KSA A·DYNAMIC·PERSPECTIVE

Addendum No. 1

To:	All Plan Holders	**Project:**	Hangar Development Project
Airport:	Winston Field Airport	**KSA Project No.:**	SCA.001
Date:	April 8, 2016	**Client Project No.:**	13HGSNYDR

The plans, specifications, and contract documents are modified as described below. All bidders shall acknowledge receipt of this and all other addenda on page P-15 of the **revised** bid form attached. This addendum becomes a part of the contract documents. All provisions of the original plans, specifications, and contract documents shall remain in full force and effect, except as modified by this addendum. Responses to questions received by KSA are included with this addendum. Questions are paraphrased and are as understood by KSA.

I. **Contract Document Revisions**

A. **Bid Form**

Replace with the attached **Revised** Bid Form. Note that the award of bids will be based on the bid items and quantities as **listed** in the **Revised** Bid Form. Any variance in bid submittals from the **Revised** Bid Form will result in the bid being disqualified.

II. **Plan Revisions**

A. Plan Sheet 3, Summary of Quantities

1. Replace with the attached Revised Plan Sheet 3, Summary of Quantities

B. Plan Sheet 7, Hangar Floor Plans and Elevations

1. Replace with the attached Revised Plan Sheet 7, Hangar Floor Plans and Elevations

III. **Specification Revisions**

A. KSA Specification Item H-1., Hangar Metal Building System and Foundation. Delete this item in its entirety and replace with the attached KSA Specification Item H-1., Hangar Metal Building System and Foundation shown as Addendum No. 1 in the footer. Clear door dimensions for Schedule 1 have been changed to 75'x22'.

Attachments

A. Bid Form
B. Plan Sheet 3, Summary of Quantities
C. Plan Sheet 7, Hangar Floor Plans and Elevations
D. KSA Specification Item H-1., Hangar Metal Building System and Foundation
E. Contractor Questions
F. Pre-Bid Meeting Sign In

Addendum No. 1 Issued By:
KSA

Kyle L. Newton, P.E.
Project Manager

4/8/16

STATE OF TEXAS
KYLE L. NEWTON
115920
LICENSED
PROFESSIONAL ENGINEER

TBPE Firm Registration No. F-1356

BID FORM

TxDOT CSJ No. 13HGSNYDR

Project Description: Winston Field Airport
Hangar Development Project

Bid by: Name of Bidder _____

Address:_____

_____

Telephone: _____ **FAX:** _____

Email Address: _____

To the Texas Department of Transportation hereinafter called the Agent.

Pursuant to the foregoing Instruction to Bidders, the undersigned bidder having examined the plans and specifications with related documents and the site of the proposed work, and being familiar with all the conditions surrounding the construction of the project hereby proposes to furnish all necessary superintendence, labor, machinery, equipment, tools materials and supplies to complete all the work upon which is bid in accordance with the contract documents, within the time set forth and at the prices stated below.

BID SCHEDULE 1 – 80’ x 100’ Hangar Building

Item No. 1: Mobilization, Temporary Access and Erosion Control Measures

Item	Qty	Unit	Specification	Description (Written & Numeric Price)	Unit Price	Total Price
1.01	1	LS	S-1	Mobillization _____ dollars and _____ cents per lump sum	$_____	$_____
1.02	1	LS	S-3	Barricades _____ dollars and _____ cents per lump sum	$_____	$_____
1.03	1	EA	P-156	Rock Construction Exit _____ dollars and _____ cents per each	$_____	$_____
1.04	550	LF	P-156	Filter Fabric Fence _____ dollars and _____ cents per linear foot	$_____	$_____
1.05	445	CY	T-905	Strip, Stockpile, and Reinstall Topsoil _____ dollars and _____ cents per cubic yard	$_____	$_____
1.06	4,045	SY	T-901	Seeding and Fertilization _____ dollars and _____ cents per square yard	$_____	$_____
1.07	566	SY	T-904	Sodding _____ dollars and _____ cents per square yard	$_____	$_____
1.08	2,690	SF	S-18	Erosion Control Blanket _____ dollars and _____ cents per square foot	$_____	$_____

Subtotal Item No. 1: Mobilization, Temporary Access and Erosion Control Measures **$** _____

Item No. 2: Hangar Access Taxiway and Hangar Apron

Item	Qty	Unit	Specification	Description (Written & Numeric Price)	Unit Price	Total Price
2.01	1,573	CY	P-152	Unclassified Excavation _____ dollars and _____ cents per cubic yard	$_____	$_____
2.02	2,513	CY	P-152	Unclassified Embankment _____ dollars and _____ cents per cubic yard	$_____	$_____
2.03	2,070	SY	TX260	8" Lime Treated Subgrade _____ dollars and _____ cents per square yard	$_____	$_____
2.04	53	Ton	TX260	Lime (7%) for Subgrade _____ dollars and _____ cents per ton	$_____	$_____
2.05	1,856	SY	TX247	14" Crushed Aggregate Base Course _____ dollars and _____ cents per square yard	$_____	$_____
2.06	557	Gal	P-602	Bituminous Prime Coat _____ dollars and _____ cents per gallon	$_____	$_____
2.07	192	Ton	TX340	2" Bituminous Surface Course _____ dollars and _____ cents per ton	$_____	$_____
2.08	205	SY	TX531	5' Concrete Sidewalks _____ dollars and _____ cents per square yard	$_____	$_____
2.09	74	SY	TX531	Hangar Building Foundation Border _____ dollars and _____ cents per square yard	$_____	$_____
2.10	711	SY	P-631	Slurry Seal Surface Treatment for Hangar Apron _____ dollars and _____ cents per square yard	$_____	$_____

2.11	170	SF	P-620	Yellow Taxiway Markings _____ dollars and _____ cents per square foot	$_____	$_____

Subtotal
Item No. 2: Hangar Access Taxiway and Hangar Apron **$** _____

Item No.3: 80' x 100' Hangar Building and Electrical Utilities

Item	Qty	Unit	Specification	Description (Written & Numeric Price)	Unit Price	Total Price
3.01	1	LS	H-1	Pre-Engineered Hangar Building _____ dollars and _____ cents per lump sum	$_____	$_____
3.02	1	LS	H-1	Reinforced Concrete Foundation _____ dollars and _____ cents per lump sum	$_____	$_____
3.03	1	LS	H-1	Connect to Electrical Service _____ dollars and _____ cents per lump sum	$_____	$_____

Subtotal
Item No.3: 80' x 100' Hangar Building and Electrical Utilities **$** _____

Additive Alternate Item No.1: Internal Drive Units for Bi-Parting Door System

Item	Qty	Unit	Specification	Description (Written & Numeric Price)	Unit Price	Total Price
A1.01	1	LS	H-1	Internal Drive Units for Bi-Parting Door System _____ dollars and _____ cents per lump sum	$_____	$_____

Subtotal
Additive Alternate Item No.1: Internal Drive Units for Bi-Parting Door System **$** _____

Additive Alternate Item No.2: Replace Bi-Parting Door System with Hydraulic Door System

Item	Qty	Unit	Specification	Description (Written & Numeric Price)	Unit Price	Total Price
A2.01	1	LS	H-1	Replace Bi-Parting Door System with Hydraulic Door System _____ dollars and _____ cents per lump sum	$_____	$_____

Subtotal
Additive Alternate Item No.2: Replace Bi-Parting Door System with Hydraulic Door System **$** _____

BID SUMMARY:

Subtotal
Item No. 1: Mobilization, Temporary Access and Erosion Control Measures Control Measures **$** _____

Subtotal
Item No. 2: Hangar Access Taxiway and Hangar Apron **$** _____

Subtotal

Item No.3: 180' x 100' Hangar Building and Electrical Utilities **$** _____

BASE BID TOTAL: **$** _____

Subtotal
Additive Alternate Item No.1: Internal Drive Units for Bi-Parting Door System **$** _____

Subtotal
Additive Alternate Item No.2: Replace Bi-Parting Door System with Hydraulic Door System **$** _____

