

CITY OF HOUSTON

John Whitmire

Mayor



Jim Szczesniak Director of Aviation

Houston Airports Supply Chain Management Post Office Box 60106 Houston, Texas 77205-0106 fly2houston.com

June 5, 2024

SUBJECT: Addendum No. 3

REFERENCE: Invitation To Bid (ITB) for Rehabilitation of Taxiways SA & SB at IAH; Solicitation

No. HJA-TXSASB-2024-020; Project No. 0646A

To: All Prospective Bidders:

This Addendum is being issued for the following reason(s):

- I. Replace Document 00410 with Revised Document 00410 Bid Form
- II. Replace Drawings Civil Section C03.01, C10.04, and C10.05 with Revised Drawings Civil Section C03.01, C10.04, and C10.05.
- III. Respond to questions.
- 1. **Question:** Can you provide the complete haul route (completely connected with sequence)? The Overall and phased haul route that has been provided are not complete or has been cut out and it is vague. For example, Sheet G02.05, the haul route is vague/cut out at very left end of Taxiway and similar on the different phases. That will be significant if we miscalculate the haul route. Please clarify.

Response: See revised Drawing G02.05, provided with Addendum 2, dated May 10, 2024.

2. **Question:** P501-8.3 18" Portland Cement Concrete Pavement base bid and alternate 1 (item #10), the quantity is small. Do you require the concrete pavement to pour using mechanical equipment such as gomaco paving machine or hand pour using roller screed paver is acceptable? Please clarify.

Response: See specification P-501 for approved construction methods, provided with Addendum 2, dated May 10, 2024.

3. **Question:** Does owner provide the spoil/disposal site? If so, can you provide the address of

Response: Contractor shall be responsible for disposal offsite.

4. **Question:** Who is responsible for payment of Control and Construction Staking? If it is the contractor, where does it get paid?

Response: Control points are provided in the plans. Contractor shall verify and protect control points (PACS and SACS). Contractor's responsible for their own constructions staking which is incidental to the contract per spec 01725.

5. **Question:** Who is responsible for payment of Lab and testing of field work such as density testing, etc.?

Response: Contractor is responsible for their own field and lab testing.

6. **Question:** Does contractor require to provide the engineer's field office?

Response: One "Temporary Field office" per Specification 01520.

7. **Question:** There is a Connections/Terminals - under base unit price (Bid form Part B - sheet 00410B-9) but no unit and quantity assigned. Please clarify.

<u>Response:</u> All electrical connections and terminations are incidental to lights, there is no individual quantity for this work.

8. **Question:** What is the thickness of bond breaker (per sheet C03.01)?

Response: Bond breaker should be a minimum of 1-inch in thickness.

9. **Question:** Following:

Under Summary of work 1.09 section (attached in this email) says; "The General Contractor (GC) and their first-tier subcontractors shall have commercial service airfield construction experience, including nighttime construction, of \$25,000,000 or more within the last 5 years. The GC and their first-tier subcontractors shall have FAA P-501 and P-401 pavement construction experience of runway and taxiway pavements, exclusive of bituminous shoulder pavements, including experience with paving P-401 with PG 76-22 and PG 82-22 bituminous pavement mix design."

- 1. Is this a combine experience of GC and Subcontractor or individual experience?
- 2. Is this for single project or combine project experience?
- 3. Does the Project Management personnel experience from managing the airfield construction project qualifies this requirement?

4. If the first-tier subcontractor has worked for an airfield construction project that valued \$25,000,000 or more but the subcontract portion is less than \$25, 000,000, does this qualify the requirement?

Response:

- 1. The GC and the sub should have their own individual experience with the items described under Summary of Work 1.09 section.
- 2. At least one project of what is specified in Section 1.09.
- 3. The GC shall have this experience not just an individual.
- 4. Yes, that would fulfill the requirement.
- 10. **Question:** Per Details 4 at Sheet C03.01 and Details 2 and 4 at sheet C3.02 show the 2' of Crushed Aggregate Base Extension, is this extended measurement of quantity of base accounted on the bid item # 41 (P-209-5.2) or is it incidental/ subsidiary to that item? Please clarify.

Response: Yes, it is accounted for in P-209.

11. **Question**: Per details 1 of headwall/wingwall of sheet C07.26 and sheet C07.25 area "A" Riprap (note #5 of C07.25), where is this item getting paid? C07.25 is TXDOT details and usually that item gets paid under separate bid item than wingwall, as Riprap item. Also, if it is subsidiary to item #70 (D-752-5.1), where you would like to stop the measurement (longest side or shortest side) example headwall/wingwall at plans sheet C07.22 has variable length of wingwalls (north and south) and details 1 of C07.26 says match existing. Please clarify.

Response: No riprap is intended to be used. Area [dimension] "A" is to be a concrete lined bottom that ties-in and matches the existing concrete lining.

Sheet C07.26 Detail 2 depicts a trapezoidal concrete lined bottom "flaring" upwards above the wingwall footings.

12. **Question**: Plans Details Sheet C10.04 and C10.05 only shows 15" PCC pavement while bid items is for 18" PCC Pavement.

Response: See revised detail on sheet C10.04.

13. **Question:** What's the size of rebar for ring/tie for #5 rebar at section AA- detail 1A (C10.05) at what pitch?

Response: See revised detail on sheet C10.05.

14. **Question:** What is the estimated cost for this project?

Response: The estimated construction cost is approximately \$67.7 Million.

15. **Question:** Based on our years of experience applying markings on airfields, it is our recommendation, in order to confirm the manufactured quality of marking materials, that the Owner require that all P-620 material be sourced from an ISO-9001:2015 certified manufacturer as it relates to the design, development, and manufacturing of all material, and provide proof of current certification to the Owner prior to fabrication. The scope of the certification should include waterborne and solvent-based paints and preformed thermoplastic pavement marking materials. Will the Owner require ISO-9001:2015 certification of sourced materials for this project for all P-620 items?

Response: Certification shall be as stated in P-620 specifications.

16. **Question:** Sections 11.2.3 and 11.3.1 of the City of Houston Conditions of the Contract states: Contractor shall furnish to the Director and City Engineer all policies and certified copies of Contractor's actual insurance policies. Please confirm the Contractor would be allowed to redact any privileged/confidential information not related to the project.

Response: Confirmed.

17. **Question:** Can the Contractor satisfy the Installation Floater required by Table 1 in Article 11 of the Supplementary Conditions with the Builders' Risk Policy required by Table 1 of the Supplementary Conditions?

Response: No, they serve different purposes.

18. **Question:** Please clarify that the following coverages: Owner's and Contractor's Protective Liability, Installation Floater, Builders Risk, increased Automobile and Excess limit of \$10,000,000 required by Table 1 in the Supplementary Conditions is only required by the Contractor and not the Subcontractors and Suppliers.

Response: Confirmed.

19. **Question:** Please confirm that Contractor can meet the increased limit of \$10,000,000 required by Table 1 in the Supplementary Conditions with the combination of Umbrella and Excess policies.

Response: Confirmed.

20. **Question:** Please confirm that this project is outside the 100-year floodplain and Flood Hazard Insurance coverage is not required.

Response: Confirming per current effective FEMA Flood Insurance Rate Maps (FIRM) 48201C0480M & 48201C0485M, dated June 9, 2014, Taxiways SA and SB and Ditch T (Sinkhole Plans) are outside of the floodplain.

21. **Question:** The Header in Table 2 of the Supplementary Conditions contains the phrase "Defense Costs Excluded from Face Amount of Policy." However, a Builder's Risk policy is a property policy covering work during construction of the project. Please clarify that the Defense Costs Excluded from Face Amount of Policy is not required for the Builder's Risk Policy or indicate this is not applicable.

Response: Not required.

22. **Question:** Table 2 of the Supplementary Conditions requires coverage for time element coverage, soft costs (management, architecture, financial costs, pre-opening costs, etc.). These coverages are generally added to a Builder's Risk policy via endorsement with a separate limit. Please provide a minimum limit that would be acceptable to the Owner or indicate this is not applicable.

Response: Not applicable.

