

ADDENDUM NO. 1

Bidding and Contract Documents

For

RIAC Construction Contract No. 24854  
FAA AIP No. 3-44-0003-XX-2013

**RUNWAY 16-34 IMPROVEMENT PROGRAM  
PHASE 1 RUNWAY 16 END SAFETY AREA & NAVAID IMPROVEMENTS**

T. F. Green State Airport  
Warwick, Rhode Island

**RHODE ISLAND AIRPORT CORPORATION**

APRIL 5, 2013

Prepared by:  
AECOM Technical Services, Inc.  
10 Orms Street, Suite 405  
Providence, Rhode Island 02904

AND

McFarland-Johnson, Inc.  
53 Regional Drive  
Concord, NH 03301

**NOTICE TO PROSPECTIVE BIDDERS**

**ADDENDUM NO. 1**

**Prospective Bidders and all concerned are hereby notified of the following changes in the Contract Documents for RUNWAY 16-34 IMPROVEMENT PROGRAM - PHASE 1 RUNWAY 16 END SAFETY AREA & NAVAID IMPROVEMENTS - at T. F. Green State Airport. These changes shall be incorporated in and shall become an integral part of the contract documents. The number (No. 1) and date (04/05/13) of this addendum must be entered into the space provided on Page P-4 of the Proposal Form. These changes will be incorporated into the Conformed Contract Documents to be issued to the successful bidder.**

## PROJECT MANUAL

### DIVISION 00 – BIDDING REQUIREMENTS AND CONTRACT DOCUMENTS

#### ADDENDUM ITEM NO. 1:

**MODIFY** Section 00 0010 Advertisement for Bid, Page 3 of 4, 2<sup>nd</sup> Paragraph:

**DELETE** the strike through words (example: ~~strike through words~~) **AND**  
**REPLACE** with the bold, italicized words (example: ***bold, italicized words***)

“No bidder may withdraw his bid within ~~one hundred twenty (120)~~ ***one hundred eighty (180)*** days after the actual date of opening hereof.”

*Clarification Note: Bid holding time has been extended to allow the bids to be current until the FAA Fiscal Year ends.*

#### ADDENDUM ITEM NO. 2:

**DELETE** Entire 24854-PROPOSAL dated March 20, 2013 **AND**

**REPLACE** with Entire 24854-PROPOSAL – Addendum #1 dated APRIL 5, 2013.

*Clarification Note: Primary modifications include adding a line item for P-620 Thermoplastic Pavement Markings with other associated line item number quantity adjustments AND modifying the L-108-1 lump sum bid item to be 2 separate allowance bid items for Tracing and Identifying Cables and Connection to the Existing Duct Bank. Changed the Bid Bond Form.*

#### ADDENDUM ITEM NO. 3:

**DELETE** Entire Section 00 0320 Bid Form dated March, 2013 **AND**

**REPLACE** with Entire Section 00 0320 Bid Form – Addendum #1 dated APRIL 5, 2013.

*Clarification Note: Primary modifications include adding a line item for P-620 Thermoplastic Pavement Markings with associated line item number and quantity adjustments AND modifying the L-108-1 lump sum bid item to be 2 separate allowance bid items for Tracing and Identifying Cables and Connection to the Existing Duct Bank. Changed the Bid Bond Form.*

#### ADDENDUM ITEM NO. 4:

**MODIFY** Section 00 0800 Summary of Work, Items 8.0 Radio Control and 9.0 Flagpersons:

**DELETE** the strike through words (example: ~~strike through words~~) **AND**  
**REPLACE** with the bold, italicized words (example: ***bold, italicized words***)

**“8.0 - Radio Control. Escort vehicles (minimum of two (2))** shall be equipped with FAA radios (ICOM model # IC A200) installed in the vehicle and capable of handling FAA frequencies used at T.F. Green Airport. Hand-held portable FAA radios will not be allowed for the escorts. The escorts shall monitor air and ground traffic at all times, and shall be capable of directing construction traffic in a manner that will not interfere with aircraft operations. **RIAC Operations will be the escort for this project.**

In addition, the Contractor shall provide **five (5) portable radios** (one for the Resident Engineer and the remainder for Contractor), **Maxon model # SP310V or approved equal**, for the purposes of maintaining communications between the escorts, gate guard(s), Contractor’s supervisor, Resident Engineer and RIAC Operations. A minimum of five (5) extra batteries, as well as five (5) battery chargers shall also be provided.

The Contractor shall, before the start of construction, test his/her radio with the appropriate agencies to demonstrate the capabilities and to demonstrate the performance of the operator and the equipment. ~~The escorts’ radio vehicles shall have a rotating amber light or strobe on the roof, which shall be in operation at all times. Whenever the escort vehicle is observing work, the escorts’ radio vehicles shall be parked in an appropriate location so that the operator can view the work. Radio control will be required whenever the Contractor is working in or adjacent to the aircraft operations areas.~~

Costs incurred by the Contractor for providing, programming, installing, maintaining and operating vehicle-mounted FAA radios and portable radios shall be paid for under item M-001-2 Allowance for Radios. ~~At the completion of the work, all radios shall be turned over to the Owner in operating condition. *considered incidental to the Contract. At the completion of the work, all radios shall become the property of the Contractor.*~~

**9.0 - Flagpersons.** The Contractor shall provide flagpersons at each active runway, taxiway, and apron pavement being crossed by his/her equipment to assure that moving aircraft are given the right of way at all times. ~~Flagpersons shall also be required when any vehicles on a service road, including the previously specified radio vehicles, are crossing the approach to an active runway. The flagpersons shall be carefully selected and fully instructed as to their duties in regulating the Contractor’s equipment crossing the aircraft pavement. They shall also be provided with broom, shovel and brush and instructed to remove any debris that might be left by the equipment on the aircraft pavement where it might be ingested by an aircraft engine. Each flagperson shall be provided with an approved striped vest of a type specifically designed for use by traffic control personnel and shall wear the vest at all times he/she is directing traffic. *No Airside flagpersons will be required for this project since RIAC Operations will be performing all Airside escorts.*~~

The Contractor shall also provide flagpersons or uniformed officers at locations where the haul routes enter public streets or highways from airport property in accordance with the applicable local requirements. *The flagpersons or uniformed officers shall be considered incidental to the other project items at no additional cost to the Owner.*”

## **DIVISION 01 – GENERAL PROVISIONS**

**NONE**

## **DIVISION 02 – TECHNICAL SPECIFICATIONS**

### **ADDENDUM ITEM NO. 5:**

**MODIFY** Section M-001 Supplementary General Conditions, Item 001-2.21 ENGINEER’S FIELD OFFICE, paragraph e.:

**APPEND** the following:

*“However during the winter shutdown, the temporary power may be turned off, but no construction may occur in the second season until the temporary power has been restored.”*

### **ADDENDUM ITEM NO. 6:**

**DELETE** Entire Section P-620 Runway and Taxiway Painting dated March, 2013 **AND**

**REPLACE** with Entire Section P-620 Runway and Taxiway Painting – Addendum #1 dated APRIL 5, 2013.

*Clarification Note: Modifications were related to including Thermoplastic Pavement Markings for Surface Painted Holding Position Signs and the elimination of the stencils.*

### **ADDENDUM ITEM NO. 7:**

**DELETE** Entire Section L-108 Underground Cable for Airports dated March, 2013 **AND**

**REPLACE** with Entire Section L-108 Underground Cable for Airports – Addendum #1 dated APRIL 5, 2013.

*Clarification Note: Modifications were related to modifying the L-108-1 lump sum item into 2 separate allowance items for: 1) Tracing and Identifying Cables and 2) Connection to Existing Duct Bank.*

## **CONTRACT DRAWINGS**

### **ADDENDUM ITEM NO. 8:**

**DELETE** Entire Sheet G-1 entitled “Quantities and General Notes” dated March, 2013 **AND**

**REPLACE** Entire Sheet G-1 entitled “Quantities and General Notes” with Revision #1 dated APRIL 5, 2013.

*Clarification Note: Modifications to the Proposal Items.*

**ADDENDUM ITEM NO. 9:**

**DELETE** Entire Sheet C-3 entitled “Layout Plan” dated March, 2013 **AND**

**REPLACE** Entire Sheet C-3 entitled “Layout Plan” with Revision #1 dated APRIL 5, 2013.

*Clarification Note: Addition of the security fence layout to the layout plan with coordinates.*

**ADDENDUM ITEM NO. 10:**

**DELETE** Entire Sheet C-11 entitled “Pavement Marking Details” dated March, 2013 **AND**

**REPLACE** Entire Sheet C-11 entitled “Pavement Marking Details” with Revision #1 dated APRIL 5, 2013.

*Clarification Note: Modify Surface Painted Holding Position Signs to be thermoplastic.*

**GENERAL CLARIFICATIONS & QUESTIONS**

**ADDENDUM ITEM NO. 11:**

**QUESTION:** *“Please clarify if the contractors operations will be allowed during evening hours. This might be needed during short duration phases – especially if weather, or other unknown circumstances occur.*

**ANSWER:** The Bidders shall refer to Sheet G-1 – General Construction Phasing Notes – #3 and Sheet CS-3 – General Construction Schedule Notes - #2 which states Standard Work Shifts are Monday through Friday from 7:00 AM to 5:00 PM. These day-shift hours already allow the Contractor to work beyond a typical 8-hour work day. This note also states the Contractor may request to extend the hours of a day shift, but it requires written approval by the Engineer (based on approval from RIAC Airport Operations) at least 48 hours in advance of the shift to be extended. It is important to note that a “blanket” approval to extend day shifts beyond the standard 5:00 PM time frame for the entire project, or even for an entire Phase, will not be allowed. However, there may be certain occasions, based on extenuating circumstances, (including but not limited to: prolonged inclement weather within a phase, emergency situations creating time constraints for the project or Airport operations, or certain time-sensitive tasks requiring longer hours which provide a benefit to the project or Airport operations), which may allow for an extension past

the standard time frame. Allowance of an extension will be at the discretion of RIAC Airport Operations and the Engineer based on their determination the extension of work shift hours is in the best interest of the project. Therefore, requests for extension of work hours past the standard day-shift hours could possibly be allowed, but will be reviewed on a “case by case” basis.

**ADDENDUM ITEM NO. 12:**

**QUESTION:** *“Please ask the Engineer if they want a snow plow ring or a flange ring with the in-pavement light base per Sheet E-4. You can’t have both, it is one or the other.”*

**ANSWER:** The Bidders shall provide a snow plow ring for the replacement of the in-pavement light base.

**ADDENDUM ITEM NO. 13:**

**QUESTION:** *“A few questions concerning the L-108-13 12-Strand SingleMode Fiber Optic Cable:*

- 1. This item is not shown on the Drawings. Where does it run to and from?*
- 2. What splicing is required, i.e. Splice Tables, etc.*
- 3. What splicing materials are required, i.e. Patch Panel, etc.”*

**ANSWER:** The questions concerning the Fiber Optic Cable are as follows:

1. The Bidder shall refer to Sheet E-2 to the Note between the Legend and the Revision Box which clearly notes that there are three (3) fiber optic cables to be relocated as part of the duct bank relocation with splices at both ends.
2. The Bidder shall refer to Technical Specification Section L-108 Underground Cable for Airports, Paragraph 108-3.8 Fiber Optic Cable Installation which states that all splices shall be fusion splices. This splice type is in compliance to the RIAC IT/Telecommunications Technical and Wiring Standards referenced in Paragraph 108-2.12 Fiber Optic Cabling. The full RIAC Standards document is available for review at RIAC IT offices.
3. The Bidder shall refer to Technical Specification Section L-108 Underground Cable for Airports, Paragraph 108-3.8 Fiber Optic Cable Installation which states that patch panels shall not be used at splice points and splices shall be fusion splices. Also in this paragraph, all other associated materials required for splice locations are noted.

**ADDENDUM ITEM NO. 14:**

**QUESTION:** *"Please provide existing pavement thickness for areas to be removed and disposed."*

**ANSWER:** The following pavement thicknesses are based on the geotechnical report and best available record information:

Runway 16 End Blast Pad Area (Station 98+50± to Station 99+87±)	11"± Asphalt Pavement & 6"± Portland Cement Concrete
Northwest Taxilane – North Side (Station 501+00± LT to Station 504+00 LT±) and Hangar #1 Apron Area	10"± Asphalt Pavement
Vehicle Service Road (24' x 250'±) (near the RW 34 Localizer)	5"± Asphalt Pavement

This Addendum No. 1 consists of 7 pages and the following 7 attachments:  
24854-Proposal – Addendum #1 dated April 5, 2013 (46 pages)  
Section 00 0320 Bid Form – Addendum #1 dated April 5, 2013 (34 pages)  
Section P-620 Runway and Taxiway Painting – Addendum #1 dated 04/05/2013 (8 pages)  
Section L-108 Underground Cable for Airports – Addendum #1 dated 04/05/2013 (14 pages)  
Sheet G-1 entitled "Quantities and General Notes" with Revision date 04/03/2013 (1 Sheet)  
Sheet C-3 entitled "Layout Plan" with Revision date 04/05/2013 (1 Sheet)  
Sheet C-11 entitled "Pavement Marking Details" with Revision date 04/05/2013 (1 Sheet)

**APPROVED BY:**  **Date:** 4/5/13  
RIAC Signature

**END OF ADDENDUM NO. 1**

RHODE ISLAND AIRPORT CORPORATION

ENGINEERING DEPARTMENT

RIAC CONTRACT NO. 24854

AIP NO. 3-44-0003-xx-2013

*PHASE 1 – RUNWAY 16 END SAFETY AREA AND  
NAVAID IMPROVEMENTS*

T.F. GREEN AIRPORT  
WARWICK, RHODE ISLAND

PROPOSAL FORMS

March 20, 2013

*Addendum #1*

## CERTIFICATION OF BIDDING REQUIREMENTS

This signature page is included in this contract document to provide assistance to all bidders in the form of a checklist and to stipulate that if any of the items mentioned below, but not limited to, are incomplete or otherwise incorrect, the Rhode Island Airport Corporation may reject the bid.

### I. REQUIRED FORMS AND SIGNATURE

A. Certification of Bidding Requirements.....	page P-1
B. Bid Summary Form .....	page P-2
C. Bid Forms .....	pages P-3 to P-26
D. Anti-Collusion Certificate (Sworn Affidavit) OR .....	<i>page P-27</i>
E. Anti-Collusion Certificate (Unsworn Affidavit).....	<i>page P-29</i>
F. Disclosure of Lobbying Activities.....	<i>page P-31</i>
G. Certification Regarding Debarment, Suspension, and Other Responsibility Matters....	<i>page P-33</i>
H. Certification of Non-Segregated Facilities .....	<i>page P-34</i>
I. Disadvantaged Business Utilization Plan; and .....	<i>page P-35</i>
J. Letter of Intent to Perform as a Qualified Disadvantaged Business; or.....	<i>page P-36</i>
K. DBE Waiver Form (if applicable) .....	<i>page P-37</i>
L. Contractor Qualification Form .....	<i>pages P-38 to P-40</i>
M. Bidder's Subcontractor List.....	<i>page P-41</i>
N. Certification of Compliance with Federally Required Contract Requirements .....	<i>page P-42</i>
O. Buy American Certification.....	<i>page P-43</i>
P. Equal Employment Opportunity Report Statement.....	<i>page P-44</i>
Q. Bid Bond .....	<i>pages P-45 to P-46</i>

### II. PROPOSAL SECTION

Unit Price Bids will be considered to be incomplete if any of the following conditions exist:

- A. Unit price in words is omitted
- B. Unit price in figures is omitted
- C. A zero, N/A, or blank is used as a bid price

### III. MISCELLANEOUS

- A. All written words and figures shall be in **INK** or **TYPED**
- B. All papers bound with or attached to the proposal form are considered a part thereof, and must not be detached or altered when the proposal is submitted.

### IV. CERTIFICATION SUMMARY

I hereby certify that I have read all of the above requirements and understand that it affects the acceptability of my bid(s).

\_\_\_\_\_  
Contractor Signature

\_\_\_\_\_  
Date

**BID SUMMARY FORM**

FOR THE PERFORMANCE OF

RHODE ISLAND AIRPORT CORPORATION CONSTRUCTION CONTRACT NUMBER: **24854**  
AIP No. **3-44-0003-xx-2013**

PROJECT: ***Phase 1 - Runway 16 End Safety Area and NAVAID Improvements***  
LOCATION: ***T. F. Green State Airport, Warwick, RI***

SUBMITTED BY: \_\_\_\_\_

ADDRESS: \_\_\_\_\_

\_\_\_\_\_

NAME OF SURETY: \_\_\_\_\_

TOTAL BID COST IN WORDS \_\_\_\_\_

\_\_\_\_\_

TOTAL BID COST IN FIGURES \$ \_\_\_\_\_

(BIDDER MUST FILL IN ALL ABOVE SPACES)

THE BASIS OF AWARD OF CONTRACT WILL BE THE LOWEST RESPONSIVE TOTAL BID  
BASED ON ALL QUANTITIES IN THE PROPOSAL.

NOTE: IN CASE OF A DISCREPANCY BETWEEN WORDS AND FIGURES, THE SUMS  
EXPRESSED IN WORDS NOTED ABOVE SHALL GOVERN.

**BID FORM**

To: Rhode Island Airport Corporation  
T. F. Green Airport  
2000 Post Road  
Warwick, Rhode Island, 02886

Date: \_\_\_\_\_

ATTN: Procurement Specialist

Time: \_\_\_\_\_

For:

**T. F. Green State Airport**  
**AIP No. 3-44-0003-xx-2013**  
**RIAC Construction Contract No. 24854**

The undersigned, having visited the site of the work and having familiarized themselves with local conditions affecting the cost of the work and with all requirements of the proposed Contract Documents, and duly issued Addenda to said documents, as acknowledged herein, propose to furnish and perform all labor, materials, necessary tools, expendable equipment, and all utility and transportation services necessary to perform and complete in a workmanlike manner all work required by said documents and Addenda.

ADDENDA: Bidder acknowledges receipt of and has examined the Addenda:

Addendum Number \_\_\_\_\_ dated \_\_\_\_\_.

Addendum Number \_\_\_\_\_ dated \_\_\_\_\_.

Acknowledged by \_\_\_\_\_ date \_\_\_\_\_.

BID PROPOSAL: This Proposal shall be filled in by the BIDDER with prices written in both words and numerals and the extensions made by him/her. In case of discrepancy between the words and numerals, the amounts shown in words shall govern.

BIDDER agrees to perform all necessary labor, furnish all materials and do all work described in the Specifications, including allowances, and shown on the Drawings, for the following lump sum prices and/or unit process:

Item No.	Pay Item No.	Est. Qty.	Unit	Description and Unit Price (in words)	Figures			
					Unit Price		Amount	
					Dollars	Cents	Dollars	Cents
1	P-102-1	4,500	SY	<u>Bituminous Concrete Milling (0"-4")</u>  dollars and cents per Square Yard	\$	.	\$	.
2	P-102-2	2,500	CY	<u>Pavement Removal</u>  dollars and cents per Cubic Yard	\$	.	\$	.
3	P-102-3	1,250	LF	<u>Saw Cut Pavement</u>  dollars and cents per Linear Foot	\$	.	\$	.
4	P-102-4	900	LF	<u>Saw and Seal Joint</u>  dollars and cents per Linear Foot	\$	.	\$	.
5	P-151-1	1	LS	<u>Clearing &amp; Grubbing</u>  dollars and cents per Lump Sum	\$	.	\$	.

Item No.	Pay Item No.	Est. Qty.	Unit	Description and Unit Price (in words)	Figures			
					Unit Price		Amount	
					Dollars	Cents	Dollars	Cents
6	P-152-1	13,000	CY	<u>Unclassified Excavation</u>  dollars and cents per Cubic Yard	\$	.	\$	.
7	P-152-2	490	LF	<u>Removal of Existing Blast Wall</u>  dollars and cents per Linear Foot	\$	.	\$	.
8	P-152-3	1	LS	<u>Removal of Sewer Structure</u>  dollars and cents per Lump Sum	\$	.	\$	.
9	L-153-1	4	CY	<u>Controlled Low Strength Material</u>  dollars and cents per Cubic Yard	\$	.	\$	.
10	P-154-1	2,900	CY	<u>Subbase Course (P-154)</u>  dollars and cents per Cubic Yard	\$	.	\$	.

Item No.	Pay Item No.	Est. Qty.	Unit	Description and Unit Price (in words)	Figures			
					Unit Price		Amount	
					Dollars	Cents	Dollars	Cents
11	P-156-1	700	LF	<u>Erosion Control Wattles</u>  dollars and cents per Linear Foot	\$	.	\$	.
12	P-156-2	8	EA	<u>Inlet Protection/ Catch Basin Filter Bag</u>  dollars and cents per Each	\$	.	\$	.
13	P-156-3	9	EA	<u>Inlet Protection/ Catch Basin Filter Bag &amp; Wattle</u>  dollars and cents per Each	\$	.	\$	.
14	P-209-1	1,230	CY	<u>Crushed Aggregate Base Course (P-209)</u>  dollars and cents per Cubic Yard	\$	.	\$	.
15	M-301-1	205	CY	<u>RIDOT Aggregate or Gravel Base Course</u>  dollars and cents per Cubic Yard	\$	.	\$	.

Item No.	Pay Item No.	Est. Qty.	Unit	Description and Unit Price (in words)	Figures			
					Unit Price		Amount	
					Dollars	Cents	Dollars	Cents
16	P-401-1	3,340	Ton	Surface Course Pavement (P-401)	\$	.	\$	.
				dollars and				
				cents				
				per Ton				
17	P-401-2	300	Ton	Base Course Pavement (P-401)	\$	.	\$	.
				dollars and				
				cents				
				per Ton				
18	P-555-1	1	LS	EMAS Bed Installation	\$	.	\$	.
				dollars and				
				cents				
				per Lump Sum				
19	P-556-1	1	LS	Concrete Anchor Beam Installation	\$	.	\$	.
				dollars and				
				cents				
				per Lump Sum				
20	P-602-1	2,400	Gallon	Bituminous Prime Coat	\$	.	\$	.
				dollars and				
				cents				
				per Gallon				

Item No.	Pay Item No.	Est. Qty.	Unit	Description and Unit Price (in words)	Figures			
					Unit Price		Amount	
					Dollars	Cents	Dollars	Cents
21	P-603-1	2,800	Gallon	<u>Bituminous Tack Coat</u>  dollars and cents per Gallon	\$	.	\$	.
22	P-620-1	<b>23,500</b>	SF	<b><u>Pavement Markings - Paint</u></b>  dollars and cents per Square Foot	\$	.	\$	.
23	<b>P-620-2</b>	<b>2,500</b>	SF	<b><u>Pavement Markings - Thermoplastic</u></b>  <b>dollars and</b> <b>cents</b> <b>per Square Foot</b>	\$	.	\$	.
24	<b>P-620-3</b>	12,100	SF	<u>Removal of Existing Pavement Markings</u>  dollars and cents per Square Foot	\$	.	\$	.
25	P-621-1	280	SY	<u>Runway Pavement Grooving</u>  dollars and cents per Square Yard	\$	.	\$	.

Item No.	Pay Item No.	Est. Qty.	Unit	Description and Unit Price (in words)	Figures			
					Unit Price		Amount	
					Dollars	Cents	Dollars	Cents
26	D-701-1	50	LF	<u>Ductile Iron Pipe, 8" Diameter Class 52</u>	\$	.	\$	.
				dollars and				
				cents				
				per Linear Foot				
27	D-701-2	190	LF	<u>Remove Existing Storm Drain Pipe</u>				
				dollars and				
				cents				
				per Each				
28	D-751-1	2	EA	<u>Heavy Duty Drainage Structure</u>	\$	.	\$	.
				dollars and				
				cents				
				per Each				
29	D-751-2	3	EA	<u>Alter Existing Drainage Structure</u>	\$	.	\$	.
				dollars and				
				cents				
				per Each				
30	D-751-3	6	EA	<u>Remove Existing Drainage Structure</u>	\$	.	\$	.
				dollars and				
				cents				
				per Each				

Item No.	Pay Item No.	Est. Qty.	Unit	Description and Unit Price (in words)	Figures			
					Unit Price		Amount	
					Dollars	Cents	Dollars	Cents
31	D-751-4	7	EA	<u>Heavy Duty Electrical Manhole</u>	\$	.	\$	.
				dollars and				
				cents				
				Per	Each			
32	D-751-5	5	EA	<u>Remove Existing Electrical Manhole</u>	\$	.	\$	.
				dollars and				
				cents				
				per	Each			
33	F-162-1	800	LF	<u>Temporary Fence – 8’ Chain Link w/ Barb Wire</u>	\$	.	\$	.
				dollars and				
				cents				
				per	Linear Foot			
34	F-162-2	1,150	LF	<u>Temporary Fence – 8’ Barrier &amp; Chain Link w/ Barb Wire</u>	\$	.	\$	.
				dollars and				
				cents				
				per	Linear Foot			
35	F-162-3	525	LF	<u>Fence – 8’ Chain Link w/ Barb Wire</u>	\$	.	\$	.
				dollars and				
				cents				
				per	Linear Foot			

Item No.	Pay Item No.	Est. Qty.	Unit	Description and Unit Price (in words)	Figures			
					Unit Price		Amount	
					Dollars	Cents	Dollars	Cents
36	F-162-4	525	LF	<u>Remove Existing Fence, Gate &amp; Foundation</u>	\$	.	\$	.
				dollars and				
				cents				
				per Linear Foot				
37	F-170-1	250	LF	<u>Install Blast Fence</u>	\$	.	\$	.
				dollars and				
				cents				
				per Linear Foot				
38	T-901-1	25,200	SY	<u>Hydroseeding</u>	\$	.	\$	.
				dollars and				
				cents				
				per Square Yard				
39	T-905-1	21,200	SY	<u>Topsoil – Borrow (min 4" depth)</u>	\$	.	\$	.
				dollars and				
				cents				
				per Square Yard				
40	L-108-1A	1	AL	<u>Trace &amp; Identify Cables</u>	\$15,000	.00	\$15,000	.00
				<b>Fifteen Thousand dollars</b>				
				<b>and</b>				
				<b>no cents</b>				
				<b>per Allowance</b>				

Item No.	Pay Item No.	Est. Qty.	Unit	Description and Unit Price (in words)	Figures			
					Unit Price		Amount	
					Dollars	Cents	Dollars	Cents
41	L-108-1B	1	AL	<u>Connection to Existing Duct Bank</u>  Twenty-five Thousand dollars and  no cents  per Allowance	\$25,000	.00	\$25,000	.00
42	L-108-2	5,000	LF	<u>1/C No. 6 AWG (L-824C) 5 kV Cable in Conduit/Duct</u>  dollars and  cents  per Linear Foot	\$	.	\$	.
43	L-108-3	25,800	LF	<u>1/C No. 8 AWG (L-824C) 5 kV Cable in Conduit/Duct</u>  dollars and  cents  per Linear Foot	\$	.	\$	.
44	L-108-4	3,700	LF	<u>No.6 AWG, Bare Counterpoise installed in Trench including Ground Rods &amp; Connectors</u>  dollars and  cents  per Linear Foot	\$	.	\$	.
45	L-108-5	2,200	LF	<u>No.4 AWG, Insulated 600V Wire Installed in Conduit/Duct</u>  dollars and  cents  per Linear Foot	\$	.	\$	.