BASE BID + ADDITITIVE ALTERNATE 1 TOTAL: **$** _____

BASE BID + ADDITITIVE ALTERNATE 2 TOTAL: **$** _____

BID SCHEDULE 2 – 100’ x 100’ Hangar Building

Item No. 1: Mobilization, Temporary Access and Erosion Control Measures

Item	Qty	Unit	Specification	Description (Written & Numeric Price)	Unit Price	Total Price
1.01	1	LS	S-1	Mobillization _____ dollars and _____ cents per lump sum	$_____	$_____
1.02	1	LS	S-3	Barricades _____ dollars and _____ cents per lump sum	$_____	$_____
1.03	1	EA	P-156	Rock Construction Exit _____ dollars and _____ cents per each	$_____	$_____
1.04	550	LF	P-156	Filter Fabric Fence _____ dollars and _____ cents per linear foot	$_____	$_____
1.05	460	CY	T-905	Strip, Stockpile, and Reinstall Topsoil _____ dollars and _____ cents per cubic yard	$_____	$_____
1.06	4,186	SY	T-901	Seeding and Fertilization _____ dollars and _____ cents per square yard	$_____	$_____
1.07	570	SY	T-904	Sodding _____ dollars and _____ cents per square yard	$_____	$_____
1.08	2,630	SF	S-18	Erosion Control Blanket _____ dollars and _____ cents per square foot	$_____	$_____

Subtotal Item No. 1: Mobilization, Temporary Access and Erosion Control Measures **$** _____

Item No. 2: Hangar Access Taxiway and Hangar Apron

Item	Qty	Unit	Specification	Description (Written & Numeric Price)	Unit Price	Total Price
2.01	1,563	CY	P-152	Unclassified Excavation _____ dollars and _____ cents per cubic yard	$_____	$_____
2.02	2,938	CY	P-152	Unclassified Embankment _____ dollars and _____ cents per cubic yard	$_____	$_____
2.03	2,288	SY	TX260	8" Lime Treated Subgrade _____ dollars and _____ cents per square yard	$_____	$_____
2.04	58	Ton	TX260	Lime (7%) for Subgrade _____ dollars and _____ cents per ton	$_____	$_____
2.05	2,068	SY	Tx247	14" Crushed Aggregate Base Course _____ dollars and _____ cents per square yard	$_____	$_____
2.06	620	Gal	P-602	Bituminous Prime Coat _____ dollars and _____ cents per gallon	$_____	$_____
2.07	212	Ton	TX340	2" Bituminous Surface Course _____ dollars and _____ cents per ton	$_____	$_____
2.08	194	SY	TX531	5' Concrete Sidewalks _____ dollars and _____ cents per square yard	$_____	$_____
2.09	74	SY	TX531	Hangar Building Foundation Border _____ dollars and _____ cents per square yard	$_____	$_____
2.10	889	SY	P-631	Slurry Seal Surface Treatment for Hangar Apron _____ dollars and _____ cents per square yard	$_____	$_____

2.11	170	SF	P-620	Yellow Taxiway Markings _____ dollars and _____ cents per square foot	$_____	$_____

Subtotal
Item No. 2: Hangar Access Taxiway and Hangar Apron **$** _____

Item No.3: 100' x 100' Hangar Building and Electrical Utilities

Item	Qty	Unit	Specification	Description (Written & Numeric Price)	Unit Price	Total Price
3.01	1	LS	H-1	Pre-Engineered Hangar Building _____ dollars and _____ cents per lump sum	$_____	$_____
3.02	1	LS	H-1	Reinforced Concrete Foundation _____ dollars and _____ cents per lump sum	$_____	$_____
3.03	1	LS	H-1	Connect to Electrical Service _____ dollars and _____ cents per lump sum	$_____	$_____

Subtotal
Item No.3: 100' x 100' Hangar Building and Electrical Utilities **$** _____

Additive Alternate Item No.1: Internal Drive Units for Bi-Parting Door System

Item	Qty	Unit	Specification	Description (Written & Numeric Price)	Unit Price	Total Price
A1.01	1	LS	H-1	Internal Drive Units for Bi-Parting Door System _____ dollars and _____ cents per lump sum	$_____	$_____

Subtotal
Additive Alternate Item No.1: Internal Drive Units for Bi-Parting Door System **$** _____

Additive Alternate Item No.2: Replace Bi-Parting Door System with Hydraulic Door System

Item	Qty	Unit	Specification	Description (Written & Numeric Price)	Unit Price	Total Price
A2.01	1	LS	H-1	Replace Bi-Parting Door System with Hydraulic Door System _____ dollars and _____ cents per lump sum	$_____	$_____

Subtotal
Additive Alternate Item No.2: Replace Bi-Parting Door System with Hydraulic Door System **$** _____

BID SUMMARY:

Subtotal
Item No. 1: Mobilization, Temporary Access and Erosion Control Measures Control Measures **$** _____

Subtotal
Item No. 2: Hangar Access Taxiway and Hangar Apron **$** _____

Subtotal

Item No.3: 100' x 100' Hangar Building and Electrical Utilities **$** _____

BASE BID TOTAL: **$** _____

Subtotal
Additive Alternate Item No.1: Internal Drive Units for Bi-Parting Door System **$** _____

Subtotal
Additive Alternate Item No.2: Replace Bi-Parting Door System with Hydraulic Door System **$** _____

BASE BID + ADDITITIVE ALTERNATE 1 TOTAL: **$** _____

BASE BID + ADDITITIVE ALTERNATE 2 TOTAL: **$** _____

BID SCHEDULE 3 – 120’ x 100’ Hangar Building

Item No. 1: Mobilization, Temporary Access and Erosion Control Measures

Item	Qty	Unit	Specification	Description (Written & Numeric Price)	Unit Price	Total Price
1.01	1	LS	S-1	Mobillization _____ dollars and _____ cents per lump sum	$_____	$_____
1.02	1	LS	S-3	Barricades _____ dollars and _____ cents per lump sum	$_____	$_____
1.03	1	EA	P-156	Rock Construction Exit _____ dollars and _____ cents per each	$_____	$_____
1.04	550	LF	P-156	Filter Fabric Fence _____ dollars and _____ cents per linear foot	$_____	$_____
1.05	472	CY	T-905	Strip, Stockpile, and Reinstall Topsoil _____ dollars and _____ cents per cubic yard	$_____	$_____
1.06	4,283	SY	T-901	Seeding and Fertilization _____ dollars and _____ cents per square yard	$_____	$_____
1.07	575	SY	T-904	Sodding _____ dollars and _____ cents per square yard	$_____	$_____
1.08	2,675	SF	S-18	Erosion Control Blanket _____ dollars and _____ cents per square foot	$_____	$_____

Subtotal Item No. 1: Mobilization, Temporary Access and Erosion Control Measures **$** _____

Item No. 2: Hangar Access Taxiway and Hangar Apron

Item	Qty	Unit	Specification	Description (Written & Numeric Price)	Unit Price	Total Price
2.01	1,543	CY	P-152	Unclassified Excavation _____ dollars and _____ cents per cubic yard	$_____	$_____
2.02	3,102	CY	P-152	Unclassified Embankment _____ dollars and _____ cents per cubic yard	$_____	$_____
2.03	2,477	SY	TX260	8" Lime Treated Subgrade _____ dollars and _____ cents per square yard	$_____	$_____
2.04	63	Ton	TX260	Lime (7%) for Subgrade _____ dollars and _____ cents per ton	$_____	$_____
2.05	2,250	SY	Tx247	14" Crushed Aggregate Base Course _____ dollars and _____ cents per square yard	$_____	$_____
2.06	675	Gal	P-602	Bituminous Prime Coat _____ dollars and _____ cents per gallon	$_____	$_____
2.07	231	Ton	TX340	2" Bituminous Surface Course _____ dollars and _____ cents per ton	$_____	$_____
2.08	189	SY	TX531	5' Concrete Sidewalks _____ dollars and _____ cents per square yard	$_____	$_____
2.09	77	SY	TX531	Hangar Building Foundation Border _____ dollars and _____ cents per square yard	$_____	$_____
2.10	1,067	SY	P-631	Slurry Seal Surface Treatment for Hangar Apron _____ dollars and _____ cents per square yard	$_____	$_____

2.11	170	SF	P-620	Yellow Taxiway Markings _____ dollars and _____ cents per square foot	$_____	$_____