23. **Question:** Footnote in Table 1 of the Supplementary Conditions contains the phrase "Defense Costs excluded from face amount of policy." Please confirm that is statement does not apply to the Contractor's Pollution Liability policy as this policy generally provides defense costs that will be equal to or less than the policy limits.

Response: Confirmed.

24. **Question:** Do the bid quantities for the excavation items include the volume of topsoil to be stripped?

Response: Yes.

25. **Question:** Do the bid quantities for the embankment items include the volume of topsoil to be placed?

Response: Topsoil is incidental per P-152.

26. **Question:** Do the bid quantities for the excavation items include the volumes of any non-soil materials to be removed, such as asphalt, base, or concrete pavement?

Response: Unclassified Excavation encompasses any material is excavated.

27. Question: Can you please provide preliminary construction schedule?

Response: See proposed calendar day schedule provided in Document 0410A.

28. **Question:** Will the owner staff with a 3rd party consultant? If yes, who is the consultant?

Response: To be determined.

29. Question: Are all utilities relocated out of conflict in contractors work area?

Response: Contractor shall be responsible for location of all utilities.

30. **Question:** Are there any items that are subsidiary to an item that we should be made aware of?

Response: Please review specifications for subsidiary items.

31. **Question:** Can you please provide the cross sections, XSR Files, or any other electronic cross section files?

Response: Cross-sections are provided in plans.

32. Question: Will an owner's field office be required?

Response: Field office is required for owner.

33. Question: Is there any special insurance that is required?

Response: If working in the AOA, you must have \$10,000,000 in automobile coverage.

34. **Question:** Is there any additional maintenance bond required?

<u>Response:</u> Yes, please reference Document 00495 – Post-Bid Procedures (page 00495-2), for all bonds under this project as post-bid required documents.

35. **Question:** Please confirm that Contractor's review of the Plans and Specifications is made in its capacity as a construction contractor (as opposed to a licensed design professional) and that as a construction contractor, Contractor is not liable for failing to discover design errors or omissions or ascertaining the project's design compliance with applicable laws or codes.

Response: Contractor shall review plans and specifications and make aware to owner potential errors or omissions.

36. **Question:** Are site condition reports included in the bid package part of the Contract Documents?

Response: Geotech report is included in the bid documents.

37. **Question:** Are answers to pre-bid questions part of the Contract Documents?

Response: Yes, in the form of addendum and is part of the contract agreement.

38. **Question:** Are critical path delays caused by 3rd parties compensable in both time and extended general conditions by the City?

Response: Please refer to relevant documents (General Conditions and Supplementary Conditions).

39. **Question:** Will Certificates of Insurance from the Contractor be evidence of adequate insurance?

Response: Yes, the ACCORD Certificate of Insurance shall reflect HAS Insurance requirements as stated on Doc 00800 Supplementary Conditions (Table 1).

40. **Question:** C-100 Section 7 requires the contractor to provide facilities for testing of items P-401 and P-403, please confirm these facilities can be provided by the contractor's supplier at an offsite location.

Response: Testing facilities are provided by supplier, usually batch plant and QA will be scheduled to witness production procedures.

41. **Question:** C-100 Section 7 requires the contractor to provide facilities for testing of items P-401 and P-403, will the RPR be performing the Quality Acceptance testing at the Contractor's laboratory or their own?

Response: Owner will be performing their own QA testing. Houston Airport System (HAS) has the right to ask QA to obtained extra samples and test quality of product delivered to job site.

42. **Question:** C-100 Section 7 requires the contractor to provide facilities for testing of items P-501. P-501 Section 5.3 requires the contractor to perform QC tests for aggregate gradation, aggregate moisture content, slump, and air content while Section 6 requires all Acceptance Sampling and Testing including casting, initial curing, transportation, curing of specimens, slump, air content, unit weight and temperature per the required sublot frequency to be performed by the RPR. Will the RPR conduct their testing at their own lab or the contractor's specifically for curing and breaking of the beams?

Response: Correct, QC have on site testing facility to test structural strength of P-501.QA will verify quality of product delivered to project and test at QA facility. Owner will be performing their own QA testing.

43. Questions:

- 1. In the original solicitation on Bid Form Part A document 00600 List of Proposed Subcontractors and Suppliers was checked as required for submission at bid time. In addendum 2 in the revised Bid Form Part A that document was removed from the checklist in its entirety. Please confirm that document 00600 is not required to be submitted with the bid per addendum 2.
- 2. Please confirm that the documents marked with an X on the checklist on Bid form part A are the only docs to be submitted with the bid? (For example, in Section 20-02 it states that evidence of competency and evidence of financial responsibility are required at bid time however it doesn't reference that on Bid Form A. Please clarify if any additional documents are required at bid time)?

Responses:

- 1. Document 00600 List of Proposed Subcontractors and Suppliers is required to be submitted with your bid, as per attached revised 00410A.
- 2. All documents marked with an "X" on Doc 00410A are to be submitted with your bid. Section 20-02 (page 00701-7) is a requirement as per Doc 00701 FAA AC 150/5370-10H General Provisions as a "Proposal Requirements and Conditions," and states that each bidder shall furnish the Owner satisfactory evidence of their financial responsibility. You can provide this information on a separate envelope as Financial Responsibility and marked "Confidential."

44. **Question**: On the DBE commitment plan are we to base the commitments on just the base bid or will the 13% commitment be required on the TOTAL bid inclusive of the Cash allowances and all bid alternates? My concern is that in the participation plan if we commit to 13% of the TOTAL but in the end are only awarded the base bid that has significant impacts. Additionally, the cash allowances add \$1 million in cost on the bid without any actual project cost to be allocated to that so there is no way for us to allocate 13% commitment on the cash allowances.

Response: HAS OBO will evaluate the DBE participation on the grand bid total. DBE commitment plan are based on the TOTAL bid inclusive of the Cash allowances and all bid alternates.

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

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

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— DocuSigned by: Cathy Vander Plaats

-02232028DE99414.

Cathy Vander Plaats
Aviation Procurement Officer
Houston Airport System

cc: Al Oracion

Solicitation File

Attachments:

Revised Document 00410
Revised Drawings Civil Section C03.01, C10.04, and C10.05

Rehabilitation of Taxiways SA & SB PN 0646A

BID FORM PART A

Document 00410A BID FORM – PART A

To: Houston Airport System

Supply Chain Management

16930 JFK BLVD. Humble, Texas 77032

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:
 - [X] Security Deposit (as defined in Document 00200 Instructions to Bidders)
 - [X] Document 00450 Bidder's Statement of MWSBE Status
 - [X] Document 00454 Affidavit of Non-interest
 - [X] Document 00455 Ownership Information Form
 - [X] Document 00456 Bidder's Certificate of Compliance with Buy American Program (required for AIP funded project)
 - [X] Document 00457 Conflicts of Interest Questionnaire (CIQ)
 - [X] Document 00458 Bidder's Certificate Regarding Foreign Trade Restriction (required for AIP funded project)
 - [X] Document 00459 Contractor's Statement Regarding Previous Contracts Subject to EEO (required for AIP funded project)
 - [X] 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")).
 - [X] Document 00470D Bidder's DBE Participation Plan (required for AIP funded project)

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BID FORM PART A

l J	Document 004/1 – 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).
[X]	Document 00480 – Form SCM-1 Reference Verification
[X]	Document 00481 – Non-Collusion Statement
[X]	Document 00600 - List of Proposed Subcontractors and Suppliers
[]	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		
5	SS-300-5.2	Removal/Repair of Broken Bolt, in Place	EA	235		
6	SS-300-5.3	Retrofit Ground Lug to Existing Can, Installed	EA	235		
7	SS-301-5.1	Existing Base Mounted Edge Light, Removed	EA	495		
8	SS-301-5.2	Existing In-Pavement Centerline Light, Removed	EA	456		
9	SS-301-5.3	Existing Base Mounted Guidance Sign, Removed	EA	28		
10	SS-301-5.4	Existing Base Mounted Edge Light, Removed, Base Top Section, Removed	EA	50		
11	SS-301-5.5	Existing In-Pavement Centerline Light, Removed, Base Top Section, Removed	EA	754		
12	SS-301-5.6	Existing L-852G Runway Guard Light, Relocated on New Base	EA	5		
13	SS-301-5.7	Abandoned Sign Foundation, Demolished	EA	2		
14	SS-301-5.8	Existing Electrical Conduit, 1- Way 2"C, Cleared	LF	10,000		