Item No.	Pay Item No.	Est. Qty.	Unit	Description and Unit Price (in words)	Figures			
					Unit Price		Amount	
					Dollars	Cents	Dollars	Cents
46	L-108-6	1,100	LF	No.8G AWG, Insulated 600V Wire Installed in Conduit/Duct	\$	.	\$	.
				dollars and				
				cents				
				per Linear Foot				
47	L-108-7	2,500	LF	No. 10 AWG, Multi-Conductor (3) (PAPI-REIL16) Control Cable	\$	.	\$	.
				dollars and				
				cents				
				per Linear Foot				
48	L-108-8	3,700	LF	No.10G AWG, Insulated 600V Wire Installed in Conduit/Duct	\$	.	\$	.
				dollars and				
				cents				
				per Linear Foot				
49	L-108-9	900	LF	No.12 AWG, 2 Conductor w/ #12G 600V Insulated - UF Type Cable	\$	.	\$	.
				dollars and				
				cents				
				per Linear Foot				
50	L-108-10	600	LF	No.12 AWG, Insulated 600V Wire Installed in Conduit/Duct	\$	.	\$	.
				dollars and				
				cents				
				per Linear Foot				

Item No.	Pay Item No.	Est. Qty.	Unit	Description and Unit Price (in words)	Figures			
					Unit Price		Amount	
					Dollars	Cents	Dollars	Cents
51	L-108-11	300	LF	No.12G AWG, Insulated 600V Wire Installed in Conduit/Duct	\$	.	\$	.
				dollars and				
				cents				
				per	Linear Foot			
52	L-108-12	1,800	LF	No.14 AWG, Unshielded 600V Twisted Conductor Installed in Conduit/Duct	\$	.	\$	.
				dollars and				
				cents				
				per	Linear Foot			
53	L-108-13	3,500	LF	12-Strand, Single Mode (SM) BerkTek Fiber Optic Cable	\$	.	\$	.
				dollars and				
				cents				
				per	Linear Foot			
54	L-108-14	49,100	LF	Remove Existing Cable in Conduit or Duct	\$	.	\$	.
				dollars and				
				cents				
				per	Linear Foot			
55	L-108-15	6,600	LF	Remove Existing Direct Bury Cabling	\$	.	\$	.
				dollars and				
				cents				
				per	Linear Foot			

Item No.	Pay Item No.	Est. Qty.	Unit	Description and Unit Price (in words)	Figures			
					Unit Price		Amount	
					Dollars	Cents	Dollars	Cents
56	L-109-1	1	LS	<u>Installation of Airfield Vault Equipment in Place</u>	\$	.	\$	.
				dollars and				
				cents				
				per Lump Sum				
57	L-110-1	550	LF	<u>Concrete Encased Duct Bank - 8-Way with 4" Conduits</u>	\$	.	\$	.
				dollars and				
				cents				
				per Linear Foot				
58	L-110-2	70	LF	<u>Concrete Encased Duct Bank - 9-Way with 3" Conduits</u>	\$	.	\$	.
				dollars and				
				cents				
				per Linear Foot				
59	L-110-3	300	LF	<u>Conduit- Type II Sch. 40 PVC, 1" - Mounted</u>	\$	.	\$	.
				dollars and				
				cents				
				per Linear Foot				
60	L-110-4	3,300	LF	<u>Conduit- Type I Sch. 40 PVC, 2"</u>	\$	.	\$	.
				dollars and				
				cents				
				per Linear Foot				

Item No.	Pay Item No.	Est. Qty.	Unit	Description and Unit Price (in words)	Figures			
					Unit Price		Amount	
					Dollars	Cents	Dollars	Cents
61	L-110-5	120	LF	<u>Conduit—Type I Sch. 40 PVC, 2" – Concrete Encased</u>  dollars and cents per Linear Foot	\$	.	\$	.
62	L-110-6	6	EA	<u>Cable/Conduit/Duct Marker</u>  dollars and cents per Each	\$	.	\$	.
63	L-110-7	225	LF	<u>Removal of Electrical Conduit</u>  dollars and cents per Linear Foot	\$	.	\$	.
64	L-110-8	1,100	LF	<u>Removal of Electrical Duct Bank</u>  dollars and cents per Linear Foot	\$	.	\$	.
65	L-119-1	2	EA	<u>Obstruction Light – Double Fixture</u>  dollars and cents per Each	\$	.	\$	.

Item No.	Pay Item No.	Est. Qty.	Unit	Description and Unit Price (in words)	Figures			
					Unit Price		Amount	
					Dollars	Cents	Dollars	Cents
66	L-119-2	1	EA	<u>Obstruction Light – Single Fixture</u>	\$	.	\$	.
				dollars and				
				cents				
				per		Each		
67	L-119-3	1	EA	<u>Obstruction Light – Photocell Controller</u>	\$	.	\$	.
				dollars and				
				cents				
				per		Each		
68	L-125-1	1	EA	<u>In-Pavement Runway Edge Light</u>	\$	.	\$	.
				dollars and				
				cents				
				per		Each		
69	L-125-2	18	EA	<u>Junction Base Can with Solid Cover</u>	\$	.	\$	.
				dollars and				
				cents				
				per		Each		
70	L-125-3	1	EA	<u>New Airfield Guidance Sign</u>	\$	.	\$	.
				dollars and				
				cents				
				per		Each		

Item No.	Pay Item No.	Est. Qty.	Unit	Description and Unit Price (in words)	Figures			
					Unit Price		Amount	
					Dollars	Cents	Dollars	Cents
71	L-125-4	2	EA	<u>Relocate Airfield Guidance Sign</u>	\$	.	\$	.
				dollars and				
				cents				
				per		Each		
72	L-125-5	1	EA	<u>Pavement Sensor</u>	\$	.	\$	.
				dollars and				
				cents				
				per		Each		
73	L-125-6	1	EA	<u>Remove Existing Runway Edge Light</u>	\$	.	\$	.
				dollars and				
				cents				
				per		Each		
74	L-125-7	9	EA	<u>Remove Existing Junction Can</u>	\$	.	\$	.
				dollars and				
				cents				
				per		Each		
75	L-126-1	1	SET	<u>Install New Runway End Indicator Lights (REILs)</u>	\$	.	\$	.
				dollars and				
				cents				
				per		Set		

Item No.	Pay Item No.	Est. Qty.	Unit	Description and Unit Price (in words)	Figures			
					Unit Price		Amount	
					Dollars	Cents	Dollars	Cents
76	L-126-2	1	SET	Remove Existing Runway End Indicator Lights (REILs)	\$	.	\$	.
				dollars and				
				cents				
				per Set				
77	L-127-1	1	SET	Install New Precision Approach Path Indicator (PAPI)	\$	.	\$	.
				dollars and				
				cents				
				per Set				
78	L-127-2	2	SET	Remove Existing Visual Approach Slope Indicator (VASI)	\$	.	\$	.
				dollars and				
				cents				
				per Set				
79	L-853-1	14	EA	Retroreflective Edge Markers - Taxiway	\$	.	\$	.
				dollars and				
				no cents				
				per Each				
80	L-853-2	8	EA	Retroreflective Edge Markers - Roadway	\$	.	\$	.
				dollars and				
				cents				
				per Each				

Item No.	Pay Item No.	Est. Qty.	Unit	Description and Unit Price (in words)	Figures			
					Unit Price		Amount	
					Dollars	Cents	Dollars	Cents
81	M-001-1	6	Month	Field Office	\$	.	\$	.
				dollars and				
				cents				
				per Month				
82	M-001-2	1	AL	Safety Barricades, Cones, Lights and Signs	\$40,000	.00	\$40,000	.00
				Forty Thousand dollars and				
				no cents				
				per Allowance				
83	M-001-3	1	AL	Temporary VSR/Haul Road	\$20,000	.00	\$20,000	.00
				Twenty Thousand dollars and				
				no cents				
				per Linear Foot				
84	M-002-1	2,300	LF	Clean Drain Lines	\$	.	\$	.
				dollars and				
				cents				
				per Each				
85	M-002-2	20	EA	Clean Drain Structures	\$	.	\$	.
				dollars and				
				cents				
				per Each				
86	M-003-1	9,000	CF	Drainage Infiltration System	\$	.	\$	.
				dollars and				
				cents				
				per Cubic Foot				

BID PROPOSAL: Bidder agrees to perform all of the work described in the Contract Documents, including allowances, for the sum of:

\_\_\_\_\_ \$ \_\_\_\_\_  
(figures)

\_\_\_\_\_  
(words [shall govern])

**LIQUIDATED DAMAGES:** Upon execution of the contract, the Contractor shall proceed with the preparation and submittal of shop drawings and his tentative construction schedule and with subsequent ordering and fabricating of materials. The Owner will issue a written "Notice-to-Proceed" which will specify an effective date for the Contractor to begin work at the site for both construction seasons. The contract work shall complete the Construction Season 2013 work within **one hundred twenty (120) calendar days** from the date of issuance of the first Notice to Proceed to meet the interim date for a winter shutdown. The contract work shall be complete the Construction Season 2014 work within **sixty (60) calendar days** from the date of issuance of the second Notice to Proceed.

Should work continue beyond time specified above, and no time extension has been granted via the Change Order process, then liquidate damages will be assessed to the Contractor for each and every calendar day the work remains uncompleted.

Liquidated damages for this project shall be **One Thousand-Five Hundred Dollars (\$1,500.00)** per calendar day for Contractor's failure to complete any key milestone by its intermediate completion date or the Final Completion date. Refer to Section 00 0800, Summary of Work.

The undersigned affirms that in making such bid, neither he or she nor any company that they may represent, nor anyone in behalf of him or her or their company, directly or indirectly, has entered into any combination, collusion, undertaking or agreement with any other bidder or bidders to maintain the prices of said work, or any compact to prevent any other bidder or bidders from bidding on said Contract or work and further affirms that such bid is made without regard or reference to any other bidder or proposer and without any agreement or understanding or combination either directly or indirectly with any other person or persons with reference to such bidding in any way or manner whatsoever.

The undersigned further agrees that if awarded the Contract he or she will commence the work within **ten (10)** calendar days after the date of the Notice to Proceed and that he or she will complete the work in accordance with the Summary Schedule and Key Milestones and Substantial Completion date set forth in the Bidding and Contract Documents or such amended date as may be granted. If the undersigned fails to complete the work as provided in the aforementioned schedule, then and in that event, he or she further expressly agrees that, for each day that any phase of work under this Contract remains uncompleted thereafter the Owner may deduct from the Contract price herein specified the stipulated sum of liquidated damages as provided in the Special Provisions and retain that sum for failure of the undersigned to complete this Contract on or before the expiration of the period shown in the completion schedule.

In submitting this bid, it is understood that the right is reserved by the Owner to waive any informality or irregularity in any bid or bid guaranty, to reject any and all bids, to re-bid, to award or refrain from awarding a contract for the work and to negotiate with the apparent qualified low responsive bidder to such extent as may be beneficial to the Owner.

***The undersigned attaches hereto a cashier's check, certified check or Bid Bond in the sum of \_\_\_\_\_ Dollars (\$ \_\_\_\_\_), payable to the Rhode Island Airport Corporation, as required in the Information for Bidders, and the undersigned agrees that in case he or she fails within five (5) calendar days after Notice of Intent to Award the Contract to him to enter into a Contract Agreement in writing and furnish the required Payment and Performance Bonds, with surety or sureties to be approved by Owner, and insurance policies or endorsements, the Owner may, as its option, determine that the undersigned has abandoned his rights and interest in such bid and that the cashier's check, certified check, or Bid Bond accompanying his or her bid has been forfeited. Otherwise, the cashier's check, certified check, or Bid Bond shall be returned to the undersigned upon the execution of the Contract and acceptance of the bonds and insurance, or upon rejection of his or her bid.***

A bid shall be considered unresponsive and shall be rejected if it fails to include fully executed statements or if the Bidder fails to furnish required data. When a determination has been made to award the Contract to a specific Contractor, such Contractor shall, prior to award, furnish such other pertinent information regarding his or her own employment policies and practices as well as those of his or her proposed Subcontractors as the Owner may require.

The bidder shall furnish similar statements executed by each of his or her first-tier and second-tier Subcontractors whose contracts equal Ten Thousand Dollars (\$10,000.00) or more and shall obtain similar compliance by such Subcontractors before awarding such Subcontractors. No subcontract shall be awarded to any non-complying Subcontractor.

The undersigned affirms that he or she has completed all of the blank spaces in the "Bid Form", with an amount in words and numbers and agrees that where a discrepancy occurs between the prices quoted in words and/or in numbers the lowest figure quoted shall take precedence and govern when determining final costs or award of Contract.

The undersigned affirms that wages not less than the minimum rates or wages, as predetermined for this project by the State of Rhode Island were used in the preparation of this "Bid Form".

SIGNATURE OF BIDDER

\* Signed \_\_\_\_\_  
By: \_\_\_\_\_  
Title: \_\_\_\_\_  
Date: \_\_\_\_\_

This proposal includes Addendum Numbers(s) \_\_\_\_\_  
(Fill in numbers(s) if Addendum(s) are issued).

Address of permanent place of business to which Notice-to-Proceed should be sent:  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

\*Important: Execute acknowledgment of officer or agent who signs this document (use proper form below):

**ACKNOWLEDGMENT OF PRINCIPAL, IF A CORPORATION:**

State of: (\_\_\_\_\_)

County of: (\_\_\_\_\_)§

On this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_, before me personally came and appeared \_\_\_\_\_ to me Known, who, being by me duly sworn, did depose and say to me that he resides at \_\_\_\_\_, that he/she is the \_\_\_\_\_ of \_\_\_\_\_ the corporation described in and which executed the foregoing instrument is an impression of such seal; that it was so affixed by the order of the directors of said corporation, and that he signed his name thereto by like order.

(Seal) \_\_\_\_\_  
Notary Public

**ACKNOWLEDGMENT OF PRINCIPAL, IF A PARTNERSHIP:**

State of (\_\_\_\_\_)

County of (\_\_\_\_\_)§

On this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_, before me personally came and appeared \_\_\_\_\_ to me known and known to me to described in and who executed the foregoing instrument and he acknowledged to me that he executed the same as and for the act and deed of said firm.

(Seal) \_\_\_\_\_  
Notary Public

**ACKNOWLEDGMENT OF PRINCIPAL, IF AN INDIVIDUAL:**

State of (\_\_\_\_\_)

County of (\_\_\_\_\_)§

On this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_, before me personally came and appeared \_\_\_\_\_ to me known and known to me to be the person described in and who executed the forgoing instrument and acknowledged that he executed the same.

(Seal) \_\_\_\_\_  
Notary Public

## **ANTI-COLLUSION CERTIFICATE FOR CONTRACT AND FORCE ACCOUNT**

(SWORN AFFIDAVIT) Title 23, United States Code, Section 112(c), requires, as a condition precedent to approval by the Rhode Island Airport Corporation (RIAC) of the contract for this work, that there be filed a sworn statement executed by, on behalf of, the person, firm, association, or corporation to whom such contract is to be awarded, certifying that such person, firm, association, or corporation has not, either directly or indirectly, entered into any agreement, participated in any collusion, or otherwise taken any action in restraint of free competitive bidding in connection with such contract. This sworn statement shall be in the form of an affidavit executed and sworn to be the successful bidder before a person who is authorized by the Laws of this State to administer oaths.

The person, firm, association, or corporation submitting the bid (under 23 U.S.C. 112(c)) has the option to sign either:

- a. the sworn affidavit executed and sworn to by the bidder before a person who is authorized by the laws of the State to administer oaths; or
- b. the unsworn declaration executed under penalty of perjury under the laws of the United States (as allowed by 28 U.S.C. 1746).

A bidder will not be considered for award of contract under this invitation for bids unless such bidder completes either the unsworn declaration (as stated on the following page) or the sworn affidavit as prescribed below:

**PLEASE NOTE: CONTRACTOR TO COMPLETE ONLY ONE (1) CERTIFICATION STATEMENT. DO NOT SIGN BOTH STATEMENTS.**

**ANTI-COLLUSION CERTIFICATE FOR CONTRACT AND FORCE ACCOUNT  
(SWORN AFFIDAVIT)**

To the: RHODE ISLAND AIRPORT CORPORATION

State of \_\_\_\_\_

County of \_\_\_\_\_§

I, \_\_\_\_\_ (name of party signing affidavit)

\_\_\_\_\_ (title), being duly sworn, do

depose and say: on behalf of \_\_\_\_\_ that said Contractor has not, either directly or indirectly, entered into any agreement, participated in collusion, or otherwise taken any action in restraint of free competitive bidding in connection with Rhode Island Airport Corporation Construction Contract Number **24854** Airport Improvement Program Project Number **3-44-0003-xx-2013**,

County of \_\_\_\_\_

Town/City \_\_\_\_\_

\_\_\_\_\_  
Contractor

\_\_\_\_\_  
Signature

Sworn to before me this \_\_\_\_\_ day of \_\_\_\_\_ 20\_\_\_\_

My commission expires \_\_\_\_\_

\_\_\_\_\_  
Signature and Seal of Notary Public

**ANTI-COLLUSION CERTIFICATE FOR CONTRACT AND FORCE ACCOUNT  
(UNSWORN AFFIDAVIT)**

Title 23, United States Code, Section 112(c), requires, as a condition precedent to approval by the Rhode Island Airport Corporation (RIAC) of the contract for this work, that there be filed a unsworn declaration executed by, on behalf of, the person, firm, association, or corporation submitting the bid, certifying that such person, firm, association, or corporation has not, either directly or indirectly, entered into any agreement, participated in any collusion, or otherwise taken any action in restraint of free competitive bidding in connection with submitted bid. This unsworn statement shall be in the form of a declaration executed under penalty of perjury under the laws of the United States.

The person, firm, association, or corporation submitting the bid (under 23 U.S.C. 112(c)) has the option to sign either:

- a. the sworn affidavit executed and sworn to by the bidder before a person who is authorized by the laws of the State to administer oaths; or
- b. the unsworn declaration executed under penalty of perjury under the laws of the United States (as allowed by 28 U.S.C. 1746).

A bidder will not be considered for award of contract under this invitation for bids unless such bidder completes either the sworn affidavit (as stated on the previous page) or the unsworn declaration as prescribed below:

**ANTI-COLLUSION CERTIFICATE FOR CONTRACT AND FORCE ACCOUNT  
(UNSWORN AFFIDAVIT)**

To the: RHODE ISLAND AIRPORT CORPORATION

State of \_\_\_\_\_

County of \_\_\_\_\_ §

I, \_\_\_\_\_ (name of party signing affidavit)

\_\_\_\_\_ (title), under penalty of perjury

under the laws of the United States, do depose and say: on behalf of \_\_\_\_\_  
that said Contractor has not, either directly or indirectly, entered into any agreement, participated in  
collusion, or otherwise taken any action in restraint of free competitive bidding in connection with Rhode  
Island Airport Corporation Construction Contract Number **24854**, Airport Improvement Program Project  
Number **3-44-0003-xx-2013**.

County of \_\_\_\_\_

Town/City \_\_\_\_\_

\_\_\_\_\_  
Contractor

\_\_\_\_\_  
Signature

Sworn to before me this \_\_\_\_\_ day of \_\_\_\_\_ 20 \_\_\_\_\_

My commission expires \_\_\_\_\_  
Signature and Seal of Notary Public

**DISCLOSURE OF LOBBYING ACTIVITIES**

Complete this form to disclose lobbying activities pursuant to 31 U.S.C. 1352

<b>1. Type of Federal Action:</b> a. contract b. grant c. cooperative agreement d. loan e. loan guarantee f. loan insurance	<b>2. Status of Federal Action</b> a. bid/offer/application b. initial award c. post-award	<b>3. Report Type</b> a. initial filing b. material change  For Material Change Only:  Year _____ Quarter _____ Date of last report _____
<b>4. Name and Address of Reporting Entity:</b>	<b>5. If Reporting Entity in No. 4 is Subawardee, Enter Name and address of Prime:</b>	
<b>6. Federal Department Agency:</b>	<b>7. Federal Program Name/Description:</b>	
<b>8. Federal Action Number, if known:</b>	<b>9. Award Amount, if known:</b>  \$	
<b>10a. Name and Address of Lobbying Entity, (if individual, last name, first name, MI)</b>	<b>10b. Individuals performing Services (including address if different from No. 10a.), (if individual, last name, first name, MI)</b>	
<b>11. Amount of Payment (check all that apply):</b>  \$ _____ actual planned	<b>13. Type of Payment (check all that apply)</b> a. retainer b. one-time fee c. commission d. contingent fee e. deferred f. other specify _____	
<b>12. Form of Payment (check all that apply):</b> a. cash b. In-kind; specify; nature _____ value _____		
<b>14. Brief Description of services performed or performed and date(s) of Service, including officer(s), employer(s), or member(s) contacted for payment indicated in Item 11.</b>		
<b>15. Continuation Sheet(s) SF-LLL-A attached:      Yes      No</b>		
<b>16. Information requested through this form is authorized by Title 31 U.S.C. Section 1362. This disclosure of lobbying activities is a material representation of fact upon which reliance was placed by the tier above when this transaction was made or entered into. This disclosure is required pursuant to 31 U.S.C. 1352. This information will be reported to Congress semi-annually and will be available for public inspection. Any person who fails to file the required disclosure shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each failure</b>	Signature: _____ Print Name: _____ Title: _____ Telephone No. _____ Date: _____	
<i>Federal Use Only</i>	Authorized for Local Reproduction Standard Form - LLL	

DISCLOSURE OF LOBBYING ACTIVITIES  
CONTINUATION SHEET

Reporting Entity: \_\_\_\_\_ Page \_\_\_\_\_ of \_\_\_\_\_

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**CERTIFICATION REGARDING DEBARMENT, SUSPENSION,  
AND OTHER RESPONSIBILITY MATTERS  
PRIMARY COVERED TRANSACTION**

In accordance with the Code of Federal Regulations, part 49, CFR Section 29.510, the prospective primary participant \_\_\_\_\_ (Name of Authorized Agent), \_\_\_\_\_ (Title), being duly sworn (or under penalty of perjury under the laws of the United States), certifies to the best of his / her knowledge and belief, that is principals:

- a. Are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from covered transactions by any federal department or agency;
- b. Have not within a three-year period preceding this proposal been convicted of or had a civil judgment rendered against them for commission of fraud or a criminal offence in connection with obtaining, attempting to obtain, or performing a public (federal, state, or local) transaction or contract under a public transaction; violation of federal or state antitrust statutes or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, or receiving stolen property;
- c. Are not presently indicted for or otherwise criminally or civilly charged by a governmental entity (federal, state, or local) with commission of any of the offenses enumerated in paragraph (1) (b) of this certification?
- d. Have not within a three-year period preceding this application / proposal had one or more public transactions (federal, state, or local) terminated for cause of default.

Where the prospective primary participant is unable to certify to any of the statements in this certification, such prospective participant shall list exceptions below.

Exceptions will not necessarily result in denial or award, but will be considered in determining contractor responsibility. For any exception note, indicate below to whom it applies, the initiating agency, and the dates of the action. Providing false information may result in criminal prosecution or administrative sanction. If an exception is noted, the contractor must contact the Corporation to discuss the exception prior to award of the contract.

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\_\_\_\_\_  
Signature of Authorized Agent

\_\_\_\_\_  
Date

**REQUIREMENT FOR CERTIFICATION FOR NONSEGREGATED FACILITIES:**

A certification of Nonsegregated Facilities must be submitted at the time of the bid opening of a contract or subcontract exceeding Ten Thousand Dollars (\$10,000), which is not exempt from the provisions of the Equal Opportunity Clause.

Certification – The information above is true and complete to the best of my knowledge and belief.

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Name and Title of Signer *(please type)*

---

Signature

---

Date

Note: The penalty for making false statements in offers is prescribed in 18 U.S.C. 1001

**DISADVANTAGED BUSINESS ENTERPRISE UTILIZATION PLAN**

The undersigned hereby further assures that the information included herein is true and correct, and that the DBE firm(s) listed herein have agreed to perform a commercially useful function in the work items noted for each firm. The undersigned further understands that no changes to this statement may be made without prior approval from the Civil Right Staff of the Federal Aviation Administration.

1. Name of Project \_\_\_\_\_
2. Number of Project \_\_\_\_\_
3. Total Dollar Amount of Bid \_\_\_\_\_
4. Disadvantaged Business Enterprise Participation \$ Goal \_\_\_\_\_
  - a. Name of Bidder \_\_\_\_\_  
Address \_\_\_\_\_  
Phone(s) \_\_\_\_\_
  - b. If the Bidder is a Disadvantaged Business Enterprises (Contractors, suppliers, vendors), the services they will provide and the approximate amount of money they will receive. (Include joint venture partner, if applicable.)  
  
Total of listed amounts \$ \_\_\_\_\_

(Use back of sheet for additional space, if needed)

Contractor: \_\_\_\_\_

By: \_\_\_\_\_

Address: \_\_\_\_\_

Phone Number: \_\_\_\_\_ Zip Code: \_\_\_\_\_

**LETTER OF INTENT TO PERFORM  
AS A QUALIFIED DISADVANTAGED BUSINESS**

To: \_\_\_\_\_  
(Name of Contractor)

Project: \_\_\_\_\_

Reference #: \_\_\_\_\_

The undersigned intends to perform work in connection with the above project as (check one):

\_\_\_\_\_ an individual

\_\_\_\_\_ a corporation

\_\_\_\_\_ a partnership

\_\_\_\_\_ a joint venture

The undersigned certifies the company is a Disadvantaged Business Enterprise as defined by the Rhode Island Department of Administration

The undersigned is prepared to perform the following described work in connection with the above project (specify in detail work to be performed).

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Subcontractor: \_\_\_\_\_  
(Name)

Contract Amount \_\_\_\_\_

Supplier: \_\_\_\_\_  
(Name)

Contract Amount \_\_\_\_\_

The Bid Price agreed upon is: \$ \_\_\_\_\_ Dated \_\_\_\_\_

The undersigned agrees that the contract conditions above are true and accurate and will be performed by the above, who will enter into a formal agreement for the above work with you, conditioned upon your execution of a contract with

\_\_\_\_\_  
\_\_\_\_\_

Name of company, signature and title of authorized official of the company and the date must be properly executed on this document or the bid will be deemed nonresponsive.

\_\_\_\_\_  
(Date)

\_\_\_\_\_  
(Name of Disadvantaged Company)

\*As determined by \_\_\_\_\_

\_\_\_\_\_

(Signature of Authorized Official)

\_\_\_\_\_

\_\_\_\_\_

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(Title of Authorized Officer)

**DBE WAIVER FORM**

(Required for All Bids Requesting Waiver of the 9.45 % DBE Requirement)

I, \_\_\_\_\_, \_\_\_\_\_, of \_\_\_\_\_  
(Name) (Title) (Company)

certify that on \_\_\_\_\_, I contacted the following DBE Contractors to obtain a bid for work  
(date)

items to be performed on Contract Number \_\_\_\_\_.

