



# CITY OF HOUSTON

**Sylvester Turner**

Mayor



HOUSTON AIRPORT SYSTEM

George Bush Intercontinental ~ William P. Hobby ~ Ellington Airport

Mario C. Diaz  
Director of Aviation

August 10, 2023

**SUBJECT: Letter of Clarification No. 5**

**REFERENCE:** Request for Competitive Sealed Proposal (CSP) Rehabilitation of Taxiways SA & SB at George Bush Intercontinental Airport; Solicitation No. HJA-TXSASB-2023-022; Project No. 646A

To: All Prospective Respondents:

This Letter of Clarification is issued for the following reasons:

- I. **Extend** the submittal due date from August 18, 2023, to **August 24, 2023, at 2:00 PM (CT).**
- II. **Replace and insert the following:**
  - 1. **Replace** Document 00410 with **Revised Document 00410 – Bid Form dated 8/10/2023.**
  - 2. **Replace** Drawings General Sections G01.02, G01.04, G01.05 with **Revised Drawings General Sections G01.02, G01.04, G01.05, dated 8/10/2023.**
  - 3. **Insert New Drawing Civil Section C07.52.**
- III. **Respond** to questions.

- 1. **Question:** One other critical item that has become more apparent in the Q & A is the issue with the detention pond grading item as well. The Q & A has identified 222,640 CY of excavation needed in this area and has indicated that it is located east of Runway 27. That quantity is a huge amount of quantity and is equivalent to almost 138-acre feet of excavation. So, for instance if we have a 10-acre pond we would be excavating almost 14' deep. Depending on the size of the pond the depth of excavation can become a huge deal with massive price swings depending on if we must dewater the area to excavate etc.

Additionally, is the pond within the glideslope of the planes and are we only going to be able to excavate this during phase 4 in the runway shutdown or can it be done regardless of phasing? Without clarity of information, we are requesting that this work be excluded from this contract, and either be negotiated via change order work or under a separate contract after we have time to obtain the necessary information to adequately quantify and estimate that. One other option would be set it up as an allowance item instead of a direct bid item.

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Solicitation No. HJA-TXSASB-2023-022  
Project No. 646A

**Response:** The Unclassified Excavation quantity for the potential detention pond grading has been removed from the Base Bid Table and is now under Additive Alternate #2 Table. Contractor should note that this detention pond grading work is no longer part of the Base Bid Scope and Base Bid Item Number 28, P-152-4.1 Unclassified Excavation, quantity has been revised to reflect this change.

The location of potential detention pond grading is to the east of Runway 27 and located outside of the runway safety area along Ditch P. New Civil Drawing C07.52 showing the location of the potential detention pond has been included in this LOC-5. Work in this area, should it be awarded, could take place during any phases of the project. The area is approximately 40 Acres in size. Final size of potential detention pond grading area to be determined after the award of Construction Contract.

- 2. **Question:** Are miscellaneous documents marked in Doc 00410 Bid Form Part A to be submitted in a separate envelope marked "Attachment H – Miscellaneous Documents"? And to clarify total submission envelopes to three (3)?

**Response:** Yes, each proposer shall submit proposals as stated in the revised Section 1.0 General Information and Section 26.0 Proposal Submission, provided in the Letter of Clarification #4, dated August 4, 2023. Additionally, Documents marked in Doc 00410-A shall be submitted in a separate envelope, clearly marked "Attachment H – Miscellaneous Documents", one (1) stamped "Original" and one (1) copy of it marked "Attachment H – Miscellaneous Documents," and another separate envelope, clearly marked "Financial Statements", one (1) stamped "Original" and one (1) copy of its Financial Statements with its proposal.

When issued, Letters of Clarification (LOC(s)) shall automatically become part of the solicitation documents and shall supersede any previous specification(s) and/or provision(s) in conflict with these LOC(s). LOC(s) will be incorporated into the Contract as applicable. It is the responsibility of the respondents to ensure that it has obtained all such LOC(s). By submitting a response on this project, respondents shall be deemed to have received all LOC(s).

If further clarification is needed regarding this solicitation, please contact Jorge Ardines, Sr. Procurement Specialist, via email at [jorge.ardines@houstontx.gov](mailto:jorge.ardines@houstontx.gov).

DS  
DE  
DocuSigned by:  
*Cathy Vander Plaats*  
02232028DE99414

DS  
Cathy Vander Plaats  
Aviation Procurement Officer  
Houston Airport System

CVP/ja

cc: Alfredo Oracion  
Dallas Evans  
Solicitation File

August 10, 2023

Rehabilitation of Taxiways SA & SB at IAH

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Attachments:

1. Revised Document 00410
2. Drawing No. G01.02 – Revised
3. Drawing No. G01.04 – Revised
4. Drawing No. G01.05 – Revised
5. Drawing No. C07.52

Rehabilitation of Taxiways SA & SB  
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**BID FORM  
PART A**

Document 00410A

BID FORM – PART A

To: **The Honorable Mayor and City Council of the City of Houston  
City Hall Annex  
900 Bagby Street  
Houston, Texas 77002**