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BID FORM PART B

15	SS-301-5.9	Existing Electrical Conduit, 1-	LF	10,000	
13	33-301-3.9	Way 4"C, Cleared	LF	10,000	
16	SS-305-5.1	Directional Boring, 16-Way 2"C Polyethylene Conduits	LF	1,350	
17	SS-310-5.1	Temporary Airfield Lighting (Base Bid)	LS	1	
18	SS-310-5.2	Mobile Photometric Testing	LS	1	
19	SS-310-5.4	Spare L-861T(L) Taxiway Edge Light, Delivered to Airport	EA	54	
20	SS-310-5.5	Spare L-852C(L), Green/Green Lens, Taxiway Centerline Light, Delivered to Airport	EA	54	
21	SS-310-5.6	Spare L-852C(L), Yellow/Obscured Lens, Taxiway Centerline Light, Delivered to Airport	EA	12	
22	SS-310-5.7	Spare L-852D(L) Green/Green Lens Taxiway Centerline Light, Delivered to Airport	EA	65	
23	SS-310-5.8	Spare L-852D(L) Green/Yellow Lens Taxiway Centerline Light, Delivered to Airport	EA	1	
24	SS-310-5.9	Spare L-852D(L) Yellow/Yellow Lens Taxiway Centerline Light, Delivered to Airport	EA	10	
25	SS-310- 5.10	Spare L-852G(L) Runway Guard Light, Delivered to Airport	EA	13	
26	SS-310- 5.11	Spare L-858(L) Sign Components Package, Delivered to Airport	EA	3	
27	C-100-14.1	Contractor Quality Control Program (CQCP)	LS	1	
28	C-102-5.1a	Filter Dam Type II	LF	70	
29	C-102-5.1b	Reinforced Silt Fence	LF	25,320	
30	C-105-6.1	Mobilization	LS	1	
31	P-101-5.1	Asphalt Milling (1" and Variable Depth)	SY	63,730	
32	P-101-5.2	Asphalt Milling (2" and Variable Depth)	SY	204,600	
33	P-101-5.3	Asphalt Milling (5" and Variable Depth)	SY	45,370	
34	P-101-5.5	Concrete Pavement Removal (12"-15" Depth)	SY	550	
35	P-101-5.6	Remove and Dispose 24" CMP	LF	660	
36	P-101-5.7	Concrete Slope Paving Removal and Disposal	SY	9,680	

00410B-2 02-12-2020 Bidder's Initials [

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37	P-101-5.8	Concrete Headwall Removal	EA	10	
38	P-101-5.9	Asphalt Crack Repair	LF	140,000	
39	P-152-4.1	Unclassified Excavation	CY	72,240	
40	P-209-5.1	6" Crushed Aggregate Base Course	SY	2,880	
41	P-209-5.2	15" Crushed Aggregate Base Course	SY	76,570	
42	P-209-5.3	Aggregate Base Course (Slope Stabilization)	CY	1,410	
43	P-209-5.4	Separation Geotextile (Slope Stabilization)	SY	16,910	
44	P-209-5.5	Geogrid (Slope Stabilization)	SY	2,750	
45	P-307-7.1	6" Cement Treated Permeable Base	CY	320	
46	P-401-8.1	Bituminous Surface Course (PG 76-22)	TON	46,530	
47	P-403-8.1	Bituminous Base Course (PG 76-22)	TON	42,570	
48	P-501-8.1	10" Portland Cement Concrete Pavement	SY	390	
49	P-501-8.2	12"-15" Portland Cement Concrete Pavement	SY	530	
50	P-501-8.4	Concrete Pavement Partial Depth Repair	SF	2,000	
51	P-501-8.5	Concrete Pavement Crack Repair	LF	3,000	
52	P-610-6.1	Concrete Slope Paving	SY	15,650	
53	P-610-6.2	Modify Curb Opening	EA	65	
54	P-610-6.3	Concrete Pilot Channel	SY	12,070	
55	P-610-6.4	Interceptor Structure	SY	310	
56	P-620-5.1a	Taxiway Pavement Marking with Reflective Beads (Yellow)	SF	86,210	
57	P-620-5.1b	Taxiway Pavement Marking with Reflective Beads (Black)	SF	111,220	
58	P-620-5.1c	Thermoplastic Surface Painted Runway Direction Signs	EA	14	
59	P-620-5.1d	Thermoplastic Surface Painted Apron Control Marking Signs	EA	2	
60	P-620-5.1e	Surface Preparation	SF	197,430	

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61	P-620-5.1f	Temporary Taxiway Pavement Markings (Yellow)	SF	14,200	
62	P-620-5.1g	Temporary Taxiway Pavement Markings (Black)	SF	24,400	
63	P-620-5.1h	Temporary Taxiway Pavement Markings Removal	SF	4,700	
64	P-620-5.1i	Removal of Existing Pavement Marking	SF	1,500	
65	D-701-5.1	Install 6'x5' RCB (Class V) Open Cut, Complete in Place	LF	70	
66	D-701-5.2	Install 7'x5' RCB (Class V) Open Cut, Complete in Place	LF	70	
67	D-701-5.3	Install 8'x4' RCB (Class V) Open Cut, Complete in Place	LF	160	
68	D-701-5.4	Install 10'x7' RCB (Class V) Open Cut, Complete in Place	LF	30	
69	D-701-5.5	Install 24" CMP Open Cut, Complete in Place	LF	2,280	
70	D-752-5.1	Install Wingwall, Complete in Place	CY	1,190	
71	T-901-5.1	Hydroseeding	AC	25.0	
72	T-904-5.1	Sodding	SY	46,570	
73	L-108-5.1	No. 8 AWG, 5 kV, L-824, Type C Cable, Installed in Trench, Duct Bank or Conduit	LF	177,400	
74	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	
75	L-110-5.1	Flowable Fill Encased Electrical Conduit, 1W-2"C	LF	1,900	
76	L-110-5.2	Non-Encased Electrical Conduit, 1W-2"C	LF	150	
77	L-110-5.3	Concrete Encased Electrical Conduit, 1W-2"C	LF	1,150	
78	L-110-5.4	Concrete Encased Electrical Conduit, 1W-2"C with Saw Kerf Pavement Repair	LF	450	
79	L-110-5.5	Non-Encased Electrical Duct Bank, 16W-2"C	LF	225	
80	L-110-5.6	Non-Encased Electrical Duct Bank, 2W-2"C	LF	280	
81	L-110-5.7	Flowable Fill Encased Electrical Duct Bank, 2W-2"C	LF	650	
82	L-115-5.1	Existing Electrical Junction Structure/Manhole Adjusted to New Grade	EA	64	

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83	L-115-5.2	4'x4'x4' Aircraft-Rated Handhole, Installed	EA	4		
84	L-115-5.3	L-868 Blank Cover with Spacers, Installed	EA	5		
85	L-125-5.1	L-852C/D(L) Taxiway Centerline Light, Installed on Adjusted Light Base	EA	754		
86	L-125-5.2	L-852C/D(L) Taxiway Centerline Light, Installed on Existing Light Base	EA	442		
87	L-125-5.3	L-861T(L) Base Mounted Taxiway Edge Light, Installed on Adjusted Light Base	EA	407		
88	L-125-5.4	L-861T(L) Base Mounted Taxiway Edge Light, Installed on Existing Light Base	EA	88		
89	L-125-5.5	L-858(L) Base Mounted Guidance Sign, Installed	EA	28		
90	L-125-5.6	L-852C/D(L) Taxiway Centerline Light, Installed on New Light Base	EA	38		
91	L-125-5.7	L-852G(L) In-Pavement Runway Guard Light, Installed	EA	62		
92	L-125-5.8	L-861T(L) Base Mounted Taxiway Edge Light, Installed on New Base in Existing Pavement	EA	18		
93	L-125-5.9	L-861T(L) Base Mounted Taxiway Edge Light, Installed on New Base in New Pavement	EA	23		
94	L-125-5.10	L-852C/D(L) Taxiway Centerline Light, Installed on New Base in Existing Pavement	EA	18		
95	L-125-5.11	Update Sign Legend	EA	1		
96	L-125-5.12	L-852C/D(L) Taxiway Centerline Light, Installed on New Base in Existing Pavement with Mill and Overlay	EA	18		
97	02378-4.1	Riprap Gradation No. 1, including Topsoil	TON	240		
TOTAL BASE UNIT PRICES						