DBE Contractor Name and Address

Work Items Sought

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

To the best of my knowledge and belief, said DBE Contractor was unavailable (exclusive of unavailability due to lack of agreement on price) for work on this project, or unable to prepare a bid for the following reason(s):

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Signature \_\_\_\_\_

Date \_\_\_\_\_

-  
This portion to be completed by DBE Contractor:

\_\_\_\_\_ was offered an opportunity to bid or make an offer on the  
above

(Name of DBE)

identified work on \_\_\_\_\_ by \_\_\_\_\_  
Date Source

The above statement is a true and accurate account of why I did not submit an offer/bid on this project.

\_\_\_\_\_  
(Signature of DBE)

\_\_\_\_\_  
(Title)

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**CONTRACTOR QUALIFICATION FORM**

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**Instructions:**

Elaboration of the following required information is necessary to ascertain your firm's capabilities to effectively execute the Project. Pursuant to the Information to Bidders of Section 1, your completion of this Contractor Qualification Form is MANDATORY and will be utilized by RIAC as a basis for determining the qualified lowest bid, and subsequent award.

**PLEASE ATTACH TO THIS FORM A COPY OF YOUR CERTIFICATE OF INSURANCE INDICATING CURRENT LIMITS.**

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Firm: _____	President: _____
Address: _____	Phone: _____
_____	Fax: _____
Federal ID#: _____ Contact: _____	Former Company Name: _____
Years performing work specialty: _____	Work Now Under Contract: \$ _____
Bank Reference: _____	Work in Place Last Year: \$ _____
Address: _____	Average Annual Sales Last 3 Years.: \$ _____
_____	Value Of Capital Equipment Owned: \$ _____
Bonding Company: _____	Bonding Agent: _____
Total Bonding Capacity: \$ _____	Address: _____
Work Currently Bonded: \$ _____	_____
Work Now Under Contract: \$ _____	
Bonding Companies Best Rating: _____	Bonding Agent's Phone: _____
Is Firm In Compliance with all EEO Requirements?: Y N	Has Firm Ever Failed To Complete A Contract?: Y N
Has Firm Ever Been Involved In Bankruptcy Or Re-organization?: Y N	Are There Any Claims Against The Firms?: Y N
Are There Any Pending Judgments Against The Firm?: Y N	

(ANSWER IS YES TO ANY OF THE ABOVE PLEASE DESCRIBE ON A SEPARATE SHEET)

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**Insurance: ("CLAIMS-MADE" GENERAL LIABILITY IS UNACCEPTABLE)**

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Submit Sample Certificate Of Insurance Showing Coverage And Limits For General Liability, Automobile Liability, Excess Umbrella Liability, And Worker's Compensation.

Experience Modification Rating: _____	Agency's Name: _____
Contact's Name: _____	Contact's Phone: _____

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**Safety:**

**Attach Log And Summary Of OSHA violations and any fines or settlements for the past 36 months**

**Attach Log And Summary Of Occupational Injuries And Illnesses As Required By the U.S. Dept. Of Labor For The Past 36 Months (OSHA Form No. 200)**

OSHA Recordable Incident Rate (Current Year): \_\_\_\_\_

OSHA Lost Days Away Incident Rate (Current Year): \_\_\_\_\_

List Four (4) Or More Most Significant Projects Completed Within The Last Five (5) Years:

Project & Location	Architect	Contract With	Contract Amount	Date Completed	Reference Contact & Phone Number

**PLEASE ATTACH ADDITIONAL SHEET IF NECESSARY**

Please list **key personnel** available for project and describe responsibilities of each:

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Total Firm Staff Employed for this project: \_\_\_\_\_

Total Staff Employed Firm-wide: \_\_\_\_\_

Please list **key equipment** available for project and whether Firm owns or leases equipment:

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List Three (3) Or More Most Significant Projects Presently Under Construction:

Project & Location	Architect	Contract With	Contract Amount	Date Completed	Reference Contact & Phone Number

**PLEASE ATTACH ADDITIONAL SHEET IF NECESSARY**

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**THE APPARENT LOW BIDDER SHALL PROVIDE A COPY OF THEIR COMPANY'S FINANCIAL STATEMENT, CERTIFIED BY PUBLIC ACCOUNTANT, WITHIN 5 DAYS OF REQUEST BY RIAC.**

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**AS APPLICABLE, SUBMIT EVIDENCE THAT BIDDER IS PREQUALIFIED WITH RIDOT FOR RELATED WORK AND IS ON THE CURRENT "BIDDER'S LIST" OF RIDOT.**

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This Form **MUST** Be Signed By An Officer Of The Firm Or An Individual So Authorized By An Officer Of The Firm.

Signature: \_\_\_\_\_

Name: \_\_\_\_\_

Title: \_\_\_\_\_

PROJECT SUBCONTRACTORS

The Bidder advises herein that the following Subcontractors are proposed for the item of work listed. Subcontractors are subject to review and approval per the requirements of the Contract Documents and the technical requirements specified. List only firms that will supply labor at the site. Failure to provide this information may result in the bid being considered non-responsive.

SUBCONTRACTOR	DBE (Y/N)	TRADE	CONTRACT WORK ITEM TO BE PERFORMED	VALUE (\$)
1. _____				
2. _____				
3. _____				
4. _____				
5. _____				
6. _____				
7. _____				
8. _____				
9. _____				
10. _____				

RESPECTFULLY SUBMITTED:

\_\_\_\_\_  
(Company)

By: \_\_\_\_\_

Title: \_\_\_\_\_

Date: \_\_\_\_\_

CERTIFICATION OF COMPLIANCE WITH FEDERALLY REQUIRED CONTRACT  
REQUIREMENTS

The bidder/offeror certifies, by submission of this proposal or acceptance of this, that he/she has read the federally mandated contract requirements as listed in Section 00 0950, Federal Contract Conditions and Section 00 0960, Executive Orders and that compliance with said references will be incorporated into the terms of the Contract documents.

I hereby certify that I have read and will comply with all of the above requirements.

\_\_\_\_\_  
Signature of Authorized Contractor and/or Consultant Representative

\_\_\_\_\_  
Date

**BUY AMERICAN – CERTIFICATE (JAN 1991)**

By submitting a bid/proposal under this solicitation, except for those items listed by the offeror below or on a separate and clearly identified attachment to this bid/proposal, the offeror certifies that steel, and each manufactured product, is produced in the United States (as defined in the clause Buy American – Steel and Manufactured Products or Buy American – Steel and Manufactured Products for Construction Contracts), and that the components of unknown origin are considered to have been produced or manufactured outside the United States.

Offerors may obtain from the Rhode Island Airport Corporation lists of articles, materials, and supplies excepted from this provision.

PRODUCT

COUNTRY OF ORIGIN

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Signature of Authorized Contractor and/or Consultant Representative

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Date

EQUAL EMPLOYMENT OPPROTUNITY REPORT STATEMENT  
As Required by 41 CFR 60-1.7(b)

The Bidder (proposer) shall complete the following statement by checking the appropriate boxes. Failure to complete these blanks may be grounds for rejection of bids.

1. The Bidder (proposer) has \_\_\_\_\_ has not \_\_\_\_\_ developed and has on file at each establishment Affirmative Action Programs pursuant to 41 CFR 60-1.4 and 41 CFR.
2. The Bidder (proposer) has \_\_\_\_\_ has not \_\_\_\_\_ participated in any previous contract or subcontract subject to the Equal Opportunity Clause prescribed by Executive Order 11246, as amended.
3. The Bidder (proposer) has \_\_\_\_\_ has not \_\_\_\_\_ filed with the Joint Reporting Committee the annual compliance report on Standard Form 100 (EEO-1 Report).
4. The Bidder (proposer) does \_\_\_\_\_ does not \_\_\_\_\_ employ fifty (50) or more employees.

\_\_\_\_\_  
(Name of Bidder)

BY: \_\_\_\_\_  
(Signature)

TITLE: \_\_\_\_\_

DATE: \_\_\_\_\_

BID BOND

**CONTRACTOR (Principal):** \_\_\_\_\_ **TYPE**  
*(Legal name and business address)* \_\_\_\_\_  Individual  
\_\_\_\_\_  Partnership  
\_\_\_\_\_  Joint Venture  
\_\_\_\_\_  Corporation

**OWNER:** Rhode Island Airport Corporation    **SURETY:** *(Name, legal status & principal place of business)*  
2000 Post Road  
Warwick, RI 02886  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**PROJECT:**    **Phase 1 - Runway 16 End Safety Area and NAVAID Improvements**  
**T. F. Green State Airport**  
**Warwick, Rhode Island**  
**RIAC Construction Contract No. 24854**  
**AIP No. 3-44-0003-xx-2013**

**BID DATE:**    **April 11, 2013**

**BOND AMOUNT:** \_\_\_\_\_  
*(Penal sum of bond)*

The Contractor and the Surety are bound to the Owner in the amount set forth above, for the payment of which the Contractor and Surety bind themselves, their heirs, executors, administrators, successors and assigns, jointly and severally, as provided herein. The conditions of this Bond are such that if the Owner accepts the bid of the Contractor within the specified time in the Bid Documents, or within such time period as may be agreed to by the Owner and Contractor, and the Contractor either (1) enters into a contract with the Owner in accordance with the terms of such bid, and gives such bond or bonds as may be specified in the bidding or Contract Documents, with the surety admitted in the jurisdiction of the Project and otherwise acceptable to the Owner, for the faithful performance of such Contract and the prompt payment of labor and materials furnished in the prosecution thereof; or (2) pays the Owner the amount difference, not to exceed the amount of the Bond, between the amount specified in said Bid and such larger amount for which the Owner may in good faith contract with another party to perform the work covered by said Bid, then this obligation shall be null and void, otherwise to remain in full force and effect. The Surety hereby waives any notice of agreement between the Owner and Contractor to extend the time in which the Owner may accept the bid. Waiver of notice by the Surety shall not apply to any extension exceeding one hundred eighty (180) days in aggregate beyond the time for acceptance of bids specified in the bid documents, and the Owner and Contractor shall obtain the Surety's consent for an extension beyond one hundred eighty (180) days.

If this Bond is issued in connection with the subcontractor's bid to a Contractor, the term Contractor in this Bond shall be deemed to be Subcontractor and the Owner shall be deemed to be the Contractor.

When this Bond has been furnished to comply with a statutory or other legal requirement in the location of the Project, any provisions in this Bond conflicting with said statutory or legal requirements shall be deemed deleted herefrom and provisions conforming to such statutory or other legal requirement shall be

deemed to be incorporated herein. When so furnished, the intent is that this Bond shall be construed as a statutory bond and not a common law bond.

WITNESS WHEREOF, the Principal and Surety have hereunto caused this Bond to be duly executed and acknowledged by their appropriate officials as set forth below this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_.

PRINCIPAL *(If Individual, Joint Venture or Partnership)*

\_\_\_\_\_  
*(Firm Name)*

ATTEST:

\_\_\_\_\_

*(SEAL)*

By: \_\_\_\_\_

\_\_\_\_\_  
*Title (Individual or Partner)*

PRINCIPAL *(If Corporation)*

\_\_\_\_\_  
*(Corporate Name)*

By: \_\_\_\_\_

*(President)*

Attest: \_\_\_\_\_

*(Secretary)*

*(Impress Corporate Seal)*

COUNTERSIGNED BY  
RESIDENT RHODE ISLAND  
AGENT OF SURETY:

SURETY:

\_\_\_\_\_  
*(Copy of Agent's current license  
as issued by State of Rhode Island  
Insurance Commissioner)*

*(Impress Corporate Seal)*

By: \_\_\_\_\_

*Attorney-In-Fact  
(Power of Attorney Must Be Attached)*

**END OF PROPOSAL FORMS**

**BID FORM – Addendum #1 – 04/05/2013**

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**Section 00 0320 - Page 1 of 34**

To: Rhode Island Airport Corporation  
T. F. Green State Airport  
2000 Post Road  
Warwick, Rhode Island, 02886  
ATTN: Laurie Sirois  
Grants and Contracts Administrator

Date: \_\_\_\_\_

Time: \_\_\_\_\_

For: **Phase 1 - Runway 16 End Safety Area and NAVAID Improvements**  
**T. F. Green State Airport**  
**RIAC Construction Contract No. 24854**

The undersigned, having visited the site of the work and having familiarized themselves with local conditions affecting the cost of the work and with all requirements of the proposed Contract Documents, and duly issued Addenda to said documents, as acknowledged herein, propose to furnish and perform all labor, materials, necessary tools, expendable equipment, and all utility and transportation services necessary to perform and complete in a workmanlike manner all work required by said documents and Addenda.

ADDENDA: Bidder acknowledges receipt of and has examined the Addenda:

Addendum Number \_\_\_\_\_ dated \_\_\_\_\_

Addendum Number \_\_\_\_\_ dated \_\_\_\_\_

Acknowledged by \_\_\_\_\_ date \_\_\_\_\_

BID PROPOSAL: This Proposal shall be filled in by the BIDDER with prices written in both words and numerals and the extensions made by him/her. In case of discrepancy between the words and numerals, the amounts shown in words shall govern.

BIDDER agrees to perform all necessary labor, furnish all materials and do all work described in the Specifications, including allowances, and shown on the Drawings, for the following lump sum prices and/or unit process:

Runway 16-34 Improvement Program  
Phase 1 – Runway 16 End RSA & NAVAID Improvements  
T. F. Green State Airport  
Warwick, Rhode Island  
RIAC Contract No.: 24584

**BID FORM – Addendum #1 – 04/05/2013**

**Section 00 0320 - Page 2 of 34**

<p style="text-align: center;"><b>Rhode Island Airport Corporation</b>  <b>Phase 1 - Runway 16 End Safety Area and NAVAID Improvements</b>  <b>T. F. Green State Airport</b>  <b>Warwick, Rhode Island</b>  <b>RIAC Construction Contract No. 24854</b>  <b>SCHEDULE OF PRICES</b>  <b>BASE BID</b></p>							
Item No.	Pay Item No.	Estimated Quantity	Item of Work With Unit Prices Written in Words	Figures			
				Unit Bid Price		Bid Amount	
				Dollars	Cents	Dollars	Cents
1	P-102-1	4,500 SY	Bituminous Concrete Milling (0 – 4") at _____ Dollars & Cents per Square Yard				
2	P-102-2	2,500 CY	Pavement Removal at _____ Dollars & Cents per Cubic Yard				
3	P-102-3	1,250 LF	Saw Cut Pavement at _____ Dollars & Cents per Linear Foot				
4	P-102-4	900 LF	Saw and Seal Joint at _____ Dollars & Cents per Linear Foot				
5	P-151-1	1 LS	Clearing & Grubbing at _____ Dollars & Cents per Lump Sum				
6	P-152-1	13,000 CY	Unclassified Excavation at _____ Dollars & Cents per Cubic Yard				
7	P-152-2	490 LF	Removal of Existing Blast Wall at _____ Dollars & Cents per Linear Foot				
8	P-152-3	1 LS	Removal of Sewer Structure at _____ Dollars & Cents per Lump Sum				
9	P-153-1	4 CY	Controlled Low Strength Material at _____ Dollars & Cents per Cubic Yard				
10	P-154-1	2,900 CY	Subbase Course (P-154) at _____ Dollars & Cents per Cubic Yard				
11	P-156-1	700 LF	Erosion Control Wattle at _____ Dollars & Cents per Linear Feet				

**BID FORM – Addendum #1 – 04/05/2013**

<b>Rhode Island Airport Corporation</b> <b>Phase 1 - Runway 16 End Safety Area and NAVAID Improvements</b> <b>T. F. Green State Airport</b> <b>Warwick, Rhode Island</b> <b>RIAC Construction Contract No. 24854</b> <b>SCHEDULE OF PRICES</b> <b>BASE BID</b>							
Item No.	Pay Item No.	Estimated Quantity	Item of Work With Unit Prices Written in Words	Figures			
				Unit Bid Price		Bid Amount	
				Dollars	Cents	Dollars	Cents
12	P-156-2	8 EA	Inlet Protection/Catch Basin Filter Bag at _____ Dollars & Cents per Each				
13	P-156-3	9 EA	Inlet Protection/Catch Basin Filter Bag & Wattle at _____ Dollars & Cents per Each				
14	P-209-1	1,230 CY	Crushed Aggregate Base Course (P-209) at _____ Dollars & Cents per Cubic Yard				
15	M-301-1	205 CY	RIDOT Aggregate or Gravel Base Course at _____ Dollars & Cents per Cubic Yard				
16	P-401-1	3,340 Ton	Surface Course Pavement (P-401) at _____ Dollars & Cents per Ton				
17	P-401-2	300 Ton	Base Course Pavement (P-401) at _____ Dollars & Cents per Ton				
18	P-555-1	1 LS	EMAS Bed Installation at _____ Dollars & Cents per Lump Sum				
19	P-556-1	1 LS	Concrete Anchor Beam Installation at _____ Dollars & Cents per Lump Sum				
20	P-602-1	2,400 Gal	Bituminous Prime Coat at _____ Dollars & Cents per Gallon				
21	P-603-1	2,800 Gal	Bituminous Tack Coat at _____ Dollars & Cents per Gallon				
22	P-620-1	<b>23,500</b> SF	Pavement Markings - Paint at _____ Dollars & Cents per Square Foot				

Runway 16-34 Improvement Program  
Phase 1 – Runway 16 End RSA & NAVAID Improvements  
T. F. Green State Airport  
Warwick, Rhode Island  
RIAC Contract No.: 24584

**BID FORM – Addendum #1 – 04/05/2013**

**Section 00 0320 - Page 4 of 34**

<p align="center"><b>Rhode Island Airport Corporation</b>  <b>Phase 1 - Runway 16 End Safety Area and NAVAID Improvements</b>  <b>T. F. Green State Airport</b>  <b>Warwick, Rhode Island</b>  <b>RIAC Construction Contract No. 24854</b>  <b>SCHEDULE OF PRICES</b>  <b>BASE BID</b></p>							
Item No.	Pay Item No.	Estimated Quantity	Item of Work With Unit Prices Written in Words	Figures			
				Unit Bid Price		Bid Amount	
				Dollars	Cents	Dollars	Cents
23	P-620-2	2,500 SF	Pavement Markings - Thermoplastic at _____ Dollars & Cents per Square Foot				
24	P-620-3	12,100 SF	Removal of Existing Pavement Markings at _____ Dollars & Cents per Square Foot				
25	P-621-1	280 SY	Runway Pavement Grooving at _____ Dollars & Cents per Square Yard				
26	D-701-1	50 LF	Ductile Iron Pipe, 8" Diameter – Class 52 at _____ Dollars & Cents per Linear Foot				
27	D-701-2	190 LF	Remove Existing Storm Drain Pipe at _____ Dollars & Cents per Linear Foot				
28	D-751-1	2 EA	Heavy Duty Drainage Structure at _____ Dollars & Cents per Each				
29	D-751-2	3 EA	Alter Existing Drainage Structure at _____ Dollars & Cents per Each				
30	D-751-3	6 EA	Remove Existing Drainage Structure at _____ Dollars & Cents per Each				
31	D-751-4	7 EA	Heavy Duty Electrical Manhole at _____ Dollars & Cents per Each				
32	D-751-5	5 EA	Remove Existing Electrical Manhole at _____ Dollars & Cents per Each				
33	F-162-1	800 LF	Temporary Fence – 8' Chain Link Fence w/ Barb Wire at _____ Dollars & Cents per Linear Foot				

**BID FORM – Addendum #1 – 04/05/2013**

**Section 00 0320 - Page 5 of 34**

<b>Rhode Island Airport Corporation</b> <b>Phase 1 - Runway 16 End Safety Area and NAVAID Improvements</b> <b>T. F. Green State Airport</b> <b>Warwick, Rhode Island</b> <b>RIAC Construction Contract No. 24854</b> <b>SCHEDULE OF PRICES</b> <b>BASE BID</b>							
Item No.	Pay Item No.	Estimated Quantity	Item of Work With Unit Prices Written in Words	Figures			
				Unit Bid Price		Bid Amount	
				Dollars	Cents	Dollars	Cents
34	F-162-2	1150 LF	Temporary Fence – 8’ Barrier & Chain Link w/ Barb Wire at _____ Dollars & Cents per Linear Foot				
35	F-162-3	525 LF	New Fence – 8’ Chain Link w/ Barb Wire at _____ Dollars & Cents per Linear Foot				
36	F-162-4	525 LF	Remove Existing Fence, Gate & Foundations at _____ Dollars & Cents per Linear Foot				
37	F-170-1	250 LF	Install Blast Fence at _____ Dollars & Cents per Linear Foot				
38	T-901-1	25,200 SY	Hydroseeding at _____ Dollars & Cents per Square Yard				
39	T-905-1	21,200 SY	Topsoil – Borrow (min. 4” Depth) at _____ Dollars & Cents per Square Yard				
40	L-108-1A	1 AL	Trace & Identify Cables at <u>Fifteen Thousand</u> Dollars & No Cents per Allowance	<b>\$15,000</b>	<b>00</b>	<b>\$15,000</b>	<b>00</b>
41	L-108-1B	1 AL	Connection to Existing Duct Bank at <u>Twenty-five Thousand</u> Dollars & No Cents per Allowance	<b>\$25,000</b>	<b>00</b>	<b>\$25,000</b>	<b>00</b>
42	L-108-2	5,000 LF	1/C No. 6 AWG (L-824C) 5 kV Cable in Conduit/Duct at _____ Dollars & Cents per Linear Foot				
43	L-108-3	25,800 LF	1/C No. 8 AWG (L-824C) 5 kV Cable in Conduit/Duct at _____ Dollars & Cents per Linear Foot				

Runway 16-34 Improvement Program  
Phase 1 – Runway 16 End RSA & NAVAID Improvements  
T. F. Green State Airport  
Warwick, Rhode Island  
RIAC Contract No.: 24584

**BID FORM – Addendum #1 – 04/05/2013**

**Section 00 0320 - Page 6 of 34**

<p style="text-align: center;"><b>Rhode Island Airport Corporation</b>  <b>Phase 1 - Runway 16 End Safety Area and NAVAID Improvements</b>  <b>T. F. Green State Airport</b>  <b>Warwick, Rhode Island</b>  <b>RIAC Construction Contract No. 24854</b>  <b>SCHEDULE OF PRICES</b>  <b>BASE BID</b></p>							
Item No.	Pay Item No.	Estimated Quantity	Item of Work With Unit Prices Written in Words	Figures			
				Unit Bid Price		Bid Amount	
				Dollars	Cents	Dollars	Cents
44	L-108-4	3,700 LF	No. 6 AWG, Bare Counterpoise installed in Trench including Ground Rods & Connectors  at _____ Dollars & Cents per Linear Foot				
45	L-108-5	2,200 LF	No.4 AWG, Insulated 600V Wire Installed in Conduit/Duct  at _____ Dollars & Cents per Linear Foot				
46	L-108-6	1,100 LF	No. 8G AWG, Insulated 600V Wire Installed in Conduit/Duct  at _____ Dollars & Cents per Linear Foot				
47	L-108-7	2,500 LF	No. 10 AWG, Multi-conductor (3) (PAPI-REIL 16) Control Cable  at _____ Dollars & Cents per Linear Foot				
48	L-108-8	3,700 LF	No.10G AWG, Insulated 600V Wire Installed in Conduit/Duct  at _____ Dollars & Cents per Linear Foot				
49	L-108-9	900 LF	No. 12 AWG, 2-Conductor w/ #12G 600V Insulated – UF Type Cable  at _____ Dollars & Cents per Linear Foot				
50	L-108-10	600 LF	No. 12 AWG, Insulated 600V Wire Installed in Conduit/Duct  at _____ Dollars & Cents per Linear Foot				
51	L-108-11	300 LF	No. 12G AWG, Insulated 600V Wire Installed in Conduit/Duct  at _____ Dollars & Cents per Linear Foot				

**BID FORM – Addendum #1 – 04/05/2013**

<b>Rhode Island Airport Corporation</b> <b>Phase 1 - Runway 16 End Safety Area and NAVAID Improvements</b> <b>T. F. Green State Airport</b> <b>Warwick, Rhode Island</b> <b>RIAC Construction Contract No. 24854</b> <b>SCHEDULE OF PRICES</b> <b>BASE BID</b>							
Item No.	Pay Item No.	Estimated Quantity	Item of Work With Unit Prices Written in Words	Figures			
				Unit Bid Price		Bid Amount	
				Dollars	Cents	Dollars	Cents
52	L-108-12	1,800 LF	No. 14 AWG, Unshielded 600V Twisted Conductor Installed in Conduit/Duct at _____ Dollars & Cents per Linear Foot				
53	L-108-13	3,500 LF	12-Strand, Single Mode (SM) BerkTek Fiber Optic Cable at _____ Dollars & Cents per Linear Foot				
54	L-108-14	49,100 LF	Remove Existing Cable in Conduit or Duct at _____ Dollars & Cents per Linear Foot				
55	L-108-15	6,600 LF	Remove Existing Direct Bury Cabling at _____ Dollars & Cents per Linear Foot				
56	L-109-1	1 LS	Installation of Airfield Vault Equipment in Place at _____ Dollars & Cents per Lump Sum				
57	L-110-1	550 LF	Concrete Encased Duct Bank 8-Way with 4" Conduits at _____ Dollars & Cents per Linear Foot				
58	L-110-2	70 LF	Concrete Encased Duct Bank 9-Way with 3" Conduits at _____ Dollars & Cents per Linear Foot				
59	L-110-3	300 LF	Conduit – Type II Sch. 40 PVC, 1"-Mounted at _____ Dollars & Cents per Linear Feet				
60	L-110-4	3300 LF	Conduit – Type I Sch. 40 PVC, 2" at _____ Dollars & Cents per Linear Feet				

Runway 16-34 Improvement Program  
Phase 1 – Runway 16 End RSA & NAVAID Improvements  
T. F. Green State Airport  
Warwick, Rhode Island  
RIAC Contract No.: 24584

**BID FORM – Addendum #1 – 04/05/2013**

**Section 00 0320 - Page 8 of 34**

<p align="center"><b>Rhode Island Airport Corporation</b>  <b>Phase 1 - Runway 16 End Safety Area and NAVAID Improvements</b>  <b>T. F. Green State Airport</b>  <b>Warwick, Rhode Island</b>  <b>RIAC Construction Contract No. 24854</b>  <b>SCHEDULE OF PRICES</b>  <b>BASE BID</b></p>							
Item No.	Pay Item No.	Estimated Quantity	Item of Work With Unit Prices Written in Words	Figures			
				Unit Bid Price		Bid Amount	
				Dollars	Cents	Dollars	Cents
61	L-110-5	120 LF	Conduit – Type I Sch. 40 PVC, 2”- Concrete Encased at _____ Dollars & Cents per Linear Feet				
62	L-110-6	6 EA	Cable/Conduit/Duct Marker at _____ Dollars & Cents per Each				
63	L-110-7	225 LF	Removal of Electrical Conduit at _____ Dollars & Cents per Linear Foot				
64	L-110-8	1,100 LF	Removal of Electrical Duct Bank at _____ Dollars & Cents per Linear Foot				
65	L-119-1	2 EA	Obstruction Light - Double Fixture at _____ Dollars & Cents per Each				
66	L-119-2	1 EA	Obstruction Light – Single Fixture at _____ Dollars & Cents per Each				
67	L-119-3	1 EA	Obstruction Light – Photocell Controller at _____ Dollars & Cents per Each				
68	L-125-1	1 EA	In-Pavement Runway Edge Light at _____ Dollars & Cents per Each				
69	L-125-2	18 EA	Junction Can with Solid Cover at _____ Dollars & Cents per Each				
70	L-125-3	1 EA	New Airfield Guidance Sign at _____ Dollars & Cents per Each				
71	L-125-4	2 EA	Relocate Airfield Guidance Sign at _____ Dollars & Cents per Each				