Project: Rehabilitation of Taxiways SA & SB

Project No.: PN 0646A

Bidder: \_\_\_\_\_

(Print or type full name of business entity, such as corporation, LLC, etc)

## 1.0 OFFER

- A. Total Bid Price:** Having examined the Project location and all matters referred to in Bid Documents for the Project, we, the undersigned, offer to enter into a Contract to perform the Work for the Total Bid Price shown on the signature page of this Document
- B. Security Deposit:** Included with the Bid is a Security Deposit in the amount of 10 percent of the Total Bid Price subject to terms described in Document 00200 – Instructions to Bidders.
- C. Period for Bid Acceptance:** This offer is open to acceptance and is irrevocable for 180 days from Bid Date. That period may be extended by mutual written agreement of the City and Bidder.
- D. Addenda:** All Addenda have been received. Modifications to Bid Documents have been considered and all related costs are included in the Total Bid Price.
- E. Bid Supplements:** The following documents are attached:
- Security Deposit (*as defined in Document 00200 – Instructions to Bidders*)
  - Document 00450 - Bidder's Statement of MWSBE Status
  - Document 00454 - Affidavit of Non-interest
  - Document 00455 - Ownership Information Form
  - Document 00456 - Bidder's Certificate of Compliance with Buy American Program (*required for AIP funded project*)
  - Document 00457 – Conflicts of Interest Questionnaire (CIQ)
  - Document 00458 - Bidder's Certificate Regarding Foreign Trade Restriction (*required for AIP funded project*)
  - Document 00459 - Contractor's Statement Regarding Previous Contracts Subject to EEO (*required for AIP funded project*)
  - Document 00460 – Pay or Play Acknowledgement Form (POP 1-A)
  - Document 00461 – Hire Houston First Affidavit
  - Document 00470 – Bidder's MWSBE Participation Plan (*required unless no MWSBE participation goal is provided in Document 00800 (the "Goal")*).
  - Document 00470D - Bidder's DBE Participation Plan (*required for AIP funded project*)

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**BID FORM  
PART A**

- Document 00471 – Bidder’s Record of Good Faith Efforts *(required if the goal in Bidder’s Participation Plan–Document 00470 is lower than the Goal).*
- Document 00472 – Bidder’s Goal Deviation Request *(required if the goal in Bidder’s Participation Plan–Document 00470 is lower than the Goal).*
- Document 00480 – Form SCM-1 Reference Verification
- Document 00481 – Non-Collusion Statement
- Document 00842 – Letter of Intent
- Others as listed: \_\_\_\_\_  
\_\_\_\_\_

**2.0 CONTRACT TIME**

**A.** If offer is accepted, Contractor shall achieve Date of Substantial Completion within 298 days after Date of Commencement of the Work, subject to adjustments of Contract Time as provided in the Contract.

Document 00410B

BID FORM – PART B

**1.0 TOTAL BID PRICE HAS BEEN CALCULATED BY BIDDER, USING THE FOLLOWING COMPONENT PRICES AND PROCESS (PRINT OR TYPE NUMERICAL AMOUNTS):****A. STIPULATED PRICE:****\$N/A**

(Total Bid Price; minus Base Unit Prices, Extra Unit Prices, Cash Allowances and All Alternates, if any)

**B. BASE UNIT PRICE TABLE:**

Item No.	Spec Ref.	Base Unit Short Title	Unit of Measure	Estimated Quantity	Unit Price (this column controls)	Total in figures
1	01555-1.04A	Traffic Control and Regulation, Excluding Flagmen	LS	1		
2	01555-1.04B	Flagmen	LS	1		
3	SS-130-4.1	Trench and Excavation Safety Systems	LF	85		
4	SS-300-5.1	Lockout/Tagout and Constant Current Regulator Calibration Procedures	LS	1		
4A	SS-300-5.2	Removal/Repair of Broken Bolt, in Place	EA	235		
4B	SS-300-5.3	Retrofit Ground Lug to Existing Can, Installed	EA	235		
5	SS-301-5.1	Existing Base Mounted Edge Light, Removed	EA	495		
6	SS-301-5.2	Existing In-Pavement Centerline Light, Removed	EA	456		
7	SS-301-5.3	Existing Base Mounted Guidance Sign, Removed	EA	28		
8	SS-301-5.4	Existing Base Mounted Edge Light, Removed, Base Top Section, Removed	EA	50		
9	SS-301-5.5	Existing In-Pavement Centerline Light, Removed, Base Top Section, Removed	EA	754		
10	SS-301-5.6	Existing L-852G Runway Guard Light, Relocated on New Base	EA	5		
11	SS-301-5.7	Abandoned Sign Foundation, Demolished	EA	2		

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02-12-2020

Bidder's Initials [                      ]







