

**FEDERAL AVIATION ADMINISTRATION
FLIGHT STANDARDS SERVICE
GLS STANDARD INSTRUMENT APPROACH PROCEDURE
TITLE 14 CFR PART 97.29**

Bearings, headings, courses, tracks and radials are magnetic. Elevations and altitudes are in feet, MSL, except HAT, HAA, TCH, and RA. Altitudes are minimum altitudes unless otherwise indicated.
Ceilings are in feet above airport elevation. Distances are in nautical miles unless otherwise indicated, except visibilities which are in statute miles or feet RVR.

<u>AIRPORT ID</u> KIAH	<u>PROCEDURE NAME</u> GLS RWY 27	<u>ORIGINAL/AMENDMENT</u> 1D	<u>CITY</u> HOUSTON	<u>STATE</u> TX		
<u>AIRPORT ELEVATION</u> 96	<u>TDZE</u> 86	<u>SUPERSEDED</u> GLS RWY 27	<u>ORIGINAL/AMENDMENT</u> 1C	<u>DATED</u> 06/17/2021	<u>MAG VAR</u> 3E	<u>EPOCH YEAR</u> 2015
<u>FACILITY</u> GLS	<u>COORDINATES OF FACILITIES</u>	<u>ACTUAL EFFECTIVE DATE</u>	<u>REQUIRED EFFECTIVE DATE</u> ROUTINE	<u>CANCEL/SUSPEND</u>		

TERMINAL ROUTES

<u>FROM</u>	<u>FIX TYPE</u>	<u>TO</u>	<u>FIX TYPE</u>	<u>LEG TYPE</u>	<u>FO/FB</u>	<u>RNP</u>	<u>COURSE</u>	<u>DISTANCE</u>	<u>ALTITUDE</u>
SILLS	IAF	TRANN		TF	FB	1.00	267.25	5.04	3000
TRANN		DENTO		TF	FB	1.00	267.12	4.23	2000
DENTO	IF	FESTA		TF	FB	1.00	267.12	7.22	2000
FESTA		REDOC		TF	FB	1.00	267.05	4.44	1500
REDOC	FAF	RW27	MAP	TF	FO	0.30	267.01	4.27	
RW27	MAP	560 MSL		CA			267.01		560
560 MSL		TICOY		DF	FO	1.00			3100

MISSED APPROACH

MAP:

GLS: DA

MISSED APPROACH INSTRUCTIONS:

CLIMB TO 560 THEN CLIMBING LEFT TURN TO 3100 DIRECT TICOY AND HOLD.

ALTERNATE MISSED APPROACH INSTRUCTIONS:



PROFILE:

1. PT

SIDE OF COURSE

OUTBOUND

FT WITHIN

MILES OF

(IAF)

2. PROFILE STARTS AT SILLS

3. FAC: 267.01

FAF: REDOC

DIST FAF TO MAP: 4.27

DIST FAF TO THLD:

4. MIN ALT: SILLS 4000, TRANN 3000, DENTO 2000, FESTA 2000, REDOC 1500

5. DIST TO THLD FROM OM: 4.27

MM:

IM:

150 HAT:

GS ANT: 1035

6. MIN GS INCPT: 1500

GS ALT AT PFAF: REDOC 1500

OM:

MM:

IM:

7. GP ANGLE: 3.00

34:1: IS CLEAR

20:1: IS CLEAR

TCH: 55.0

8. MSA FROM: RW27 3100

PBN REQUIREMENTS NOTES:

RNP APCH.
GPS REQUIRED.

NOTES:

CHART NOTE: SIMULTANEOUS APPROACH AUTHORIZED.
CHART NOTE: USE OF FD OR AP REQUIRED DURING SIMULTANEOUS OPERATIONS.
CHART NOTE: AUTOPILOT COUPLED APPROACH NA BELOW 286.
CHART PROFILE NOTE: GLS UNUSABLE INSIDE DA.
CHART PROFILE NOTE: VGSI AND GLS GLIDEPATH NOT COINCIDENT (VGSI ANGLE {ANGLE}/TCH {FEET}).
CHART SPEED ICON IN PLANVIEW AT SILLS: MAX 210 KIAS.
CHART NOTE: FOR INOPERATIVE ALS, INCREASE GLS CAT E VISIBILITY TO RVR 4000.