**BID FORM – Addendum #1 – 04/05/2013**

<b>Rhode Island Airport Corporation</b> <b>Phase 1 - Runway 16 End Safety Area and NAVAID Improvements</b> <b>T. F. Green State Airport</b> <b>Warwick, Rhode Island</b> <b>RIAC Construction Contract No. 24854</b> <b>SCHEDULE OF PRICES</b> <b>BASE BID</b>							
Item No.	Pay Item No.	Estimated Quantity	Item of Work With Unit Prices Written in Words	Figures			
				Unit Bid Price		Bid Amount	
				Dollars	Cents	Dollars	Cents
72	L-125-5	1 EA	Pavement Sensor at _____ Dollars & Cents per Each				
73	L-125-6	1 EA	Remove Existing Runway Edge Light at _____ Dollars & Cents per Each				
74	L-125-7	9 EA	Remove Existing Junction Can at _____ Dollars & Cents per Each				
75	L-126-1	1 SET	Install New Runway End Indicator Lights (REIL) at _____ Dollars & Cents per Set				
76	L-126-2	1 SET	Remove Existing Runway End Indicator Lights( REIL) at _____ Dollars & Cents per Set				
77	L-127-1	1 SET	Install New Precision Approach Path Indicator (PAPI) at _____ Dollars & Cents per Set				
78	L-127-2	2 SET	Remove Existing Visual Approach Slope Indicator (VASI) at _____ Dollars & Cents per Set				
79	L-853-1	14 EA	Retroreflective Edge Marker - Taxiway at _____ Dollars & Cents per Each				
80	L-853-2	8 EA	Retroreflective Edge Marker - Roadway at _____ Dollars & Cents per Each				
81	M-001-1	6 MO	Field Office at _____ Dollars & Cents per Month				
82	M-001-2	1 AL	Safety Barricades, Cones, Lights & Signs at <u>Forty thousand</u> Dollars & Cents per Allowance	\$40,000	00	\$40,000	00

Runway 16-34 Improvement Program  
 Phase 1 – Runway 16 End RSA & NAVAID Improvements  
 T. F. Green State Airport  
 Warwick, Rhode Island  
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<b>Rhode Island Airport Corporation</b> <b>Phase 1 - Runway 16 End Safety Area and NAVAID Improvements</b> <b>T. F. Green State Airport</b> <b>Warwick, Rhode Island</b> <b>RIAC Construction Contract No. 24854</b> <b>SCHEDULE OF PRICES</b> <b>BASE BID</b>							
Item No.	Pay Item No.	Estimated Quantity	Item of Work With Unit Prices Written in Words	Figures			
				Unit Bid Price		Bid Amount	
				Dollars	Cents	Dollars	Cents
83	M-001-3	1 AL	Temporary VSR/Haul Road at <u>Twenty thousand</u> Dollars & Cents per Allowance	\$20,000	00	\$20,000	00
84	M-002-1	2,300 LF	Clean Drain Lines at _____ Dollars & Cents per Linear Foot				
85	M-002-1	20 EA	Clean Drain Structures at _____ Dollars & Cents per Each				
86	M-003-1	9,000 CF	Drainage Infiltration System at _____ Dollars & Cents per Cubic Foot				
PLEASE MAKE SURE A BID IS ENTERED FOR EACH ITEM _____ (Amount in Figures)							
ESTIMATED TOTAL CONTRACT PRICE FOR BASE BID IS: _____ (Amount in Words)							

**BID PROPOSAL:** Bidder agrees to perform all of the work described in the Contract Documents, including allowances, for the sum of:

\_\_\_\_\_ \$ \_\_\_\_\_  
 (words [shall govern]) (figures)

LIQUIDATED DAMAGES: Upon execution of the contract, the Contractor shall proceed with the preparation and submittal of shop drawings and his tentative construction schedule and with subsequent ordering and fabricating of materials. The Owner will issue a written “Notice-to-Proceed” which will specify an effective date for the Contractor to begin work at the site for both construction seasons. The contract work shall complete the Construction Season 2013 work within **one hundred twenty (120) calendar days** from the date of issuance of the first Notice to Proceed to meet the interim date for a winter shutdown. The contract work shall be complete the Construction Season 2014 work within **sixty (60) calendar days** from the date of issuance of the second Notice to Proceed.

Should work continue beyond time specified above, and no time extension has been granted via the Change Order process, then liquidate damages will be assessed to the Contractor for each and every calendar day the work remains uncompleted.

Liquidated damages for this project shall be **One Thousand-Five Hundred Dollars (\$1,500.00)** per calendar day for Contractor’s failure to complete any key milestone by its intermediate completion date or the Substantial Completion date. Refer to Section 00 0800, Summary of Work and Special Conditions.

The undersigned affirms that in making such bid, neither he or she nor any company that they may represent, nor anyone in behalf of him or her or their company, directly or indirectly, has entered into any combination, collusion, undertaking or agreement with any other bidder or bidders to maintain the prices of said work, or any compact to prevent any other bidder or bidders from bidding on said Contract or work and further affirms that such bid is made without regard or reference to any other bidder or proposer and without any agreement or understanding or combination either directly or indirectly with any other person or persons with reference to such bidding in any way or manner whatsoever.

The undersigned further agrees that if awarded the Contract he or she will commence the work within **ten (10)** calendar days after the date of the Notice to Proceed and that he or she will complete the work in accordance with the Summary Schedule and Key Milestones and Substantial Completion date set forth in the Bidding and Contract Documents or such amended date as may be granted. If the undersigned fails to complete the work as provided in the aforementioned schedule, then and in that event, he or she further expressly agrees that, for each day that any phase of work under this Contract remains uncompleted thereafter the Owner may deduct from the Contract price herein specified the stipulated sum of liquidated damages as provided in the Special Provisions and retain that sum for failure of the undersigned to complete this Contract on or before the expiration of the period shown in the completion schedule.

In submitting this bid, it is understood that the right is reserved by the Owner to waive any informality or irregularity in any bid or bid guaranty, to reject any and all bids, to re-bid, to award or refrain from awarding a contract for the work and to negotiate with the apparent qualified low responsive bidder to such extent as may be beneficial to the Owner.

*The undersigned attaches hereto a cashier’s check, certified check or Bid Bond in the sum of*  
*Dollars*  
*(\$ \_\_\_\_\_), payable to the Rhode Island Airport Corporation, as required in the Information*  
*to Bidders, and the undersigned agrees that in case he or she fails within five (5) calendar days after*

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*Notice of Intent to Award the Contract to him to enter into a Contract Agreement in writing and furnish* the required Payment and Performance Bonds, with surety or sureties to be approved by Owner, and insurance policies or endorsements, the Owner may, as its option, determine that the undersigned has abandoned his rights and interest in such bid and that the cashier’s check, certified check, or Bid Bond accompanying his or her bid has been forfeited. Otherwise, the cashier’s check, certified check, or Bid Bond shall be returned to the undersigned upon the execution of the Contract and acceptance of the bonds and insurance, or upon rejection of his or her bid.

A bid shall be considered unresponsive and shall be rejected if it fails to include fully executed statements or if the Bidder fails to furnish required data. When a determination has been made to award the Contract to a specific Contractor, such Contractor shall, prior to award, furnish such other pertinent information regarding his or her own employment policies and practices as well as those of his or her proposed Subcontractors as the Owner may require.

The bidder shall furnish similar statements executed by each of his or her first-tier and second-tier Subcontractors whose contracts equal Ten Thousand Dollars (\$10,000.00) or more and shall obtain similar compliance by such Subcontractors before awarding such Subcontractors. No subcontract shall be awarded to any non-complying Subcontractor.

The undersigned affirms that he or she has completed all of the blank spaces in the “Bid Form”, with an amount in words and numbers and agrees that where a discrepancy occurs between the prices quoted in words and/or in numbers the words shall take precedence and govern when determining final costs or award of Contract.

The undersigned affirms that wages not less than the minimum rates or wages, as predetermined for this project by the State of Rhode Island were used in the preparation of this “Bid Form”.

**SIGNATURE OF BIDDER**

Signed: \_\_\_\_\_

By: \_\_\_\_\_

Title: \_\_\_\_\_

Date: \_\_\_\_\_

This proposal includes Addendum Numbers(s) \_\_\_\_\_  
(Fill in numbers(s) if Addendum(s) are issued).

Address of permanent place of business to which Notice-to-Proceed should be sent:

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

\*Important: Execute acknowledgment of officer or agent who signs this document (use proper form below):

**ACKNOWLEDGMENT OF PRINCIPAL, IF A CORPORATION:**

State of: ( \_\_\_\_\_ )

County of: ( \_\_\_\_\_ )§

On this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_, before me personally came and appeared \_\_\_\_\_ to me Known, who, being by me duly sworn, did depose and say to me that he resides at \_\_\_\_\_, that he/she is the \_\_\_\_\_ of \_\_\_\_\_ the corporation described in and which executed the foregoing instrument is an impression of such seal; that it was so affixed by the order of the directors of said corporation, and that he signed his name thereto by like order.

(Seal) \_\_\_\_\_  
Notary Public

**ACKNOWLEDGMENT OF PRINCIPAL, IF A PARTNERSHIP:**

State of ( \_\_\_\_\_ )

County of ( \_\_\_\_\_ )§

On this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_, before me personally came and appeared \_\_\_\_\_ to me known and known to me to described in and who executed the foregoing instrument and he acknowledged to me that he executed the same as and for the act and deed of said firm.

(Seal) \_\_\_\_\_  
Notary Public

Runway 16-34 Improvement Program  
Phase 1 – Runway 16 End RSA & NAVAID Improvements  
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**ACKNOWLEDGMENT OF PRINCIPAL, IF AN INDIVIDUAL:**

State of (\_\_\_\_\_)

County of (\_\_\_\_\_)§

On this \_\_\_\_\_ day of \_\_\_\_\_ 20\_\_\_\_\_, before me  
personally came and appeared \_\_\_\_\_ to me known and known to me  
to be the person described in and who executed the forgoing instrument and acknowledged that  
he executed the same.

(Seal)

\_\_\_\_\_  
Notary Public

**ANTI-COLLUSION CERTIFICATE FOR CONTRACT AND FORCE ACCOUNT**

(SWORN AFFIDAVIT) Title 23, United States Code, Section 112(c), requires, as a condition precedent to approval by the Rhode Island Airport Corporation (RIAC) of the contract for this work, that there be filed a sworn statement executed by, on behalf of, the person, firm, association, or corporation to whom such contract is to be awarded, certifying that such person, firm, association, or corporation has not, either directly or indirectly, entered into any agreement, participated in any collusion, or otherwise taken any action in restraint of free competitive bidding in connection with such contract. This sworn statement shall be in the form of an affidavit executed and sworn to be the successful bidder before a person who is authorized by the Laws of this State to administer oaths.

The person, firm, association, or corporation submitting the bid (under 23 U.S.C. 112(c)) has the option to sign either:

- a. the sworn affidavit executed and sworn to by the bidder before a person who is authorized by the laws of the State to administer oaths; or
- b. the unsworn declaration executed under penalty of perjury under the laws of the United States (as allowed by 28 U.S.C. 1746).

A bidder will not be considered for award of contract under this invitation for bids unless such bidder completes either the unsworn declaration (as stated on the following page) or the sworn affidavit as prescribed below:

**PLEASE NOTE: CONTRACTOR TO COMPLETE ONLY ONE (1) CERTIFICATION STATEMENT. DO NOT SIGN BOTH STATEMENTS.**

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**ANTI-COLLUSION CERTIFICATE FOR CONTRACT AND FORCE ACCOUNT  
(SWORN AFFIDAVIT)**

To the: RHODE ISLAND AIRPORT CORPORATION

State of \_\_\_\_\_

County of \_\_\_\_\_ §

I, \_\_\_\_\_ (name of party signing affidavit)

\_\_\_\_\_ (title), being duly sworn, do

depose and say: on behalf of \_\_\_\_\_ that said Contractor has not, either directly or indirectly, entered into any agreement, participated in collusion, or otherwise taken any action in restraint of free competitive bidding in connection with Rhode Island Airport Corporation Construction Contract Number **24854**, Airport Improvement Program Project Number **3-44-0003-xx-2013**

County of \_\_\_\_\_

Town/City \_\_\_\_\_

\_\_\_\_\_  
Contractor

\_\_\_\_\_  
Signature

Sworn to before me this \_\_\_\_\_ day of \_\_\_\_\_ 20\_\_\_\_\_

My commission expires \_\_\_\_\_  
\_\_\_\_\_  
Signature and Seal of Notary Public

**ANTI-COLLUSION CERTIFICATE FOR CONTRACT AND FORCE ACCOUNT  
(UNSWORN AFFIDAVIT)**

Title 23, United States Code, Section 112(c), requires, as a condition precedent to approval by the Rhode Island Airport Corporation (RIAC) of the contract for this work, that there be filed a unsworn declaration executed by, on behalf of, the person, firm, association, or corporation submitting the bid, certifying that such person, firm, association, or corporation has not, either directly or indirectly, entered into any agreement, participated in any collusion, or otherwise taken any action in restraint of free competitive bidding in connection with submitted bid. This unsworn statement shall be in the form of a declaration executed under penalty of perjury under the laws of the United States.

The person, firm, association, or corporation submitting the bid (under 23 U.S.C. 112(c)) has the option to sign either:

- a. the sworn affidavit executed and sworn to by the bidder before a person who is authorized by the laws of the State to administer oaths; or
- b. the unsworn declaration executed under penalty of perjury under the laws of the United States (as allowed by 28 U.S.C. 1746).

A bidder will not be considered for award of contract under this invitation for bids unless such bidder completes either the sworn affidavit (as stated on the previous page) or the unsworn declaration as prescribed below:

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Phase 1 – Runway 16 End RSA & NAVAID Improvements  
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Warwick, Rhode Island  
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**ANTI-COLLUSION CERTIFICATE FOR CONTRACT AND FORCE ACCOUNT  
(UNSWORN AFFIDAVIT)**

To the: RHODE ISLAND AIRPORT CORPORATION

State of \_\_\_\_\_

County of \_\_\_\_\_ §

I, \_\_\_\_\_ (name of party signing affidavit)

\_\_\_\_\_ (title), under penalty of perjury

under the laws of the United States, do depose and say: on behalf of \_\_\_\_\_  
that said Contractor has not, either directly or indirectly, entered into any agreement, participated in  
collusion, or otherwise taken any action in restraint of free competitive bidding in connection with  
Rhode Island Airport Corporation Construction Contract Number **24854** Airport Improvement Program  
Project Number **3-44-0003-xx-2013**.

County of \_\_\_\_\_

Town/City \_\_\_\_\_

\_\_\_\_\_  
Contractor

\_\_\_\_\_  
Signature

Sworn to before me this \_\_\_\_\_ day of \_\_\_\_\_ 20\_\_\_\_

My commission expires \_\_\_\_\_

Signature and Seal of Notary Public

**BID FORM – Addendum #1 – 04/05/2013**

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**DISCLOSURE OF LOBBYING ACTIVITIES**

Complete this form to disclose lobbying activities pursuant to 31 U.S.C. 1352

<b>1. Type of Federal Action:</b> a. contract b. grant c. cooperative agreement d. loan e. loan guarantee f. loan insurance	<b>2. Status of Federal Action</b> a. bid/offer/application b. initial award c. post-award	<b>3. Report Type</b> a. initial filing b. material change  For Material Change Only:  Year _____ Quarter _____ Date of last report _____
<b>4. Name and Address of Reporting Entity:</b>		<b>5. If Reporting Entity in No. 4 is Subawardee, Enter Name and address of Prime:</b>
<b>6. Federal Department Agency:</b>		<b>7. Federal Program Name/Description:</b>
<b>8. Federal Action Number, if known:</b>		<b>9. Award Amount, if known:</b>  \$
<b>10a. Name and Address of Lobbying Entity, (if individual, last name, first name, MI)</b>		<b>10b. Individuals performing Services (including address if different from No. 10a.), (if individual, last name, first name, MI)</b>
<b>11. Amount of Payment (check all that apply):</b>  \$ _____ actual planned		<b>13. Type of Payment (check all that apply)</b>  a. retainer b. one-time fee c. commission d. contingent fee e. deferred f. other specify _____
<b>12. Form of Payment (check all that apply):</b>  a. cash b. In-kind; specify; nature _____ value _____		
<b>14. Brief Description of services performed or performed and date(s) of Service, including officer(s), employer(s), or member(s) contacted for payment indicated in Item 11.</b>		
<b>15. Continuation Sheet(s) SF-LLL-A attached:      Yes      No</b>		
<b>16. Information requested through this form is authorized by Title 31 U.S.C. Section 1362. This disclosure of lobbying activities is a material representation of fact upon which reliance was placed by the tier above when this transaction was made or entered into. This disclosure is required pursuant to 31 U.S.C. 1352. This information will be reported to Congress semi-annually and will be available for public inspection. Any person who fails to file the required disclosure shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each failure</b>		Signature: _____ Print Name: _____ Title: _____ Telephone No. _____      Date: _____
<i>Federal Use Only</i>		Authorized for Local Reproduction Standard Form - LLL

Runway 16-34 Improvement Program  
Phase 1 – Runway 16 End RSA & NAVAID Improvements  
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Reporting Entity: \_\_\_\_\_ Page \_\_\_\_\_ of \_\_\_\_\_

**CERTIFICATION REGARDING DEBARMENT, SUSPENSION,  
AND OTHER RESPONSIBILITY MATTERS  
PRIMARY COVERED TRANSACTION**

In accordance with the Code of Federal Regulations, part 49, CFR Section 29.510, the prospective primary participant \_\_\_\_\_ (Name of Authorized Agent), \_\_\_\_\_ (Title), being duly sworn (or under penalty of perjury under the laws of the United States), certifies to the best of his / her knowledge and belief, that its principals:

- a. Are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from covered transactions by any federal department or agency;
- b. Have not within a three-year period preceding this proposal been convicted of or had a civil judgment rendered against them for commission of fraud or a criminal offence in connection with obtaining, attempting to obtain, or performing a public (federal, state, or local) transaction or contract under a public transaction; violation of federal or state antitrust statutes or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, or receiving stolen property;
- c. Are not presently indicted for or otherwise criminally or civilly charged by a governmental entity (federal, state, or local) with commission of any of the offenses enumerated in paragraph (1) (b) of this certification?
- d. Have not within a three-year period preceding this application / proposal had one or more public transactions (federal, state, or local) terminated for cause of default.

Where the prospective primary participant is unable to certify to any of the statements in this certification, such prospective participant shall list exceptions below.

Exceptions will not necessarily result in denial or award, but will be considered in determining contractor responsibility. For any exception note, indicate below to whom it applies, the initiating agency, and the dates of the action. Providing false information may result in criminal prosecution or administrative sanction. If an exception is noted, the contractor must contact the Corporation to discuss the exception prior to award of the contract.

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\_\_\_\_\_  
Signature of Authorized Agent

\_\_\_\_\_  
Date

Runway 16-34 Improvement Program  
Phase 1 – Runway 16 End RSA & NAVAID Improvements  
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**REQUIREMENT FOR CERTIFICATION FOR NONSEGREGATED FACILITIES:**

A certification of Nonsegregated Facilities must be submitted at the time of the bid opening of a contract or subcontract exceeding Ten Thousand Dollars (\$10,000), which is not exempt from the provisions of the Equal Opportunity Clause.

Certification – The information above is true and complete to the best of my knowledge and belief.

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Name and Title of Signer *(please type)*

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Signature

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Date

Note: The penalty for making false statements in offers is prescribed in 18 U.S.C. 1001

**DISADVANTAGED BUSINESS ENTERPRISE UTILIZATION PLAN**

The undersigned hereby further assures that the information included herein is true and correct, and that the DBE firm(s) listed herein have agreed to perform a commercially useful function in the work items noted for each firm. The undersigned further understands that no changes to this statement may be made without prior approval from the Civil Right Staff of the Federal Aviation Administration.

1. Name of Project \_\_\_\_\_
2. Number of Project \_\_\_\_\_
3. Total Dollar Amount of Bid \_\_\_\_\_
4. Disadvantaged Business Enterprise Participation \$ Goal \_\_\_\_\_
  - a. Name of Bidder \_\_\_\_\_  
Address \_\_\_\_\_  
Phone(s) \_\_\_\_\_
  - b. If the Bidder is a Disadvantaged Business Enterprises (Contractors, suppliers, vendors), the services they will provide and the approximate amount of money they will receive. (Include joint venture partner, if applicable.)  
  
Total of listed amounts \$ \_\_\_\_\_

(Use back of sheet for additional space, if needed)

Contractor: \_\_\_\_\_

By: \_\_\_\_\_

Address: \_\_\_\_\_

Phone Number: \_\_\_\_\_ Zip Code: \_\_\_\_\_

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**LETTER OF INTENT TO PERFORM  
AS A QUALIFIED DISADVANTAGED BUSINESS**

To: \_\_\_\_\_ Project: \_\_\_\_\_  
(Name of Contractor)

Reference #: \_\_\_\_\_

The undersigned intends to perform work in connection with the above project as (check one):

\_\_\_\_\_ an individual                      \_\_\_\_\_ a corporation  
\_\_\_\_\_ a partnership                      \_\_\_\_\_ a joint venture

The undersigned certifies the company is a Disadvantaged Business Enterprise as defined by the Rhode Island Department of Administration

The undersigned is prepared to perform the following described work in connection with the above project (specify in detail work to be performed).

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Subcontractor: \_\_\_\_\_ Contract Amount \_\_\_\_\_  
(Name)

Supplier: \_\_\_\_\_ Contract Amount \_\_\_\_\_  
(Name)

The Bid Price agreed upon is: \$ \_\_\_\_\_ Dated \_\_\_\_\_

The undersigned agrees that the contract conditions above are true and accurate and will be performed by the above, who will enter into a formal agreement for the above work with you, conditioned upon your execution of a contract with

\_\_\_\_\_  
\_\_\_\_\_

Name of company, signature and title of authorized official of the company and the date must be properly executed on this document or the bid will be deemed nonresponsive.

\_\_\_\_\_  
(Date)

\_\_\_\_\_  
(Name of Disadvantaged Company)

\*As determined by \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

\_\_\_\_\_  
(Signature of Authorized Official)  
\_\_\_\_\_

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(Title of Authorized Officer)

**BID FORM – Addendum #1 – 04/05/2013**

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**DBE WAIVER FORM**

(Required for All Bids Requesting Waiver of the 9.45 % DBE Requirement)

I, \_\_\_\_\_, \_\_\_\_\_, of \_\_\_\_\_  
(Name) (Title) (Company)

certify that on \_\_\_\_\_, I contacted the following DBE Contractors to obtain a bid for work  
(date)

items to be performed on Contract Number \_\_\_\_\_.

DBE Contractor Name and Address	Work Items Sought
_____	_____
_____	_____
_____	_____

To the best of my knowledge and belief, said DBE Contractor was unavailable (exclusive of unavailability due to lack of agreement on price) for work on this project, or unable to prepare a bid for the following reason(s):

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_

Signature

Date

-----  
This portion to be completed by DBE Contractor:

\_\_\_\_\_ was offered an opportunity to bid or make an offer on the  
above

(Name of DBE)

identified work on \_\_\_\_\_ by \_\_\_\_\_  
(Date) (Source)

The above statement is a true and accurate account of why I did not submit an offer/bid on this project.

\_\_\_\_\_  
\_\_\_\_\_

(Signature of DBE)

(Title)

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**BID FORM – Addendum #1 – 04/05/2013**

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**CONTRACTOR QUALIFICATION FORM**

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**Instructions:**

Elaboration of the following required information is necessary to ascertain your firm's capabilities to effectively execute the Project. Pursuant to the Information to Bidders of Section 1, your completion of this Contractor Qualification Form is MANDATORY and will be utilized by RIAC as a basis for determining the qualified lowest bid, and subsequent award.

**PLEASE ATTACH TO THIS FORM A COPY OF YOUR CERTIFICATE OF INSURANCE INDICATING CURRENT LIMITS.**

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Firm: \_\_\_\_\_ President: \_\_\_\_\_  
Address: \_\_\_\_\_ Phone: \_\_\_\_\_  
\_\_\_\_\_ Fax: \_\_\_\_\_  
Federal ID#: \_\_\_\_\_ Contact: \_\_\_\_\_ Former Company Name: \_\_\_\_\_  
Years performing work specialty: \_\_\_\_\_ Work Now Under Contract: \$ \_\_\_\_\_  
Bank Reference: \_\_\_\_\_ Work in Place Last Year: \$ \_\_\_\_\_  
Address: \_\_\_\_\_ Average Annual Sales Last 3 Years.: \$ \_\_\_\_\_  
\_\_\_\_\_ Value Of Capital Equipment Owned: \$ \_\_\_\_\_  
Bonding Company: \_\_\_\_\_ Bonding Agent: \_\_\_\_\_  
Total Bonding Capacity: \$ \_\_\_\_\_ Address: \_\_\_\_\_  
Work Currently Bonded: \$ \_\_\_\_\_  
Work Now Under Contract: \$ \_\_\_\_\_  
Bonding Companies Best Rating: \_\_\_\_\_ Bonding Agent's Phone: \_\_\_\_\_  
Is Firm In Compliance with all EEO Requirements?: Y N Has Firm Ever Failed To Complete A Contract?: Y N  
Has Firm Ever Been Involved In Bankruptcy Or Re-organization?: Y N Are There Any Claims Against The Firms?: Y N  
Are There Any Pending Judgments Against The Firm?: Y N

(ANSWER IS YES TO ANY OF THE ABOVE PLEASE DESCRIBE ON A SEPARATE SHEET)

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**Insurance: ("CLAIMS-MADE" GENERAL LIABILITY IS UNACCEPTABLE)**

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Submit Sample Certificate Of Insurance Showing Coverage And Limits For General Liability, Automobile Liability, Excess Umbrella Liability, And Worker's Compensation.