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**BID FORM  
PART B**

56	D-701-5.1	Install 6'x5' RCB (Class V) Open Cut, Complete in Place	LF	63		
57	D-701-5.2	Install 7'x5' RCB (Class V) Open Cut, Complete in Place	LF	65		
58	D-701-5.3	Install 8'x4' RCB (Class V) Open Cut, Complete in Place	LF	151		
59	D-701-5.4	Install 10'x7' RCB (Class V) Open Cut, Complete in Place	LF	28		
60	D-701-5.5	Install 24" CMP Open Cut, Complete in Place	LF	2,170		
61	D-752-5.1	Install Wingwall, Complete in Place	CY	1,130		
62	T-901-5.1	Hydroseeding	AC	61.0		
63	T-904-5.1	Sodding	SY	63,930		
64	L-108-5.1	No. 8 AWG, 5 kV, L-824, Type C Cable, Installed in Trench, Duct Bank or Conduit	LF	177,400		
65	L-108-5.2	No. 6 AWG, Solid, Bare Copper Counterpoise Wire, Installed in Trench, Above the Duct Bank or Conduit, Including Connections/Terminations	LF	3,000		
66	L-110-5.1	Flowable Fill Encased Electrical Conduit, 1W-2"C	LF	1,900		
67	L-110-5.2	Non-Encased Electrical Conduit, 1W-2"C	LF	150		
68	L-110-5.3	Concrete Encased Electrical Conduit, 1W-2"C	LF	1,150		
69	L-110-5.4	Concrete Encased Electrical Conduit, 1W-2"C with Saw Kerf Pavement Repair	LF	450		
70	L-110-5.5	Non-Encased Electrical Duct Bank, 16W-2"C	LF	225		
71	L-110-5.6	Non-Encased Electrical Duct Bank, 2W-2"C	LF	280		
72	L-110-5.7	Flowable Ffill Encased Electrical Duct Bank, 2W-2"C	LF	650		
73	L-115-5.1	Existing Electrical Junction Structure/Manhole Adjusted to New Grade	EA	64		

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**BID FORM**  
**PART B**

74	L-115-5.2	4'x4'x4' Aircraft-Rated Handhole, Installed	EA	4		
75	L-115-5.3	L-868 Blank Cover with Spacers, Installed	EA	5		
76	L-125-5.1	L-852C/D(L) Taxiway Centerline Light, Installed on Adjusted Light Base	EA	754		
77	L-125-5.2	L-852C/D(L) Taxiway Centerline Light, Installed on Existing Light Base	EA	442		
78	L-125-5.3	L-861T(L) Base Mounted Taxiway Edge Light, Installed on Adjusted Light Base	EA	407		
79	L-125-5.4	L-861T(L) Base Mounted Taxiway Edge Light, Installed on Existing Light Base	EA	88		
80	L-125-5.5	L-858(L) Base Mounted Guidance Sign, Installed	EA	28		
81	L-125-5.6	L-852C/D(L) Taxiway Centerline Light, Installed on New Light Base	EA	38		
82	L-125-5.7	L-852G(L) In-Pavement Runway Guard Light, Installed	EA	62		
83	L-125-5.8	L-861T(L) Base Mounted Taxiway Edge Light, Installed on New Base in Existing Pavement	EA	18		
84	L-125-5.9	L-861T(L) Base Mounted Taxiway Edge Light, Installed on New Base in New Pavement	EA	23		
85	L-125-5.10	L-852C/D(L) Taxiway Centerline Light, Installed on New Base in Existing Pavement	EA	18		
86	L-125-5.11	Update Sign Legend	EA	1		
86A	L-125-5.12	L-852C/D(L) Taxiway Centerline Light, Installed on New Base in Existing Pavement with Mill and Overlay	EA	18		
87	02378-4.1	Riprap Gradation No. 1, including Topsoil	TON	230		
<b>TOTAL BASE UNIT PRICES</b>						\$ _____

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Bidder's Initials [                      ]

**C. EXTRA UNIT PRICE TABLE: N/A**

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**D. CASH ALLOWANCE TABLE:**

Item No.	Spec Ref.	Cash Allowance Short Title	Cash Allowance in figures (1)
	01210	Cash Allowance Item 1 – Building Permit, Additional Flaggers, Barricades, Site Conditions and specific safety conditions improvements	\$600,000
	01210	Cash Allowance Item 2 – Clean Air Incentive	\$200,000
	01210	Cash Allowance Item 3 – Duct Bank and Telecommunication Cable Relocation	\$200,000
<b><u>TOTAL CASH ALLOWANCES</u></b>			\$1,000,000

(1) Fixed Unit Price determined prior to Bid. Cannot be adjusted by the Bidder.