Rehabilitation of Taxiways SA & SB PN 0646A

BID FORM PART B

C. EXTRA UNIT PRICE TABLE: N/A

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BID FORM PART B

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
TOTAL	CASH AL	LOWANCES	\$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 (High Speed Taxiway PCC Pavement Construction)

Item No.	Spec Ref.	Base Unit Short Title	Unit of Measure	Estimated Quantity	Unit Price (this column controls)	Total in figures
1	SS-305-5.1	Directional Boring, 16- Way 2"C Polyethylene Conduits	LF	1,300		
2	SS-310-5.3	Temporary Airfield Lighting (Additive Alternate 1)	LS	1		
3	P-152-4.1	Unclassified Excavation	CY	7,470		
4	P-101-5.1	Asphalt Milling (1" and Variable Depth)	SY	(3,410)		
5	P-101-5.4	Full-Depth Asphalt Shoulder Removal	SY	4,700		
6	P-209-5.1	6" Crushed Aggregate Base Course	SY	12,410		
7	P-209-5.2	15" Crushed Aggregate Base Course	SY	2,200		
8	P-304-8.1	6" Cement-Treated Base Course	SY	12,050		
9	P-403-8.1	Bituminous Base Course (PG 76-22)	TON	410		
10	P-501-8.3	18" Portland Cement Concrete Pavement	SY	10,560		
11	P-620-5.1a	Taxiway Pavement Marking with Reflective Beads (Yellow)	SF	1,690		
12	P-620-5.1b	Taxiway Pavement Marking with Reflective Beads (Black)	SF	2,180		
13	P-620-5.1c	Thermoplastic Surface Painted Runway Direction Signs	EA	4		
14	T-901-5.1	Hydroseeding	AC	(1.0)		
15	T-904-5.1	Sodding	SY	200		
16	L-108-5.1	No. 8 AWG, 5 kV, L-824, Type C Cable, Installed in Trench, Duct Bank or Conduit	LF	25,000		
17	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	16,300		

Rehabilitation of Taxiways SA & SB PN 0646A

18	L-110-5.1	Flowable Fill Encased Electrical Conduit, 1W- 2"C	LF	1,700	
19	L-110-5.3	Concrete Encased Electrical Conduit, 1W- 2"C	LF	1,100	
20	L-110-5.4	Concrete Encased Electrical Conduit, 1W- 2"C with Saw Kerf Pavement Repair	LF	525	
21	L-110-5.5	Non-Encased Electrical Duct Bank, 16W-2"C	LF	320	
22	L-110-5.6	Non-Encased Electrical Duct Bank, 2W-2"C	LF	160	
23	L-110-5.7	Flowable Fill Encased Electrical Duct Bank, 2W- 2"C	LF	700	
24	L-115-5.2	4'x4'x4' Aircraft-Rated Handhole, Installed	EA	3	
25	L-125-5.2	L-852C/D(L) Taxiway Centerline Light, Installed on Existing Light Base	EA	9	
26	L-125-5.3	L-861T(L) Base Mounted Taxiway Edge Light, Installed on Adjusted Light Base	EA	(23)	
27	L-125-5.4	L-861T(L) Base Mounted Taxiway Edge Light, Installed on Existing Light Base	EA	(8)	
28	L-125-5.5	L-858(L) Base Mounted Guidance Sign, Installed	EA	2	
29	L-125-5.6	L-852C/D(L) Taxiway Centerline Light, Installed on New Light Base	EA	14	
30	L-125-5.7	L-852G(L) In-Pavement Runway Guard Light, Installed	EA	31	
31	L-125-5.8	L-861T(L) Base Mounted Taxiway Edge Light, Installed on New Base in Existing Pavement	EA	15	
32	L-125-5.9	L-861T(L) Base Mounted Taxiway Edge Light, Installed on New Base in New Pavement	EA	22	
33	L-125-5.10	L-852C/D(L) Taxiway Centerline Light, Installed on New Base in Existing Pavement	EA	41	
TOTAL	ADDITIVE ALT	ERNATE 1 UNIT PRICES			 \$

Additive Alternate 2 (Substituting PG 76-22 with 82-22 in high dynamic areas)

Item No.	Spec Ref.	Base Unit Short Title	Unit of Measure	Estimated Quantity	Unit Price (this column controls)	Total in figures
1	P-401-8.1	Bituminous Surface Course (PG 76-22)	TON	(9,727)		
2	P-401-8.2	Bituminous Surface Course (PG 82-22)	TON	9,727		
3	P-403-8.1	Bituminous Base Course (PG 76-22)	TON	(4,067)		
4	P-403-8.2	Bituminous Base Course (PG 82-22)	TON	4,067		
TOTAL A	ADDITIVE ALT	ERNATE 2 UNIT PRICES				\$

Additive Alternate 3 (Miscellaneous Pavement Repair)

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-300-5.1	Lockout/Tagout and Constant Current Regulator Calibration Procedures	LS	1		
4	C-100-14.1	Contractor Quality Control Program (CQCP)	LS	1		
5	C-105-6.1	Mobilization	LS	1		
6	P-101-5.2	Asphalt Milling (2" and Variable Depth)	SY	565		
7	P-101-5.10	Concrete Pavement Removal (14"-20" Depth)	SY	445		
8	P-401-8.1	Bituminous Surface Course (PG 76-22)	TON	145		
9	P-501-8.4	Concrete Pavement Partial Depth Repair	SF	500		
10	P-501-8.5	Concrete Pavement Crack Repair	LF	500		
11	P-501-8.6	Concrete Pavement Crack Repair (Epoxy Injection)	LF	400		
12	P-501-8.7	14"-20" Portland Cement Concrete Pavement	SY	445		

Rehabilitation of Taxiways SA & SB PN 0646A

BID FORM PART B

13	P-501-8.8	Concrete Joint Seal Repair	LF	5,000	
14	P-620-5.1a	Taxiway Pavement Marking with Reflective Beads (Yellow)	SF	2,000	
15	P-620-5.1b	Taxiway Pavement Marking with Reflective Beads (Black)	SF	2,000	
16	P-620-5.1f	Temporary Taxiway Pavement Markings (Yellow)	SF	2,115	
17	P-620-5.1g	Temporary Taxiway Pavement Markings (Black)	SF	2,115	
18	P-620-5.1h	Temporary Taxiway Pavement Markings Removal	SF	4,230	
19	SS-310-5.3	Temporary Airfield Lighting (Additive Alternate 3)	LS	1	
TOTAL A	ADDITIVE ALT	ERNATE 3 UNIT PRICES			\$

Additive Alternate 4 (Ditch G FAA Duct Bank Relocation)

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-301- 5.10	Existing Concrete Encased Electrical Duct Bank, 4-Way 4"C, Cleared	LF	60		
4	SS-301- 5.11	5.11 Encased Duct Bank, 4- Way 4"C, Demolished		60		
5	C-100-14.1			1		
6	C-102-5.1a	Filter Dam Type II	LF	10		
7	P-101-5.11	Remove and Dispose 24" RCP	LF	20		
8	P-152-4.1	Unclassified Excavation	CY	66		
9	P-610-6.5	4" Seal Slab	CY	20		
10	P-610-6.6	Concrete Channel Lining	CY	48		

Rehabilitation of Taxiways SA & SB PN 0646A

BID FORM PART B

11	D-701-5.6	Install 24" RCP (Class V) Open Cut, Complete in Place	LF	20		
12	T-904-5.1	Sodding	SY	200		
13	L-110-5.8	FAA Style, Concrete Encased Electrical Duct Bank, 4Way-4"C	LF	370		
14	02378-4.1	Riprap Gradation No. 1 incl Topsoil	TON	15		
TOTAL ADDITIVE ALTERNATE 3 UNIT PRICES					\$	

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E4 TOTAL DAGE DID DDICE.

		for Stipulated Price, Base	ニ . Unit Price, Extra Unit Price, and Cash	Allowance)
	F2. TOTAL	ADDITIVE ALTE	RNATE #1 BID PRICE:	\$
	F3. TOTAL	ADDITIVE ALTE	RNATE #2 BID PRICE:	\$
	F4. TOTAL	ADDITIVE ALTE	RNATE #3 BID PRICE:	\$
	F5. TOTAL	ADDITIVE ALTE	\$	
***	F6. GRAND	BID TOTAL (F1+	-F2+F3+F4+F5):	\$
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 calculating the Total Bid Price.				
	Bidder:	(Print or type full name o	f your proprietorship, partnership, cor	poration, or joint venture. *)
*	*By:			
	•	Signature		Date
	Name:	(Print or type name)		Title
	Address:	(Mailing)		
		(Walling)		
		(Street, if different)		
	Telephone a	ind 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.
- *** City reserves the right to choose not to add any alternates to the Base Bid Price or add any one or multiple alternates to the Base Bid Price. Evaluation shall be based on 'Grand Bid Total' amount.
- 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.