ADDITIONAL FLIGHT DATA:

REFERENCE PATH ID: GGGH
LTP HAE: -1.7 M
HOLD SW, RT, 031.22 INBOUND.
GBAS CHANNEL # 22306
CHART MANDATORY 4000 AT SILLS.

MINIMUMS:

TAKEOFF: SEE FAA FORM 8260-15A FOR THIS AIRPORT

ALTERNATE: NA ☒

CATEGORY:	A			B			C			D			E		
FINAL TYPE	DA/MDA	VIS	HAT/HAA	DA/MDA	VIS	HAT/HAA	DA/MDA	VIS	HAT/HAA	DA/MDA	VIS	HAT/HAA	DA/MDA	VIS	HAT/HAA
GLS DA	286	1800	200	286	1800	200	286	1800	200	286	1800	200	286	1800	200

CHANGES - REASONS

1. FAS DATA CHANGED: CRC REMAINDER UPDATED FROM "258D32EC" TO "62A57B6A" -- CORRECTION TO SYSTEM ERROR.



AIRPORT ID
KIAH

PROCEDURE NAME
GLS RWY 27

ORIGINAL/AMENDMENT
1D

CITY
HOUSTON

STATE
TX

COORDINATED WITH:

A4A ☒ ALPA ☒ AOPA ☒ APA ☒ HAI ☐ NBAA ☒ OTHER: ZHU, IAH APP CON, IAH TWR, AMGR

FLIGHT CHECKED BY

DONALD MCGOUGH

Digitally signed by

JASON KRETSCHMER

Jun 30, 2021

OFFICE

FICO

DATE

06/29/2021

DEVELOPED BY

JASON KRETSCHMER (DANIEL C JOHNSEN)

Digitally signed by

JASON KRETSCHMER

Jun 28, 2021

OFFICE

AJV-A421

DATE

06/23/2021

APPROVED BY

MARLON ROBINSON

Digitally signed by

JASON KRETSCHMER

Jun 28, 2021

OFFICE

AJV-A420

DATE

TITLE
MANAGER



**U.S. DEPARTMENT OF TRANSPORTATION - FEDERAL AVIATION ADMINISTRATION
GLSOR STANDARD INSTRUMENT APPROACH PROCEDURE
FLIGHT STANDARD SERVICE - FAR PART 97.33**

Bearings, headings courses, and radials are magnetic. Elevations and altitudes are in feet, MSL, except HAT, HAA, TCH, and RAltitudes are minimum altitudes unless otherwise indicated. Ceilings are in feet above airport elevation. Distances are in nautical miles unless otherwise indicated, except visibilities which are in statute miles or in feet RVR.

FAS DATA BLOCK INFORMATION

<u>DATA FIELD</u>	<u>DATA</u>
OPERATION TYPE	0
SBAS SERVICE PROVIDER IDENTIFIER	14
AIRPORT IDENTIFIER	KIAH
RUNWAY	RW27
APPROACH PERFORMANCE DESIGNATOR	1
ROUTE INDICATOR	
REFERENCE PATH DATA SELECTOR	5
REFERENCE PATH IDENTIFIER (APPROACH ID)	GGHI
LTP/FTP LATITUDE	295839.4070N
LTP/FTP LONGITUDE	0951809.0945W
LTP/FTP ELLIPSOIDAL HEIGHT	-00017
FPAP LATITUDE	295839.3360N
FPAP LONGITUDE	0952002.7930W
THRESHOLD CROSSING HEIGHT (TCH)	00055.0
TCH UNITS SELECTOR (METERS OR FEET USED)	F
GLIDEPATH ANGLE (GPA)	03.00
COURSE WIDTH AT THRESHOLD	106.75
LENGTH OFFSET	0000
HORIZONTAL ALERT LIMIT (HAL)	
VERTICAL ALERT LIMIT (VAL)	

<u>CRC REMAINDER</u>	62A57B6A
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ADDITIONAL PATH POINT RECORD INFORMATION

ICAO CODE	K4
LTP ORTHOMETRIC HEIGHT	+00257
FPAP ORTHOMETRIC HEIGHT	+00257



CITY AND STATE HOUSTON, TX	ELEVATION:85 TDZE:86 AIRPORT NAME GEORGE BUSH INTCNTL/HOU STON	FACILITY IDENTIFIER: I-GHI	PROCEDURE NO./AMD T NO./ GLS RWY 27, 1D EFFECTIVE DATE: 08/12/2021	SUP: GLS RWY 27
				AMDT: 1C
				DATED: 06/17/2021