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**E. ALTERNATES TABLE:****ADDITIVE ALTERNATE #1**

Item No.	Spec Ref.	Base Unit Short Title	Unit of Measure	Estimated Quantity	Unit Price (this column controls)	Total in figures
1	P-101-5.2	Asphalt Milling (2" and Variable Depth)	SY	565		
2	P-101-5.10	Concrete Pavement Removal (14"-20" Depth)	SY	445		
3	P-401-8.1	Bituminous Surface Course	TON	145		
4	P-501-8.4	Concrete Pavement Partial Depth Repair	SF	500		
5	P-501-8.5	Concrete Pavement Crack Repair	LF	500		
6	P-501-8.6	Concrete Pavement Crack Repair (Epoxy Injection)	LF	400		
7	P-501-8.7	14"-20" Portland Cement Concrete Pavement	SY	445		
8	P-501-8.8	Concrete Joint Seal Repair	LF	5,000		
9	P-620-5.1a	Taxiway Pavement Marking with Reflective Beads (Yellow)	SF	2,000		
10	P-620-5.1b	Taxiway Pavement Marking with Reflective Beads (Black)	SF	2,000		
11	P-620-5.1f	Temporary Taxiway Pavement Markings (Yellow)	SF	2,115		
12	P-620-5.1g	Temporary Taxiway Pavement Markings (Black)	SF	2,115		
13	P-620-5.1h	Temporary Taxiway Pavement Markings Removal	SF	4,230		
14	SS-310-5.3	Temporary Airfield Lighting (Additive Alternate 1)	LS	1		
<b>TOTAL ADDITIVE ALTERNATE #1 UNIT PRICES</b>						\$ _____

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**BID FORM  
PART B**

**ADDITIVE ALTERNATE #2 – DETENTION POND GRADING**

Item No.	Spec Ref.	Base Unit Short Title	Unit of Measure	Estimated Quantity	Unit Price (this column controls)	Total in figures
1	P-152-4.1	Unclassified Excavation	CY	222,640		
<b>TOTAL ADDITIVE ALTERNATE #2 UNIT PRICES</b>						\$ _____

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**BID FORM  
PART B**

**F. TOTAL BID PRICE:** \$ \_\_\_\_\_  
(Add Totals for Stipulated Price, Base Unit Price, Extra Unit Price, Cash Allowance, and All Alternates, if any)

**2.0 SIGNATURES:** By signing this Document, I agree that I have received and reviewed all Addenda and considered all costs associated with the Addenda in calculating the Total Bid Price.

Bidder: \_\_\_\_\_  
(Print or type full name of your proprietorship, partnership, corporation, or joint venture.\*)

**\*\* By:** \_\_\_\_\_  
Signature Date

Name: \_\_\_\_\_  
(Print or type name) Title

Address: \_\_\_\_\_  
(Mailing)

\_\_\_\_\_  
(Street, if different)

Telephone and Fax Number: \_\_\_\_\_  
(Print or type numbers)

\* If Bid is a joint venture, add additional Bid Form signature sheets for each member of the joint venture.

\*\* Bidder certifies that the only person or parties interested in this offer as principals are those named above. Bidder has not directly or indirectly entered into any agreement, participated in any collusion, or otherwise taken any action in restraint of free competitive bidding.

Note: This document constitutes a government record, as defined by § 37.01 of the Texas Penal Code. Submission of a false government record is punishable as provided in § 37.10 of the Texas Penal Code.

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G01.06	SURVEY CONTROL PLAN
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C07.05	GRADING & DRAINAGE PLAN V
C07.06	GRADING & DRAINAGE PLAN VI
C07.07	GRADING & DRAINAGE PLAN VII
C07.08	GRADING & DRAINAGE PLAN VIII
C07.09	GRADING & DRAINAGE PLAN IX
C07.10	GRADING & DRAINAGE PLAN X
C07.11	GRADING & DRAINAGE PLAN XI
C07.12	GRADING & DRAINAGE PLAN XII
C07.13	GRADING & DRAINAGE POINT TABLES I
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C08.10	TELECOMMUNICATIONS PLAN X
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C08.12	TELECOMMUNICATIONS PLAN XII



REVISIONS

NO.	DESCRIPTION	DATE	BY
1	ADD. 1	07/06/23	JEF
2	ADD. 2	07/24/23	JEF
3	ADD. 3	08/09/23	JEF

GEORGE BUSH INTERCONTINENTAL AIRPORT  
 REHABILITATION OF TAXIWAYS SA & SB

INDEX OF SHEETS I

PROJECT MGR: JEF  
 DESIGNER: KKR  
 DRAWN BY: DAG  
 CHECK BY: JEF  
 SCALE: 1" = 1"  
 DATE: 08/09/2023



APPROVED BY: JEF

DIRECTOR  
HOUSTON AIRPORT SYSTEM

PROJECT NO.	0646A
A.I.P. NO.	XXXX
C.I.P. NO.	A-0515
H.A.S. NO.	20C0646A
SHEET NO.	