CEMENT STABILIZED BASE

EXISTING TAXIWAY TYPICAL SECTION B SCALE: NONE

NOTES: 1. EXISTING CENTERLINE LIGHT CAN TOP SECTION TO BE REMOVED PRIOR TO MILLING OPERATIONS. COVER REMAINING BASE WITH MUD CAP TO PRESERVE LIGHT CAN.

EXISTING SUBGRADE

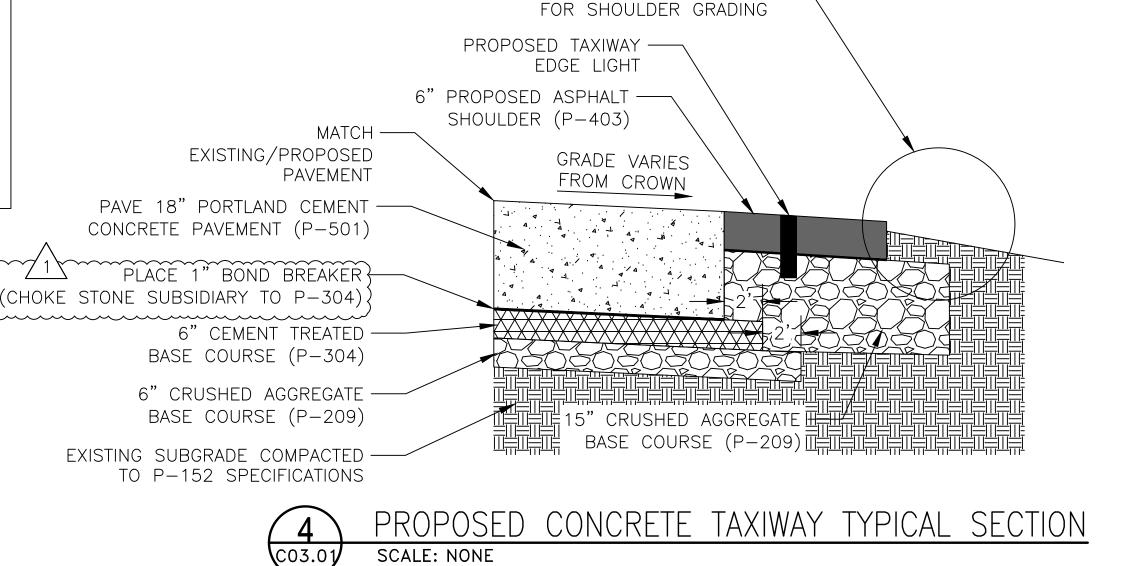
2. EXISTING TAXIWAY EDGE LIGHT CAN TOP SECTION TO BE REMOVED PRIOR TO MILLING OPERATIONS. COVER REMAINING BASE WITH MUD CAP TO PRESERVE LIGHT CAN. 3. CONTRACTOR MAY PROPOSE ALTERNATIVE, BUT WILL NOT PROCEED

WITHOUT ENGINEER APPROVAL

4. UNIFORM 5" MILL MAY REMOVE BASE MATERIAL IN SOME SECTIONS WHERE ASPHALT THICKNESS IS LESS THAN 5". THIS BASE MATERIAL REMOVAL WILL BE CONSIDERED SUBSIDIARY TO P-101 ASPHALT REMOVAL PAY ITEM.

TAXIWAY	BASE BID	ADDITIVE AL	TERNATE #2
IAXIVVAT	76-22	82-22	76-22
		STA 2040+00 to 2044+00	
SA	ALL STATIONS	STA 2067+00 to 2080+00	ALL OTHER STATIONS
		STA 2087+00 to 2100+00	
SB	ALL STATIONS	ALL STATIONS	ALL STATIONS
SG	ALL STATIONS	STA 5001+00 to 5003+61	STA 5000+00 to 5001+00
SH	ALL STATIONS	STA 6001+00 to 6003+60	STA 6000+00 to 6001+00
SJ	ALL STATIONS	STA 7001+00 to 7003+60	STA 7000+00 to 7001+00
SK	ALL STATIONS	ALL STATIONS	ALL STATIONS

TABLE 1: TAXIWAY ASPHALT PG RATING SCHEDULE

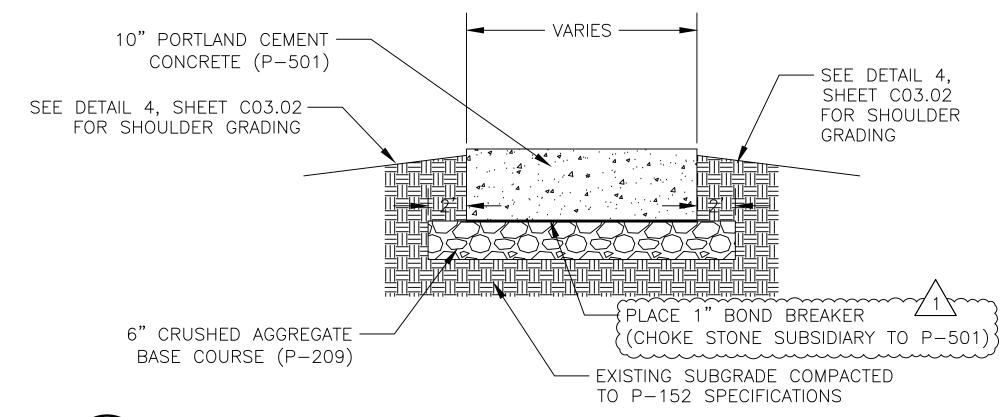


SEE DETAIL 4, SHEET CO3.02 -

SAWCUT CLEAN VERTICAL FACE. — INITIAL CUT SHALL BE MADE 2' INSIDE THE SLAB JOINTS TO AVOID DAMAGING ADJACENT SLABS TO REMAIN. SAWCUT CLEAN VERTICAL FACE. — INITIAL CUT SHALL BE MADE 2' INSIDE THE SLAB JOINTS TO AVOID DAMAGING ADJACENT SLABS TO REMAIN. EXISTING CONCRETE — PAVEMENT TO REMAIN EXISTING ASPHALT BOND -BREAKER TO REMAIN EXISTING BASE TO REMAIN -IF POOR BASE IS ENCOUNTERED REMOVE TO SOUND BASE PRIOR TO CONCRETE POUR. THIS SHALL BE -REMOVE EXISTING 12"-15" CONSIDERED SUBSIDIARY. STEEL REINFORCED PCC PAVEMENT (P-101)

PROPOSED DOWEL BARS -(SEE DETAIL 4, SHEET C10.04) TYPE E TYPE E COSNTRUCTION CONSTRUCTION JOINT JOINT **EXISTING** - MATCH EXISTING MATCH EXISTING -GRADE CONCRETE CONCRETE PAVEMENT PAVEMENT PAVE 12-15" PORTLAND 'LACE 1" BOND BREAKER CEMENT CONCRETE PAVEMENT CHOKE STONE SUBSIDIARY TO P -50° (P-501)- COMPACT EXISTING BASE PRIOR TO CONCRETE POUR