FEDERAL AVIATION ADMINISTRATION
FLIGHT STANDARDS SERVICE
STANDARD INSTRUMENT APPROACH PROCEDURE DATA RECORD

AIRPORT ID	PROCEDURE NAME	AMDT NO.	CITY	STATE	AIRPORT ELEVATION	FACILITY
KIAH	GLS RWY 27	1D	HOUSTON	TX	96	GHI ILS

PART A: OBSTRUCTION DATA SEGMENTS

INITIAL

FROM
SILLS

TO
TRANN

<u>RNP</u>	<u>DISTANCE</u>	<u>PAT</u>	<u>MAP</u>	<u>HAT</u>			<u>HMAS</u>					
	5.04											
<u>OBSTRUCTION</u>	<u>COORDINATES</u>		<u>ELEV MSL</u>	<u>HORZ</u>	<u>VERT</u>	<u>AC</u>	<u>ROC</u>	<u>OCS</u>	<u>CG</u>	<u>CGTA</u>	<u>ADJUSTMENTS</u>	<u>MIN ALT</u>
1.AAO	300009.00N/0945100.00W		269	164	98	4E	1000				AT1731	3000
2.TERRAIN	300009.00N/0945100.00W		69 (100)								AS1500	1600

COMPUTATIONS

ALT KIAS KTAS HAA VKTW TR BA DTA COURSE CHANGE DVEB VEB OCS RF CENTER FIX/DISTANCE

SEGMENT REMARKS:

AIRSPEED SET TO 210 KIAS FOR ALL SEGMENTS PER CFPT.

INITIAL: STEPDOWN

FROM
TRANN

TO
DENTO

<u>RNP</u>	<u>DISTANCE</u>	<u>PAT</u>	<u>MAP</u>	<u>HAT</u>			<u>HMAS</u>				
	4.23										
<u>OBSTRUCTION</u>	<u>COORDINATES</u>	<u>ELEV MSL</u>	<u>HORZ</u>	<u>VERT</u>	<u>AC</u>	<u>ROC</u>	<u>OCS</u>	<u>CG</u>	<u>CGTA</u>	<u>ADJUSTMENTS</u>	<u>MIN ALT</u>
3.TOWER (48-009804)	295756.00N/0945631.00W	341	250	50	4D	1000				AT659	2000
4.TERRAIN	300012.00N/0950530.00W	69 (100)								AS1500	1600

COMPUTATIONS

ALT KIAS KTAS HAA VKTW TR BA DTA COURSE CHANGE DVEB VEB OCS RF CENTER FIX/DISTANCE

SEGMENT REMARKS:

AIRSPEED SET TO 210 KIAS FOR ALL SEGMENTS PER CFPT.



INTERMEDIATE

FROM
DENTO

TO
FESTA

RNP	DISTANCE 7.22	PAT	MAP	HAT			HMAS					
OBSTRUCTION	COORDINATES		ELEV MSL	HORZ	VERT	AC	ROC	OCS	CG	CGTA	ADJUSTMENTS	MIN ALT
5.AAO	300012.00N/0950530.00W		269	164	98	4E	500				AC98 AT1133	2000
6.TERRAIN	300012.00N/0950530.00W		69 (100)								AS1500	1600

COMPUTATIONS

ALT

KIAS

KTAS

HAA

VKTW

TR

BA

DTA

COURSE CHANGE

DVEB

VEB OCS

RF CENTER FIX/DISTANCE

SEGMENT REMARKS:

AIRSPEED SET TO 210 KIAS FOR ALL SEGMENTS PER CFPT.

INTERMEDIATE: STEPDOWN

FROM
FESTA

TO
REDOC

RNP	DISTANCE 4.44	PAT	MAP	HAT			HMAS					
OBSTRUCTION	COORDINATES		ELEV MSL	HORZ	VERT	AC	ROC	OCS	CG	CGTA	ADJUSTMENTS	MIN ALT
7.AAO	295909.00N/0951333.00W		283	164	98	4E	500				AC98 AT619	1500
8.TERRAIN	295909.00N/0951333.00W		83 (100)								AS1000	1100

COMPUTATIONS

ALT

KIAS

KTAS

HAA

VKTW

TR

BA

DTA

COURSE CHANGE

DVEB

VEB OCS

RF CENTER FIX/DISTANCE

SEGMENT REMARKS:

AIRSPEED SET TO 210 KIAS FOR ALL SEGMENTS PER CFPT.