Experience Modification Rating: \_\_\_\_\_ Agency's Name: \_\_\_\_\_  
Contact's Name: \_\_\_\_\_ Contact's Phone: \_\_\_\_\_

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**Safety:**

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**Attach Log And Summary Of OSHA violations and any fines or settlements for the past 36 months**

**Attach Log And Summary Of Occupational Injuries And Illnesses As Required By the U.S. Dept. Of Labor For The Past 36 Months (OSHA Form No. 200)**

OSHA Recordable Incident Rate (Current Year): \_\_\_\_\_ OSHA Lost Days Away Incident Rate (Current Year) \_\_\_\_\_

**BID FORM – Addendum #1 – 04/05/2013**

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List Four (4) Or More Most Applicable Projects Completed Within The Last Five (5) Years:

Project & Location	Engineer	Contract With	Contract Amount	Date Completed	Reference Contact & Phone Number

**PLEASE ATTACH ADDITIONAL SHEET IF NECESSARY**

Please list **key personnel** available for project and describe responsibilities of each:

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Total Firm Staff Employed for this project: \_\_\_\_

Total Staff Employed Firm-wide: \_\_\_\_

Please list **key equipment** available for project and whether Firm owns or leases equipment:

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Runway 16-34 Improvement Program  
Phase 1 – Runway 16 End RSA & NAVAID Improvements  
T. F. Green State Airport  
Warwick, Rhode Island  
RIAC Contract No.: 24584

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List Three (3) Or More Most Applicable Projects Presently Under Construction:

Project & Location	Engineer	Contract With	Contract Amount	Date Completed	Reference Contact & Phone Number

**PLEASE ATTACH ADDITIONAL SHEET IF NECESSARY**

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**THE APPARENT LOW BIDDER SHALL PROVIDE A COPY OF THEIR COMPANY'S FINANCIAL STATEMENT, CERTIFIED BY PUBLIC ACCOUNTANT, WITHIN 5 DAYS OF REQUEST BY RIAC.**

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This Form **MUST** Be Signed By An Officer Of The Firm Or An Individual So Authorized By An Officer Of The Firm.

Signature: \_\_\_\_\_

Name: \_\_\_\_\_

Title: \_\_\_\_\_

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**PROJECT SUBCONTRACTORS**

The Bidder advises herein that the following Subcontractors are proposed for the item of work listed. Subcontractors are subject to review and approval per the requirements of the Contract Documents and the technical requirements specified. List only firms that will supply labor at the site. Failure to provide this information may result in the bid being considered non-responsive.

SUBCONTRACTOR	DBE (Y/N)	TRADE	CONTRACT WORK ITEM TO BE PERFORMED	VALUE (\$)
1. _____				
2. _____				
3. _____				
4. _____				
5. _____				
6. _____				
7. _____				
8. _____				
9. _____				
10. _____				
11. _____				
12. _____				
13. _____				
14. _____				
15. _____				

RESPECTFULLY SUBMITTED:

\_\_\_\_\_  
(Company)

By: \_\_\_\_\_  
Title: \_\_\_\_\_  
Date: \_\_\_\_\_

Runway 16-34 Improvement Program  
Phase 1 – Runway 16 End RSA & NAVAID Improvements  
T. F. Green State Airport  
Warwick, Rhode Island  
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CERTIFICATION OF COMPLIANCE WITH FEDERALLY REQUIRED CONTRACT  
REQUIREMENTS

The bidder/offeror certifies, by submission of this proposal or acceptance of this, that he/she has read the federally mandated contract requirements as listed in Section 00 0950, *Federal Contract Conditions* and Section 00 0960, *Executive Orders* and that compliance with said references will be incorporated into the terms of the Contract documents.

I hereby certify that I have read and will comply with all of the above requirements.

\_\_\_\_\_  
Signature of Authorized Contractor and/or Consultant Representative

\_\_\_\_\_  
Date

**BUY AMERICAN – CERTIFICATE (JAN 1991)**

By submitting a bid/proposal under this solicitation, except for those items listed by the offeror below or on a separate and clearly identified attachment to this bid/proposal, the offeror certifies that steel, and each manufactured product, is produced in the United States (as defined in the clause Buy American – Steel and Manufactured Products or Buy American – Steel and Manufactured Products for Construction Contracts), and that the components of unknown origin are considered to have been produced or manufactured outside the United States.

Offerors may obtain from the Rhode Island Airport Corporation lists of articles, materials, and supplies excepted from this provision.

PRODUCT

COUNTRY OF ORIGIN

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\_\_\_\_\_  
Signature of Authorized Contractor and/or Consultant Representative

\_\_\_\_\_  
Date

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EQUAL EMPLOYMENT OPPORTUNITY REPORT STATEMENT  
As Required by 41 CFR 60-1.7(b)

The Bidder (proposer) shall complete the following statement by checking the appropriate boxes. Failure to complete these blanks may be grounds for rejection of bids.

1. The Bidder (proposer) has \_\_\_\_\_ has not \_\_\_\_\_ developed and has on file at each establishment Affirmative Action Programs pursuant to 41 CFR 60-1.4 and 41 CFR.
2. The Bidder (proposer) has \_\_\_\_\_ has not \_\_\_\_\_ participated in any previous contract or subcontract subject to the Equal Opportunity Clause prescribed by Executive Order 11246, as amended.
3. The Bidder (proposer) has \_\_\_\_\_ has not \_\_\_\_\_ filed with the Joint Reporting Committee the annual compliance report on Standard Form 100 (EEO-1 Report).
4. The Bidder (proposer) does \_\_\_\_\_ does not \_\_\_\_\_ employ fifty (50) or more employees.

\_\_\_\_\_  
(Name of Bidder)

BY: \_\_\_\_\_  
(Signature)

TITLE: \_\_\_\_\_

DATE: \_\_\_\_\_

BID BOND

**CONTRACTOR (Principal):** \_\_\_\_\_ **TYPE**  
(Legal name and business address) \_\_\_\_\_  Individual  
\_\_\_\_\_  Partnership  
\_\_\_\_\_  Joint  
Venture \_\_\_\_\_  Corporation

**OWNER:** Rhode Island Airport Corporation    **SURETY:** (Name, legal status & principal place of business)  
2000 Post Road  
Warwick, RI 02886  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**PROJECT:**    **Phase 1 - Runway 16 End Safety Area and NAVAID Improvements**  
**T. F. Green State Airport**  
**Warwick, Rhode Island**  
**RIAC Construction Contract No. 24854**  
**AIP No. 3-44-0003-xx-2013**

**BID DATE:**    **April 11, 2013**

**BOND AMOUNT:** \_\_\_\_\_  
(Penal sum of bond)

The Contractor and the Surety are bound to the Owner in the amount set forth above, for the payment of which the Contractor and Surety bind themselves, their heirs, executors, administrators, successors and assigns, jointly and severally, as provided herein. The conditions of this Bond are such that if the Owner accepts the bid of the Contractor within the specified time in the Bid Documents, or within such time period as may be agreed to by the Owner and Contractor, and the Contractor either (1) enters into a contract with the Owner in accordance with the terms of such bid, and gives such bond or bonds as may be specified in the bidding or Contract Documents, with the surety admitted in the jurisdiction of the Project and otherwise acceptable to the Owner, for the faithful performance of such Contract and the prompt payment of labor and materials furnished in the prosecution thereof; or (2) pays the Owner the amount difference, not to exceed the amount of the Bond, between the amount specified in said Bid and such larger amount for which the Owner may in good faith contract with another party to perform the work covered by said Bid, then this obligation shall be null and void, otherwise to remain in full force and effect. The Surety hereby waives any notice of agreement between the Owner and Contractor to extend the time in which the Owner may accept the bid. Waiver of notice by the Surety shall not apply to any extension exceeding one hundred eighty (180) days in aggregate beyond the time for acceptance of bids specified in the bid documents, and the Owner and Contractor shall obtain the Surety's consent for an extension beyond one hundred eighty (180) days.

If this Bond is issued in connection with the subcontractor's bid to a Contractor, the term Contractor in this Bond shall be deemed to be Subcontractor and the Owner shall be deemed to be the Contractor.

Runway 16-34 Improvement Program  
Phase 1 – Runway 16 End RSA & NAVAID Improvements  
T. F. Green State Airport  
Warwick, Rhode Island  
RIAC Contract No.: 24584

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When this Bond has been furnished to comply with a statutory or other legal requirement in the location of the Project, any provisions in this Bond conflicting with said statutory or legal requirements shall be deemed deleted herefrom and provisions conforming to such statutory or other legal requirement shall be deemed to be incorporated herein. When so furnished, the intent is that this Bond shall be construed as a statutory bond and not a common law bond.

WITNESS WHEREOF, the Principal and Surety have hereunto caused this Bond to be duly executed and acknowledged by their appropriate officials as set forth below this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_\_.

PRINCIPAL *(If Individual, Joint Venture or Partnership)*

ATTEST:

\_\_\_\_\_  
*(Firm Name)*

\_\_\_\_\_

By: \_\_\_\_\_

*(SEAL)*

\_\_\_\_\_  
*Title (Individual or Partner)*

PRINCIPAL *(If Corporation)*

\_\_\_\_\_  
*(Corporate Name)*

By: \_\_\_\_\_  
*(President)*

*(Impress Corporate Seal)*

Attest: \_\_\_\_\_  
*(Secretary)*

COUNTERSIGNED BY  
RESIDENT RHODE ISLAND  
AGENT OF SURETY:

SURETY:

\_\_\_\_\_  
*(Copy of Agent's current license  
as issued by State of Rhode Island  
Insurance Commissioner)*

*(Impress Corporate Seal)*

By: \_\_\_\_\_  
*Attorney-In-Fact  
(Power of Attorney Must Be Attached)*

END OF SECTION

**ITEM L-108  
UNDERGROUND CABLE FOR AIRPORTS**

**DESCRIPTION**

**108-1.1** This item shall consist of furnishing and installing power and control cables within conduit or duct banks-in accordance with these specifications at the locations shown on the plans. Also included are the installation of counterpoise wires, ground wires, ground rods and connections, cable splicing, cable marking & tagging, cable testing, and all incidentals necessary to place the cable in operating condition as a completed unit to the satisfaction of the Engineer. This item shall not include the installation of duct banks or conduit, trenching and backfilling for duct banks or conduit, or furnishing or installation of any cable for FAA facilities. Requirements and payment for trenching and backfilling for the installation of underground conduit and duct banks are covered under Item L-110 "Airport Underground Electrical Duct Banks and Conduits."

**EQUIPMENT AND MATERIALS**

**108-2.1 GENERAL.**

**a.** Airport lighting equipment and materials covered by Federal Aviation Administration (FAA) specifications shall be approved under the Airport Lighting Equipment Certification Program described in Advisory Circular (AC) 150/5345-53, current version.

**b.** All other equipment and materials covered by other referenced specifications shall be subject to acceptance through manufacturer's certification of compliance with the applicable specification, when requested by the Engineer.

**c.** Manufacturer's certifications shall not relieve the Contractor of the Contractor's responsibility to provide materials in accordance with these specifications and acceptable to the Engineer. Materials supplied and/or installed that do not materially comply with these specifications shall be removed, when directed by the Engineer and replaced with materials, which do comply with these specifications, at the sole cost of the Contractor.

**d.** All materials and equipment used to construct this item shall be submitted to the Engineer for approval prior to ordering the equipment. Submittals consisting of marked catalog sheets or shop drawings shall be provided. Submittal data shall be presented in a clear, precise and thorough manner. Original catalog sheets are preferred. Photocopies are acceptable provided they are as good a quality as the original. Clearly and boldly mark each copy to identify pertinent products or models applicable to this project. Indicate all optional equipment and delete non-pertinent data. Submittals for components of electrical equipment and systems shall identify the equipment for which they apply on each submittal sheet. Markings shall be boldly and clearly made with arrows or circles (highlighting is not acceptable). Contractor is solely responsible for delays in project accruing directly or indirectly from late submissions or resubmissions of submittals.

**e.** The data submitted shall be sufficient, in the opinion of the Engineer, to determine compliance with the plans and specifications. The Engineer reserves the right to reject any and all equipment, materials or procedures, which, in the Engineer's opinion, does not meet the system design and the standards and codes, specified herein.

f. All equipment and materials furnished and installed under this section shall be guaranteed against defects in materials and workmanship for a period of at least twelve (12) months from final acceptance by the Owner. The defective materials and/or equipment shall be repaired or replaced, at the Owner's discretion, with no additional cost to the Owner. The Contractor shall be responsible to maintain an insulation resistance of 50 megohms minimum, (1000V megger) with isolation transformers connected in new circuits and new segments of existing circuits through the end of the contract warranty period.

**108-2.2 CABLE.** Underground cable for airfield lighting facilities (i.e. runway and taxiway lights) shall conform to the requirements of AC 150/5345-7, Specification for L-824 Underground Electrical Cable for Airport Lighting Circuits. Conductor sizes noted above shall not apply to leads furnished by manufacturers on airfield lighting transformers and fixtures.

Wire for electrical circuits up to 600 volts shall comply with Specification L-824 and/or Federal Specification J-C-30 and shall be type THWN-2.

Underground feeder, direct buried cable for electrical circuits up to 600 volts shall comply with ASTM-B3 and B-8 and Federal Specification A-A-59544 and shall be type UF-B.

Underground multi-conductor industrial grade control cable for new PAPI-REIL 16 end controls between existing relaying in the airfield vault and the existing relaying in the existing PAPI-REIL control pedestal shall be Southwire, Type TC Control Cable (THWN), or engineer approved equal, 600V, copper, (3) #10 AWG stranded conductors (black-red-white insulation to match existing insulation colors). Cable shall be rated for installation in raceways and/or direct burial.

Cable type, size, number of conductors, strand and service voltage shall be as specified on the plans.

**108-2.3 BARE COPPER WIRE (COUNTERPOISE, BARE COPPER GROUND AND GROUND RODS.)** Wire for counterpoise or ground-installations for airfield lighting systems shall be No. 6 AWG solid for counterpoise and/or No. 6 AWG stranded for ground wire conforming to ASTM B 3 and ASTM B 8, and shall be bare copper wire conforming to the requirements of ASTM D 33.

Ground rods shall be copper or copper-clad steel. The ground rods shall be of the length and diameter specified on the plans, but in no case shall they be less than 8-feet (240 cm) long nor less than 5/8 inch (15 mm) in diameter.

**108-2.4 CABLE CONNECTIONS.** In-line connections of underground primary cables shall be of the type called for on the plans, and shall be one of the types listed below. No separate payment will be made for cable connections.

a. **The Cast Splice.** A cast splice, employing a plastic mold and using epoxy resin equivalent to that manufactured by Minnesota Mining and Manufacturing Company, "Scotchcast" Kit No. 82--B, or as manufactured by Hysol® Corporation, "Hyseal Epoxy Splice" Kit No. E1135, or equivalent, is used for potting the splice is acceptable.

**b. The Field-attached Plug-in Splice.** Figure 3 of AC 150/5345-26, Specification for L-823 Plug and Receptacle, Cable Connectors, employing connector kits, is acceptable for field attachment to single conductor cable. It shall be the Contractor's responsibility to determine the outside diameter of the cable to be spliced and to furnish appropriately sized connector kits and/or adapters and heat shrink tubing with integral sealant.

**c. The Factory-Molded Plug-in Splice.** Specification for L-823 Connectors, Factory-Molded to Individual Conductors, is acceptable.

**d. The Taped or Heat-Shrunked Splice.** Taped splices employing field-applied rubber, or synthetic rubber tape covered with plastic tape is acceptable. The rubber tape should meet the requirements of ASTM D 4388 and the plastic tape should comply with Mil Spec. MIL-I-24391 or Fed. Spec. A-A-55809. Heat shrinkable tubing shall be heavy-wall, self-sealing tubing rated for the voltage of the wire being spliced and suitable for direct-buried installations. The tubing shall be factory coated with a thermoplastic adhesive-sealant that will adhere to the insulation of the wire being spliced forming a moisture- and dirt-proof seal. Additionally, heat shrinkable tubing for multi-conductor cables, shielded cables, and armored cables shall be factory kits designed for the application. Heat shrinkable tubing and tubing kits shall be manufactured by Tyco Electronics/ Raychem Corporation, Energy Division, or approved equivalent.

In all the above cases, connections of cable conductors shall be made using crimp connectors utilizing a crimping tool designed to make a complete crimp before the tool can be removed. All L-823/L-824 splices and terminations shall be made in accordance with the manufacturer's recommendations and listings.

All connections of counterpoise, grounding conductors and ground rods shall be made by the exothermic process or approved equivalent, except the base can ground clamp connector shall be used for attachment to the base can. All exothermic connections shall be made in accordance with the manufacturer's recommendations and listings.

**108-2.5 SPLICER QUALIFICATIONS.** Every airfield lighting cable splicer shall be qualified in making cable splices and terminations on cables rated above 5,000 volts AC. The Contractor shall submit to the Engineer proof of the qualifications of each proposed cable splicer for the cable type and voltage level to be worked on. Cable splicing/terminating personnel shall have a minimum of three (3) years continuous experience in terminating/splicing medium voltage cable.

**108-2.6 CONCRETE.** Concrete for cable markers shall conform to Specification Item P-610, "Structural Portland Cement Concrete."

**108-2.7 FLOWABLE BACKFILL.** Flowable material used to backfill trenches for power cable trenches shall conform to the requirements of Item P-153 "Controlled Low Strength Material".

**108-2.8 CABLE IDENTIFICATION TAGS.** Cable identification tags shall be made from a non-corrosive material with the circuit identification stamped or etched onto the tag.

**108-2.9 TAPE.** Electrical tapes shall be Scotch Electrical Tapes – number Scotch 88 (1-1/2" wide) and Scotch 130C linerless rubber splicing tape (2" wide), as manufactured by the Minnesota Mining and Manufacturing Company, or approved equivalent.

**108-2.10 ELECTRICAL COATING.** Scotchkote™ shall be as manufactured by Minnesota Mining and Manufacturing Company, or approved equivalent.

**108-2.11 EXISTING CIRCUITS.** Whenever the scope of work requires, connection to an existing circuit, the circuit's insulation resistance shall be tested, in the presence of the Engineer. The test shall be performed in accordance with this item and prior to any activity affecting the respective circuit. The Contractor shall record the results on forms acceptable to the Engineer. When the work affecting the circuit is complete, the circuit's insulation resistance shall be checked again, in the presence of the Engineer. The Contractor shall record the results on forms acceptable to the engineer. The second reading shall be equal to or greater than the first reading or the Contractor shall make the necessary repairs to the circuit to bring the second reading above the first reading. All repair costs including a complete replacement of the L-823 connectors, L-830 transformers and L-824 cable, if necessary, shall be borne by the Contractor. All test results shall be submitted in the Operation and Maintenance (O&M) Manual.

**108-2.12 FIBER OPTIC CABLING.** Fiber optic cabling materials and installation shall conform to RIAC's *IT/Telecommunications Technical and Wiring Standards*, dated May 2010, available for review in the RIAC IT Office. Contact David Wilga, Chief Technology Officer at (401) 691-2240 for more information.

The fiber backbone between buildings shall be Berk-Tek's Adventum SingleMode cabling. Only this specific brand of cabling is approved for installation between buildings in order to match the existing fiber optic cabling.

Fiber optic patch panels should be installed in or adjacent to the equipment racks or cabinets which house LAN equipment. Connectors and couplers must be LC type for all new installations. No other fiber connector types are authorized.

**108-2.13 TRACING & IDENTIFYING EXISTING CIRCUITS TO BE RELOCATED.** Since many of the existing circuits to be relocated are not tagged in the existing manholes and there may be abandoned and spare cables, it is the intent of this project to have the Contractor trace, identify and tag each of the existing circuits in the section to be relocated and back to existing airfield electrical vault. This tracing and identification shall also pertain to the existing circuit wiring for the Nav aids from the facilities back to the airfield electrical vault. This work shall also include identification of the 3 separate Owner fiber optic lines and any other control wiring. This work shall be performed prior to any of the relocation or replacement work.

**108-2.14 CONNECTION TO EXISTING DUCT BANK** As shown on the Drawings, the proposed duct bank will be relocated and will connect back to the existing duct bank on each side of the Runway 16 End Safety Area. The western interconnection will be in the existing manhole as shown on the Drawings. The eastern interconnection will occur into existing conduits as outlined in the Insert A on Sheet E-2 of the Plans. The eastern interconnection will require the use of split duct. The split duct shall be manufactured from Sch. 40 PVC in different sizes as required by the existing conditions. It is anticipated that 2", 3" and 4" could be used based on record information.

## CONSTRUCTION METHODS

**108-3.1 GENERAL.** The Contractor shall install the specified cable at the approximate locations indicated on the plans. Unless otherwise shown on the plans, all cable required to cross under pavements expected to carry aircraft loads shall be installed in concrete encased duct banks. Wherever possible, cable shall be run without splices, from connection to connection.

Cable connections between lights will be permitted only at the light locations for connecting the underground cable to the primary leads of the individual isolation transformers. The Contractor shall be responsible for providing cable-in continuous lengths for home runs or other long cable runs without connections, unless otherwise authorized in writing by the Engineer or shown on the plans.

In addition to connectors being installed at individual isolation transformers, L-823 cable connectors for maintenance and test points shall be installed at locations shown on the plans. Cable circuit identification markers shall be installed on both sides of the L-823 connectors installed or at least once in each access point where L-823 connectors are not installed.

Provide not less than 3 feet of cable slack on each side of all connections, isolation transformers, light units, and at points where cable is connected to field equipment. Where provisions must be made for testing or for future above grade connections, provide enough slack to allow the cable to be extended at least one foot vertically above the top of the access structure. This requirement also applies where primary cable passes through empty base cans, junction and access structures to allow for future connections, or as designated by the Engineer.

**108-3.2 INSTALLATION IN DUCT BANKS OR CONDUITS.** This item includes the installation of the cable in duct banks or conduit as described below. The maximum number and voltage ratings of cables installed in each single duct or conduit, and the current-carrying capacity of each cable shall be in accordance with the latest National Electric Code, or the code of the local agency or authority having jurisdiction.

The Contractor shall make no connections or splices-of any kind in cables installed in conduits or duct banks.

Unless otherwise designated in the plans, where ducts are in tiers, use the lowest ducts to receive the cable first, with spare ducts left in the upper levels. Check duct routes prior to construction to obtain assurance that the shortest routes are selected and interferences are avoided.

Duct banks or conduits shall be installed as a separate item in accordance with Item L-110, "Airport Underground Electrical Duct Banks and Conduit." The Contractor shall run a mandrel through duct banks or conduit prior to installation of cable to insure that the duct bank or conduit is open, continuous and clear of debris. Mandrel size shall be compatible with conduit size. The Contractor shall swab out all conduits/ducts and clean base can, manhole, etc. interiors IMMEDIATELY prior to pulling cable. Once cleaned and swabbed the base cans and all accessible points of entry to the duct/conduit system shall be kept closed except when installing cables. Cleaning of ducts, base cans, manholes, etc. is incidental to the pay item of the item being cleaned. All raceway systems left open, after initial cleaning, for any reason shall be recleaned at the Contractor's expense. All accessible points shall be kept closed when not installing cable. The Contractor shall verify existing ducts proposed for use in this project as clear and open. The

Contractor shall notify the Engineer of any blockage in the existing ducts. The cable shall be installed in a manner to prevent harmful stretching of the conductor, injury to the insulation, or damage to the outer protective covering. The ends of all cables shall be sealed with moisture-seal tape providing moisture-tight mechanical protection with minimum bulk, or alternately, heat shrinkable tubing before pulling into the conduit and it shall be left sealed until connections are made. Where more than one cable is to be installed in a conduit, all cable shall be pulled in the conduit—at the same time. The pulling of a cable through duct banks or conduits may be accomplished by hand winch or power winch with the use of cable grips or pulling eyes. Maximum pulling-tensions shall be governed by cable manufacturer's recommendations. A non-hardening lubricant recommended for the type of cable being installed shall be used where pulling lubricant is required.

Contractor shall submit pulling tension values to the Engineer prior to any cable installation. If required by the Engineer, pulling tension values for cable pulls shall be monitored by a dynamometer in the presence of the Engineer. Cable pull tensions shall be recorded by the Contractor and reviewed by the Engineer. Cables exceeding the maximum allowable pulling tension values shall be removed and replaced by the Contractor at the Contractor's expense.

The manufacturer's minimum bend radius or the NEC requirements whichever is more restrictive shall apply. Cable installation, handling and storage shall be per manufacturer's recommendations. During cold weather, particular attention shall be paid to the manufacturer's minimum installation temperature. Cable shall not be installed when the temperature is at or below the manufacturer's minimum installation temperature. At the Contractor's option, the Contractor may submit a plan, for review by the Engineer, for heated storage of the cable and maintenance of an acceptable cable temperature during installation when temperatures are below the manufacturer's minimum cable installation temperature.

Cable shall not be dragged across base can or manhole edges, pavement or earth. When cable must be coiled, lay cable out on a canvas tarp or utilize other appropriate means to prevent abrasion to the cable jacket.

**108-3.3 SPLICING.** Connections of the type shown on-the plans shall be made by experienced personnel regularly engaged in this type of work and shall be made as follows:

**a. Cast Splices.** These shall be made by using crimp connectors for jointing conductors. Molds shall be assembled, and the compound shall be mixed and poured in accordance with manufacturer's instructions and to the satisfaction of the Engineer.

**b. Field-attached Plug-in Splices.** These shall be assembled in accordance with manufacturer's instructions. These splices shall be made by plugging directly into mating connectors. In all cases the joint where the connectors come together shall be wrapped with at least one layer of rubber or synthetic rubber tape and one layer of plastic tape, one-half lapped, extending at least 1-1/2 inches (37 mm) on each side of the joint.

**c. Factory-Molded Plug-in Splices.** These shall be made by plugging directly into mating connectors. In all cases, the joint where the connectors come together shall be wrapped with at least one layer of rubber or synthetic rubber tape and one layer of plastic tape, one-half lapped, extending at least 1-1/2 inches (37 mm) on each side of the joint.

**d. Taped or Heat-Shrunked Splices.** A taped splice shall be made in the following manner:

Bring the cables to their final position and cut so that the conductors will butt. Remove insulation and jacket allowing for bare conductor of proper length to fit compression sleeve connector with 1/4 inch (6 mm) of bare conductor on each side of the connector. Prior to splicing, the two ends of the cable insulation shall be penciled using a tool designed specifically for this purpose and for cable size and type. Do not use emery paper on splicing operation since it contains metallic particles. The copper conductors shall be thoroughly cleaned. Join the conductors by inserting them equidistant into the compression connection sleeve. Crimp conductors firmly in place with crimping tool that requires a complete crimp before tool can be removed. Test the crimped connection by pulling on the cable. Scrape the insulation to assure that the entire surface over which the tape will be applied (plus 3 inches (75 mm) on each end) is clean. After scraping wipe the entire area with a clean lint-free cloth. Do not use solvents.

Apply high-voltage rubber tape one-half lapped over bare conductor. This tape should be tensioned as recommended by the manufacturer. Voids in the connector area may be eliminated by highly elongating the tape, stretching it just short of its breaking point. Throughout the rest of the splice less tension should be used. Always attempt to exactly half-lap to produce a uniform buildup. Continue buildup to 1-1/2 times cable diameter over the body of the splice with ends tapered a distance of approximately 1 inch (25 mm) over the original jacket. Cover rubber tape with two layers of vinyl pressure-sensitive tape one-half lapped. Do not use glyptol or lacquer over vinyl tape as they react as solvents to the tape. No further cable covering or splice boxes are required.

Heat shrinkable tubing shall be installed following manufacturer's instructions. Direct flame heating shall not be permitted unless recommended by the manufacturer. Cable surfaces within the limits of the heat-shrink application shall be clean and free of contaminants prior to application.