PROPOSED CONCRETE SLAB REPLACEMENT TYPICAL SECTION ****C03.01 SCALE: NONE



C03.01

PROPOSED CONCRETE ARFF DRIVEWAY TYPICAL SECTION SCALE: NONE

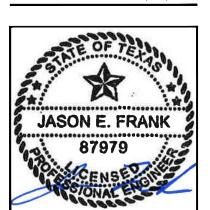
AIRPORTS

GARVER 12141 Wickchester Lane Suite 200 Houston, TX 77079 (713) 491-8333 TBPE Registration No. F-5713

NO. DESCRIPTION DATE BY 1 ADD. 3 05/31/24 JEF

ECTIONS S TYPIC, GEORGE REHABIL

PROJECT MGR: KKR DRAWN BY: CHECK BY: 1" = 1" 05/03/2024



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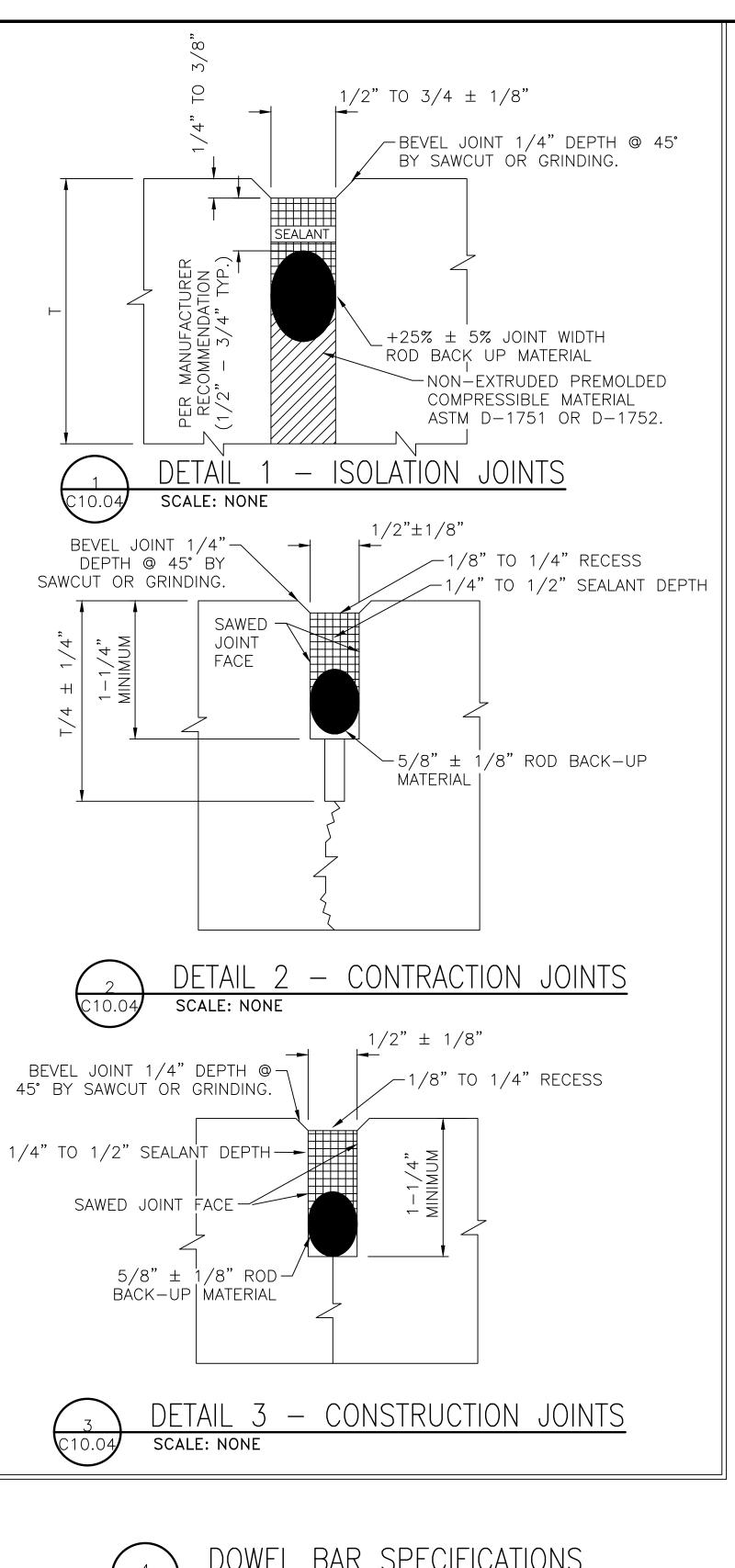
DIRECTOR HOUSTON AIRPORT SYSTEM PROJECT NO. 0646A

A.I.P. NO. XXXX C.I.P. NO.

A-0515 H.A.S. NO. 20C0646A

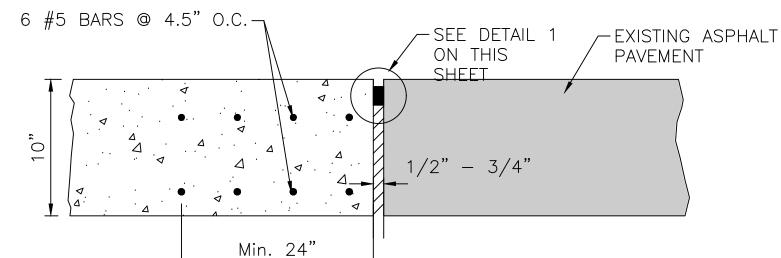
C03.01

SHEET NO.



DOWEL BAR SPECIFICATIONS SCALE: NONE

_				
	SLAB THICKNESS	DOWEL DIAMETER	DOWEL LENGTH	DOWEL SPACING
	6" TO 7"	3/4"	18"	12"
	7.5" TO 12"	1"	18"	12"
	12.5" TO 16"	1 1/4"	20"	15"
	16.5" TO 20"	1 1/2"	20"	18"
	20.5" TO 24"	2"	24"	18"



8 #5 BARS © 3" O.C.

SEE DETAIL 1
ON THIS
PAVEMENT
SHEET

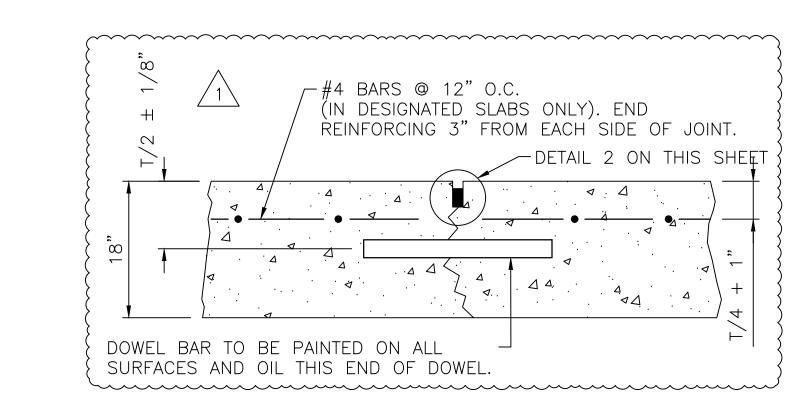
Min. 24"

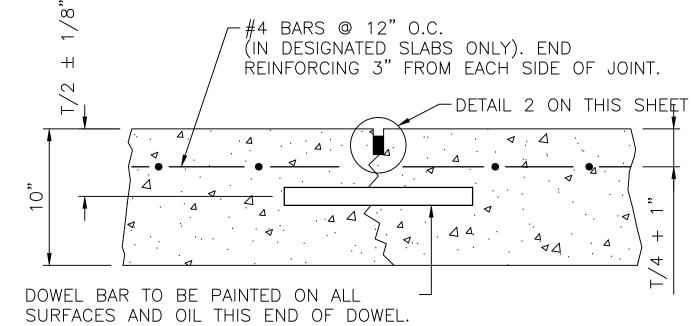
Min. 24"

NOTE:

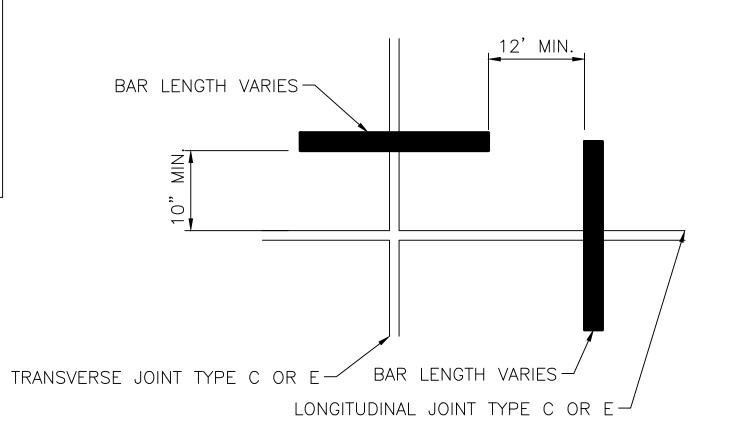
1. REINFORCING STEEL SHALL ONLY BE INSTALLED IN SLABS IDENTIFIED IN THE JOINT LAYOUT PLAN SHEETS.