FINAL: GLS

FROM
REDOC

TO
RW27

RNP	DISTANCE 4.27	PAT	MAP RW27	HAT 200	HMAS							
OBSTRUCTION	COORDINATES		ELEV MSL	HORZ	VERT	AC	ROC	OCS	CG	CGTA	ADJUSTMENTS	MIN ALT
								ASC				286

COMPUTATIONS

ALT

KIAS

KTAS

HAA

VKTW

TR

BA

DTA

COURSE CHANGE

DVEB

VEB OCS

RF CENTER FIX/DISTANCE

SEGMENT REMARKS:

8260.54A LPV (200' HATH) CRITERIA USED FOR DEVELOPMENT OF GLS (LAAS) PROCEDURES PER FPO/WORKING GROUP REQUEST.

MISSED APPROACH : GLS

FROM
RW27

TO
TICOY

RNP	DISTANCE	PAT	MAP	HAT	HMAS 117							
OBSTRUCTION	COORDINATES		ELEV MSL	HORZ	VERT	AC	ROC	OCS	CG	CGTA	ADJUSTMENTS	MIN ALT
								ASC				3100
9.BLDG (48-004421)	294459.00N/0952857.00W		731	500	50	5D	1000					1800
10.TERRAIN	295624.00N/0952521.00W		122 (100)								AS1500	1600

COMPUTATIONS

ALT

KIAS

KTAS

HAA

VKTW

TR

BA

DTA

COURSE CHANGE

DVEB

VEB OCS

RF CENTER FIX/DISTANCE

SEGMENT REMARKS:

CIRCLING

☐ ALL CATS

☐ CAT A

☐ CAT B

☐ CAT C

☐ CAT D

☐ CAT E

☒ NOT AUTHORIZED



MSA

CENTER
RW27

RADIUS
25

SECTOR	OBSTRUCTION	COORDINATES	BEARING	DISTANCE	ELEV MSL	HORZ	VERT	AC	ROC	OCS	ADJUSTMENTS	MIN ALT
360-360	TOWER (48-009465)	301351.00N/0950726.00W	028	17.8	2049	500	50	5D	1000			3100

MSA REMARKS:

NOTES/EXPLANATIONS FROM PROCEDURE SEGMENTS:

SIMULTANEOUS APPROACH AUTHORIZATION AND ASSOCIATED NOTES INCLUDED ON PROCEDURE; PER FPT: AIR TRAFFIC HAS CONFIRMED THAT AS OF 18 JAN 2012 GNSS IS INCLUDED IN THE SIMULTANEOUS OPERATIONS PLAN FOR GROUND-BASED AND SATELLITE-BASED INSTRUMENT FLIGHT PROCEDURES.

55 FT VEGETATION USED PER FPT.



PART B: SUPPLEMENTAL DATA

COMMUNICATIONS WITH
ZHU ARTCC, IAH APP CON, IAH TOWER

WX SERVICE ASOS	LOCATION KIAH	HRS OPERATION 24	ALTIMETER SOURCE KIAH	DISTANCE 0	SERVICE-A Y	ADJUSTMENTS 0
BACK-UP WX SERVICE	LOCATION	HRS OPERATION	ALTIMETER SOURCE	DISTANCE	SERVICE-A	ADJUSTMENTS

WX REMARKS:
BACKUP ALTIMETER SOURCE NOT ESTABLISHED DUE TO REDUNDANT WEATHER SOURCES AT AIRPORT.

PRIMARY NAVAID MONITOR POINT HRS OPERATION CAT

APPROACH AND RUNWAY LIGHTING SYSTEM	RUNWAY MARKINGS	RUNWAY VISUAL RANGE
RW15L - HIRL, C/LINE, PAPI-4R	NPI-G	APPROACH, MIDPOINT, ROLL OUT
RW33L - TDZ, HIRL, C/LINE, PAPI-4R	NPI-G	APPROACH, MIDPOINT, ROLL OUT
RW8L - TDZ, ALSF-2, HIRL, C/LINE	PIR-G	APPROACH, MIDPOINT, ROLL OUT
RW8R - TDZ, MALSR, HIRL, C/LINE, PAPI-4L	PIR-G	APPROACH, MIDPOINT, ROLL OUT
RW9 - MALSR, HIRL, C/LINE, PAPI-4R	PIR-G	APPROACH, MIDPOINT, ROLL OUT
RW15R - TDZ, MALSR, HIRL, C/LINE, PAPI-4L	PIR-G	APPROACH, MIDPOINT, ROLL OUT
RW26L - TDZ, ALSF-2, HIRL, C/LINE, PAPI-4R	PIR-G	APPROACH, MIDPOINT, ROLL OUT
RW26R - TDZ, ALSF-2, HIRL, C/LINE	PIR-G	APPROACH, MIDPOINT, ROLL OUT
RW27 - TDZ, ALSF-2, HIRL, C/LINE, PAPI-4L	PIR-G	APPROACH, MIDPOINT, ROLL OUT
RW33R - MALSR, HIRL, C/LINE	PIR-G	APPROACH, MIDPOINT, ROLL OUT