**108-3.4 BARE COUNTERPOISE WIRE INSTALLATION FOR LIGHTNING PROTECTION AND GROUNDING.** If shown on—the plans or included—in the job specifications, bare counterpoise copper wire shall be installed for lightning protection of the underground cables. Counterpoise wire shall be installed in the same trench for the entire length of buried cable, conduits and duct banks which are installed to contain airfield cables. Where the cable or duct/conduit trench runs parallel to the edge of pavement, the counterpoise shall be installed in a separate trench located half the distance between the pavement edge and the cable or duct/conduit trench. In trenches not parallel to pavement edges, counterpoise wire shall be installed continuously a minimum of 4 inches above the cable, conduit or duct bank, or as shown on the plans if greater. Additionally, counterpoise wire shall be installed at least 8 inches below the top of subgrade in paved areas or 10 inches below finished grade in un-paved areas. This dimension may be less than 4 inches where conduit is to be embedded in existing pavement. Counterpoise wire shall not be installed in conduit.

The counterpoise wire shall be routed around to each light fixture base, mounting stake, or junction/access structures. The counterpoise wire shall also be exothermically welded to-ground rods installed as shown on the plans but not more than 500 feet (150 m) apart around the entire circuit.

The counterpoise system shall be continuous and terminate at the transformer vault or at the power source. It shall be securely attached to the vault or equipment external ground ring or other made electrode grounding system. The connections shall be made as shown on-the plans and in the specifications.

A separate equipment (safety) ground system shall be provided in addition to the counterpoise wire using one of the following methods, as designated by the Engineer:

- (1) A ground rod installed at and securely attached to each light fixture base, mounting stake if painted, and to all metal surfaces at junction/access structures.
- (2). Install an insulated equipment ground conductor internal to the conduit system and securely attached it to each light fixture base and to all metal surfaces at junction/access structures.

**a. Counterpoise Installation Above Multiple Conduits and Duct Banks.** Counterpoise wires shall be installed above multiple conduits/duct banks for airfield lighting cables, with the intent being to provide a complete cone of protection over the airfield lighting cables. When multiple conduits and/or duct banks for airfield cable are installed in the same trench, the number and location of counterpoise wires above the conduits shall be adequate to provide a complete cone of protection measured  $22\frac{1}{2}$  degrees each side of vertical.

Where duct banks pass under pavement to be constructed in the project, the counterpoise shall be placed above the duct bank. Reference details on the construction plans.

**b. Counterpoise Installation at Existing Duct Banks.** When airfield lighting cables are indicated on the plans to be routed through existing duct banks, the new counterpoise wiring shall be terminated at ground rods at each end of the existing duct bank where the cables being protected enter and exit the duct bank. The new counterpoise conductor shall be bonded to the existing counterpoise system.

**108-3.5 EXOTHERMIC BONDING.** Bonding of counterpoise wire shall be by the exothermic welding process. Only personnel experienced in and regularly engaged in this type of work shall make these connections.

Contractor shall demonstrate to the satisfaction of the Engineer, the welding kits, materials and procedures to be used for welded connections prior to any installations in the field. The installations shall comply with the manufacturer's recommendations and the following:

All slag shall be removed from welds.

For welds at light fixture base cans, all galvanized coated surface areas and "melt" areas, both inside and outside of base cans, damaged by exothermic bond process shall be restored by coating with a liquid cold-galvanizing compound conforming to U.S. Navy galvanized repair coating meeting Mil. Spec. MIL-P-21035. Surfaces to be coated shall be prepared and compound applied in accordance with manufacturer's recommendations.

All buried copper and weld material at weld connections shall be thoroughly coated 6 mil of 3M "Scotchkote," or approved equivalent, or coated with coal tar bitumastic material to prevent surface exposure to corrosive soil or moisture."

**108-3.6 TESTING.** The Contractor shall furnish all necessary equipment and appliances for testing the airport electrical systems and underground cable circuits before and after installation. The Contractor shall perform all tests in the presence of the Engineer. The Contractor shall demonstrate the electrical characteristics to the satisfaction of the Engineer. All costs for testing are incidental to the respective item being tested. For phased projects, the tests must be completed by phase and results meeting the specifications below must be maintained by the Contractor throughout the entire project as well as during the ensuing warranty period.

Earth resistance testing methods shall be submitted to the Engineer for approval. Earth resistance testing results shall be recorded on an approved form and testing shall be performed in the presence of the Engineer. All such testing shall be at the sole expense of the Contractor.

Should the counterpoise or ground grid conductors be damaged or suspected of being damaged by construction activities the Contractor shall test the conductors for continuity with a low resistance ohmmeter. The conductors shall be isolated such that no parallel path exists and tested for continuity. The Engineer shall approve the test method selected. All such testing shall be at the sole expense of the Contractor.

After installation, the Contractor shall test and demonstrate to the satisfaction of the Engineer the following:

- a. That all affected lighting power and control circuits (existing and new) are continuous and free from short circuits.
- b. That all affected circuits (existing and new) are free from unspecified grounds.
- c. That the insulation resistance to ground of all new non-grounded series circuits or cable segments is not less than 50 megohms.
- d. That the insulation resistance to ground of all non-grounded conductors of new multiple circuits or circuit segments is not less than 50 megohms.
- e. That all affected circuits (existing and new) are properly connected in accordance with applicable wiring diagrams.
- f. That all affected circuits (existing and new) are operable. Tests shall be conducted that include operating each control not less than 10 times and the continuous operation of each lighting and power circuit for not less than 1/2 hour.
- g. That the impedance to ground of each ground rod does not exceed 25 ohms prior to establishing connections to other ground electrodes. The fall-of-potential ground impedance test shall be utilized, as described by ANSI/IEEE Standard 81, to verify this requirement.

Two copies of tabulated results of all cable tests performed shall be supplied by the Contractor to the Engineer. Where connecting new cable to existing cable, ground resistance tests shall be performed on the new cable prior to connection to the existing circuit.

There are no approved "repair" procedures for items that have failed testing other than complete replacement.

**108-3.7 CABLE REMOVAL IN EXISTING CONDUIT/DUCT BANK.** Cabling within existing conduit shall be removed as designated on the Plans within the limits of the project, or as directed by the Engineer. While removing the cabling, a pull string shall be installed for the future installation of the replacement cabling if necessary. All removed cable shall be properly disposed of off the Airport site.

**108-3.8 FIBER OPTIC CABLE INSTALLATION.** Fiber optic backbone cables shall be terminated inside a dedicated fiber optic patch panel at both ends.

Service loops shall be provided for all finished (terminated) fiber cables. Service loop length shall be not less than three (3) feet and not greater than twelve (12) feet long.

Where fiber optic cables are identified for repaired or permanent extension, fusion splices shall be used in all cases. Splice trays, panels and other dedicated enclosures shall be utilized so as to protect the finished splices from further damage, and if necessary to preserve the watertight integrity of the cable. Splice enclosures may be rack mounted, wall mounted, or mid-span, but must be designed by the manufacturer exclusively for the purpose of containing splices. Cables shall be individually labeled in accordance with RIAC's aforementioned IT standards. Because of the somewhat higher db loss associated with air-gap connections, patch panels shall never be used as splice points.

**108-3.9 TRACING & IDENTIFYING EXISTING CIRCUITS TO BE RELOCATED.** The Contractor shall determine the best "means and methods" for tracing and identification of the existing circuits. The Contractor shall use the cable identification tags as specified within this Section. The Contractor shall also coordinate all activities required for the tracing and identification of existing cabling with the RIAC Facilities Electrical Maintenance personnel.

**108-3.10 CONNECTION TO EXISTING DUCT BANK** As shown on the Drawings, the proposed duct bank will be relocated across the Runway 16 End Safety Area. The proposed duct bank will connect back into the existing duct bank on each side of the Runway 16 End Safety Area. The western interconnection will occur at an existing manhole structure and will involve splicing new cabling into the existing cabling. This interconnection will not require any significant conduit modifications other than new cores into the existing structure which may be required. The eastern interconnection which will occur in the vicinity of the existing southeastern corner of Hangar #1 building which is to be removed under a separate contract as shown in Insert A on Sheet E-2 of the Drawings. This interconnection will require cutting the existing conduits, without disturbing the existing cabling as much as possible, of the duct bank at a sufficient distance (i.e. 25± feet to be field determined and verified) back towards the airfield electrical vault. The means and methods of the interconnection from these conduits to the new manholes (1 for power supply and 1 for controls) may be determined by the Contractor, but has been assumed to be performed with the use of split ducts. This part of the relocation process is critical to minimize the shutdown impacts to the airfield lighting systems and should be scheduled by the

Contractor through the Engineer to RIAC Operations. A submittal detailing the methods and scheduling of this work needs to be submitted to the Engineer for review and approval prior to any relocation work. Alternative methods, other than using split duct, may be submitted by the Contractor for review by the Engineer.

## METHOD OF MEASUREMENT

~~108-4.1 Tracing and identification of the existing cabling and interconnection to the existing duct bank shall be measured as a lump sum. The measurement for this work will be for all items necessary to complete the tracing and identification of cabling, including identification tags, and for the interconnections to the existing duct bank system. The interconnection work shall be all inclusive for any work and materials necessary to complete the item. No separate measurement will be made for identification tags or any of the interconnection materials, except cabling items.~~

*An allowance of \$15,000 is provided for the tracing and identification of the existing cabling in the work areas of the cables to be replaced. This allowance assumes 240 standard rate hours and 20 premium rate hours at the Rhode Island Davis-Bacon wage rate for an electrician shown in Section 00 0725 Federal Wage Rates (or approximately 3 weeks of 2 electricians identifying and tracing the existing cabling). The measurement of work by the Contractor shall be for number of documented hours worked and approved by the Engineer and the actual documented and approved costs, without any markup, of the identification tag materials required to permanently identify the cabling. However, any tracing equipment and all other incidental material items required to complete the work shall be considered incidental to the tracing and identification of the cabling item.*

*An allowance of \$25,000 is provided for the estimated cost of the connection of the existing duct bank near the Hangar #1 Building to be demolished. This allowance assumes the use of the rates in the Rhode Island Davis-Bacon wage rate for an electrician and laborer shown in Section 00 0725 Federal Wage Rates. The measurement of work by the Contractor shall be for number of documented hours worked and approved by the Engineer, as well as the actual documented and approved costs of the associated interconnection materials required to connect the existing conduits to the new manholes. However, any equipment and miscellaneous tools required to complete the work to connect the existing conduit/cabling to the new manholes shall be considered incidental (i.e. no rental or coring costs allowed). Also, the submittal of the schedule, details and methods are also considered to be incidental to the connection between the existing conduits and the new manholes. In addition, any other work item which is already included in this project necessary to complete this work, as determined by the Engineer, shall be paid under the other bid item (i.e. unclassified excavation, backfill materials, cabling, etc.).*

**108-4.2** Cable or counterpoise wire installed in trench, duct bank or conduit shall be measured by the number of linear feet of cable or counterpoise wire installed in trenches, duct bank or conduit, including ground rods and grounding connectors, and trench marking tape ready for operation, and accepted as satisfactory. Separate measurement shall be made for each cable or counterpoise wire installed in trench, duct bank or conduit. The measurement for this item shall not include additional quantities required for connections within fixtures or slack. Cable and counterpoise slack is considered incidental to this item and is included in the Contractor's unit price. No separate measurement or payment will be made for cable or counterpoise slack.

**108-4.3** Removal of cabling in conduit or by direct burial shall be paid for by the linear footage of cabling removed.

### **BASIS OF PAYMENT**

~~**108-5.1** Payment will be made at the contract lump sum price for tracing, identifying and tagging of the existing cabling and the connection to the existing duct bank by the Contractor and accepted by the Engineer. This price shall be full compensation for furnishing all materials and for all preparation and installation of these materials (exclusive of the various cabling items), and for all labor, equipment, tools, and incidentals, including trench marking tape, necessary to complete this item.~~

*Payment shall be made using the allowance for the tracing and identifying existing cables work performed by the Contractor and approved by the Engineer as outlined above under the Method of Measurement. The amount paid to the Contractor shall be for number of documented hours worked and approved by the Engineer and the actual documented and approved costs, without any markup, of the identification tag materials required to permanently identify the cabling. However, any tracing equipment and all other incidental material items required to complete the work shall be considered incidental to the tracing and identification of the cabling item.*

*Payment shall be made using the allowance for the interconnection work performed by the Contractor and approved by the Engineer as outlined above under the Method of Measurement. The amount paid to the Contractor shall be for number of documented hours worked and approved by the Engineer and the actual documented and approved costs, without any markup, of the associated interconnection materials. However, the costs of any equipment and miscellaneous tools required to complete the work of connecting the existing conduit/cabling to the new manholes shall be considered incidental (i.e. no rental or coring costs allowed). Also, the costs associated with the submittal of the schedule, details and methods are also considered to be incidental to the connection between the existing conduits and the new manholes. In addition, any other work item which is already included in this project which will be necessary to complete this work, as determined by the Engineer, shall be paid under those other bid item (i.e. unclassified excavation, backfill materials, cabling, etc.).*

**108-5.2** Payment will be made at the contract unit price for cable and bare counterpoise wire installed in trench (direct-buried), or cable and equipment ground installed in duct bank or conduit, in place by the Contractor and accepted by the Engineer. This price shall be full compensation for furnishing all materials and for all preparation and installation of these materials, and for all labor, equipment, tools, and incidentals, including ground rods and ground connectors and trench marking tape, necessary to complete this item.

**108-5.3** Cabling removal in existing conduit or by direct burial shall be paid for at the contract unit price per linear foot. This price shall include removal of all cabling and other appurtenances associated with any airfield electrical system, legally disposed of the removed cabling material off the site and providing a future pull string (if necessary), unless otherwise directed by the Engineer. The price shall be full compensation for furnishing all materials, labor, equipment, tools, and incidentals necessary to complete the item.

Payment will be made under:

- Item L-108-1A*     ~~*Trace & Identify Existing Cables & Connection to Existing Duct Bank – per Lump Sum - \$15,000 Allowance*~~
- Item L-108-1B*     ~~*Trace & Identify Existing Cables & Connection to Existing Duct Bank – per Lump Sum - \$25,000 Allowance*~~
- Item L-108-2     1/C No. 6 AWG (L-824C) 5KV Cable installed in conduit/duct – per linear foot
- Item L-108-3     1/C No. 8 AWG (L-824C) 5KV Cable installed in conduit/duct – per linear foot
- Item L-108-4     No. 6 AWG Bare Counterpoise Wire installed in trench, including ground rods and connectors– per linear foot
- Item L-108-5     No. 4 AWG, Insulated 600V Ground Wire installed in Conduit/Duct – per linear foot
- Item L-108-6     No. 8G AWG, Insulated 600V Ground Wire installed in Conduit/Duct – per linear foot
- Item L-108-7     No. 10 AWG Multi-conductor (3) (PAPI-REIL 16) Control Cable – per linear foot
- Item L-108-8     No. 10G AWG, 600V Insulated Ground Wire installed in Duct or Conduit – per linear foot
- Item L-108-9     No. 12 AWG, Two Conductor, with #12G AWG, 600V Insulated UF Type Cable — per linear foot
- Item L-108-10     No. 12 AWG, 600V Insulated Ground Wire installed in Conduit/Duct – per linear foot
- Item L-108-11     No. 12G AWG, 600V Insulated Ground Wire installed in Conduit/Duct – per linear foot
- Item L-108-12     No. 14 AWG, 600V Unshielded Twisted Conductor installed in Conduit/Duct – per linear foot
- Item L-108-13     12-Strand, SingleMode (SM), Berk-Tek Fiber Optic Cable – per linear foot
- Item L-108-14     Remove Existing Cabling in Conduit or Duct – per linear foot
- Item L-108-15     Remove Existing Direct Bury Cabling – per linear foot

### **MATERIAL REQUIREMENTS**

AC 150/5345-7	Specification for L-824 Underground Electrical Cable for Airport Lighting Circuits
AC 150/5345-26	Specification for L-823 Plug and Receptacle Cable Connectors
Fed.Spec. J-C-30	Cable and Wire, Electrical Power, Fixed Installation (cancelled; replaced by A-A-59544 Cable and Wire, Electrical (Power, Fixed Installation))
Fed. Spec A-A-55809	Insulation Tape, Electrical, Pressure-Sensitive Adhesive, Plastic
ASTM B 3	Soft or Annealed Copper Wire
ASTM D 4388	Rubber tapes, Nonmetallic Semiconducting and Electrically Insulating

### **REFERENCE DOCUMENTS**

NFPA No. 70	National Electrical Code (NEC)
MIL-S-23586C	Sealing Compound, Electrical, Silicone Rubber
NN	Building Industry Consulting Service International (BICSI)
ANSI/IEEE Std 81	IEEE Guide for Measuring Earth Resistivity, Ground Impedance, and Earth Surface Potentials of a Ground System

**END OF ITEM L-108**

## SECTION P-620 RUNWAY AND TAXIWAY PAINTING

### CONTRACT DOCUMENTS

**620-0.1** This section of these specifications is part of the Contract Documents as defined in the General Provisions. All applicable parts of the balance of the Contract Documents are equally as binding for this section as for all other sections.

Attention shall be directed to Section 1 of these specifications entitled "Summary of work and Special Work Requirements".

### DESCRIPTION

**620-1.1** This item shall consist of the painting of numbers, markings, and stripes on the surface of runways, taxiways, and aprons, in accordance with these specifications and at the locations shown on the plans, or as directed by the Engineer.

**620-1.2** This item shall consist of the removing the existing paint of numbers, markings, and stripes on the surface of runways, taxiways, and aprons, in accordance with these specifications and at the locations shown on the plans, or as directed by the Engineer.

### MATERIALS

**620-2.1 MATERIALS ACCEPTANCE.** The Contractor shall furnish manufacturer's certified test reports for materials shipped to the project. The certified test reports shall include a statement that the materials meet the specification requirements. The reports can be used for material acceptance or the Engineer may perform verification testing. The reports shall not be interpreted as a basis for payment. The Contractor shall notify the Engineer upon arrival of a shipment of materials to the site.

**620-2.2 PAINT.** Paint shall be **Waterborne, except Surface Painted Hold Signs**, in accordance with the requirements of paragraph 620-2.2a. Paint shall be furnished in **White – 37925, Red – 31136, Yellow – 33538 or 33655 and Black 37038** in accordance with Federal Standard No 595. **Surface Painted Hold Signs shall be Preformed Thermoplastic Pavement Markings. Preformed thermoplastic pavement markings shall have a non-reflectorized black border integral to the marking.**

**a. WATERBORNE.** Paint shall meet the requirements of Federal Specification TT-P-1952E, **Type I or Type II.**

**b. PREFORMED THERMOPLASTIC AIRPORT PAVEMENT MARKINGS.** *Markings must be composed of ester modified resins in conjunction with aggregates, pigments, and binders that have been factory produced as a finished product. The material must be impervious to degradation by aviation fuels, motor fuels, and lubricants.*

**(1)** *The markings must be able to be applied in temperatures as low as 35 °F without any special storage, preheating, or treatment of the material before application.*

(a) The markings must be supplied with an integral, non-reflectorized black border.

**(2) Graded Glass Beads.**

(a) The material must contain a minimum of thirty percent (30%) intermixed graded glass beads by weight. The intermixed beads shall conform to **Federal Specification. TT-B-1325D, Type I, gradation A.**

(b) The material must have factory applied coated surface beads in addition to the intermixed beads at a rate of 1 lb. ( $\pm 10\%$ ) per 10 sq. ft. These factory applied coated surface beads shall have a minimum of 90% true spheres, minimum refractive index of 1.50, and meet the following gradation.

Size Gradation		Retained, %	Passing, %
US Mesh	$\mu m$		
12	1700	0 - 2%	98 - 100%
14	1400	0 - 3.5%	96.5 - 100%
16	1180	2 - 25%	75 - 98%
18	1000	28 - 63%	37 - 72%
20	850	63 - 72%	28 - 37%
30	600	67 - 77%	23 - 33%
50	300	89 - 95%	5 - 11%
80	200	97 - 100%	0 - 3%

**(3) Heating Indicators.** The top surface of the material (same side as the factory applied surface beads) shall have regularly spaced indents. These indents shall act as a visual cue during application that the material has reached a molten state so satisfactory adhesion and proper bead embedment has been achieved and a post-application visual cue that the installation procedures have been followed.

**(4) Pigments.** Percent by weight.

**(a) White:**

Titanium Dioxide, ASTM D 476, type II shall be 10 percent minimum.

**(b) Yellow and Colors:**

Titanium Dioxide, ASTM D 476, type II shall be 1 percent minimum.

Organic yellow, other colors, and tinting as required to meet color standard.

**(5) Prohibited Materials.** The manufacturer shall certify that the product does not contain mercury, lead, hexavalent chromium, halogenated solvents, nor any carcinogen as defined in 29 CFR 1910.1200 in amounts exceeding permissible limits as specified in relevant Federal Regulations.

**(6) Daylight Directional Reflectance.**

**(a) White:** The daylight directional reflectance of the white paint shall not be less than 75 percent (relative to magnesium oxide), when tested in accordance with Federal Test Method Standard No. 141D/GEN, Method 6121.

**(b) Yellow:** *The daylight directional reflectance of the yellow paint shall not be less than 45 percent (relative to magnesium oxide), when tested in accordance with Federal Test Method Standard No. 141D/GEN. The x and y values shall be consistent with the Federal Hegman yellow color standard chart for traffic yellow standard 33538, or shall be consistent with the tolerance listed below:*

x .462	x .470	x .479	x .501
y .438	y .455	y .428	y .452

**(7) Skid Resistance.** *The surface, with properly applied and embedded surface beads, must provide a minimum resistance value of 45 BPN when tested according to ASTM E303.*

**(8) Thickness.** *The material must be supplied at a nominal thickness of 65 mil (1.7 mm).*

**(9) Environmental Resistance.** *The material must be resistant to deterioration due to exposure to sunlight, water, salt, or adverse weather conditions and impervious to aviation fuels, gasoline, and oil.*

**(10) Retroreflectivity.** *The material, when applied in accordance with manufacturer's guidelines, must demonstrate a uniform level of nighttime retroreflection when tested in accordance to ASTM E1710.*

**(11) Packaging.** *A protective film around the box must be applied in order to protect the material from rain or premature aging.*

**(12) Manufacturing Control and ISO Certification.** *The manufacturer must be ISO 9001:2000 certified and provide proof of current certification. The scope of the certification shall include manufacture of reflective markings.*

**a.** *The markings must be a resilient thermoplastic product with uniformly distributed glass beads throughout the entire cross-sectional area. The markings must be resistant to the detrimental effects of aviation fuels, motor fuels and lubricants, hydraulic fluids, de-icers, anti-icers, protective coatings, etc. Lines, legends, and symbols must be capable of being affixed to bituminous and/or Portland cement concrete pavements by the use of a large radiant heater. Colors shall be available as required.*

**b.** *The markings must be capable of conforming to pavement contours, breaks, and faults through the action of airport traffic at normal pavement temperatures. The markings must be capable of fully conforming to grooved pavements, including pavement grooving per FAA AC 150/5320-12, current version. The markings shall have resealing characteristics, such that it is capable of fusing with itself and previously applied thermoplastics when heated with a heat source per manufacturer's recommendation.*

**c.** *Multicolored markings must consist of interconnected individual pieces of preformed thermoplastic pavement marking material, which through a variety of colors and patterns, make up the desired design. The individual pieces in each large marking segment (typically more than 20 ft. long) must be factory assembled with a compatible material and interconnected so that in the field it is not necessary to assemble the individual pieces within a marking segment. Obtaining multicolored effect by overlaying materials of different colors is not acceptable due to resulting inconsistent marking thickness and inconsistent application temperature in the marking/substrate interface.*

**e.** *The marking material must set up rapidly, permitting the access route to be re-opened to traffic a maximum of 15 minutes after application.*

*f. The marking material shall have an integral color throughout the thickness of the marking material.*

**620-2.3 REFLECTIVE MEDIA.** Glass beads shall meet the requirements for Federal Specification, **TT-B-1325D, Type IA**. Glass beads shall be treated with all compatible coupling agents recommended by the manufacturers of the paint and reflective media to ensure adhesion and embedment.

~~**620-2.4 SURFACE PAINTED HOLD MARKING STENCILS.** Stencils shall conform to the dimensional requirements set forth in the FAA Advisory Circular 150/5340-1 (latest revision) and the inscriptions shall have a height of 12 feet. The stencil material requirements shall be as noted on the Drawings. As a reference, the existing RIAC stencils were manufactured by:~~

~~———— Pavement Stencil Co.  
———— 4347 A Aerospace Rd. SE  
———— Roanoke, VA 24014  
———— Phone: 800-250-5547 Contact: Megan or Kelvin~~

## CONSTRUCTION METHODS

**620-3.1 WEATHER LIMITATIONS.** The painting shall be performed only when the surface is dry and when the surface temperature is at least 45°F and rising and the pavement surface temperature is at least 5°F above the dew point. **Painting operations shall be discontinued when the surface temperature exceeds 90 degrees F.** Markings shall not be applied when the pavement temperature is greater than 120°F.

**620-3.2 EQUIPMENT.** Equipment shall include the apparatus necessary to properly clean the existing surface, a mechanical marking machine, a bead dispensing machine, and such auxiliary hand-painting equipment as may be necessary to satisfactorily complete the job.

The mechanical marker shall be an atomizing spray-type or airless type marking machine suitable for application of traffic paint. It shall produce an even and uniform film thickness at the required coverage and shall apply markings of uniform cross sections and clear-cut edges without running or spattering and without over spray.

**620-3.3 PREPARATION OF SURFACE.** Immediately before application of the paint, the surface shall be dry and free from dirt, grease, oil, laitance, or other foreign material that would reduce the bond between the paint and the pavement. The area to be painted shall be cleaned by sweeping and blowing or by other methods as required to remove all dirt, laitance, and loose materials without damage to the pavement surface. Use of any chemicals or impact abrasives during surface preparation shall be approved in advance by the Engineer.

**620-3.4 LAYOUT OF MARKINGS.** The proposed markings shall be laid out in advance of the paint application. The locations of markings to receive glass beads shall be shown on the plans. **In general, for this project, glass beads will be required for taxiway hold lines, taxiway centerlines, taxiway edge stripes and surface painted signs.**

**620-3.5 PAINT APPLICATION.** Paint shall be applied at the locations and to the dimensions and spacing shown on the plans. Paint shall not be applied until the layout and condition of the surface has been approved by the Engineer.

The edges of the markings shall not vary from a straight line more than 1/2 inch (12 mm) in 50 feet (15 m) and marking dimensions and spacings shall be within the following tolerances:

Dimension and Spacing	Tolerance
36 inches (910 mm) or less	±1/2 inch (12 mm)
greater than 36 inches to 6 feet (910 mm to 1.85 m)	± 1 inch (25 mm)
greater than 6 feet to 60 feet (1.85 m to 18.3 m)	± 2 inches (51 mm)
greater than 60 feet (18.3 m)	± 3 inches (76 mm)

The paint shall be mixed in accordance with the manufacturer's instructions and applied to the pavement with a marking machine at the rate(s) shown in Table 1. The addition of thinner will not be permitted. A period of **7 days** shall elapse between placement of a bituminous surface course or seal coat and application of the paint. The final coat of paint, at full strength, will be applied **30 days** after the bituminous surface course is placed or as approved by the Engineer.