Subtotal
Item No. 2: Hangar Access Taxiway and Hangar Apron **$** _____

Item No.3: 120' x 100' Hangar Building and Electrical Utilities

Item	Qty	Unit	Specification	Description (Written & Numeric Price)	Unit Price	Total Price
3.01	1	LS	H-1	Pre-Engineered Hangar Building _____ dollars and _____ cents per lump sum	$_____	$_____
3.02	1	LS	H-1	Reinforced Concrete Foundation _____ dollars and _____ cents per lump sum	$_____	$_____
3.03	1	LS	H-1	Connect to Electrical Service _____ dollars and _____ cents per lump sum	$_____	$_____

Subtotal
Item No.3: 120' x 100' Hangar Building and Electrical Utilities **$** _____

Additive Alternate Item No.1: Internal Drive Units for Bi-Parting Door System

Item	Qty	Unit	Specification	Description (Written & Numeric Price)	Unit Price	Total Price
A1.01	1	LS	H-1	Internal Drive Units for Bi-Parting Door System _____ dollars and _____ cents per lump sum	$_____	$_____

Subtotal
Additive Alternate Item No.1: Internal Drive Units for Bi-Parting Door System **$** _____

Additive Alternate Item No.2: Replace Bi-Parting Door System with Hydraulic Door System

Item	Qty	Unit	Specification	Description (Written & Numeric Price)	Unit Price	Total Price
A2.01	1	LS	H-1	Replace Bi-Parting Door System with Hydraulic Door System _____ dollars and _____ cents per lump sum	$_____	$_____

Subtotal Additive Alternate Item No.2: Replace Bi-Parting Door System with Hydraulic Door System **$** _____

BID SUMMARY:

Subtotal Item No. 1: Mobilization, Temporary Access and Erosion Control Measures Control Measures **$** _____

Subtotal Item No. 2: Hangar Access Taxiway and Hangar Apron **$** _____

Subtotal Item No.3: 180' x 100' Hangar Building and Electrical Utilities **$** _____

BASE BID TOTAL: **$** _____

Subtotal Additive Alternate Item No.1: Internal Drive Units for Bi-Parting Door System **$** _____

Subtotal Additive Alternate Item No.2: Replace Bi-Parting Door System with Hydraulic Door System **$** _____

BASE BID + ADDITITIVE ALTERNATE 1 TOTAL: **$** _____

BASE BID + ADDITITIVE ALTERNATE 2 TOTAL: **$** _____

It is understood the quantities of work to be done at unit prices are approximate and are intended for bidding purposes only. Amounts are to be shown in both words and figures. In case of discrepancy the amount shown in words shall govern.

Bidder must bid Schedule 1, 2, and 3 plus alternates.

The contract award will be based on the lowest qualified bid for the base bid or the lowest qualified bid for the base bid plus any combination of alternate and additive bids that the Agent/Owner chooses, depending on the availability of funds.

Bidders understand the Agent reserves the right to reject any bid and the right to waive technicalities if such waiver is in the best interest of the Owner or Agent and conforms to State and local laws and ordinances pertaining to the letting of construction contracts. Funding availability will be considered in selecting the bid award. The bidder agrees this bid shall be honored and may not be withdrawn for a period of 60 calendar days after the scheduled closing time for receiving bids.

Upon receipt of the written "Notice of Award", the bidder will execute the formal contract agreement within 14 days and deliver a surety bond or bonds as required under the contract documents. The bid security attached, two percent (2%) of the total bid price stated in the bid, in the sum of $_____is to become the property of the Agent in the event the contract is not executed as set forth in the contract documents as liquidated damages for the delay and additional expense caused thereby.

Bidder hereby agrees to commence work under this contract on or before a date to be specified in a written “Notice to Proceed” and to fully complete the project within 210 calendar days thereafter. Bidder further agrees to pay as liquidated damages the sum of $1000.00 for each calendar day to complete the work beyond the allotted time or as extended by an approved Change Order or Supplemental Agreement.

_____	_____
Signature	Title
_____	_____
Printed Name	Phone
_____	_____
Mailing Address	City, State, Zip Code

Addendum:

The undersigned Bidder certifies that he has acknowledged the addendum(s) to the contract as indicated below.

Addendum No. _____ dated _____

Addendum No._____ dated _____

Addendum No. _____ dated _____

Qualification Acknowledgment:

The undersigned Bidder certifies they are a prequalified bidder with the Texas Department of Transportation (TxDOT) and is on the current TxDOT "Bidder's List" as indicated below:

_____ Full Prequalification with a bidding capacity of $_____

_____ Bidder's Questionnaire with a bidding capacity of $_____

OR

The undersigned Bidder is not a pre-qualified TxDOT bidder and has enclosed the bidder's qualifications per General Provision 20-02, Prequalification of Bidders.

_____ I have enclosed qualification statements.

Qualification Acknowledgment Signature:

_____ _____

Signature Title

_____ _____

Mailing Address City, State, Zip Code

Note: The bidder may also submit an electronically printed bid. The bid must have pay items in the same order and with the exact information as on this bid form. If submitting an electronically printed bid, please submit qualification/signature page. The bidder is responsible for incorrect information and will be considered non-responsive if pay items are incorrect.

BID SCHEDULE 1 - 80' x 100' HANGAR BUILDING

Item No. 1: Mobilization, Temporary Access and Erosion Control Measures

Item No.	Spec. No.	Description	Units	Estimated Quantity	Actual Quantity
1.01	S-1	Mobillization	LS	1	
1.02	S-3	Barricades	LS	1	
1.03	P-156	Rock Construction Exit	EA	1	
1.04	P-156	Filter Fabric Fence	LF	550	
1.05	T-905	Strip, Stockpile, and Reinstall Topsoil	CY	445	
1.06	T-901	Seeding and Fertilization	SY	4,045	
1.07	T-904	Sodding	SY	566	
1.08	S-18	Erosion Control Blanket	SF	2,690	

Item No. 2: Hangar Access Taxiway and Hangar Apron

Item No.	Spec. No.	Description	Units	Estimated Quantity	Actual Quantity
2.01	P-152	Unclassified Excavation	CY	1,573	
2.02	P-152	Unclassified Embankment	CY	2,513	
2.03	TX260	8" Lime Treated Subgrade	SY	2,070	
2.04	TX260	Lime (7%) for Subgrade	Ton	53	
2.05	TX247	14" Crushed Aggregate Base Course	SY	1,856	
2.06	P-602	Bituminous Prime Coat	Gal	557	
2.07	TX340	2" Bituminous Surface Course	Ton	192	
2.08	TX531	5' Concrete Sidewalks	SY	205	
2.09	TX531	Hangar Building Foundation Border	SY	74	
2.10	P-631	Slurry Seal Surface Treatment for Hangar Apron	SY	711	
2.11	P-620	Yellow Taxiway Markings	SF	170	

Item No.3: 80' x 100' Hangar Building and Electrical Utilities

Item No.	Spec. No.	Description	Units	Estimated Quantity	Actual Quantity
3.01	H-1	Pre-Engineered Hangar Building	LS	1	
3.02	H-1	Reinforced Concrete Foundation	LS	1	
3.03	H-1	Connect to Electrical Service	LS	1	

Additive Alternate Item No.1: Internal Drive Units for Bi-Parting Door System

Item No.	Spec. No.	Description	Units	Estimated Quantity	Actual Quantity
A1.01	H-1	Internal Drive Units for Bi-Parting Door System	LS	1	

Additive Alternate Item No.2: Replace Bi-Parting Door System with Hydraulic Door System

Item No.	Spec. No.	Description	Units	Estimated Quantity	Actual Quantity
A2.01	H-1	Replace Bi-Parting Door System with Hydraulic Door System	LS	1	

BID SCHEDULE 2 - 100' x 100' HANGAR BUILDING

Item No. 1: Mobilization, Temporary Access and Erosion Control Measures

Item No.	Spec. No.	Description	Units	Estimated Quantity	Actual Quantity
1.01	S-1	Mobillization	LS	1	
1.02	S-3	Barricades	LS	1	
1.03	P-156	Rock Construction Exit	EA	1	
1.04	P-156	Filter Fabric Fence	LF	550	
1.05	T-905	Strip, Stockpile, and Reinstall Topsoil	CY	460	
1.06	T-901	Seeding and Fertilization	SY	4,186	
1.07	T-904	Sodding	SY	570	
1.08	S-18	Erosion Control Blanket	SF	2,630	