**G01.02**



**BASE BID**

ITEM NO.	SPEC. NO.	DESCRIPTION	UNIT	ESTIMATED QUANTITY
	01210	Cash Allowances	LS	1
1	01555-1.04A	Traffic Control and Regulation, Excluding Flagmen	LS	1
2	01555-1.04B	Flagmen	LS	1
3	SS-130-4.1	Trench and Excavation Safety Systems	LF	85
4	SS-300-5.1	Lockout/Tagout and Constant Current Regulator Calibration Procedures	LS	1
4A	SS-300-5.2	Removal/Repair of Broken Bolt, in Place	EA	235
4B	SS-300-5.3	Retrofit Ground Lug to Existing Can, Installed	EA	235
5	SS-301-5.1	Existing Base Mounted Edge Light, Removed	EA	495
6	SS-301-5.2	Existing In-Pavement Centerline Light, Removed	EA	456
7	SS-301-5.3	Existing Base Mounted Guidance Sign, Removed	EA	28
8	SS-301-5.4	Existing Base Mounted Edge Light, Removed, Base Top Section, Removed	EA	50
9	SS-301-5.5	Existing In-Pavement Centerline Light, Removed, Base Top Section, Removed	EA	754
10	SS-301-5.6	Existing L-852G Runway Guard Light, Relocated on New Base	EA	5
11	SS-301-5.7	Abandoned Sign Foundation, Demolished	EA	2
11A	SS-301-5.8	Existing Electrical Conduit, 1-Way 2"C, Cleared	LF	10,000
11B	SS-301-5.9	Existing Electrical Conduit, 1-Way 4"C, Cleared	LF	10,000
12	SS-305-5.1	Directional Boring, 16-Way 2"C Polyethylene Conduits	LF	1,350
13	SS-310-5.1	Temporary Airfield Lighting	LS	1
14	SS-310-5.2	Mobile Photometric Testing	LS	1
15	C-100-14.1	Contractor Quality Control Program (CQCP)	LS	1
16	C-102-5.1a	Filter Dam Type II	LF	60
17	C-102-5.1b	Reinforced Silt Fence	LF	24,112
18	C-105-6.1	Mobilization	LS	1
19	P-101-5.1	Asphalt Milling (1" and Variable Depth)	SY	66,760
20	P-101-5.2	Asphalt Milling (2" and Variable Depth)	SY	204,600
21	P-101-5.3	Asphalt Milling (5" and Variable Depth)	SY	45,370
22	P-101-5.4	Full-Depth Asphalt Shoulder Removal	SY	4,920
23	P-101-5.5	Concrete Pavement Removal (12"-15" Depth)	SY	550
24	P-101-5.6	Remove and Dispose 24" CMP	LF	625
25	P-101-5.7	Concrete Slope Paving Removal and Disposal	SY	9,218
26	P-101-5.8	Concrete Headwall Removal	EA	10
27	P-101-5.9	Asphalt Crack Repair	LF	140,000
28	P-152-4.1	Unclassified Excavation	CY	92,640
29	P-209-5.1	6" Crushed Aggregate Base Course	SY	16,010
30	P-209-5.2	15" Crushed Aggregate Base Course	SY	81,360
31	P-209-5.3	Aggregate Base Course (Slope Stabilization)	CY	1,343
32	P-209-5.4	Separation Geotextile (Slope Stabilization)	SY	16,106
33	P-209-5.5	Geogrid (Slope Stabilization)	SY	2,618
34	P-304-8.1	6" Cement-Treated Base Course	SY	12,620
35	P-307-7.1	6" Cement Treated Permeable Base	CY	350

**BASE BID (CONT'D)**

ITEM NO.	SPEC. NO.	DESCRIPTION	UNIT	ESTIMATED QUANTITY
36	P-401-8.1	Bituminous Surface Course	TON	40,230
37	P-403-8.1	Bituminous Base Course	TON	40,750
38	P-501-8.1	10" Portland Cement Concrete Pavement	SY	410
39	P-501-8.2	12"-15" Portland Cement Concrete Pavement	SY	550
40	P-501-8.3	15" Portland Cement Concrete Pavement	SY	12,240
41	P-501-8.4	Concrete Pavement Partial Depth Repair	SF	2,000
42	P-501-8.5	Concrete Pavement Crack Repair	LF	3,000
43	P-610-6.1	Concrete Slope Paving	SY	14,904
44	P-610-6.2	Modify Curb Opening	EA	61
45	P-610-6.3	Concrete Pilot Channel	SY	11,490
46	P-610-6.4	Interceptor Structure	SY	289
47	P-620-5.1a	Taxiway Pavement Marking with Reflective Beads (Yellow)	SF	87,900
48	P-620-5.1b	Taxiway Pavement Marking with Reflective Beads (Black)	SF	113,400
49	P-620-5.1c	Thermoplastic Surface Painted Runway Direction Signs	EA	18
50	P-620-5.1d	Thermoplastic Surface Painted Apron Control Marking Signs	EA	2
51	P-620-5.1e	Surface Preparation	SF	201,300
52	P-620-5.1f	Temporary Taxiway Pavement Markings (Yellow)	SF	14,200
53	P-620-5.1g	Temporary Taxiway Pavement Markings (Black)	SF	24,400
54	P-620-5.1h	Temporary Taxiway Pavement Markings Removal	SF	4,700
55	P-620-5.1i	Removal of Existing Pavement Marking	SF	1,500
56	D-701-5.1	Install 6'x5' RCB (Class V) Open Cut, Complete in Place	LF	63
57	D-701-5.2	Install 7'x5' RCB (Class V) Open Cut, Complete in Place	LF	65
58	D-701-5.3	Install 8'x4' RCB (Class V) Open Cut, Complete in Place	LF	151
59	D-701-5.4	Install 10'x7' RCB (Class V) Open Cut, Complete in Place	LF	28
60	D-701-5.5	Install 24" CMP Open Cut, Complete in Place	LF	2,170
61	D-752-5.1	Install Wingwall, Complete in Place	CY	1,130
62	T-901-5.1	Hydroseeding	AC	61.0
63	T-904-5.1	Sodding	SY	63,930
64	L-108-5.1	No. 8 AWG, 5 kV, L-824, Type C Cable, Installed in Trench, Duct Bank or Conduit	LF	177,400
65	L-108-5.2	No. 6 AWG, Solid, Bare Copper Counterpoise Wire, Installed in Trench, Above the Duct Bank or Conduit, Including Connections/Terminations	LF	3,000
66	L-110-5.1	Flowable Fill Encased Electrical Conduit, 1W-2"C	LF	1,900
67	L-110-5.2	Non-Encased Electrical Conduit, 1W-2"C	LF	150
68	L-110-5.3	Concrete Encased Electrical Conduit, 1W-2"C	LF	1,150
69	L-110-5.4	Concrete Encased Electrical Conduit, 1W-2"C with Saw Kerf Pavement Repair	LF	450
70	L-110-5.5	Non-Encased Electrical Duct Bank, 16W-2"C	LF	225
71	L-110-5.6	Non-Encased Electrical Duct Bank, 2W-2"C	LF	280
72	L-110-5.7	Flowable Fill Encased Electrical Duct Bank, 2W-2"C	LF	650