**TABLE 1. APPLICATION RATES FOR PAINT AND GLASS BEADS**

Paint Type	Paint Square feet per gallon, ft <sup>2</sup> /gal	Glass Beads, Type IA Pounds per gallon of paint—lb./gal.
Waterborne (Temp)	<b>460</b> s.f. / gal (maximum)	None required
Waterborne (Perm)	<b>115</b> s.f. / gal (maximum)	<b>12</b> lbs./gal. (minimum)

Glass beads shall be distributed upon the marked areas at the locations shown on the plans to receive glass beads immediately after application of the paint. A dispenser shall be furnished which is properly designed for attachment to the marking machine and suitable for dispensing glass beads. Glass beads shall be applied at the rate(s) shown in Table 1. Glass beads shall not be applied to black paint. Glass beads shall adhere to the cured paint or all marking operations shall cease until corrections are made.

**Pavement markings shall be applied using two coats of paint both at an application rate of 115 square feet per gallon. Glass beads shall be applied to both coats, unless otherwise directed by the Engineer. Except glass beads are prohibited on Black Paint.**

All emptied containers shall be returned to the paint storage area for checking by the Engineer. The containers shall not be removed from the airport or destroyed until authorized by the Engineer.

**620-3.6 APPLICATION -- PREFORMED THERMOPLASTIC AIRPORT PAVEMENT MARKINGS.**

*a. Asphalt and Portland cement To ensure minimum single-pass application time and optimum bond in the marking/substrate interface, the materials must be applied using a variable speed self-propelled mobile heater with an effective heating width of no less than 16 ft (4.88 m) and a free span between supporting wheels of no less than 18 ft (5.49 m). The heater must emit*

*thermal radiation to the marking material in such a manner that the difference in temperature of 2 in (5.08 cm) wide linear segments in the direction of heater travel must be within 5 percent of the overall average temperature of the heated thermoplastic material as it exits the heater. The material must be able to be applied at ambient and pavement temperatures down to 35 °F (2 °C) without any preheating of the pavement to a specific temperature. The material must be able to be applied without the use of a thermometer. The pavement shall be clean, dry, and free of debris. A non-VOC sealer with a maximum applied viscosity of 250 centiPoise (ASTM D 2393) must be applied to the pavement shortly before the markings are applied. The supplier must enclose application instructions with each box/package.*

**620-3.6 620-3.7 PROTECTION AND CLEANUP.** After application of the paint, all markings shall be protected from damage until the paint is dry. All surfaces shall be protected from excess moisture and/or rain and from disfiguration by spatter, splashes, spillage, or drippings of paint. The Contractor shall remove from the site all debris, waste, loose or unadhered reflective media, and by-products generated by the surface preparation and application operations to the satisfaction of the Engineer. The Contractor shall dispose of these wastes in strict compliance with all applicable state, local, and Federal environmental statutes and regulations.

**620-3.7 620-3.8 PAVEMENT MARKING REMOVAL.** All existing pavement markings shall be removed on pavements to be overlaid or having pavement marking modifications shall be removed by grinding or milling. Pavement markings removed during milling operations required to facilitate bituminous overlays will not be measured for payment.

Pavement markings that are no longer needed, or to be replaced, are not to be painted over, but instead are to be physically removed. All pavement markings to be removed on pavements, which are not requiring overlay as noted above, shall be removed by either waterblasting or grinding that do not harm the existing pavement. Markings must be 100% removed, except where pavement damage may occur, then the degree of removal shall be 95% to 100%, with care not to cause harm pavement damage. All loose material from the removal operations shall be carefully gathered and removed from the pavement areas. Disposal of paint debris on paved or grass shoulders will not be permitted. In addition, “painting” over pavement markings with paint, asphalt mixtures, or any other material is prohibited. All removal shall occur in accordance with all applicable federal, state, and local regulations.

## METHOD OF MEASUREMENT

**620-4.1** The quantity of “Pavement Markings” (*Paint or Thermoplastic*) to be paid for shall be the number of square feet of pavement surface painted, regardless of the number of coats, complete in conformance with these specifications, the Contract Drawing, or as directed, and accepted by the Engineer. No separate measure shall be made for retroreflective media. ~~In addition, there shall be no separate measurement for stencils to be provided for any pavement markings.~~

**620-4.2** The quantity of “Removal of Existing Pavement Markings” to be paid for shall be the number of square feet of pavement surface paint removed, regardless of the number of coats, complete in conformance with these specifications, the Contract Drawing, or as directed, and accepted by the Engineer. No separate measure shall be made for collection and disposal of the paint and grinding materials.

## BASIS OF PAYMENT

**620-5.1** Payment for “Pavement Markings” (*Paint or Thermoplastic*) will be made at the contract unit price per square foot for each and every square foot of painted pavement surface completed and accepted, measured as specified above, which price and payment thereof shall constitute full compensation for all labor, materials, equipment, layout, expenses and incidentals for completing the painting to the complete satisfaction of the Engineer. No separate payment for retroreflective media or ~~stencils~~ to be provided for any pavement markings.

**620-5.2** Payment for “Removal of Existing Pavement Markings” will be made at the contract unit price per square foot for each and every square foot of painted pavement surface completely removed and accepted, measured as specified above, which price and payment thereof shall constitute full compensation for all labor, materials, equipment, expenses and incidentals for completing the removal of painting to the complete satisfaction of the Engineer.

Payment will be made under:

- Item P-620-1 *Pavement Markings - Paint* -- per square foot
- Item P-620-2 Pavement Markings - Thermoplastic -- per square foot*
- Item P-620-3* Removal of Existing Pavement Markings -- per square foot

## TESTING REQUIREMENTS

ASTM C 136	Sieve Analysis of Fine and Coarse Aggregates
ASTM C 146	Chemical Analysis of Glass Sand
ASTM C 371	Wire-Cloth Sieve Analysis of Nonplastic Ceramic Powders
ASTM D 92	Test Method for Flash and Fire Points by Cleveland Open Cup
ASTM D 711	No-Pick-Up Time of Traffic Paint
ASTM D 968	Standard Test Methods for Abrasion Resistance of Organic Coatings by Falling Abrasive
ASTM D 1213-54(1975)	Test Method for Crushing Resistance of Glass Spheres
ASTM D 1652	Test Method for Epoxy Content of Epoxy Resins
ASTM D 2074	Test Method for Total Primary, Secondary, and Tertiary Amine Values of Fatty Amines by Alternative Indicator Method
ASTM D 2240	Test Method for Rubber Products-Durometer Hardness
ASTM G 15453	Operating Light and Water-Exposure Apparatus (Fluorescent Light Apparatus UV-Condensation Type) for Exposure of Nonmetallic Materials.

Federal Test Method      Paint, Varnish, Lacquer and Related Materials; Methods of  
Standard No. 141D/GEN      Inspection, Sampling and Testing

### **MATERIAL REQUIREMENTS**

ASTM D 476	Specifications for Dry Pigmentary Titanium Dioxide Pigments Products
Code of Federal Regulations	40 CFR Part 60, Appendix A – Definition of Traverse Point Number and Location
Code of Federal Regulations	29 CFR Part 1910.1200 – Hazard Communications
FED SPEC TT-B-1325D	Beads (Glass Spheres) Retroreflective
AASHTO M 247	Glass Beads Used in Traffic Paints
FED SPEC TT-P-1952E	Paint, Traffic and Airfield Marking, Waterborne
Commercial Item Description (CID) A-A-2886B	Paint, Traffic, Solvent Based
FED STD 595	Colors used in Government Procurement

**END OF ITEM P-620**

RUNWAY 16 RSA IMPROVEMENT - PROPOSAL ITEMS			
ITEM NO.	DESCRIPTION	UNIT	ESTIMATED QUANTITY
P-102-1	MILLING BITUMINOUS PAVEMENT (0 - 4")	SY	4,500
P-102-2	PAVEMENT REMOVAL	CY	2,500
P-102-3	SAW CUT PAVEMENT	LF	1,250
P-102-4	SAW AND SEAL JOINT	LF	900
P-151-1	CLEARING AND GRUBBING	LS	1
P-152-1	UNCLASSIFIED EXCAVATION	CY	13,000
P-152-2	REMOVAL OF EXISTING BLAST WALL	LF	490
P-152-3	REMOVAL OF SEWER STRUCTURE	LS	1
P-153-1	CONTROLLED LOW STRENGTH MATERIAL	CY	4
P-154-1	SUBBASE COURSE (P-154)	CY	2,900
P-156-1	EROSION CONTROL WATTLES	LF	700
P-156-2	INLET PROTECTION/CATCH BASIN FILTER BAG	EA	8
P-156-3	INLET PROTECTION/CATCH BASIN FILTER BAG & WATTLE	EA	9
P-209-1	CRUSHED AGGREGATE BASE COURSE (P-209)	CY	1,230
M-301-1	RIDOT AGGREGATE OR GRAVEL BASE COURSE	CY	205
P-401-1	SURFACE COURSE PAVEMENT (P-401)	TON	3,340
P-401-2	BASE COURSE PAVEMENT (P-401)	TON	300
P-555-1	EMAS BED INSTALLATION	LS	1
P-556-1	CONCRETE ANCHOR BEAM INSTALLATION	LS	1
P-602-1	BITUMINOUS PRIME COAT	GAL	2,400
P-603-1	BITUMINOUS TACK COAT	GAL	2,800
P-620-1	PAVEMENT MARKINGS - PAINT	SF	23,500
P-620-2	PAVEMENT MARKINGS - THERMOPLASTIC	SF	2,500
P-620-3	REMOVAL OF EXISTING PAVEMENT MARKINGS	SF	12,100
P-621-1	RUNWAY PAVEMENT GROOVING	SY	280
D-701-1	DUCTILE IRON PIPE, 8" DIAMETER - CLASS 52	LF	50
D-701-2	REMOVE EXISTING STORM DRAIN PIPE	LF	190
D-751-1	HEAVY DUTY DRAINAGE STRUCTURE	EA	2
D-751-2	ALTER EXISTING DRAINAGE STRUCTURE	EA	3
D-751-3	REMOVE EXISTING DRAINAGE STRUCTURE	EA	6
D-751-4	HEAVY DUTY ELECTRICAL MANHOLE	EA	7
D-751-5	REMOVE EXISTING ELECTRICAL MANHOLE	EA	5
F-162-1	TEMPORARY FENCE - 8-FT CHAIN LINK W/ BARB WIRE	LF	800
F-162-2	TEMPORARY FENCE - 8-FT BARRIER & CHAIN LINK W/ BARB WIRE	LF	1,150
F-162-3	NEW FENCE - 8' CHAIN LINK W/ BARB WIRE	LF	525
F-162-4	REMOVE EXISTING FENCE, GATE & FOUNDATION	LF	525
F-170-1	INSTALL BLAST FENCE	LF	250
T-901-1	HYDROSEEDING	SY	25,200
T-905-1	TOPSOIL - BORROW (MIN. 4" DEPTH)	SY	21,200
L-108-1A	TRACE & IDENTIFY CABLES	Allow	\$ 15,000.00
L-108-1B	CONNECTION TO EXISTING DUCT BANK	Allow	\$ 25,000.00
L-108-2	1/2" NO. 6 AWG (L-824C) 5KV CABLE INSTALLED IN CONDUIT/DUCT	LF	5,000
L-108-3	1/2" NO. 8 AWG (L-824C) 5KV CABLE INSTALLED IN CONDUIT/DUCT	LF	25,800
L-108-4	NO. 6 AWG BARE COUNTERPOISE INSTALLED IN TRENCH	LF	3,700
L-108-5	NO. 4 AWG, INSULATED 600V WIRE INSTALLED IN CONDUIT/DUCT	LF	2,200
L-108-6	NO. 8G AWG, INSULATED 600V WIRE INSTALLED IN CONDUIT/DUCT	LF	1,100
L-108-7	NO. 10 AWG, MULTICONDUCTOR (3) (PAPI-REIL 16) CONTROL CABLE	LF	2,500
L-108-8	NO. 10G AWG, INSULATED 600V WIRE INSTALLED IN CONDUIT/DUCT	LF	3,700
L-108-9	NO. 12 AWG, 2-CONDUCTOR W/ 12G, 600V INSULATED - UF TYPE CABLE	LF	900
L-108-10	NO. 12 AWG, INSULATED 600V WIRE INSTALLED IN CONDUIT/DUCT	LF	600
L-108-11	NO. 12G AWG, INSULATED 600V WIRE INSTALLED IN CONDUIT/DUCT	LF	300
L-108-12	NO. 14 AWG, UNSHIELDED 600V TWISTED CONDUCTOR	LF	1,800
L-108-13	12-STRAND SINGLE MODE (SM) BERKTEK FIBER OPTIC CABLE	LF	3,500
L-108-14	REMOVE EXISTING CABLE IN CONDUIT OR DUCT	LF	49,100
L-108-15	REMOVE EXISTING DIRECT BURY CABLING	LF	6,600
L-109-1	INSTALLATION OF AIRFIELD VAULT EQUIPMENT IN PLACE	LS	1
L-110-1	CONCRETE ENCASED DUCT BANK 8-WAY W/ 4" CONDUIT	LF	550
L-110-2	CONCRETE ENCASED DUCT BANK 9-WAY W/ 3" CONDUIT	LF	70
L-110-3	CONDUIT, TYPE II SCH 40 PVC, 1" - MOUNTED	LF	300
L-110-4	CONDUIT, TYPE I SCH 40 PVC, 2"	LF	3,300
L-110-5	CONDUIT, TYPE I SCH 40 PVC, 2" - CONCRETE ENCASED	LF	120
L-110-6	CABLE/CONDUIT/DUCT MARKERS	EA	6
L-110-7	REMOVAL OF ELECTRICAL CONDUIT	LF	225
L-110-8	REMOVAL OF ELECTRICAL DUCT BANK	LF	1,100
L-119-1	OBSTRUCTION LIGHT - DOUBLE FIXTURE	EA	2
L-119-2	OBSTRUCTION LIGHT - SINGLE FIXTURE	EA	1
L-119-3	OBSTRUCTION LIGHT - PHOTOCELL CONTROLLER	EA	1
L-125-1	IN-PAVEMENT RUNWAY EDGE LIGHT	EA	1
L-125-2	JUNCTION CAN WITH SOLID COVER	EA	18
L-125-3	NEW AIRFIELD GUIDANCE SIGN	EA	1
L-125-4	RELOCATE AIRFIELD GUIDANCE SIGN	EA	2
L-125-5	PAVEMENT SENSOR	EA	1
L-125-6	REMOVE EXISTING RUNWAY EDGE LIGHT	EA	1
L-125-7	REMOVE EXISTING JUNCTION CAN	EA	9
L-126-1	INSTALL NEW RUNWAY END INDICATOR LIGHT (REIL)	SET	1
L-126-2	REMOVE EXISTING RUNWAY END INDICATOR LIGHT (REIL)	SET	1
L-127-1	INSTALL NEW PRECISION APPROACH PATH INDICATOR (PAPI)	SET	1
L-127-2	REMOVE EXISTING VISUAL APPROACH SLOPE INDICATOR (VASI)	SET	2
L-853-1	RETROREFLECTIVE EDGE MARKERS - TAXIWAY	EA	14
L-853-2	RETROREFLECTIVE EDGE MARKERS - ROADWAY	EA	8
M-001-1	FIELD OFFICE	Month	6
M-001-2	SAFETY BARRICADES, CONES, LIGHTS & SIGNS	Allow	\$ 40,000.00
M-001-3	TEMPORARY VSR/HAUL ROAD	Allow	\$ 20,000.00
M-002-1	CLEAN DRAINAGE LINES	LF	2,300
M-002-2	CLEAN DRAIN STRUCTURES	EA	20
M-003-1	DRAINAGE INFILTRATION SYSTEM	CF	9,000

**GENERAL PROJECT NOTES:**

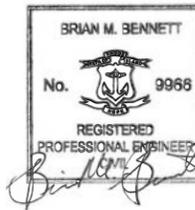
- THE CONTRACTOR SHALL CONDUCT HIS OPERATIONS SO AS TO AFFORD COMPLETE UNRESTRICTED ACCESS BY EMERGENCY PERSONNEL AND EQUIPMENT.
- CONTRACTOR SHALL MAINTAIN ALL SEDIMENT AND EROSION CONTROLS. CONTRACTOR SHALL COMPLY WITH ALL FEDERAL, STATE, AND LOCAL ENVIRONMENTAL RULES AND REGULATIONS INCLUDING THE SWPPP DEVELOPED IN COMPLIANCE WITH THE RIPDES CONSTRUCTION GENERAL PERMIT.
- THE CONTRACTOR'S PRIMARY ACCESS TO THE WORK SITE SHALL BE FROM AIRPORT ROAD THROUGH AN EXISTING AIRSIDE SECURITY GATE (GATE 39) AS SHOWN ON THE GENERAL PLAN. THE AIRPORT ROAD GATE TO THE CONTRACTOR'S OFFICE AND STAGING LOCATION MAY BE OPEN DURING WORKING HOURS, BUT SHALL REMAIN LOCKED AT ALL OTHER TIMES.
- THE TEMPORARY CONSTRUCTION FENCE SHOWN IN THE PLANS WILL BECOME THE SECURITY FENCE FOR THE AIRPORT TO DEFINE "LANDSIDE" AND AIRPORT OPERATIONS AREA (AOA OR AIRSIDE). THE MAJORITY OF THE 2013 CONSTRUCTION SEASON WORK WILL BE PERFORMED "LANDSIDE" OF THE SECURITY FENCE. THE SITE SECURITY OF THIS WORK ZONE WILL BE THE RESPONSIBILITY OF THE CONTRACTOR. HOWEVER, THE CONTRACTOR SHALL ALSO BE RESPONSIBLE FOR MAINTAINING THE TEMPORARY SECURITY FENCE DURING THE 2013 CONSTRUCTION SEASON.
- CONTRACTOR SHALL REFER TO THE GENERAL CONDITIONS WHICH REQUIRE PRE-CONSTRUCTION PROJECT PHOTOGRAPHS FOR RESTORATION DOCUMENTATION (I.E. HAUL ROUTES, EXISTING FENCING TO REMAIN, ETC.).
- CONTRACTOR SHALL REMOVE ALL CONSTRUCTION RELATED DEBRIS FROM THE PROJECT AREA AND THE CONTRACTOR'S STAGING AREA DAILY.
- ALL EXCAVATED STRUCTURES, PAVEMENTS, UNSUITABLE MATERIAL, AND UNUSED CONSTRUCTION DEBRIS SHALL BE IMMEDIATELY REMOVED FROM THE AIRPORT SITE AND BE LEGALLY DISPOSED OF BY THE CONTRACTOR OFF AIRPORT PROPERTY, OR TEMPORARILY STORED IN A DESIGNATED CONTRACTOR STAGING AND EQUIPMENT STORAGE AREA. THE CONTRACTOR SHALL OBTAIN ALL PERMITS AND PAY ALL FEES REQUIRED FOR DISPOSAL OF CONSTRUCTION MATERIAL OFF THE AIRPORT. NO SEPARATE MEASUREMENT AND PAYMENT WILL BE MADE FOR THE DISPOSAL, BUT RATHER THE DISPOSAL SHALL BE INCIDENTAL TO THE RESPECTIVE ITEM ASSOCIATED WITH THE MATERIAL.
- THE CONTRACTOR SHALL NOT LEAVE ANY TRENCHES OR OTHER EXCAVATIONS OPEN DURING NON-WORK HOURS WITHOUT PRIOR APPROVAL FROM THE ENGINEER.
- ALL EXCAVATIONS SHALL BE BACKFILLED, PAVEMENT REPAIRED, PROPERLY CURED, MARKED AND APPROVED BY THE ENGINEER PRIOR TO THE WORK AREA BEING REOPENED TO TRAFFIC.
- AT THE COMPLETION OF EACH WORK DAY, THE CONTRACTOR SHALL INSPECT THE WORK SITE IN THE ENGINEER'S PRESENCE TO ENSURE THAT ALL SAFETY AND SECURITY DEVICES ARE IN PLACE, AS WELL AS IN PROPER WORKING ORDER. THE WORK AREA SHALL ALSO BE INSPECTED FOR FOREIGN OBJECT DEBRIS THAT COULD POTENTIALLY GO OUT OF THE WORK ZONE AND ONTO THE AIRPORT OPERATIONS AREA OR OFF SITE. ALL DEFICIENCIES SHALL BE CORRECTED BY THE CONTRACTOR PRIOR TO LEAVING THE WORK SITE FOR THE DAY.
- RUNWAY 16-34 WILL BE CLOSED FOR THE ENTIRE DURATION OF THE PROJECT (BOTH CONSTRUCTION SEASONS). IN ADDITION TO THE SAFETY AND SECURITY CHECKS AT THE END OF EACH WORK SHIFT NOTED ABOVE, THE CONTRACTOR SHALL ALSO INSPECT THE RUNWAY CLOSURE MARKERS. THIS CHECK OF THE EQUIPMENT WILL HELP ENSURE IT IS OPERATING PROPERLY AND TO CONTINUE OPERATING DURING THE NIGHT, HOLIDAY OR WEEKEND. THE CONTRACTOR WILL BE "ON-CALL" AT ALL TIMES DURING NON-WORKING HOURS TO FUEL AND MAINTAIN THE RUNWAY CLOSURE MARKERS AS REQUIRED.
- CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE DONE BY EQUIPMENT OR ANY RELATED CONSTRUCTION ACTIVITIES FOR THIS PROJECT TO TO ALL EXISTING PAVEMENT. ANY DAMAGE THAT OCCURS SHALL BE REPAIRED TO THE SATISFACTION OF THE ENGINEER AND THE OWNER AT NO ADDITIONAL COST TO THE OWNER.
- EXISTING SURVEY INFORMATION IN THIS DRAWING SET WAS OBTAINED FROM ON-SITE SURVEY PERFORMED BY AEROTECH CORP. IN NOVEMBER 2012 & JANUARY 2013, AS WELL AS PHOTOGRAMETRIC DATA ALSO PREPARED BY AEROTECH CORP.
- CONTRACTOR'S SURVEY EQUIPMENT SHALL HAVE A VERTICAL ELEVATION TOLERANCE OF 0.02 FEET OR LESS.

**GENERAL AIRSIDE WORK NOTES:**

- AS NOTED UNDER GENERAL PROJECT NOTE 3, GATE 39 WILL BE THE PRIMARY ACCESS TO THE PROJECT SITE. WHEN THE WORK ZONE IS CONSIDERED TO BE WITHIN THE AIRPORT OPERATIONS AREA (I.E. AIRSIDE WORK,) THIS SECURITY GATE SHALL BE LOCKED AT ALL TIMES. WHEN THE TEMPORARY AIRPORT SECURITY FENCE IS IN PLACE, ALL ACCESS TO AIRSIDE WORK SHALL BE AT THE GATES BY THE OLD RIAC OPERATIONS (HISTORIC TERMINAL) BUILDING.
- ALL WORK UNDER THIS CONTRACT SHALL BE CARRIED OUT IN STRICT CONFORMANCE WITH FAA AC 150/5370-2 (LATEST REVISION) "OPERATIONAL SAFETY ON AIRPORTS DURING CONSTRUCTION", AND ALL RELATED ORDERS. CRANES OR BOOMS SHALL HAVE AN ORANGE AND WHITE FLAG AND FLASHING BEACON IN ACCORDANCE WITH FAA AC 150/5370-2.
- RIAC OPERATIONS WILL PROVIDE ESCORT VEHICLES FOR THIS PROJECT. HOWEVER THE CONTRACTOR AND ALL AIRSIDE SUBCONTRACTORS SHALL MEET RHODE ISLAND AIRPORT CORPORATION SAFETY AND SECURITY REQUIREMENTS FOR BADGING OF PERSONNEL. A MAXIMUM RATIO OF 5 EMPLOYEES PER BADGED EMPLOYEE WILL BE REQUIRED.
- NORMAL AIRCRAFT OPERATIONS SHALL BE CONDUCTED ON THE AIRPORT DURING ALL CONSTRUCTION. THE PROJECT PHASING HAS BEEN DESIGNED TO MINIMIZE INTERFERENCE WITH DAILY AIRPORT OPERATIONS BY MAKING A LARGE PORTION OF THE WORK TO BE PERFORMED LANDSIDE. HOWEVER, THE AIRSIDE WORK SHALL BE PERFORMED IN SUCH A MANNER AS NOT TO INTERFERE WITH THE NECESSARY OPERATION OF THE AIRPORT. THE CONTRACTOR SHALL TAKE ALL PRECAUTIONS NECESSARY TO ENSURE THE SAFETY OF OPERATING AIRCRAFT AS WELL AS HIS OWN EQUIPMENT AND PERSONNEL. MINOR MODIFICATIONS AND/OR CHANGES TO THE PHASING PLAN MAY BE NECESSARY TO MINIMIZE IMPACT TO AIRPORT OPERATIONS. ALL SUCH CHANGES SHALL BE COORDINATED THROUGH THE ENGINEER AND SHALL BE AT NO ADDITIONAL EXPENSE TO THE OWNER.
- ALL CONTRACTOR'S MOTORIZED VEHICLES OPERATING IN AIRCRAFT MOVEMENT AREAS SHALL BE EQUIPPED WITH AN AMBER FLASHING LIGHT AND/OR A 3 FEET SQUARE FLAG CONSISTING OF INTERNATIONAL ORANGE AND WHITE SQUARES NOT LESS THAN ONE FOOT SQUARE DISPLAYED IN FULL VIEW ABOVE THE VEHICLE. ALL CONTRACTOR'S VEHICLES SHALL HAVE THE COMPANY IDENTIFICATION AND TELEPHONE NUMBER PLAINLY VISIBLE ON BOTH SIDES OF THE VEHICLE.
- ALL AIRSIDE WORK SHALL BE PERFORMED IN CLOSED WORK ZONES, UNLESS OTHERWISE PROPERLY SCHEDULED AND APPROVED TO BE PERFORMED UNDER A CAUTION. NO CONSTRUCTION OPERATIONS SHALL BE PERFORMED WITHIN 129.5 FEET FROM THE CENTERLINE OF ANY ACTIVE TAXIWAY OR TAXILANE, OR WITHIN 250 FEET FROM THE CENTERLINE OF ANY ACTIVE RUNWAY OR WITHIN THE LIMITS OF ACTIVE RUNWAY APPROACH ZONES, UNLESS PRIOR APPROVAL HAS BEEN OBTAINED. WHEN PERMISSION HAS BEEN GRANTED TO WORK INSIDE ACTIVE MOVEMENT LIMITS, NO EQUIPMENT SHALL BE LEFT WITHIN THE LIMITS WHEN IT IS NOT ACTUALLY WORKING. WHEN EQUIPMENT IS OUTSIDE ACTIVE MOVEMENT AREA LIMITS, ALL BOOMS SHALL BE LOWERED WHEN THE EQUIPMENT IS NOT IN OPERATION.
- THE CONTRACTOR SHALL NOT BEGIN AIRSIDE WORK IN ANY AREA UNTIL THE ENGINEER HAS APPROVED THE TEMPORARY MARKINGS AND SAFETY CHANNELIZER CONE LAYOUT, AND CONFIRMED WITH THE ENGINEER THAT TEMPORARY MARKINGS AND SAFETY CHANNELIZER CONES HAVE BEEN PROPERLY PLACED. THE CONTRACTOR SHALL NOT ENTER THE WORK AREA TO COMMENCE OPERATIONS UNTIL OBTAINING APPROVAL FROM RHODE ISLAND AIRPORT CORPORATION OPERATIONS, AND THE ENGINEER.
- ANY WORK REQUIRING OPEN FLAME WELDING OR BURNING SHALL NOT BE PERFORMED WITHIN 100 FEET OF AIRCRAFT. WELDING AND BURNING SHALL REQUIRE NOTIFICATION OF THE T.F. GREEN (ARFF) FIRE DEPARTMENT, (401) 691-2268.
- AT THE COMPLETION OF EACH WORK DAY, THE CONTRACTOR SHALL INSPECT THE AIRSIDE WORK SITE IN THE ENGINEER'S AND RIAC OPERATION'S PRESENCE TO ENSURE THAT ALL SAFETY CHANNELIZER CONES AND SAFETY LIGHTS ARE IN PLACE AND IN PROPER WORKING ORDER WHEN OVERNIGHT CLOSURE IS ALLOWABLE. ACCESS ROUTES AND ALL APRON PAVEMENTS ADJACENT TO THE WORK AREA SHALL ALSO BE INSPECTED FOR FOREIGN OBJECT DEBRIS AND REMOVE IT ACCORDINGLY. ALL DEFICIENCIES TO SITE SAFETY AND SECURITY SHALL BE CORRECTED BY THE CONTRACTOR TO THE SATISFACTION OF THE ENGINEER AND RIAC OPERATIONS PRIOR TO LEAVING THE WORK SITE FOR THE DAY.