Item No. 2: Hangar Access Taxiway and Hangar Apron

Item No.	Spec. No.	Description	Units	Estimated Quantity	Actual Quantity
2.01	P-152	Unclassified Excavation	CY	1,563	
2.02	P-152	Unclassified Embankment	CY	2,938	
2.03	TX260	8" Lime Treated Subgrade	SY	2,288	
2.04	TX260	Lime (7%) for Subgrade	Ton	58	
2.05	TX247	14" Crushed Aggregate Base Course	SY	2,068	
2.06	P-602	Bituminous Prime Coat	Gal	620	
2.07	TX340	2" Bituminous Surface Course	Ton	212	
2.08	TX531	5' Concrete Sidewalks	SY	194	
2.09	TX531	Hangar Building Foundation Border	SY	74	
2.10	P-631	Slurry Seal Surface Treatment for Hangar Apron	SY	889	
2.11	P-620	Yellow Taxiway Markings	SF	170	

Item No.3: 100' x 100' Hangar Building and Electrical Utilities

Item No.	Spec. No.	Description	Units	Estimated Quantity	Actual Quantity
3.01	H-1	Pre-Engineered Hangar Building	LS	1	
3.02	H-1	Reinforced Concrete Foundation	LS	1	
3.03	H-1	Connect to Electrical Service	LS	1	

Additive Alternate Item No.1: Internal Drive Units for Bi-Parting Door System

Item No.	Spec. No.	Description	Units	Estimated Quantity	Actual Quantity
A1.01	H-1	Internal Drive Units for Bi-Parting Door System	LS	1	

Additive Alternate Item No.2: Replace Bi-Parting Door System with Hydraulic Door System

Item No.	Spec. No.	Description	Units	Estimated Quantity	Actual Quantity
A2.01	H-1	Replace Bi-Parting Door System with Hydraulic Door System	LS	1	

BID SCHEDULE 3 - 120' x 100' HANGAR BUILDING

Item No. 1: Mobilization, Temporary Access and Erosion Control Measures

Item No.	Spec. No.	Description	Units	Estimated Quantity	Actual Quantity
1.01	S-1	Mobillization	LS	1	
1.02	S-3	Barricades	LS	1	
1.03	P-156	Rock Construction Exit	EA	1	
1.04	P-156	Filter Fabric Fence	LF	550	
1.05	T-905	Strip, Stockpile, and Reinstall Topsoil	CY	472	
1.06	T-901	Seeding and Fertilization	SY	4,283	
1.07	T-904	Sodding	SY	575	
1.08	S-18	Erosion Control Blanket	SF	2,675	

Item No. 2: Hangar Access Taxiway and Hangar Apron

Item No.	Spec. No.	Description	Units	Estimated Quantity	Actual Quantity
2.01	P-152	Unclassified Excavation	CY	1,543	
2.02	P-152	Unclassified Embankment	CY	3,102	
2.03	TX260	8" Lime Treated Subgrade	SY	2,477	
2.04	TX260	Lime (7%) for Subgrade	Ton	63	
2.05	TX247	14" Crushed Aggregate Base Course	SY	2,250	
2.06	P-602	Bituminous Prime Coat	Gal	675	
2.07	TX340	2" Bituminous Surface Course	Ton	231	
2.08	TX531	5' Concrete Sidewalks	SY	189	
2.09	TX531	Hangar Building Foundation Border	SY	77	
2.10	P-631	Slurry Seal Surface Treatment for Hangar Apron	SY	1,067	
2.11	P-620	Yellow Taxiway Markings	SF	170	

Item No.3: 120' x 100' Hangar Building and Electrical Utilities

Item No.	Spec. No.	Description	Units	Estimated Quantity	Actual Quantity
3.01	H-1	Pre-Engineered Hangar Building	LS	1	
3.02	H-1	Reinforced Concrete Foundation	LS	1	
3.03	H-1	Connect to Electrical Service	LS	1	

Additive Alternate Item No.1: Internal Drive Units for Bi-Parting Door System

Item No.	Spec. No.	Description	Units	Estimated Quantity	Actual Quantity
A1.01	H-1	Internal Drive Units for Bi-Parting Door System	LS	1	

Additive Alternate Item No.2: Replace Bi-Parting Door System with Hydraulic Door System

Item No.	Spec. No.	Description	Units	Estimated Quantity	Actual Quantity
A2.01	H-1	Replace Bi-Parting Door System with Hydraulic Door System	LS	1	

MARK	REVISION	DATE
1	ADDENDUM #1	4/8/16

\\KSA-SA-SERVER1\MAIN\PROJECTS\SCA 00101 DESIGN AND BIDDING FILES\00 DRAWING\03-1 SUMMARY OF QUANTITIES.DWG
DRAWING PATH/NAME/LAYOUT; PLOT DATE/TIME

SHEET NAME:
SUMMARY OF QUANTITIES

PROJECT NAME:
WINSTON FIELD AIRPORT HANGAR DEVELOPMENT PROJECT SNYDER, TEXAS

DRAWN BY:	DD
DESIGNED BY:	KLN
LATEST REVISION:	1/29/2016
KSA JOB NO.	SCA.001

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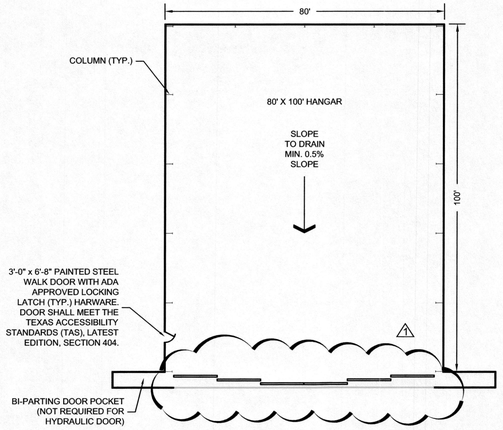
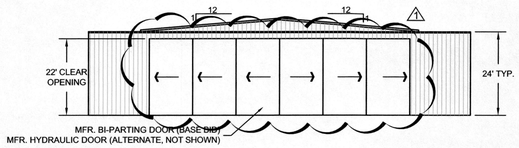
4/8/16
STATE OF TEXAS
KYLE L. NEWTON
115920
LICENSED
PROFESSIONAL ENGINEER
SEAL
TBPE Firm Registration No. F-1356

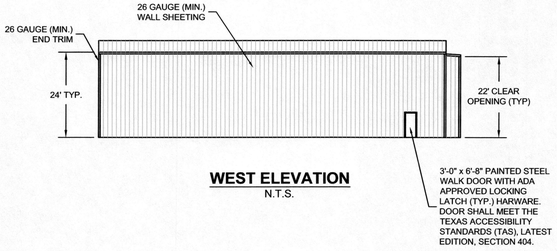
SHEET NO.
03



PLAN VIEW
N.T.S.



NORTH ELEVATION
N.T.S.

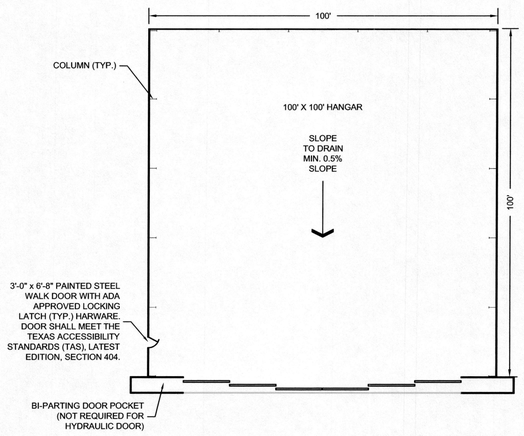


WEST ELEVATION
N.T.S.