**BASE BID (CONT'D)**

ITEM NO.	SPEC. NO.	DESCRIPTION	UNIT	ESTIMATED QUANTITY
73	L-115-5.1	Existing Electrical Junction Structure/Manhole Adjusted to New Grade	EA	64
74	L-115-5.2	4'x4'x4' Aircraft-Rated Handhole, Installed	EA	4
75	L-115-5.3	L-868 Blank Cover with Spacers, Installed	EA	5
76	L-125-5.1	L-852C/D(L) Taxiway Centerline Light, Installed on Adjusted Light Base	EA	754
77	L-125-5.2	L-852C/D(L) Taxiway Centerline Light, Installed on Existing Light Base	EA	442
78	L-125-5.3	L-861T(L) Base Mounted Taxiway Edge Light, Installed on Adjusted Light Base	EA	407
79	L-125-5.4	L-861T(L) Base Mounted Taxiway Edge Light, Installed on Existing Light Base	EA	88
80	L-125-5.5	L-858(L) Base Mounted Guidance Sign, Installed	EA	28
81	L-125-5.6	L-852C/D(L) Taxiway Centerline Light, Installed on New Light Base	EA	38
82	L-125-5.7	L-852G(L) In-Pavement Runway Guard Light, Installed	EA	62
83	L-125-5.8	L-861T(L) Base Mounted Taxiway Edge Light, Installed on New Base in Existing Pavement	EA	18
84	L-125-5.9	L-861T(L) Base Mounted Taxiway Edge Light, Installed on New Base in New Pavement	EA	23
85	L-125-5.10	L-852C/D(L) Taxiway Centerline Light, Installed on New Base in Existing Pavement	EA	18
86	L-125-5.11	Update Sign Legend	EA	1
86A	L-125-5.12	L-852C/D(L) Taxiway Centerline Light, Installed on New Base in Existing Pavement with Mill and Overlay	EA	18
87	02378-4.1	Riprap Gradation No. 1, including Topsoil	TON	230

**ADDITIVE ALTERNATE #1**

ITEM NO.	SPEC. NO.	DESCRIPTION	UNIT	ESTIMATED QUANTITY
1	P-101-5.2	Asphalt Milling (2" and Variable Depth)	SY	565
2	P-101-5.10	Concrete Pavement Removal (14"-20" Depth)	SY	445
3	P-401-8.1	Bituminous Surface Course	TON	145
4	P-501-8.4	Concrete Pavement Partial Depth Repair	SF	500
5	P-501-8.5	Concrete Pavement Crack Repair	LF	500
6	P-501-8.6	Concrete Pavement Crack Repair (Epoxy Injection)	LF	400
7	P-501-8.7	14"-20" Portland Cement Concrete Pavement	SY	445
8	P-501-8.8	Concrete Joint Seal Repair	LF	5,000
9	P-620-5.1a	Taxiway Pavement Marking with Reflective Beads (Yellow)	SF	2,000
10	P-620-5.1b	Taxiway Pavement Marking with Reflective Beads (Black)	SF	2,000
11	P-620-5.1f	Temporary Taxiway Pavement Markings (Yellow)	SF	2,115
12	P-620-5.1g	Temporary Taxiway Pavement Markings (Black)	SF	2,115
13	P-620-5.1h	Temporary Taxiway Pavement Markings Removal	SF	4,230
14	SS-310-5.3	Temporary Airfield Lighting (Additive Alternate 1)	LS	1