TYPE A-1 REINFORCED ISOLATION JOINT AT EXISTING ASPHALT PAVEMENT



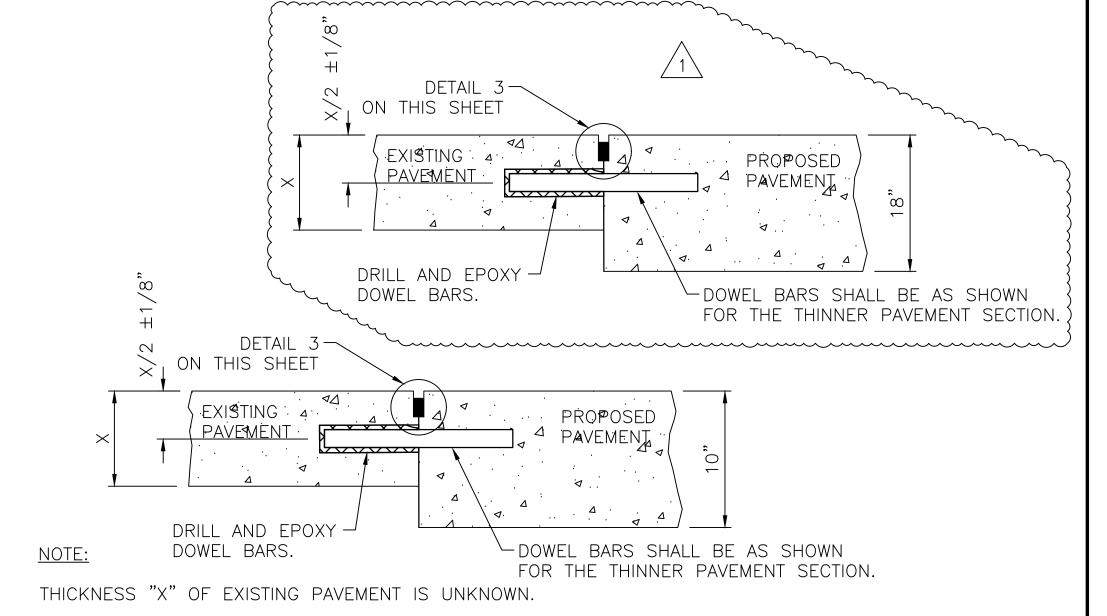


TYPE C - DOWELED CONTRACTION JOINT SCALE: NONE

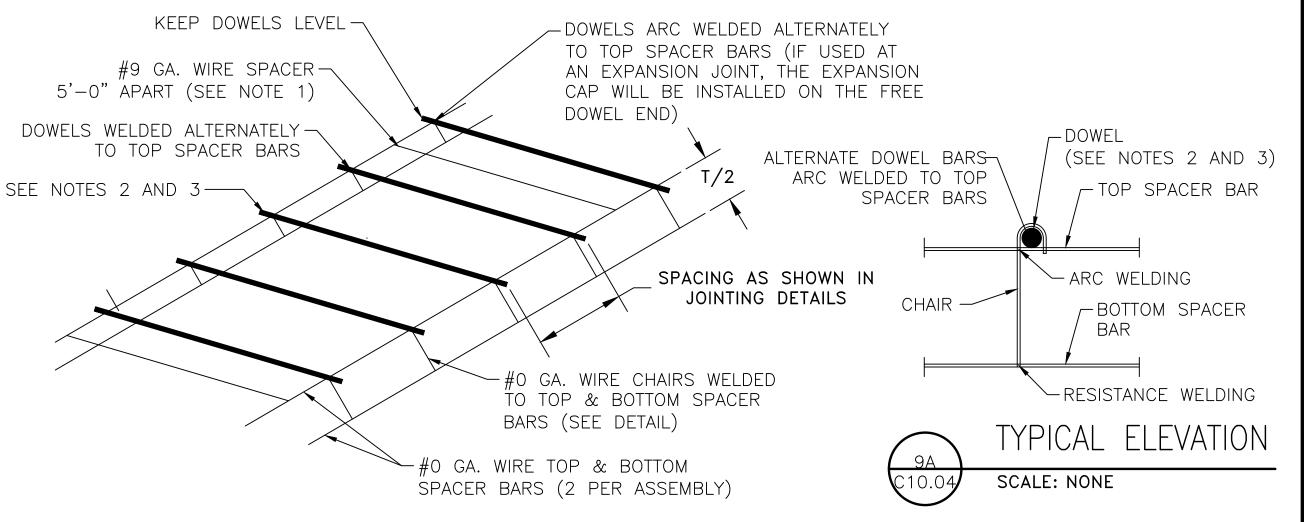


DOWEL BARS AT SLAB CORNERS (PLAN VIEW)

SCALE: NONE



TYPE E — DOWELED CONSTRUCTION JOINT AT EXISTING/PROPOSED PAVEMENT SCALE: NONE



NOTES:

- 1. #9 GA. WIRE SPACER BAR ARC WELDED TO THE BOTTOM OF TOP SPACER BAR. (MAY BE MECHANICALLY ATTACHED IN LIEU OF WELDING) 3 REQUIRED PER UNIT. THIS WIRE MUST BE CUT OR REMOVE PRIOR TO PLACING PC CONCRETE.
- 2. DOWEL BAR DIAMETER, LENGTH, AND SPACING SHALL BE AS SHOWN ON THE DIMENSION TABLE.
- 3. DOWELS SHALL BE EPOXY COATED FULL LENGTH OF DOWEL. A LUBRICANT BOND BREAKER SHALL BE APPLIED TO THE EPOXY COATED DOWEL IMMEDIATELY PRIOR TO PAVING.

DOWEL BASKET ASSEMBLY DETAIL

9
C10.04 SCALE: NONE





NO. DESCRIPTION DATE BY
ADD. 3 05/31/24 JEF

SHABILITATION OF TAXIWAYS SA & SE
JOINT DETAILS I

PROJECT MGR: JEF

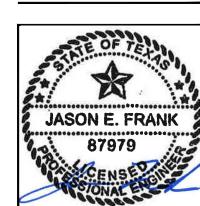
DESIGNER: KKR

DRAWN BY: DAG

CHECK BY: JEF

SCALE: 1" = 1"

DATE: 05/31/2024



Digitally Signed 05/29/2024

APPROVED BY:

DIRECTOR
HOUSTON AIRPORT SYSTEM
PROJECT NO.