BID SCHEDULE 1 - 80' X 100' HANGAR

HANGAR NOTES:

1. SEE SPECIFICATION ITEM H-1, HANGAR METAL BUILDING SYSTEM AND FOUNDATION, FOR HANGAR SPECIFICATIONS.
2. FINISHED FLOOR ELEVATIONS SHOWN IN PLANS IS AT OPENING OF AIRCRAFT HANGAR DOOR. FOUNDATION SHALL BE DESIGNED TO DRAIN TO THE AIRCRAFT HANGAR DOOR AT A MINIMUM SLOPE OF 0.50%.
3. THIS IS A GENERIC HANGAR FLOOR PLAN, DESIGNED SO THAT THE CONTRACTOR IS NOT LIMITED TO ONE SPECIFIC HANGAR SUPPLIER. THE FINAL DIMENSIONS MAY VARY SOMEWHAT FROM THE PLAN DIMENSIONS GIVEN. HOWEVER, WHEN BID, ANY ADDITIONAL COSTS ASSOCIATED WITH VARIATIONS IN FOUNDATION DIMENSIONS SHALL BE REFLECTED IN THE UNIT PRICE BID FOR THE FOUNDATION. THERE WILL BE NO ADDITIONAL COMPENSATION FOR CHANGES IN DIMENSIONS TO THE FOUNDATION AS A RESULT OF THE HANGAR SUPPLIER PROPOSED BY THE CONTRACTOR.
4. APPLICABLE DESIGN AND CONSTRUCTION CODES: 2006 INTERNATIONAL BUILDING CODE, 2009 INTERNATIONAL MECHANICAL CODE, 2006 INTERNATIONAL PLUMBING CODE, NATIONAL ELECTRIC CODE, 2011 VERSION, AND NFPA STANDARD 409.
5. OCCUPANCY CLASSIFICATION: GRADE S-2, LOW HAZARD STORAGE.
6. CONSTRUCTION TYPE: IIB.
7. PROVIDE FIRE EXTINGUISHERS WITH MINIMUM 2A10BC RATING IN EACH UNIT AND STORAGE AREA.
8. THE CONTRACTOR SHALL BE RESPONSIBLE FOR SECURING ALL PERMITS AND LICENSES AS REQUIRED BY ALL AUTHORITIES HAVING JURISDICTION, LOCAL, STATE, AND/OR FEDERAL. GIVE ALL NOTICES AND COMPLY WITH ALL LAWS, ORDINANCES, RULES, REGULATIONS, AND CONTRACT REQUIREMENTS BEARING ON THE WORK. THIS SHALL BE CONSIDERED SUBSIDIARY TO THE VARIOUS BID ITEMS OF THE CONTRACT.
9. THESE PLANS AND SPECIFICATIONS WERE DESIGNED WITH THE INTENT TO MEET ALL APPLICABLE LOCAL, STATE, AND FEDERAL DESIGN CODES AND STANDARDS, INCLUDING THE TEXAS ACCESSIBILITY STANDARDS (TAS), LATEST EDITION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONSTRUCTING THE IMPROVEMENTS AS SHOWN IN THE PLANS AND SPECIFICATIONS IN ACCORDANCE WITH THESE CODES. IF THE CONTRACTOR DETERMINES THAT ANY PORTION OF THE DESIGN DOES NOT MEET THESE CODES, THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE ENGINEER, PRIOR TO PERFORMING ANY CONSTRUCTION ACTIVITIES.
10. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING AND SECURING ALL REQUIRED INSPECTIONS BY LOCAL AUTHORITIES HAVING JURISDICTION AND SHALL BE RESPONSIBLE FOR ALL FEES ASSOCIATED WITH SAID INSPECTIONS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CORRECTING ANY FAILED COMPONENTS OF SAID INSPECTIONS AT THE CONTRACTOR'S EXPENSE.
11. THE ENGINEER WILL COORDINATE AN INSPECTION OF THE PROPOSED IMPROVEMENTS, WITH RESPECT TO TAS REGULATIONS AND IN ACCORDANCE WITH THE TEXAS DEPARTMENT OF LICENSING AND REGULATIONS (TDLR), AT THE ENGINEER'S EXPENSE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CORRECTING ANY FAILED COMPONENTS OF THE TAS/TDLR INSPECTION AT THE CONTRACTOR'S EXPENSE. ANY ADDITIONAL INSPECTION FEES BEYOND THE INITIAL INSPECTION, AS A RESULT OF A FAILED INSPECTION, SHALL BE PAID FOR AT THE CONTRACTOR'S EXPENSE.



PLAN VIEW
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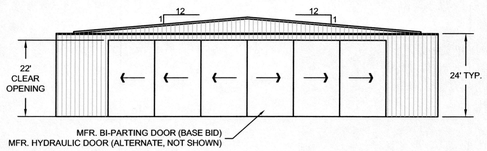
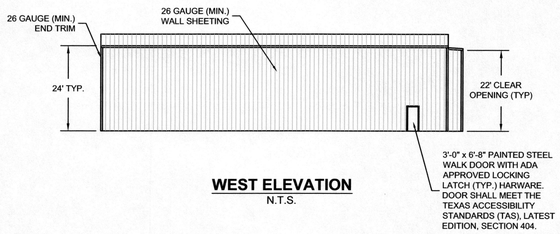
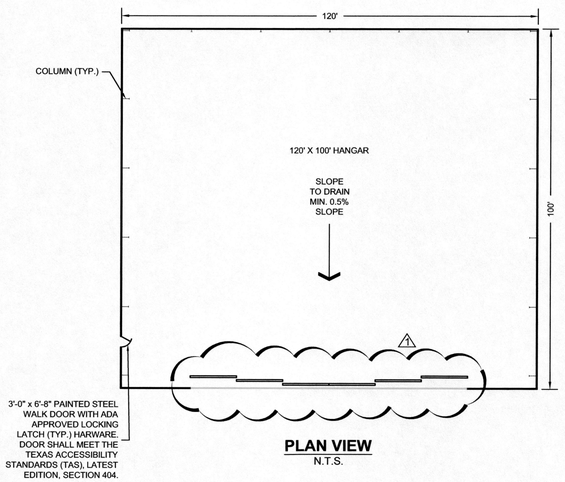


NORTH ELEVATION
N.T.S.

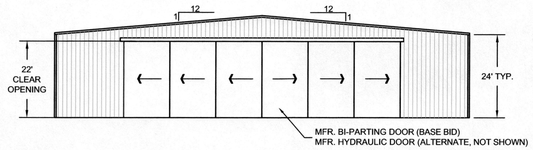


WEST ELEVATION
N.T.S.

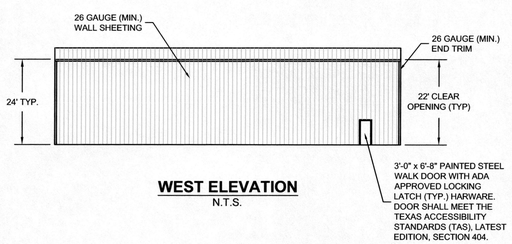
BID SCHEDULE 2 - 100' X 100' HANGAR



PLAN VIEW
N.T.S.



NORTH ELEVATION
N.T.S.



WEST ELEVATION
N.T.S.

BID SCHEDULE 3 - 120' X 100' HANGAR

MARK	REVISION	DATE
1	ADDENDUM #1	4/7/16

VKSA-SA-SERVER1\PROJECTS\SCA_001\01 DESIGN AND BIDDING FILES\02 DRAW\ 06 HANGAR FLOOR PLANS AND ELEVATIONS_ADD 1.DWG
DRAWING PATH/NAME/LAYOUT: PLOT DATE-TIME

SHEET NAME:
HANGAR FLOOR PLANS AND ELEVATIONS

PROJECT NAME:
WINSTON FIELD AIRPORT
HANGAR DEVELOPMENT PROJECT
SNYDER, TEXAS

DRAWN BY:	DD
DESIGNED BY:	KLN
LATEST REVISION:	1/29/2016
KSA JOB NO.:	SCA_001

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4/8/16
STATE OF TEXAS
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SEAL:
TBPE Firm Registration No. F-1356

SHEET NO.
07

ITEM H-1

Hangar Metal Building System and Foundation

PART 1 GENERAL

1.1 WORK INCLUDED

This item shall consist of providing all labor, tools, equipment and materials for furnishing, installation, and erection of aircraft hangars on site as shown on the plans. The items of work include, but are not limited to, the following: design of hangar foundation and subgrade; construction of hangar foundation and subgrade; purchase and erection of pre-fabricated metal hangar including doors, door operators, hardware, and all other related accessories; purchase and installation of electrical devices; connection of all electrical utilities; and purchase and installation of all other accessories and utility connections as shown on the plans.

Construction of one (1) pre-engineered metal building and accessories for aircraft hangars. Metal building to have sloped roof and steel frame type construction, and is to be a completely integrated system according to specified dimensions and as shown in the plans.