**ADDITIVE ALTERNATE #2**

ITEM NO.	SPEC. NO.	DESCRIPTION	UNIT	ESTIMATED QUANTITY
1	P-152-4.1	Unclassified Excavation	CY	222,640

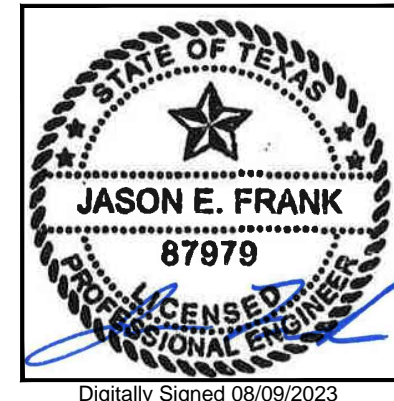


**REVISIONS**

NO.	DESCRIPTION	DATE BY
1	ADD. 1	07/06/23 JEF
2	ADD. 2	07/24/23 JEF
3	ADD. 3	08/09/23 JEF

**GEORGE BUSH INTERCONTINENTAL AIRPORT  
 REHABILITATION OF TAXIWAYS SA & SB**  
**SUMMARY OF QUANTITIES**

PROJECT MGR: JEF  
 DESIGNER: KKR  
 DRAWN BY: DAG  
 CHECK BY: JEF  
 SCALE: 1" = 1"  
 DATE: 08/09/2023



APPROVED BY: JEF

DIRECTOR  
HOUSTON AIRPORT SYSTEM

PROJECT NO. 0646A  
 A.I.P. NO. XXXX  
 C.I.P. NO. A-0515  
 H.A.S. NO. 20C0646A  
 SHEET NO.

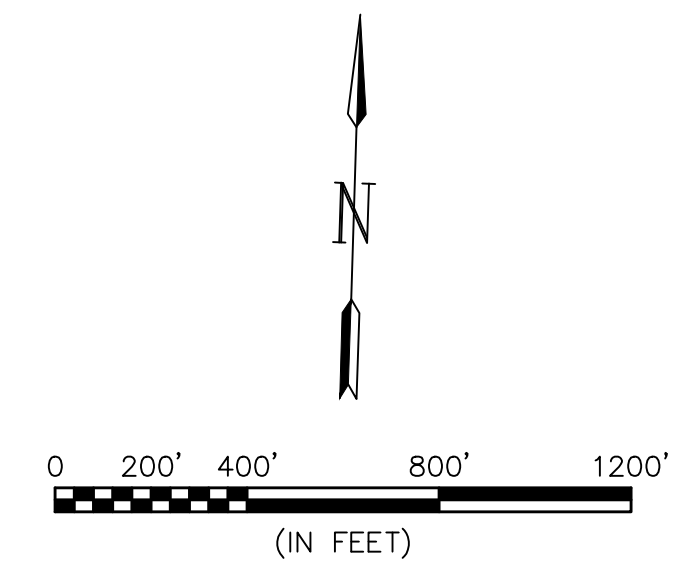
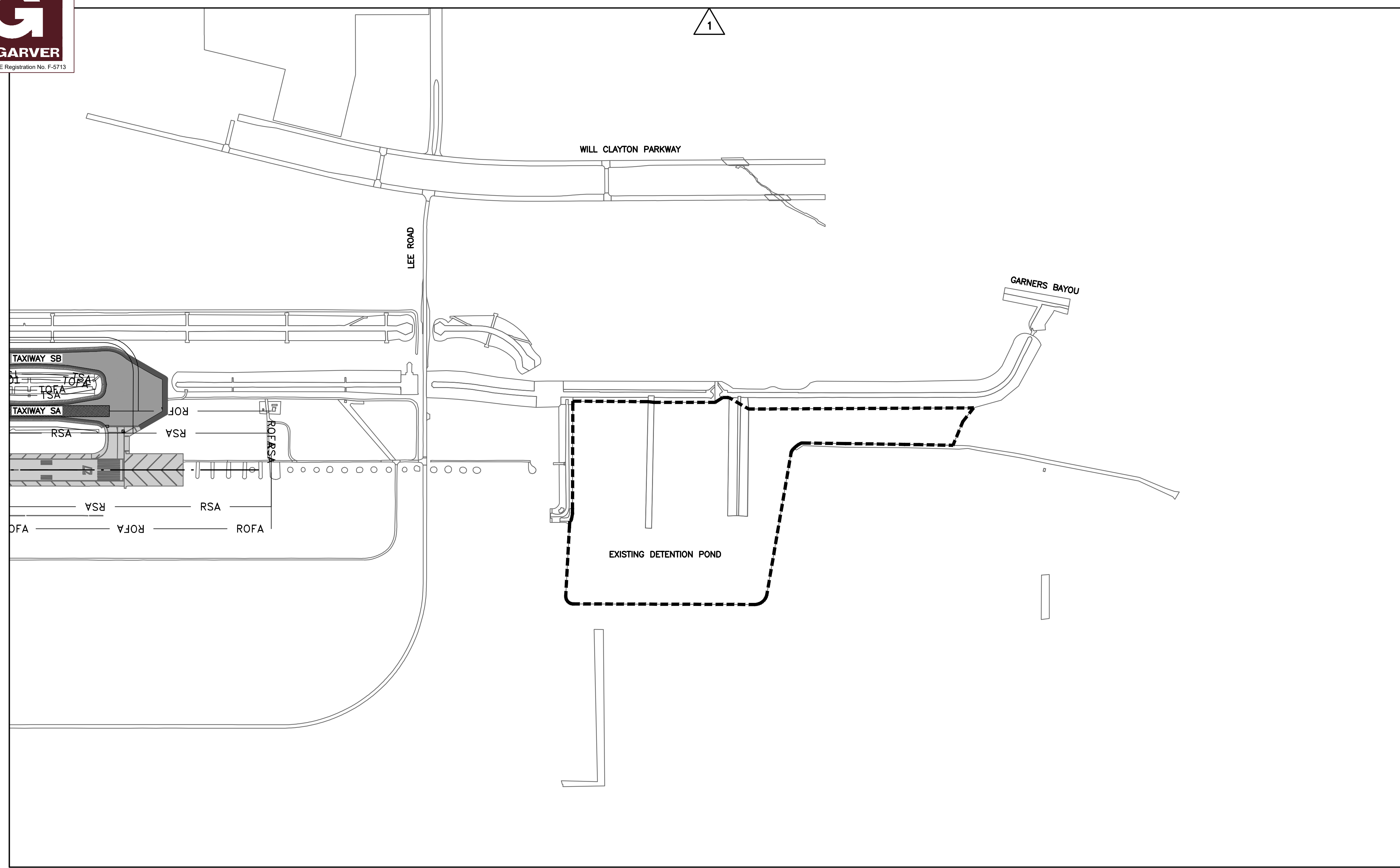








