteristics, the row “Coupling Loss”, shall be deleted and be replaced as follows:
- |               |  |
|---------------|--|
| Coupling Loss | 72 dB in frequency bands of interest between 100 and 2,600 MHz |
|---------------|--|
- (RFV-180)
10. **Volume II, Part 2, Section 27 37 00 [Multi-band Mobile Radio]-** Delete Paragraph 1.04.C.2.c in its entirety and replace it as follows:
- “c. Leaky cables shall be usable with portable radio and wireless device antennas oriented in any direction.”* (RFV-180)
11. **Volume II, Part 2, Section 28 16 00 [Intrusion Detection Systems]-** Delete Paragraph 1.03.C.5.b.1 in its entirety and replace it as follows:
- “(1.) Cords shall be two-conductor cable suitable for rotating doors. Conductors shall be #22 AWG or thicker.”* (RFV-177)
12. **Volume II, Part 2, Section 28 16 00 [Intrusion Detection Systems]-** Delete Paragraph 1.03.C.8.a.8 in its entirety and replace it as follows:
- “(8.) “(Deleted)”* (RFV-177)

13. **Volume II, Part 2, Section 28 16 00 [Intrusion Detection Systems]**- Delete Paragraph 1.03.C.8.c.3 in its entirety and replace it as follows:

*“3) Conductors within armored cords, if any, shall be provided with lug terminals at accessible ends. Jumper conductors and armored cords shall experience no mechanical strain as the door is moved from fully open to closed. The switch circuit shall initiate an alarm if a short circuit is applied to the door cord.”* (RFV-177)

14. **Volume II, Part 2, Section 28 16 00 [Intrusion Detection Systems]**- Delete Paragraph 1.03.D.8.c.4 in its entirety and replace it as follows:

*“4) When the unit housing can be removable, it shall be protected from unauthorized access by a cover operated, corrosion-resistant tamper switch. The device shall initiate an alarm when the cover is opened as little as 3.175 mm (1/8 inch) and shall be inaccessible until actuated.”* (RFV-177)

15. **Volume II, Part 2, Section 40 91 00 [Primary Process Measurement Devices]**- Delete Paragraph 1.03 B.4.g, previously agreed upon in Variation No. 38 and replace it with the following:

*“g. Use of this fieldbus is only acceptable for air quality sensors, water quality sensors, Vessel detection Systems, and other devices where specified in the Employer’s Requirements.”* (RFV-168)

16. **Volume III – Conditions of Contract** - Delete Paragraph (a)(i) of Sub-Clause 5.2 in its entirety and replace it with the following:

(i) “The Employer’s Representative shall give notice to the Contractor that it may (A) “proceed”, (B) “proceed as noted”, (C) “proceed as noted and resubmit”, (D) “Revise and Resubmit”, or (E) “Superseded”.

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

\*\*\*\*\*  
  
\*\*\*\*\*