Unless otherwise specified within this section, all aspects of the building system including design, details, materials, fabrication, quality criteria, tolerances, marking and identification, methods and procedures are governed by the building system manufacturer's standards.

Construction of concrete foundation and subgrade, designed for pre-engineered metal building signed and sealed by a Professional Engineer licensed in the State of Texas. A Report of Geotechnical Investigation is provided as an attachment to the specifications.

1.2 BUILDING DESCRIPTION

A. Building Type: Aircraft Hangar(s): One Unit.

B. Roof Slope: min. 1:12; max. 2:12; provide 10 inch minimum overhang for bi-parting stack sliding doors to shed water away from hangar doors. Pitched Roof.

C. Minimum Eave Height: 24 feet, measured vertically from top of eave strut at sidewall steel line to base of sidewall frame column.

D. Clear Door Opening(s): 75' x 22' (Bid Schedule 1), 80' X 22' (Bid Schedules 2 and 3).

E. Total Building Overall Dimensions: 80'x100' (Bid Schedule 1), 100'x100' (Bid Schedule 2), 120'x100' (Bid Schedule 3)

1.3 QUALITY ASSURANCE

A. Codes and Standards:

1. Use following where applicable in structural design:

a. AWS "Code of Welding in Building Construction" and "Specification for Welding Sheet Steel in Structures", latest edition.

b. MBMA "Recommended Design Practices Manual", latest edition and "Low-Rise Building Systems Manual", latest edition.

c. AISI "Specifications for the Design of Cold Formed Steel Structural Members", latest edition.

d. AISC “Steel Construction Manual” and “Specifications for the Design, Fabrication and Erection of Structural Steel for Buildings”, latest edition (Manufacturer must be certified by AISC).

e. AAMA “Aluminum Construction Manual”, latest edition.

f. SJI “Standard Specifications, Load Tables and Weight Tables”, latest edition.

g. AISC “Specifications for Structural Joints using ASTM A-325 or ASTM A-490 Bolts, latest edition.

h. AISC “Code of Standard Practice for Steel Buildings and Bridges”, latest edition.

i. SDI “Steel Roof Deck Design Manual”, latest edition.

j. IBC “International Building Code”, 2006 edition, as amended.

k. Texas Accessibility Standards (TAS), latest edition.

l. Texas Department of Licensing and Regulations (TDLR).

2. Use following where applicable in other phases of design:

a. Building Code and Regulations of other governing authorities having jurisdiction at project site.

b. Structural Steel Painting Council (SSPC) Standards.

c. Roofing system rating UL Classification 90.

d. American Society for Testing and Materials (ASTM) Standards.

e. NFPA 409, as applicable to authority having jurisdiction.

f. IPC “International Plumbing Code”, 2006 edition, as amended.

g. IMC “International Mechanical Code”, 2009 edition, as amended.

h. IECC “International Energy Conservation Code”, 2012 edition, as amended.

i. NEC “National Electrical Code”, 2011 edition, as amended.

B. Design Loads:

1. Basic Design Loads: To include live and wind, in addition to dead loads and including loading imposed by mechanical units. Consider all other design loads, whether they are of static, dynamic, or kinetic nature, as auxiliary loads. Design must conform to the minimum requirements of the IBC, 2006 edition, as amended. Vertical live loads and wind loads with doors closed shall be as prescribed by the IBC, 2006 edition, as amended.

2. Tributary reductions as allowed by IBC, 2006 edition, as amended.

3. Crane Loads: No crane loads are required.

4. Horizontal deflections shall be limited to “L”/180 under full wind load, or as required by hangar door manufacturer’s requirements for operation.

1.4 SUBMITTALS

A. General: Comply with requirements of Scurry County codes and ordinances.

B. Shop Drawings and Calculations:

1. Within four (4) weeks of award of bid, the Contractor shall furnish Engineer with completed erection drawings and calculations for approval.

    a. Design Calculations and Erection Drawings: Prepared by, or under direct supervision of Professional Engineer licensed to practice in the State of Texas with all drawings and calculations bearing this seal.

    b. Show each type structural building frame required and their locations within structure; details of anchor bolt settings; sidewall, endwall, and roof framing; diagonal bracing and location within structure; roof and wall insulation and types; longitudinal and transverse cross sections; details of curbs, roof jacks, and items penetrating roof; canopy framing and details; trim, liner panels, wall and roof coverings, and all accessory items; materials; finishes; construction and installation details, and other pertinent information required for proper and complete installation.

    c. All shop drawings shall be approved by Engineer before purchase or start of fabrication.

C. Foundation Design Plan:

1. Within four (4) weeks of bid award, the Contractor shall furnish Engineer with completed foundation design, including all details for each specific hangar unit, for approval. The foundation plan shall be signed and sealed by a Professional Engineer licensed to practice in the State of Texas.

2. Contractor, at a minimum, shall furnish Engineer with:

    a. Manufacturer’s product data sheets on joint devices, attachment accessories, admixtures, and bonding agents.

    b. Manufacturer's installation instructions.

    c. Certificates – Mill certificates for bulk cement.

    d. Design Mixes – Submit mix designs for each specified concrete and grout type. Design data shall include the name of the concrete supplier; manufacturer/supplier and type of cement used; size and type of aggregate; proportional weights of cement, aggregate, and water per cubic yard of concrete; name and quantity of admixture used.

    e. Reinforcement – Indicate bar sizes, spacings, locations, and quantities of reinforcing steel and wire fabric, bending and cutting schedules, and supporting and spacing devices.

3. Bearing material to be as shown in the Report of Geotechnical Investigation. With the design of the foundation, the Contractor shall include a design for providing a suitable subgrade for the hangar construction. This may include reworking/conditioning the subgrade, excavating the existing subgrade materials and replacing with select fill materials, or other methods reviewed and approved by the Engineer.

4. Floor slab shall not be less than 6” thick with maximum control joint spacing at 15’. The foundation shall be sloped towards the doors of the building to ensure positive drainage is maintained within each unit of the metal building system.

5. The contractor shall coordinate all dimensions and foundation details with the metal building supplier, subcontractors, and any other affected parties to assure a complete,

sound and finished project. Contractor shall also coordinate with any plumbing and/or electrical plans to provide all necessary penetrations to hangar foundation.

6. Contractor shall verify all concrete forms for finished floor elevation of the foundation through survey and in the presence of the Engineer before concrete is poured.

D. Electrical: Provide electrical as indicated in the plans and electrical specifications.

E. Material and Color Samples:

1. For each specific material sample requested by Engineer, submit in size, form, and number as directed.

2. Submit duplicate color sample sets showing full color range available, for selection purposes. The Sponsor will select the roof, wall panel, and trim colors.

F. Product Data: Two (2) copies of manufacturer's specifications, and descriptive literature.

G. Certification: Two (2) copies of written certification prepared and signed and sealed by a Professional Engineer licensed to practice in the State of Texas attesting that building design meets specified loading requirements, requirements of codes and authorities having jurisdiction at project site, and other requirements as specified.

H. Manufacturer's certification for all steel, including origin to comply with "Buy American-Steel and Manufactured Products" grant assurance.

I. Contractor shall provide record drawings to the Engineer after final acceptance of the project.

1. Accurately record actual locations of embedded utilities and components which are concealed from view.

1.5 PRODUCT HANDLING

A. Deliver and store pre-fabricated components, sheets, panels and other manufactured items so that they will not be damaged or deformed. Any damaged or deformed building materials shall be replaced by the Contractor for no additional cost or project time.

B. Stack materials on platforms or pallets, covered with tarpaulins or other approved weather-tight ventilated covering.

C. Store metal sheets and panels so water accumulation will drain freely. Do not store sheets and panels in contact with other materials that might cause staining.

D. Store materials to be readily accessible, with factory makings visible. Contractor shall be responsible for the stored materials until building systems can be erected. Contractor may elect to store materials in bonded warehouse, but at no additional cost.

E. Include installation and maintenance instructions.

F. No payments shall be made to the Contractor for deposits or down payments for pre-fabricated buildings, components, or equipment. Payment will be made for materials that are delivered and stored satisfactorily on the project site in accordance with these specifications.

1.6 WARRANTIES

Item	Materials & Workmanship	Panel Finish
Panel Rib Roof	3 years	20 years
Panel Rib Walls	3 years	20 years
Materials, Component, and Accessories	3 years	20 years

Provide any other manufacturer's standard or extended warranties.