0646A

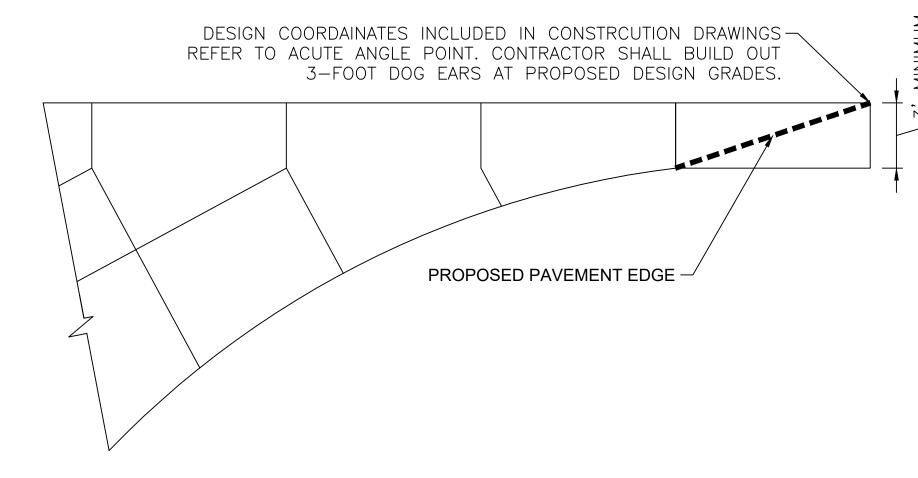
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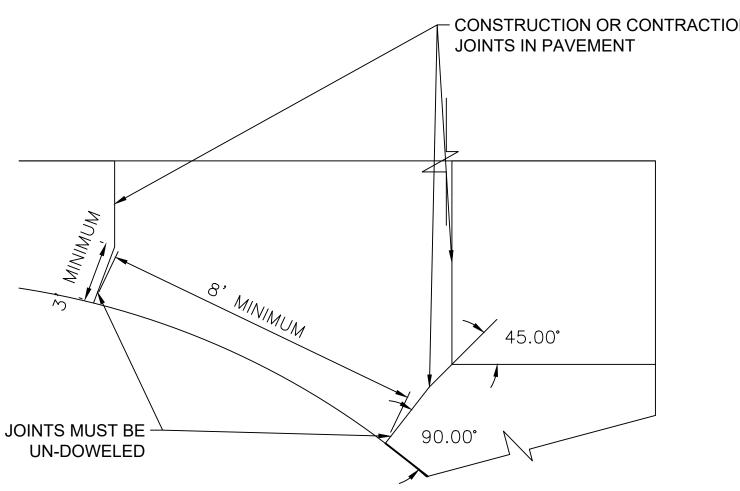
C.I.P. NO.

A-0515 H.A.S. NO. 20C0646A

C10.04



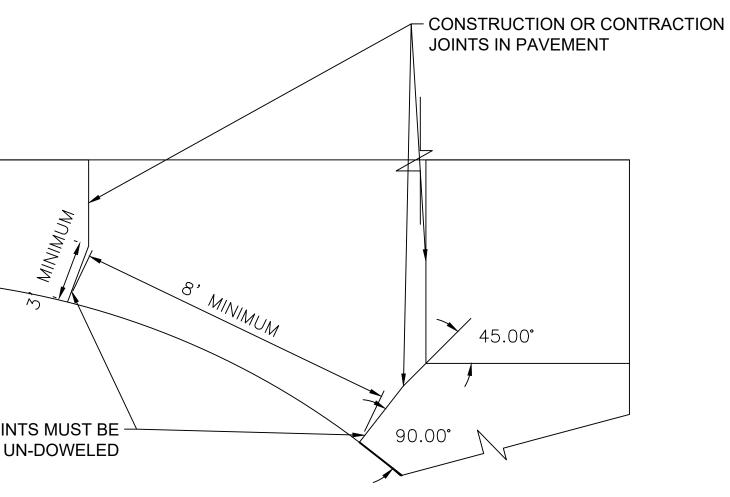


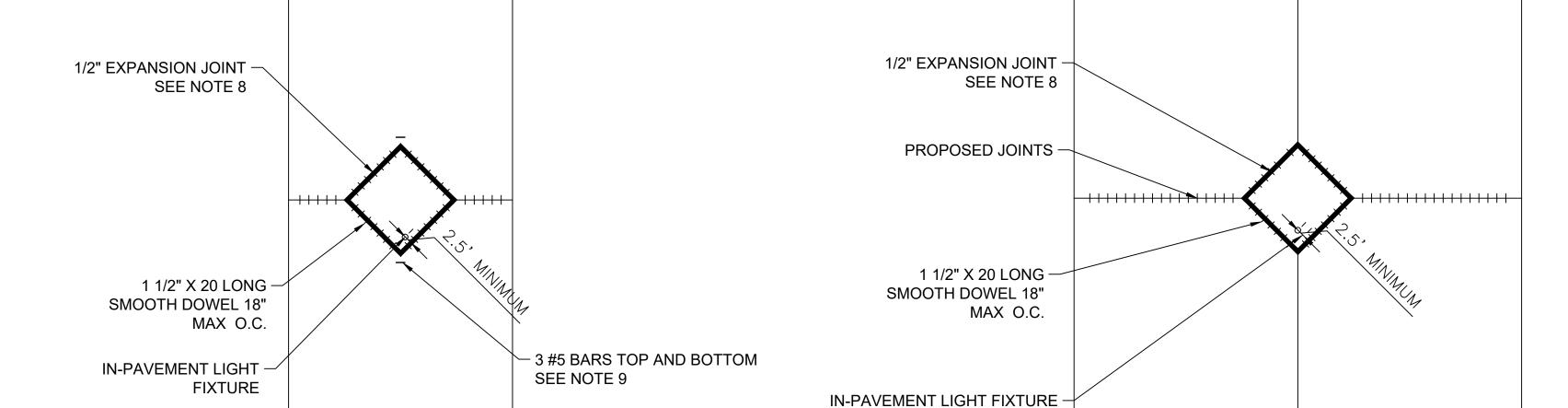




BLOCKOUT NOTES:

- 1. DRILLING METHOD FOR DOWELS SHALL BE CAPABLE OF MAINTAINING DRILL HOLES PARALLEL TO THE CONCRETE SURFACE AND PERPENDICULAR TO THE JOINT LINE. DRILL HOLES SHALL BE ACCURATELY LAID OUT IN ACCORDANCE WITH SPECIFICATIONS SECTION P-501. DRILL HOLE DIAMETER TO BE OF SUFFICIENT SIZE TO ACCEPT THE TYPE AND SIZE OF DOWEL REQUIRED.
- 2. AFTER THE DRILLING IS COMPLETE AND PRIOR TO THE INSTALLATION OF DOWELS, THE HOLES SHALL BE THOROUGHLY CLEANED TO REMOVE DRILLING DUST. CONCRETE CHIPS AND ANY MATERIAL DETRIMENTAL TO DEVELOPING BOND.
- 3. DOWEL CLOSEST TO BLOCKOUT MAY HAVE TO BE ADJUSTED TO MAINTAIN MINIMUM SPACING AS THE BLOCKOUT IS CONSIDERED A JOINT.
- 4. THE ACTUAL LOCATIONS OF EXISTING DOWELS IN THE FIELD MAY VARY. THE CONTRACTOR SHALL NOTIFY THE PROJECT MANAGER IF THE DOWELS VARY FROM THESE PLANS MORE THAN 1/2"
- 5. DOWELS SHALL BE NO CLOSER THAN 10" TO THE JOINT
- 6. CONTRACTOR SHALL MAINTAIN A MINIMUM 2.5' CLEARANCE BETWEEN THE CENTER OF LIGHT FIXTURE AND JOINT
- 7. WHEN A BLOCKOUT IS USED ON A PLANNED CONTRACTION JOINT. THE JOINT WILL BE CHANGED TO A CONSTRUCTION JOINT.
- 8. PROVIDE A 1/2" PREMOLDED EXPANSION JOINT MATERIAL CONTINUOUS AROUND BLOCKOUT. PROVIDE POURED SEALER FOR TOP 1" SPACE.
- 9. (3) #5 BARS 30" LONG, TOP AND BOTTOM, CENTERED ON CORNER OF BLOCKOUT AT 4", 8", AND 12" FROM CORNER. TOP BARS SHALL BE 5 1/4" BELOW SURFACE AND BOTTOM BARS SHALL BE 5 1/4" ABOVE BOTTOM OF SLAB





2 PANEL BLOCKOUT (CENTER OF PANEL) SCALE: NONE



SEE NOTE 6





REVISIONS NO. DESCRIPTION DATE BY 1 ADD. 3 05/31/24 JEF

> ETAIL JOINT

PROJECT MGR: DESIGNER: DRAWN BY: CHECK BY: SCALE: 1" = 1" 05/31/2024



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Digitally Signed 05/29/2024	
APPROVED BY:	٠,

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.

C10.05