GLIDESLOPE ANGLE	ELEV RWY THRESHOLD	TCH	ELEV GS ANTENNA	DISTANCE FROM RWY	VGSI ANGLE 3.00	TCH 70.3
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FINAL APPROACH COURSE AIMING

RUNWAY THRESHOLD	<input checked="" type="checkbox"/>	FT FROM THRESHOLD	DISPLACED THRESHOLD DISTANCE
ON CENTERLINE	<input checked="" type="checkbox"/>	FT FROM CENTERLINE	



CRITICAL TEMPERATURES

<u>CRITICAL LOW</u>	<u>CRITICAL HIGH</u>	<u>ACT</u>	<u>APT ISA</u>
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CRITICAL TEMPERATURE REMARKS:

"VISUAL PORTION OF FINAL" PENETRATIONS

HELICOPTER 'VISUAL PORTION OF FINAL' PENETRATIONS

and/or
5280-FT "PROCEED VFR" SEGMENT LEVEL SURFACE AREA PENETRATIONS

<u>PENETRATIONS REMARKS:</u>

PART C: GENERAL REMARKS:
PRECIPITOUS TERRAIN EVALUATION COMPLETED.
CIRCLING NA PER FPT AND ATC REQUEST.
RDH VALUE USED IN PROCEDURE DEVELOPMENT.



<div>AIRPORT ID</div> <div>KIAH</div>	<div>PROCEDURE NAME</div> <div>GLS RWY 27</div>	<div>AMDT NO.</div> <div>1D</div>	<div>CITY</div> <div>HOUSTON</div>	<div>STATE</div> <div>TX</div>	<div>AIRPORT ELEVATION</div> <div>96</div>	<div>FACILITY</div> <div>GHI ILS</div>
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PART D: AIRSPACE

DOCKET #

ALL DISTANCES TO 1/100NM; ELEVATION TO NEAREST 100 FEET; COORDINATES TO 1/100 SECOND; DEG TO 1/100 DEGREE

DISTANCE FROM	THLD	TO 1000FT POINT	3.01
WIDTH OF	FINAL	SEGMENT AT 1000FT POINT	0.87
TRUE COURSE OF	FINAL	SEGMENT CONTAINING 1000FT POINT	270.01
HIGH TERRAIN IN	FINAL	SEGMENT CONTAINING 1000FT POINT	100
DISTANCE FROM	THLD	TO 1500FT POINT	4.58
WIDTH OF	INTERMEDIATE	SEGMENT AT 1500FT POINT	2.42
TRUE COURSE OF	INTERMEDIATE	SEGMENT CONTAINING 1500FT POINT	270.05
HIGH TERRAIN IN	INTERMEDIATE	SEGMENT CONTAINING 1500FT POINT	100

THRESHOLD
COORDINATES
(IF STR-IN)

295839.41N/0951809.09W

ARP COORDINATES

295903.97N/0952029.19W

RUNWAY APCH END
AND DIST FURTHEST
FROM ARP

RUNWAY 27 DISTANCE 2.07 NM

FAF
COORDINATES

295839.45N/0951314.03W

FIX NAME
COORDINATES

REMARKS

NO ADDITIONAL AIRSPACE REQUIRED

QUALITY

19

CHECKED

FAA Form 8260-9 / (11/16) Supersedes Previous Edition

Electronic Version

Page 7 of 8

PART E: PREPARED BY

<u>NAME</u> JASON KRETSCHMER (DANIEL C JOHNSEN)	<u>OFFICE</u> AJV-A421	<u>DATE</u> 06/23/2021	<u>TITLE</u> AERONAUTICAL INFORMATION SPECIALIST
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