PART 2 PRODUCTS AND FABRICATION

2.1 STRUCTURAL STEEL

A. Materials:

1. Structural steel shall conform to the following ASTM designations:

   a. ASTM A36 – Structural steel angles and wide flange sections.

   b. ASTM A572 GR 50 – Structural steel plate.

   c. ASTM A500 GR B – All tubular sections.

   d. ASTM A1003 GR 50 – Cold-Formed steel sections.

2. High Strength Bolts, Nuts and Washers; ASTM A325, or equivalent unless otherwise noted on plans; size required by metal building system manufacturer.

3. Prime Coat: Primer shall meet or exceed the end performance requirements of Federal Specification TT-P-636.

B. Fabrication:

1. Primary Framing: Rigid frames of shop-welded steel plate columns and rafters, both tapered and uniform depth sections as required by drawings, complete with all necessary stiffeners, connections plates and holes for field bolted assembly. Design rigid frames on basis of elastic behavior.

   a. All building components less than 1/8" thick shall be manufactured from galvanized steel. Components greater than 1/8" thick shall have a shop coat of rust inhibitive primer that meets or exceed the end performance requirements of Federal Specification TT-P-636.

   b. Steel framing shall be factory punched for assembly by bolting; sidewall framing members shall be pre-punched to accurate dimensions.

   c. Welding shall be done in accordance with the American Welding Society Code for building construction.

2. Secondary Framing: (Purlin, Girts, Struts, Flange Braces, Base Angles, Base Trim Angles), per ASTM A572 and/or ASTM A36 as applicable:

   a. Clean secondary framing components to be free from oil, dirt, loose scale and foreign matter and apply one (1) coat of primer.

3. Steel Joists:

    a. Fabricate in accordance with SJI Standard Specifications. Verify dimensions and job conditions prior to starting fabrication.

    b. Camber to accommodate for dead load deflection.

    c. Provide extended top and bottom chords where indicated on drawings.

    d. Clean, prepare and shop prime joists.

2.2 ROOFING AND SIDING

A. Exterior Wall and Hangar Door Panels:

1. Minimum 26 gauge pre-coated Galvalume steel ribbed “R” panels with 36” wide net coverage, four (4) major corrugations at 12” centers, with two (2) minor ribs located symmetrically between the major ribs.

2. Provide all wall panels in continuous lengths, complete with all required sealant, trim, flashings, panel closure, and other components required for complete weather-tight installation. Color to be tan as selected by Sponsor.

B. Roofing Panels:

1. Minimum 26 gauge Galvalume Plus steel ribbed “R” panels with 36” wide net coverage, four (4) major corrugations at 12” centers, with two (2) minor ribs located symmetrically between the major ribs.

2. Provide all roof panels in continuous lengths from ridge to eave, complete with all required sealant, trim, flashings, panel closure, and other components required for complete weather-tight installation. Color to be white as selected by Sponsor.

C. Building Trim: Minimum 26 gauge pre-coated Galvalume or Galvalume Plus equal in quality to roof and wall panels, color to be brown as selected by Sponsor.

D. Fasteners:

1. Wall Panels: #14 x 7/8” self-tapping zinc plated screws with bonded neoprene washers color coated to match wall and door sheeting.

2. Roof Panels: Fasten panels to purlins with #12 x 1” heavy-duty zinc/aluminum/cast alloy headed self-drilling screws with bonded neoprene washers. Stitch screws to be #14 x 7/8” self-tapping zinc plated screws with bonded neoprene washers.

3. Trim Fasteners: #14 x 7/8” self-tapping zinc plated screws with bonded neoprene washers color coated to match wall and door sheeting.

E. Roof and Wall Panel Sealant:

1. Neoprene or other solid or closed cell, preformed (inside for roof panels and outside for endwall panels at the rake) closure strips matching the profile of the panel shall be installed along the eave of the roof panels and rake of the endwall panels.

2. Base Flashing: Manufacturer’s standard base trim to provide dirt proof seal between slab and floor panels.

F. Roof Insulation:

1. Standard non-combustible fiberglass blanket insulation.

2. Sheet vapor retarder, black polyethylene film reinforced with glass square mesh (6 mil.).

3. Minimum 3-inch thickness (R 10).

2.3 WIND BRACING

A. General:

1. Approved type rod bracing or portal frames as shown on final shop drawings.

2. Clean components free of oil, dirt, loose scale and foreign matter and apply one (1) coat of primer.

2.4 FIRE PROTECTION

A. Fire Extinguishers: Provide at least one (1) fire extinguisher with a minimum 2A10BC rating in each hangar unit.

2.5 HANGAR DOORS

A. General:

1. Hangar doors shall be bi-parting stack sliding doors (base bid) or hydraulic door (alternate bid) adequate for building design live and wind load with uplift protection. Doors to be installed according to manufacturer's installation instructions and specifications.

2. Door design/manufacture shall be part of the metal building system for hangar, or certified to be compatible with hangar building design. If hangar and door manufacturers are different, certification of compatibility shall accompany design shop drawings for approval. Door panels shall match building wall material and color. The manufacturer of the metal building system and the hangar doors must coordinate to ensure compatibility of products. Contractor shall be responsible for ensuring the compatibility of the building system and doors and shall bear all costs to replace if they are not compatible at the time of erection.

3. Doors to have secure locking system, to be keyed alike to a master key system, with two (2) keys per hangar, and four (4) master keys for hangar locks to be provided.

B. Hydraulic Door (Bid Alternate)

a. Door shall have 75'x22' (Bid Schedule 1) or 80'x22' (Bid Schedules 2 and 3) clear opening and installed per manufacturer's installation and specifications. Hangar door shop drawings and specifications shall be submitted with metal building system to Engineer for review and approval.

2.6 ACCESSORIES

A. Access Doors, Frames and Hardware: Provide all metal doors in building exterior as follows:

1. Frames: Manufacturer's standard self-flashing, self-trimming, non-handed, wrap-around type fabricated from 16 gauge steel with ASTM A 525 G60 commercial zinc coating, with 5-3/4" frame profile. Provide complete with 18 gauge sill channel, 22 gauge adaptor angles, galvanized reinforcements and preparations required for finish hardware, and factory applied dark brown rust inhibitive prime coat finish.

2. Doors: Manufacturer's standard non-handed type in size indicated, not less than 1-3/4" thick, of flush panel design. Fabricate from minimum 16 gauge steel with ASTM A-535 G60 minimum commercial zinc coating. Provide complete with internal reinforcements,

stiffeners and sound deadening honeycomb core material, galvanized reinforcements and other preparation required for finish hardware, and factory applied dark brown rust inhibitive coat finish.

3. Finish Hardware: Provide each door with heavy duty stainless steel door lock. The portion of the door and frame receiving lock and strike to be solid core. All locks to be keyed alike to a master key system, two (2) keys for each lock and four (4) master keys to be provided.

B. Stationary Ridge Roof Ventilators:

1. Ridge roof ventilators shall be gravity type, manufactured from 24 gauge galvanized steel and be continuous across the ridge.

2. Roof ventilators shall be leak proof.

C. Translucent (Skylight) Panels: NOT USED

2.7 ELECTRICAL WORK

A. General: Contractor shall provide all electrical work necessary for fully-operational hangars, including all accessories as shown on the plans. All electrical work shall be in accordance with the NEC, 2011 edition, as amended, and shall meet all applicable local codes. Permits required from local authorities shall be determined, coordinated, obtained, and paid for by the Contractor.

1. Contractor shall coordinate all electrical work with building manufacturer and door supplier.

2. See electrical plans and specifications for further requirements.

PART 3 EXECUTION

3.1 FOUNDATION

A. General: The work includes the design and construction of concrete foundation(s). Foundation design shall be in accordance with the building manufacturer's requirements and all applicable local codes signed and sealed by a Professional Engineer licensed in the State of Texas. Foundations shall be finished to a smooth steel-troweled finish. The building foundation border may be poured monolithically with the foundation or dowelled in after foundation construction.

1. The site prior to construction shall be roughly prepared and consist of subgrade, as designed by a Professional Engineer licensed to practice in the State of Texas and furnished by the Contractor, graded to within six (6) inches of proposed finish floor elevation. The contractor shall be responsible for all site work as necessary to construct grade beams and concrete foundation, as required by design.