**GENERAL CONSTRUCTION PHASING NOTES:**

- THE TOTAL CONSTRUCTION DURATION WILL BE 180 DAYS AND BE PERFORMED OVER 2 CONSTRUCTION SEASONS. REFER TO CONSTRUCTION PHASING FOR MORE DETAILS.
- THE CONTRACTOR SHALL BE AWARE THAT AN ADJACENT PROJECT TO DEMOLISH THE HANGAR #1 BUILDING WILL BE PERFORMED SIMULTANEOUSLY DURING THE 2013 CONSTRUCTION SEASON. COORDINATION BETWEEN THE 2 PROJECTS WILL BE MANDATORY AND WILL BE A PRIMARY FACTOR TO THE SUCCESSFUL COMPLETION OF BOTH PROJECTS. THE LIMITS OF WORK WILL HAVE SOME OVERLAP (I.E. ELECTRICAL AND DRAINAGE WORK) AND WILL REQUIRE CONTINUAL COORDINATION AND COMMUNICATION BETWEEN THE CONTRACTORS, THE ENGINEERS AND THE OWNER.
- SCHEDULING OF CONSTRUCTION ACTIVITIES SHALL BE DONE WITH ENGINEER AT LEAST 48 HOURS IN ADVANCE OF COMMENCING PROPOSED WORK.
- DAILY COORDINATION OF CONSTRUCTION ACTIVITIES SHALL BE HELD WITH THE CONTRACTOR AND THE ENGINEER TO CLEARLY IDENTIFY THE LIMITS OF WORK FOR THE DAY. FOR AIRSIDE WORK, THE DAILY COORDINATION SHALL ALSO INCLUDE RHODE ISLAND AIRPORT CORPORATION. THE CONTRACTOR SHALL NOT EXCEED THE LIMITS OF WORK WITHOUT APPROVAL FROM THE ENGINEER, AS WELL AS THE RHODE ISLAND AIRPORT CORPORATION FOR AIRSIDE WORK.
- DAY SHIFTS (LANDSIDE OR AIRSIDE) MAY BE FROM 7:00 AM TO 5:00 PM, MONDAY THROUGH FRIDAY. ANY NIGHT AIRSIDE SHIFTS NECESSARY SHALL BE BETWEEN 12:00 AM (MIDNIGHT) TO 5:00 AM MONDAY THROUGH FRIDAY ON A WIND/WEATHER AVAILABILITY BASIS AND PROPERLY SCHEDULED WITH THE ENGINEER AND RHODE ISLAND AIRPORT CORPORATION. WORK ON WEEKENDS, LEGAL HOLIDAYS, AND AT NIGHT MAY BE PERMITTED, BUT ONLY WITH PRIOR WRITTEN APPROVAL FROM THE ENGINEER. THE CONTRACTOR MAY EXTEND THE HOURS OF THE DAY SHIFT WITH WRITTEN APPROVAL FROM THE ENGINEER AT LEAST 48 HOURS IN ADVANCE OF THE SHIFT TO BE EXTENDED.
- CHANNELIZER CONES SHALL BE PLACED AT THE LIMITS OF THE WORK ZONES AT 4-FT. INTERVALS AND THE LOCATION SHALL BE APPROVED BY THE ENGINEER PRIOR TO COMMENCING WORK. PERSONNEL AND EQUIPMENT SHALL REMAIN IN THE WORK AREA, AND NO CLOSER THAN 129.5 FEET FROM ANY ACTIVE TAXIWAY CENTERLINE OR 250 FEET FROM ANY ACTIVE RUNWAY.
- ALL AIRSIDE WORK REQUIRING EXCAVATION WITHIN 129.5 FEET OF AN ACTIVE TAXIWAY CENTERLINE OR 250 FEET OF AN ACTIVE RUNWAY CENTERLINE SHALL REQUIRE A CLOSURE. ALL CLOSURES SHALL BE COORDINATED IN WRITING WITH ENGINEER AT LEAST 72 HOURS IN ADVANCE OF CLOSURE. ALL CLOSURES ARE SUBJECT TO WIND/WEATHER AVAILABILITY AND ARE SUBJECT TO A RECALL OF 15 MINUTES FOR SURVEY AND 2 HOURS FOR CONSTRUCTION, EXCEPT FOR RUNWAY 16-34. THIS RUNWAY WILL BE CLOSED FOR THE DURATION OF CONSTRUCTION, BUT WILL ALLOW FOR TAXI CROSSING OF AIRCRAFT AT DESIGNATED LOCATIONS.
- PRIOR TO COMMENCING ANY CONSTRUCTION OPERATIONS, THE CONTRACTOR SHALL SUBMIT A DETAILED SAFETY PLAN COMPLIANCE DOCUMENT (SPCD) (WITH PARTICULAR ATTENTION TO AIRSIDE WORK) TO THE ENGINEER FOR APPROVAL. THE PLAN SHALL INCLUDE VEHICLE CROSSINGS, TRAFFIC & CHANNELIZER CONE PLACEMENT, ESCORT VEHICLE ROUTES, AND CONSTRUCTION ACTIVITIES ON AND ADJACENT TO AIRCRAFT MOVEMENT AREAS. THE PLAN SHALL BE UPDATED AND SUBMITTED TO THE ENGINEER FOR APPROVAL AS REQUIRED TO ADDRESS WORK PROGRESS AND ANY MODIFICATIONS.



REVISION NUMBER	REVISION DATE	DESCRIPTION
Δ	4-3-13	PROPOSAL ITEM MODIFICATIONS



**Rhode Island Airport Corporation**  
**T.F. GREEN AIRPORT**  
WARWICK, RHODE ISLAND

SHEET TITLE

QUANTITIES AND GENERAL NOTES			
DESIGNED	DRAWN	CHECKED	APPROVED
DPB	MJF	BMB	BMB
PROJECT NO. 24854 (RIAC)		17746.04 (M)	
DATE: JAN. 2013		SHEET G-1	




NOTE:  
HANGAR NO. 1 IS A  
SEPARATE CONTRACT TO BE  
PERFORMED BY OTHERS.

END NEW FENCE  
COORDINATE LOCATION WITH  
END OF HANGAR #1 FENCE  
N 236568.30  
E 346543.20

STATION 97+100  
N 236472.8306  
E 346410.0163

BM-1  
DRILL HOLE  
EL.=52.9  
N 236345.40  
E 346650.95

BM-2  
DRILL HOLE  
EL.=52.5  
N 235874.50  
E 347051.92

BM-3  
DRILL HOLE  
EL.=52.4  
N 235531.94  
E 347297.95

ROADWAY RETROREFLECTIVE EDGE  
MARKER SPACED AT 10' APART ALONG  
EDGE OF VEHICLE SERVICE ROAD

EXISTING LOCALIZER  
NEW BLASTWALL

NEW RELOCATED CHAIN LINK  
SECURITY FENCE. REFER TO  
SHEET C-15 FOR DETAILS.

START NEW FENCE  
N 236547.84  
E 346025.84

EMAS BED LAYOUT  
SEE SHEETS C28-C30

RW 16 END STATION 100+00  
N 236237.9401  
E 346596.6348

16-34 CENTERLINE  
STA. 101+36.27=  
STA. 500+00 TAXILANE  
NORTHING=236131.25  
EASTING=346681.40

EXISTING RUNWAY EDGE  
LINE TO REMAIN

RW 16 THRESHOLD STATION 105+64.81  
N 235795.71  
E 346947.98

Curve #	Length	Radius	Delta	Chord Direction	Chord Length
C1	55.20	25.00	126°30'	S24° 47' 12"W	44.65
C2	115.67	185.00	35°49'	S70° 07' 39"W	113.80
C3	38.97	25.00	89°19'	N83° 07' 33"W	35.14
C4	100.12	160.00	35°51'	N70° 06' 46"E	98.50
C5	77.95	50.00	89°19'	S83° 09' 17"E	70.29
C6	39.65	25.00	90°52'	S24° 47' 11"W	35.62
C7	85.57	45.12	108°40'	S18° 43' 47"W	73.32

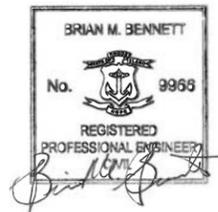
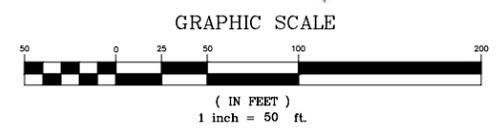
Point #	Northing	Easting
1	236169.7725	347051.3546
2	236157.4552	346919.3262
3	236131.0343	346845.9658
4	236073.1055	346842.1355
5	236124.9765	346558.6643
6	236406.7096	346334.8298
7	236555.7386	346476.5353
8	236545.1817	346228.9513
9	236337.5984	347029.5811
10	236297.9167	347010.2120
11	236292.4454	346850.3533
12	236253.7620	346743.3332
13	236257.9691	346708.4411
14	236503.8101	346457.0470

Point #	Northing	Easting
15	236508.3525	346509.5136
16	236524.5070	346516.1957
17	236521.6308	346450.4040
18	236517.8761	346482.7892
19	236412.1256	346349.6846
20	236316.1966	346643.0220
21	236210.4461	346509.9174
22	236517.9622	346360.8642
23	236542.1839	346359.8416
24	236525.3064	346536.5181
25	236551.7683	346535.5150
26	236472.8306	346410.0163
27	236237.9401	346596.6348
28	235795.7118	346947.9814

TAXILANE RETROREFLECTIVE EDGE MARKERS	Point Label	Northing	Easting
M1	236284.3517	347055.0844	
M2	236281.9501	346984.9170	
M3	236279.5153	346913.7768	
M4	236277.4247	346852.6953	
M5	236267.4541	346800.8450	
M6	236241.8244	346754.2824	
M7	236233.7095	346724.9906	
M8	236248.4926	346698.4764	
M9	236178.7689	346988.4485	
M10	236172.1842	346917.8685	
M11	236158.9010	346880.9306	
M12	236145.6177	346843.9928	
M13	236130.3348	346824.3600	
M14	236106.4022	346817.5596	

**LEGEND**

PAVEMENT	EXISTING	NEW PAVEMENT	NEW
PROPERTY LINE	---	PROPOSED EDGE SHOULDER PAVEMENT	---
UNDERGROUND ELECTRIC	ue-ue	APPROXIMATE LIMIT OF NEW PAVEMENT	---
FAA CABLE	FAA	CURVE NUMBER	C1
RUNWAY SAFETY AREA	RSA	LAYOUT POINT	o
RUNWAY OBJECT FREE AREA	ROFA	RETROREFLECTIVE TAXIWAY EDGE MARKERS	•
LOCALIZER CRITICAL AREA	LCA		
RWY/TWY EDGE LIGHTS	OR		



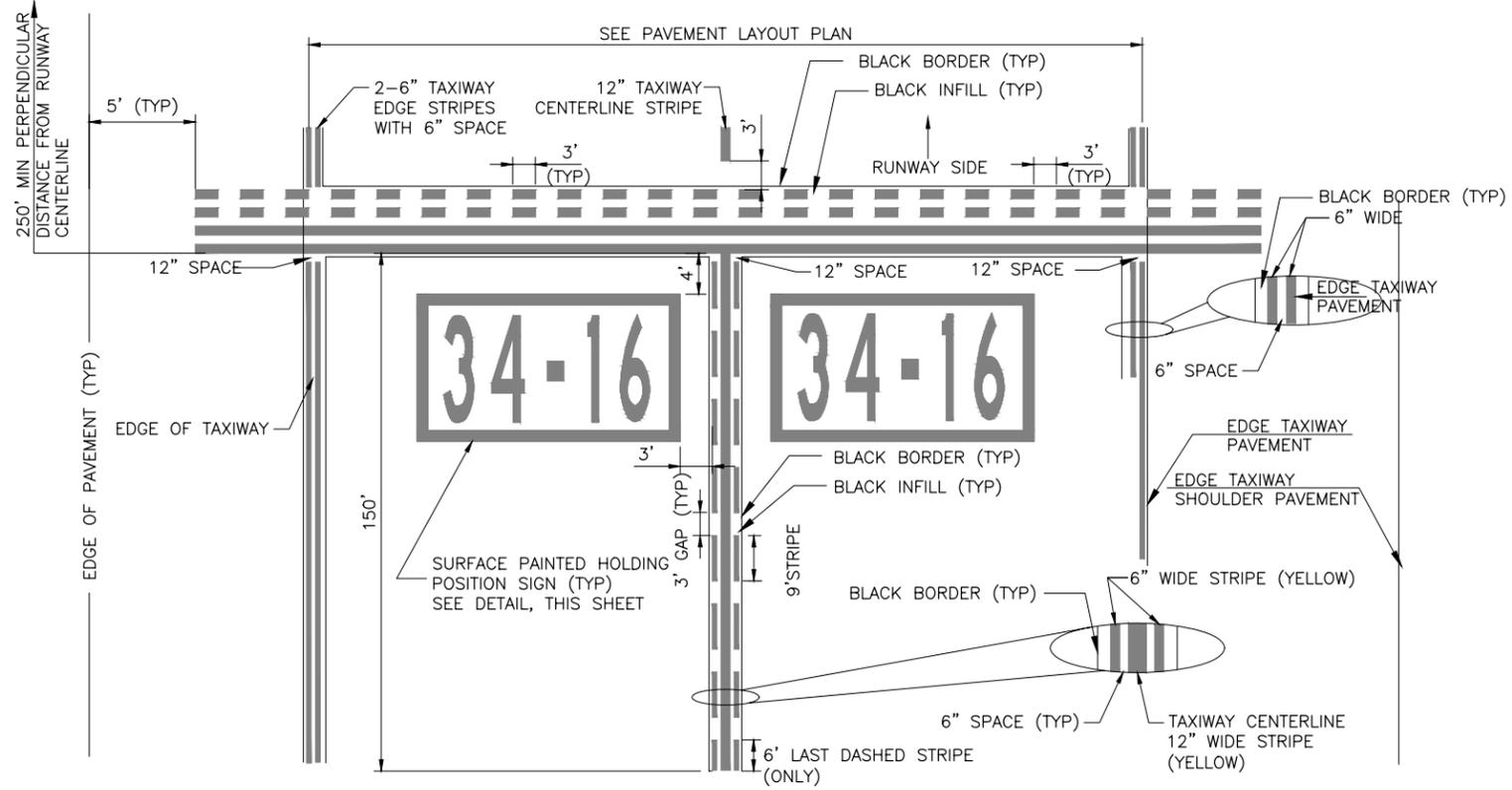
- NOTES:**
- LIMITS OF PAVEMENT TO BE MILLED OUT AND PAVED TO BE DETERMINED BY THE ENGINEER.
  - FOR RUNWAY AND TAXIWAY PAVEMENT MARKING PLAN, REFER TO SHEET NUMBER C-9

**Rhode Island Airport Corporation**  
**T.F. GREEN AIRPORT**  
WARWICK, RHODE ISLAND

SHEET TITLE  
**LAYOUT PLAN - PVD 16**

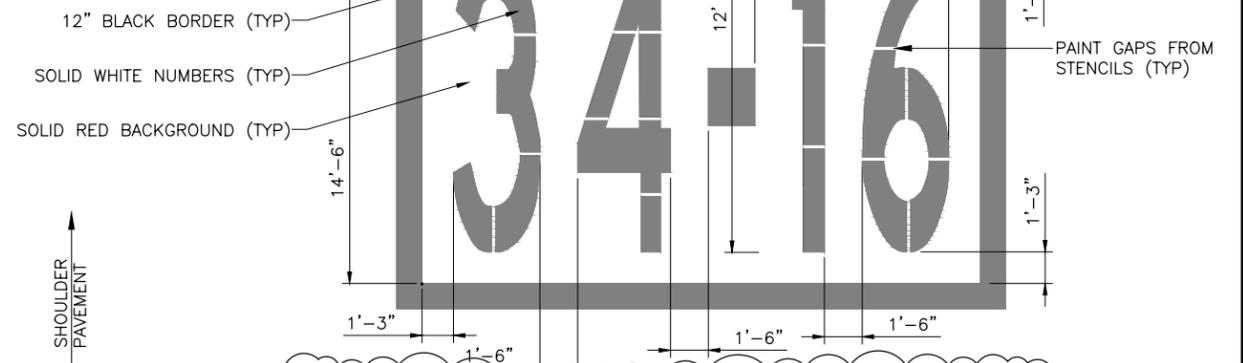
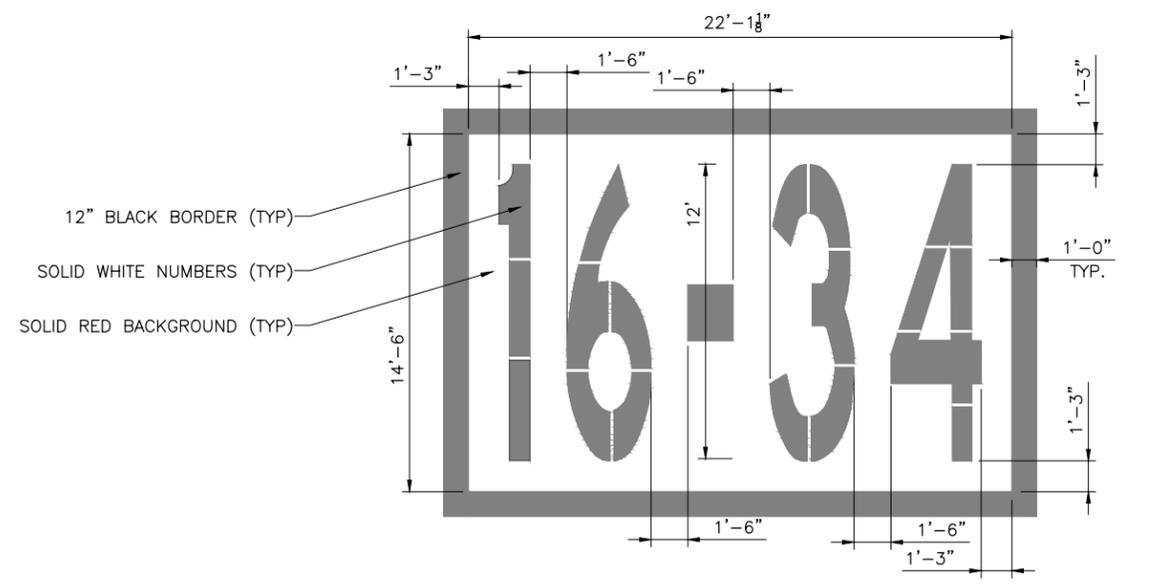
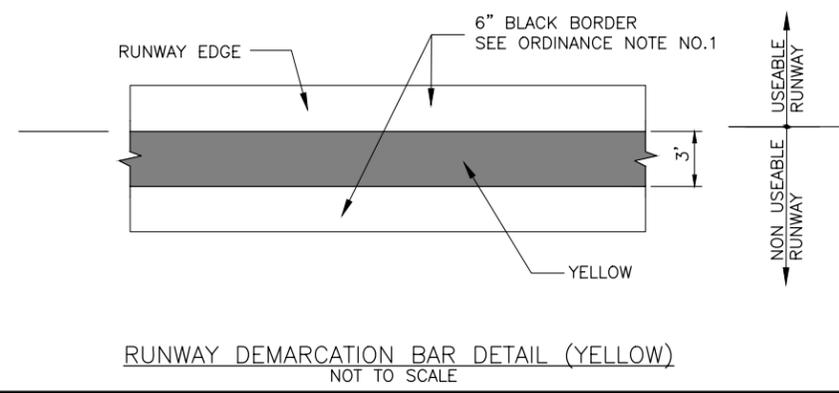
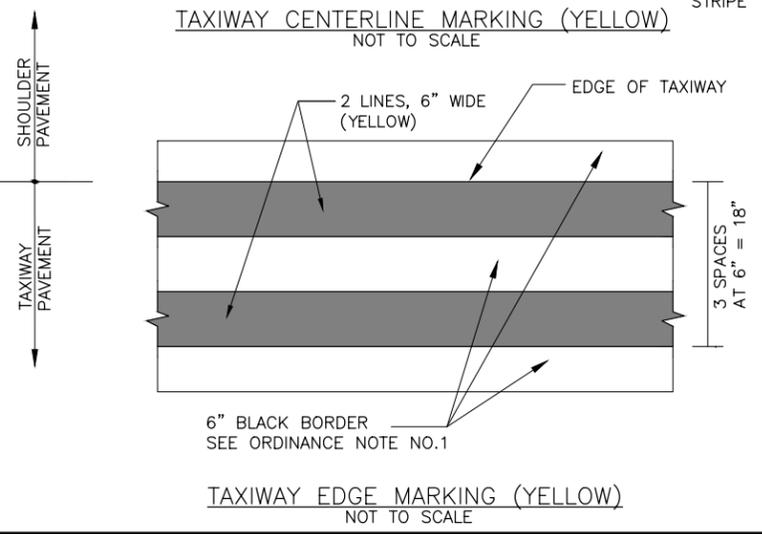
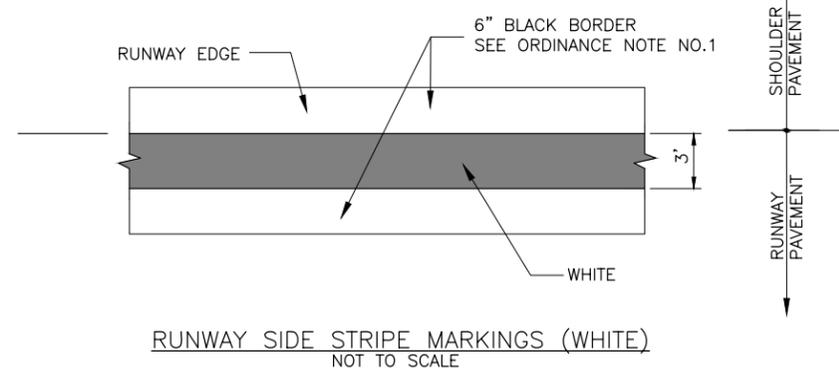
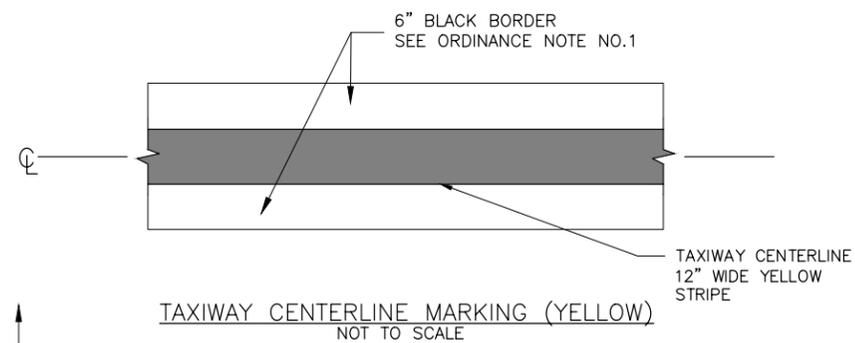
DESIGNED DPB	DRAWN MJF	CHECKED BMB	APPROVED BMB
PROJECT NO. 24854 (RIAC)		17746.04 (MU)	
DATE MARCH 2013		SHEET C-3	

**AECOM** **McFarland Johnson**



**RUNWAY HOLDING POSITION MARKING (YELLOW)**  
NOT TO SCALE

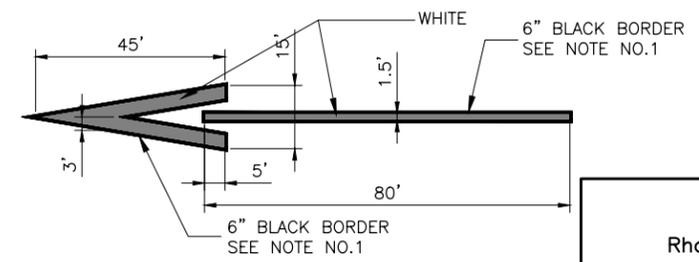
NOTE: BLACK BORDERS ARE REQUIRED SURROUNDING ALL PAVEMENT MARKINGS APPLIED TO PORTLAND CEMENT CONCRETE PAVEMENTS AND ALL BITUMINOUS CONCRETE PAVEMENT (NEW AND EXISTING), AND TREATED PAVEMENT SURFACES. DIMENSIONS AS SHOWN ON THE DETAILS.



NOTE: THE CONTRACTOR SHALL PROVIDE NEW STENCILS FOR THE HOLD POSITION SIGN NUMBERS. THE COST SHALL BE INCIDENTAL TO THE PAVEMENT MARKINGS.

THE SURFACE PAINTED HOLDING POSITION SIGNS TO BE INSTALLED USING THERMOPLASTIC MATERIALS.

**SURFACE PAINTED HOLDING POSITION SIGN**  
NOT TO SCALE



Rhode Island Airport Corporation  
**T.F. GREEN AIRPORT**  
WARWICK, RHODE ISLAND

SHEET TITLE  
**PAVEMENT MARKING DETAILS - PVD 16**

DESIGNED DPB	DRAWN SSS	CHECKED BLS	APPROVED BLS
PROJECT NO. 24854 (RIAC)		17746.04 (MJ)	
DATE MARCH 2013		SHEET C-11	

REVISION NUMBER: 1, REVISION DATE: 04/05/13, DESCRIPTION: THERMOPLASTIC HOLD SIGNS

AECOM | McQuinn Johnson