TBPE Registration No. F-5713



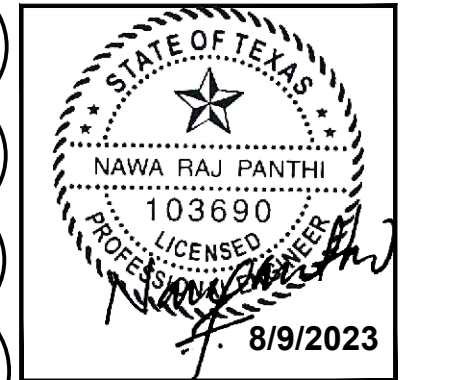
10351 STELLA LINK RD  
HOUSTON, TEXAS 77025  
(832) 767-0090  
TBPE FIRM No. F-14087

REVISIONS			
NO.	DESCRIPTION	DATE	BY
1	ADD 3	08/09/23	NRP

GEORGE BUSH INTERCONTINENTAL AIRPORT  
REHABILITATION OF TAXIWAYS SA & SB

## DETENTION POND LOCATION

PROJECT MGR:	NRP
DESIGNER:	HSC
DRAWN BY:	HSC
CHECK BY:	NRP
SCALE:	1" = 400'
DATE:	08/09/2023

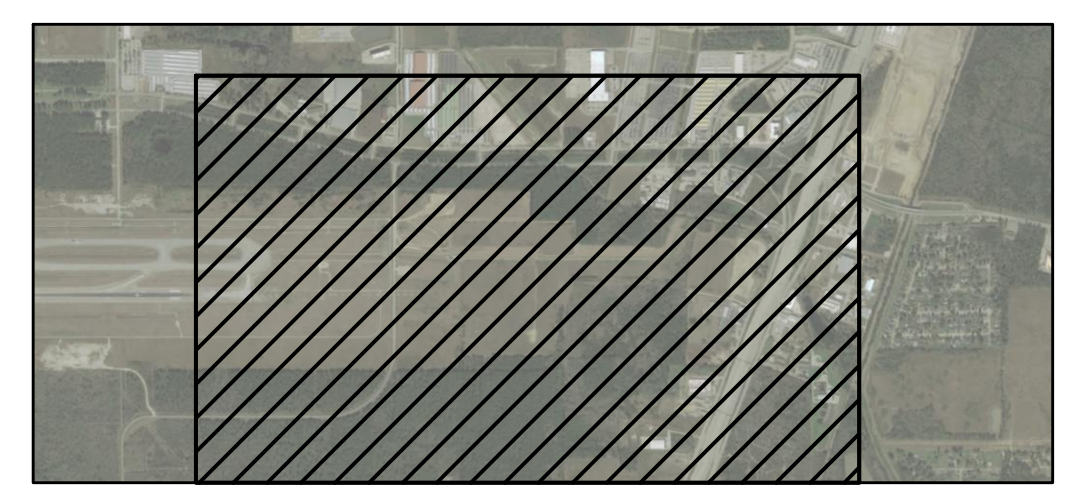


APPROVED BY: JEF

DIRECTOR  
HOUSTON AIRPORT SYSTEM

PROJECT NO.	0646A
A.I.P. NO.	XXXX
C.I.P. NO.	A-0515
H.A.S. NO.	20C0646A
SHEET NO.	

### KEYMAP



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