2. The foundation shall be designed and constructed to accommodate the pre-engineered building selected based on the Report of Geotechnical Investigation, included as an attachment to the specifications. Any additional soils information required by the foundation design engineer shall be acquired at Contractor's expense. If building foundation border is to be dowelled into foundation, dowel placement and detail shall be included with foundation design for consideration and approval by the Engineer.

3. All concrete work shall be installed per FAA Item P-610, Structural Portland Cement Concrete, and FAA Item P-605, Joint Sealing Filler. Contractor shall accept full responsibility for accuracy of levelness, dimensions, and squareness of foundation.

3.2 ERECTION

A. General:

1. Clean structural steel members of any dust and dirt acquired during storage before erection.

2. Install metal building system components following manufacturer's instructions and complying with requirements shown on final shop drawings.

3. Erection of metal building, insulation and accessories shall be performed by a competent building erector familiar with, and experienced in, aircraft hangar construction.

4. Written approval from the building design engineer shall be submitted to the Engineer before any field changes are made.

B. Structural Frames:

1. Erect true to line, level, and plumb, rigid and secure.

2. Level base plates to true even plane with full bearing to supporting structures. Use non-shrinking grout to obtain uniform bearing and to maintain level base line elevation. Moist cure grout for not less than seven (7) days after placement.

3. Installation and location of anchor bolts shall be coordinated with manufacturer so that they are installed in the concrete foundation at the correct locations. Manufacturer will be required to review the foundation plan as prepared so that anchor bolt alignment and orientation is acceptable. Drilling and doweling of anchor bolts after the concrete foundation has been placed is unacceptable.

C. Steel Joists:

1. Place and secure in accordance with requirements of SJI Specifications and final shop drawings.

2. Place on supporting work, adjust and align in accurate locations and spacing before permanently bolting in final location.

3. Install bridging simultaneously with joist erection, before any construction loads are applied. Anchor ends of bridging lines at top and bottom chords where terminating at wall or beams.

4. Provide and install temporary bridging, connections and anchors to ensure lateral stability during construction.

D. Bracing: Install diagonal rod or angle bracing in lieu of sidewall rod bracing, to suit manufacturer's standards.

E. Framed Openings: Provide shapes of proper design and size to reinforce opening and to carry loads and vibrations imposed, including equipment furnished under mechanical or electrical work. Securely attach to building structural frame.

F. Roofing and Siding Panels:

1. Install roof panels with long edges running parallel to gable ends of building, with panel ends parallel to ridge. Install wall panels with long edges plumb. Install canopy roof panels with long edges running parallel with building walls.

2. Arrange and nest sidelap joints so prevailing winds will blow over, not into, lapped joints. Lap ribbed or fluted sheets one full rib corrugation.

3. Apply panels and associated items for neat and weather-tight enclosure.

4. Avoid “panel creep” or application not true to line.

5. Protect factory finishes from damage. Contractor shall repair or replace any damaged panels at the Engineer’s direction, at no additional cost.

6. Install approved type closures to exclude weather. Provide weather seal under ridge cap. Flash and seal roof panels at eave and rake, at perimeter of all openings through roof, and elsewhere as required. Flash and seal wall and liner panels at perimeter of all openings, under eaves and gable trims, along lower panel edges, and elsewhere as required or shown on the plans, as applicable

G. Wall panels:

1. Install wall panels on exterior of all metal buildings, with liner panels installed on building interior in locations shown on the plans.

2. Apply approved type, continuous elastomeric sealant bead between metal base sill angle and concrete, and elsewhere as necessary for waterproofing. Handle and apply sealant and back-up in accordance with sealant manufacturer’s recommendations.

3. Align bottoms of panels and fasten with manufacturer’s recommended and supplied anchorage devices. Fasten flashings and trim around openings, etc. with approved type self-tapping screws; fasten window and door frames with approved type machine screws or bolts.

4. Install screw fasteners with power tool having controlled torque adjusted to compress tightly without damage to screws, screw heads, or panels.

H. Accessories: Install flashings, trim, ridge covers, roof curbs, pipe flashings, closure strips, roof jacks, and other accessories and sheet metal items in accordance with manufacturer’s recommendations for anchorage to building and weather-tight mounting.

I. Swing Doors and Frames: Install doors and frames straight, plumb, and level. Securely anchor frames to building structure. Set units with 1/8” maximum clearance between door and frame at jambs and head, and 3/4” maximum between door and floor. Adjust hardware for proper operation.

J. Thermal Insulation: Install insulation and vapor retarder in accordance with manufacturer’s directions, performed concurrently with installation of roof and wall panels.

1. Roof Insulation: Place insulation straight and true in one-piece lengths. Seal both sets of tabs to provide complete vapor barrier. Install in roof and ceiling spaces without gaps or voids. Do not compress insulation. Trim insulation neatly to fit spaces. Insulate miscellaneous gaps and voids. Fit insulation tight in spaces and tight to exterior side of mechanical and electrical services within the plane of insulation. Place insulation with facing exposed-to-view from interior of building unless recommended otherwise by metal building manufacturer or shown the plans.

3.3 PAINTING

A. General: Touch-up abrasions, marks, skips or other defects in shop-primed or factory finished painted surfaces with same type material as used for shop primer or factory finished painting.

1. Apply finish paint coats to factory primed items on surfaces that are not required to be galvanized surfaces.

2. Provide finish coats that are compatible with metal building manufacturer's prime coat paints.
3. Provide approved type barrier coats over incompatible primers where required.

4. Remove hardware and accessories, and similar items in place and not to be finish-painted, or provide surface-applied protection. Reinstall removed items.

5. Finish exterior swing doors on tips, bottoms, and edges same as exterior faces, unless otherwise indicated.

3.4 FINAL CLEANING

A. General: Remove any oilspots, rubber tire marks, or any substance from the surface of the concrete floor after erection of the building and before acceptance by the Engineer. Methods of washing/removal may include power washing.

PART 4 MEASUREMENT AND PAYMENT

All work and labor involved with the design, erection, and construction of the hangars, reinforced concrete foundations, foundation subgrade, and accessories shall be measured and paid for at the contract unit price per lump sum for the Hangar Building System, as noted in the Bid Form, and as completed and accepted by the Engineer.

A bid alternate is provided for internal drive units for the bi-parting stack sliding door system. All labor, equipment, and materials required to install the drive units, control panels, switches and other appurtenances necessary to complete the item, including any modifications to the hangar building, shall be included and paid for per the lump sum unit price under Bid Item A1.01.

A bid alternate is provided for a hydraulic door. All labor, equipment, and materials required to install the hydraulic door and other modifications to the hangar building and foundation shall be included and paid for per the lump sum unit price under Bid Item A2.01.

Winston Field Airport
Hangar Development Project
Scurry County, Texas
TxDOT CSJ No.: 13HGSNYDR

Contractor Questions

1. The contract documents have a minority participation by trade goal of 10.9% and a female participation by trade goal of 6.9%. Will the contractor be required to meet these goals?

   Engineer's Response (provided by TxDOT): **According to the Special Provisions to Bidders Regarding EEO, "… the contractor shall make a good faith effort to employ minorities and women evenly on each of its projects." This is expected to be a good faith effort on the contractor's part and that no tracking of that goal will be done by TxDOT. However, TxDOT will track the 4% DBE goal per the Disadvantaged Business Enterprise in Federal Funded Construction section of the contract documents.**

2. Where does excavated material go?

   Engineer's Response: **Excavated material can be used as embankment if it meets requirements of specification P-152.**

3. Where embankment located? What are material requirements?

   Engineer's Response: **Embankment is below taxiway, apron, and hangar. The quantity for embankment does not include select fill required for hangar foundation. Select fill for hangar foundation to be included under item for reinforced concrete foundation. Material requirements for embankment shall meet requirements stated in specification P-152.**

4. Is the fill and subgrade for the foundation of the hangar to be included with the engineered plans of the foundation and price for foundation?

   Engineer's Response: **Yes.**

5. The bid bond of 2% is for which schedule?

   Engineer's Response: **The 2% bid bond shall be based on the highest bid price between all schedules and alternates.**

Pre-Bid Conference Sign In
April 5, 2016 – 2:00 p.m.
Hangar Development Project
Winston Field Airport
Snyder, Texas
TxDOT CSJ No.: 13HGSNYDR

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